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Book

EU Trade Mark Law and Product Protection: A Comparative Analysis of Trade Mark Functionality

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EU TRADE MARK LAW AND PRODUCT PROTECTION

A COMPARATIVE ANALYSIS OF TRADE MARK
FUNCTIONALITY

Lavinia Brancusi



EU Trade Mark Law and Product Protection

This book employs scholarly analysis to ground practical tools for applying the EU Trade Mark law (EUTM) functionality refusal grounds to address business needs when registering trade marks consisting of product characteristics. The study comprehensively examines the absolute grounds for a refusal of registration of functional signs under EUTM. It interprets the functionality refusal grounds through objective tests, focusing on the pro-competition rationale of denying trade mark exclusivity on product features that are technically or aesthetically important for competitors' ability to trade in alternative products. The work takes a comparative approach looking at the US trade dress functionality doctrine, and a law and economics perspective on the role of trade marks and brands in the marketplace. It explores how competition rules related to market definition and the substitutability of products, as well as marketing and design findings related to branding and aesthetics, could be integrated into the legal assessment of EUTM functionality. The volume will be of interest to academics and researchers working in the areas of Intellectual Property Law, Trade Mark and Design Law, EU Law, Comparative Law, and Branding.

Lavinia Brancusi is Adjunct Professor at New Technologies Law Centre, Institute of Law Studies, Polish Academy of Sciences in Warsaw, Poland. She holds law degrees from the University of Warsaw, Faculty of Law (master, dr. iur.) with an award-winning doctoral dissertation in design law. Her research interests cover cumulative protection in intellectual property, with a specific focus on product protection, functionality in trademark and design law, as well as the interface between IP and competition rules, especially in relation to brands.



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A Comparative Analysis of Trade Mark
Functionality

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To my husband Jan



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Introduction

How to deal with functionality in trade mark law in a practical way

This book has been written during COVID times, when everyone’s attention has naturally focused on public health issues – such as whether patent exclusivity should be limited in order to enhance the availability of medicines and medical devices. Trade marks have not been in the foreground during such discussions. However, the tension between legal exclusivity on behalf of private rights’ holders, and enabling society to access much-needed assets is also central to areas of trade mark law. One such field concerns the functionality of trade marks, or put alternatively, the category of functional trade marks. This is a timely topic that over the last two decades has tended to appear only incidentally, yet has now reached critical mass. One such ‘incident’ is the story of one particular product, a brief outline of which is the best way to illustrate the reasons for writing this book.

1. One story

Thirty-five years have passed since Jeremy Philips wrote oracularly about ‘An Empire Built of Bricks: A Brief Appraisal of “Lego”’,¹ mapping the success of the ‘stud and tube’ brick – from the wooden, then plastic moulded prototypes, locally manufactured in Denmark, to the best-selling interlocking toy system worldwide. Today both children and adults are fascinated by *Lego*’s unlimited possibilities of construction and application,² whilst competitors have grappled with two basic queries. Can a different toy modular system achieve similar market success? If not, is compatibility with *Lego*’s system legally allowed?

Monitoring the moves of rivals, *Lego* has been extremely vigilant in protecting its business via intellectual property rights (IPRs). As Philips retraced some contemporaneous litigation, since early 1930s the *Lego* word mark was put at trade³ and became an ‘immense reservoir of goodwill’ and a ‘household

1 Jeremy Philips, ‘An Empire Built of Bricks: A Brief Appraisal of “Lego”’ (1987) 12 EIPR 363 referring, back to 1932, to the origins of the carpentry firm of Ole Kirk Christiansen in Billund, Denmark.

2 www.lego.com/en-gb

3 This similarly involved *Lego*’s figurative logotypes which were periodically updated.

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word’ to be enforced against manufacturers from toy and non-toy industries.⁴ In 1958, a patent application for the building block was filed in Denmark, followed by numerous other national patents,⁵ which enabled *Lego* to effectively prevent product copying for many years. Separately, and mostly with success, *Lego* fought rival attempts to market similar, identical, and compatible toy components by means of (what continental law understands as) unfair competition claims. Yet, in the 1980s, after the patents lapsed, Philips concluded that ‘*Lego* c[ould] rely, ultimately, only on the intellectual property rights in its name and reputation, and in its rights as a manufacturer of quality product; rights in the bricks themselves [were] all too ephemeral’⁶ (LB). And that temporariness was what *Lego* intended to redress. The perfect tool was at hand in trade mark registration, which may, theoretically, be indefinitely renewed.⁷

In 1996 *Lego* applied for EU registration for the three-dimensional shape of a brick in a red colour. The sign was registered on October 19, 1999, based on distinctiveness acquired by effect of use in trade.⁸ A few days later, a competitor filed for a declaration of the invalidity of the trade mark with respect to most of the categories of designated goods. It took 14 years for this to be achieved, in a legal battle which has significantly impacted the European practice on product protection ever since.⁹ The final judgement delivered by the Court of Justice of the European Union (CJEU – previously known as the European Court of Justice) contained seminal guidance that has served as benchmark for assessing similar trade mark cases. The key issue of the litigation, also central to this book, concerned the fact that the subject-matter of the trade mark was (partially) disclosed in the expired relevant patents, and competitors wished to use the information, freely available in the public domain, in order to manufacture bricks with identical clamping capability. This was to ensure the compatibility of their toy components with *Lego*’s systems. Competitors considered that the shape of the brick was necessary to achieve the technical result of allowing repeated assembly and disassembly of toys. This line of argument touched upon one of the legal provisions of EU trade mark law (EUTM), known under the doctrinal term of ‘functionality’. The specifics of the *Lego* case fell under the category of what is called ‘technical functionality’.

In the EUTM, ‘functionality’ consists of three absolute grounds for a refusal of trade mark registration, addressing signs consisting exclusively of product characteristics that result from the nature of goods, are necessary to obtain technical results, or that give substantial value to goods. These types

4 Philips (n 1) 365.

5 Danish priority application of 28 January 1958; US 3005282 A (1961); UK 866557; UK 587206.

6 Philips (n 1) 366.

7 This effectively depends on the genuine use of the mark, otherwise registration may be cancelled.

8 CTM 000107029.

9 EUIPO Grand appeal BoA R-856/2004-G, General Court T270/06; EU Court of Justice C-48/09P *Lego* ... ECLI:EU:C:2010:516.

of feature are considered technically or aesthetically important for business entities to effectively compete on the market. Competitors need to be able to freely copy such functional features in order to trade substitutable products that meet consumer expectations. This collides with the common business interest in making successful products into objects of permanent exclusivity via trade mark protection. To nobody's surprise, along with *Lego's* brick, all of the most notorious functionality cases have dealt with 'iconic' products, such as the *Philips* three-head rotary shaver,¹⁰ the *Stokke* child chair,¹¹ *Rubik's* cube,¹² or the *Louboutin* red-lacquered sole.¹³ The book examines these cases in detail, whilst comprehensively interpreting the EUTM functionality refusal grounds through pro-competitive tests which may optimally meet business needs when registering trade marks.

Without trade mark protection over the basic shape, *Lego* has consequently relied on other legal means to keep rivals away from its range of products. In many EU countries *Lego* continued to conduct litigation based on unfair competition law against copying of the brick design and parasitic use of its embedded goodwill. The main legal issues concerned the right to copy functional features of expired patents, and whether this right was overpassed by the right to protect goodwill; however *Lego's* claims often failed.¹⁴ Due to the absence of EU harmonization, unfair competition issues are not discussed in this book.

A far better avenue for product protection is found in the harmonized EU design law, which *Lego* has extensively used. EU design rights may be conferred for features determining the appearance of products, such as figures (manikin) and components from various *Lego* toy-lines.¹⁵ Although EU design law enacted – similarly to trade mark law – a set of functionality provisions (see Chapter 1.4.) – by way of normative exception they do not apply to modular systems and *Lego* was able to protect a basic structure described as a 'building block from a toy building set'.¹⁶ This design comprised some of the basic elements of the aforementioned brick (a base and upper studs) which enabled interconnection. The fact that the EU design legislator explicitly decided to protect the effect of compatibility within a given modular system against

10 C-299/99 *Philips v. Remington*, EU:C:2002:377.

11 C-205/13 *Hauck v. Stokke*, ECLI:EU:C:2014:2233.

12 C-30/15 P *Simba Toys v. Seven Towns ...*, EU:C:2016:849.

13 C-163/16 *Christian Louboutin v. Van Haren Schoenen*, EU:C:2018:423.

14 For instance, in Poland, *Lego's* unfair competition claims failed, see ruling of the Supreme Court (SN) of 11 July 2002, I CKN 1319/00. In Norway the Supreme Court denied product protection in the first *Lego* case, whereas in a subsequent case a lower court found the toy bricks protectable. In Denmark the court considered that 'extensive product development' justified protection of *Lego's* market position, see Monika Viken, 'The Borderline Between Legitimate and Unfair Copying of Products – A Unified Scandinavian Approach?' (2020) 53 IIC 1033, 1051.

15 For example: CDR 000128681, CDR 001036289, CDR 007537964, CDR 008337372, CDR 000868807, CDR 001810532.

16 T-515/19 *Lego v. EUIPO – Delta ...*, EU:T:2021:155 conc. CDR 16643680006.

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interoperability with products of different origins demonstrates the absence of convergence between the functionality rules of EU trade mark and design law, at least with regard to some particular industries.¹⁷ Certainly, design rights are limited in time, and so legal exclusivity appears to affect market competition less severely than in the case of trade marks. This is one of the reasons that the book focuses on trade mark law, whilst restricting the discussion of design rules to details which help frame the main theme.

In addition, *Lego* has strategically registered other kinds of trade marks which cover important elements of toy sets or features of the packaging. One such example is a figurative trade mark displaying a black-and-white brick, drawn with yellow contours on a red background, which was unsuccessfully challenged upon absence of distinctive character for reasons of realistic representation of the interlocking brick.¹⁸ Another interesting registration was a two-dimensional figurative mark that involved a one-knob brick represented in black and white as a rhombic shape and a half-oval shape set above – the attempt of invalidation due to functionality failed.¹⁹ The case of *Lego*'s three-dimensional shape of a manikin with protrusion on the head and holes in its feet is interesting for several reasons. Trade mark registration was sought for the toy figure, although design rights were also available. Serious functionality objections challenged the basic structure of the manikin as resulting from the nature of designated goods, however the registration was successfully maintained, despite the fact that the CJEU had implemented a restrictive approach towards this type of functionality.²⁰ Another recent attempt to cancel the registration of a quasi-identical shape of a manikin without protrusion for reasons of functionality also failed.²¹ These few examples show that the practice of relying on trade marks that combined several design features (graphics/colour or shape elements) was a shrewd business manoeuvre because such trade marks were more easily registered and defended against cancellation.

Lego's story is instructive not only for demonstrating how mindful entrepreneurs cover their most valuable core assets (here: product appearance + interoperability/connectivity effects = modular system) by means of various layers of intellectual property rights (trade marks, patents, designs, unfair competition, copyright). It also shows the persistent pressure from competitors who wish to freely exercise technical solutions available in the public domain in order to trade similar products. In reality, competitors wished to get closer to *Lego*'s market position, which was built on a renowned product. *Lego* invested time and money into delivering products of consistent quality, which

17 There are more differences between these two types of regulation which the book touches further upon.

18 EUTM 106 948, EUIPO BoA R-690/2014-4.

19 CTM 13 745 476, EUIPO Cancellation No. 14148 C of 27 November 2018.

20 CTM 50450, T-396/14, C-452/15.

21 CTM 50518, EUIPO cancellation no. C 44791 of 1 July 2020.

was expensive. Should rivals get a share of *Lego's* success? They would argue that the ability to trade alternatives, some compatible with *Lego's* system, would exert market pressure to lower the price of the final products (toy sets) which ultimately lies in the interest of consumers. Who deserves more attention? Intuition suggests that solving the conflict between the interests of right-holders and competitors, let alone consumers, is not easy and involves balancing and prioritizing competing goals. One possible legal tool to address this issue is represented by the functionality provisions of trade mark law. The book will discuss the purpose of this regulation in detail, and how it may be effectively applied.

At this point it is worth noting that concerns about the anti-competitive effects of 'monopolizing' product features under trade mark protection are not a feature unique to the EUTM. Many other legislations worldwide have adopted similar policies and rules pertaining to functional signs. For reasons that will be explained further, this book benefits extensively from examining the US functionality doctrine and practice.

2. Is functionality a pressing problem that requires (distinct) attention?

Functional trade marks are occurring at an increasing rate in the practice of the EUTM in recent years. Each new case strikes from a surprising angle and generates a great deal of vigorous debate among scholars and in the courts. One possible reason for this situation lies in the expansion of new categories of signs, those that fall outside the traditional realm of words and graphics, and which businesses seek to use and register as trade marks.²² This trend seems attributable to ever-more sophisticated branding strategies that build on important product features, appealing to a wide range of sensorial experiences. As will be discussed in Chapters 4 and 8, interdisciplinary research is developing an integrated approach to what may represent product value in the eyes of consumers, and how emotional experience becomes an essential indicator of consumer satisfaction. Product interaction involves much more than visual stimuli, triggering the specific consumer emotions that designers and marketers seek to steer. Businesses know how stimulating sound, touch, taste, and smell may be, and how employing a complete sensory experience as part of product launches or shopping activity may influence consumer awareness and the purchase decision.²³ For these reasons, the issue of monopolizing aspects

22 Irene Calboli, Martin Senftleben (eds.) *The Protection of Non-Traditional Trade Marks: Critical Perspectives* (OUP 2018). For a recent critique, Irene Calboli, 'Non-Traditional Trade-marks as Barriers to Competition, Innovation and Creativity: What if Their Protection Could Be Effectively Limited in Practice' in Gustavo Ghidini, Valeria Falce (eds.) *Reforming Intellectual Property* (Elgar 2022) 1.

23 Carlos Velasco, Charles Spence (eds.) *Multisensory Packaging: Designing New Product Experiences* (Palgrave Macmillan 2019). For a legal study acknowledging the significance of

of sensorial experience based on non-traditional trade marks, as part of the ‘way of doing business’ by a given entrepreneur, raises actual legal concerns.

Generally, it is not yet a settled rule that non-traditional signs may easily perform the basic function of a trade mark, that of distinguishing the commercial origin of goods or services. Registration of such trade marks has generally faced a variety of legal obstacles, which in the most common cases range from unclear subject-matter to a lack of distinctiveness. These matters have been extensively scrutinized in the legal doctrine.²⁴ Less attention, however, has been paid to the separate invalidity ground that pertains to functionality. Although similar provisions were present in the national legislation of several EU countries, harmonization of the EUTM has led to the need to develop uniform methods of assessment, following a diversification of case-law. The recent EUTM reform has reshaped the functional provisions by rendering them more suitable for challenging the status of non-traditional trade marks. Analysing the different aspects of legal interpretation to define the scope of functionality set out in the EUTM may, thus, provide the primary and most straightforward reason for writing this book.

Under the EUTM, conferring autonomous interpretation to functionality provisions, that is, separately from the assessment of distinctive character (and related grounds, such as descriptiveness and genericness), should be an easy task. In practice, though, it has turned out to be difficult for a number of reasons. First of all, in the pre-harmonization period, as international conventions did not explicitly address functionality, the legislation in European countries dealt with it autonomously in various ways. In most cases the registration of what appeared to be a functional sign was denied either because of a general incapacity of distinguishing goods/services, or for the absence of a distinctive character assessed in relation to the designated goods/services. Even when harmonization took place at the EU level, for many years afterwards certain specificities of pre-reform practice still lingered in the way courts understood the issue of functional signs and the application of dedicated legal provisions. For this reason Chapter I looks into some aspects of international and national legislations that are relevant to the regime of EUTM functionality.

neuropsychology findings on consumer behaviour and purchase decision, Annette Kur, ‘Brand Symbols, the Consumer, and the Internet’, Max Planck Institute for Innovation & Competition Research Paper No. 16-01, at <https://ssrn.com/abstract=2721740>, 4–6. More in Chapter 8.3.1.

²⁴ Anette Kur, Martin Senftleben, *European Trade Mark Law: A Commentary* (OUP 2017), Lionel Bently, Brad Sherman, Dev Gangjee, Phillip Johnson, *Intellectual Property Law* (5th ed. OUP 2018); William Cornish, David Llewelyn, Tanya Aplin, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* (8th ed. Sweet & Maxwell 2013), Jeremy Phillips, *Trade Mark Law: A Practical Anatomy* (OUP 2003); Ryszard Skubisz, *Prawo z rejestracji znaku towarowego i jego ochrona: Studium z zakresu prawa polskiego na tle prawnoporównawczym* (reprint Stowarzyszenie Naukowe Pro Scientia Iuridica Lublin 2018).

Another difficulty for the functionality assessment results from the way the sign consisting of product features was filed – how it was indicated and (graphically) represented. Applicants have strategically disguised the real nature of such signs by relying on other trade mark categories (e.g. figurative, position, colour) which could more easily acquire registration, mostly under the test of distinctive character. It is true that many signs falling under the functionality radar are a combination of functional/non-functional features. However, EUTM functionality prohibitions only apply under the condition that the sign at issue consists ‘exclusively’ of functionally determined features. This means that assessment of a composite sign requires weighing some features against the others and using certain, objective, criteria to reach a decision in a situation when the assessment remains a matter of degree. In addition, the issue of trade mark categorization and its legal effects is determined by the framework of the registration proceedings, and especially by the scope of freedom the examiners/courts enjoy with regard to the evidence used to interpret the filed subject-matter. The interpretation of the subject-matter has direct consequences in choosing the absolute refusal grounds upon which a given application is examined. Chapter 5 looks into the intricacies of identifying the subject-matter of functionality prohibitions, and the difficulty of keeping the functionality assessment separated from the distinctiveness path.

Last, but not least, the CJEU’s jurisprudence has implemented a rule that both the absolute grounds for refusal related to distinctiveness and functionality should be interpreted through the lenses of ‘public interest’. This is not a normative notion, but a jurisprudential one. The difficulty is found in the situation that the term ‘public interest’ has captured various meanings over time²⁵ and fails to clearly separate not only the sphere of application of the refusal pertaining to descriptiveness or genericness or (absence of) distinctiveness, but also the realm of these three refusal grounds from functionality ones. Chapter 2 looks into the development of the ‘public interest’ criterion for the purposes of these absolute refusal grounds, whilst justifying why functionality objections should remain the object of a separate assessment prior to any distinctiveness matters.

3. The purposes of functionality and the interests at stake

The story of *Lego* is a good illustration of how various IPRs have been used, sequentially or simultaneously, in order to protect the same or complementary product features, which represent an important market asset. This phenomenon of so-called ‘overlaps’, that is, cumulative protection, which strengthens

25 Ilanah Fhima, ‘The Public Interest in European Trade Mark Law’ (2017) 4 IPQ 311; Antoon Quaedvlieg, ‘Shapes with a Technical Function: An Ever Expanding Exclusion?’ (2016) 17 ERA Forum 101; Jeremy Philips, ‘Trade Mark Law and the Need to Keep Free’ (2005) 36(4) IIC 389.

the market position of a business undertaking and collides with competitors' interests, lies at the core of the teleological foundation of the functionality doctrine. As noted above, a decision denying trade mark protection to a functional sign under the EUTM should be underlined/guided by specific reasons of 'public interest'. One way of understanding the latter notion centres on the goal of achieving a clear demarcation between the different limited regimes (patents, utility models, designs), with functionality performing the role of a cutting tool to separate them. Another complementary approach focuses on the negative impact of a trade mark's registration on market competition due to the possible monopolization of product features.²⁶ As parts of Chapter 2 demonstrate, EUTM practice to date has tried to accommodate these two approaches in various proportions. There are still queries around whether the concept of public interest is a common one, good for all types of functionality, or whether separate approaches better fit the technical as opposed to the aesthetic kind of functionality. Chapters 6 to 8, individually addressing the interpretation of EUTM functionality provisions, argue that achieving the rigid and formalistic clear-cutting goal is unsustainable/unfeasible in most cases, whilst adopting a flexible solution – focused on situations of unfair competition advantages and product features needed to compete effectively – represents a viable and reachable option.

The rationales underpinning the functionality rules represent a point where the EUTM and US legal systems seem to converge. Different approaches have been advanced in the USA, for example under the terms of a 'right to copy' as opposed to 'a need to copy', in order to justify the decision to confer protection upon, or deny it to, a trade mark that has been deemed functional.²⁷ Some theories, following the 'law and economics' approach, accentuate the negative economic impact, including higher societal costs, that results from trademarking functional signs – these findings are of interest for EUTM practice. These aspects are discussed in Chapter 3 and parts of Chapter 4. A recent trend in the US functionality doctrine has been evaluating multiple interactions between functionality rules across different IP regimes. There are voices advocating for a 'holistic' view on the way functionality rules may help to rebalance the IP system vis-à-vis the negative effects of overlapping rights.²⁸ From its side, the

26 Estelle Derclaye, Matthias Leistner, *Intellectual Property Overlaps: A European Perspective* (Hart Publishing 2011); Anna Tischner, *Kumulatywna ochrona wzornictwa przemysłowego w prawie własności przemysłowej* (Warszawa C.H. Beck 2015).

27 For a seminal work: Graeme Dinwoodie, 'The Death of Ontology: A Teleological Approach to Trademark Law' (1999) 84 *Iowa Law Review* 611. See also Mark P McKenna, '(Dys)functionality' (2011) 48 *Hous L R* 823.

28 Christopher Buccafusco, Mark Lemley, 'Functionality Screens' (2017) 103 *Virginia Law Review* 1293; Mark McKenna, Christopher Sprigman, 'What's In, and What's Out: How IP's Boundary Rules Shape Innovation' (2017) 30 *Harv. J. L. & Tech.* 491; Christopher Buccafusco, Mark Lemley, Jonathan S. Masur, 'Intelligent Design' (2018) 68 *Duke Law Journal*; Caitlin Canahai, Mark McKenna 'The Case Against Product Configuration Trade Dress' in

CJEU has recently elaborated upon the meaning and purpose of functionality rules in trade mark, design, and copyright law,²⁹ although refraining from adopting a uniformed, systemic interpretation and solutions. Some European scholars have suggested the introduction of a ‘harmonised exclusion’ for three-dimensional objects – under design, trade marks, and copyright rules – with the common denominator being those cases restricting market competition.³⁰ This approach is worth consideration as a long-term goal, however, for the time being the author considers that it is worth trying to apply competition-related criteria, at least within the regime of trade mark functionality. At various points this book will discuss aspects in which EUTM functionality rules differ from those of EU design law. Due to space restrictions, and also due to lack of explicit legal grounds, functionality issues in the copyright law of European countries remain beyond the scope of this book.

As noted earlier, the product features that are usually captured by functionality rules are needed by business entities that wish to effectively compete and trade in alternative offers. If such features cannot be legally copied – because they are covered by legal exclusivity on behalf of one entity – producers must ‘design around’ them, a process which may adversely impact the cost and quality of their offer. Still, even in cases where a different appearance is found for a product of similar functionality, a competitor may be uncertain whether their solution lies within the boundaries of the freedom to operate, or if they will risk infringement claims from the owner of the functional trade mark. Concerns about litigation and its impact on economic viability may lead competitors to abandon plans for manufacturing such alternatives. For this reason, one of the concerns most often articulated by the judiciary regarding the EUTM is that functional trade marks may heavily reduce competition by substitution. However, no specific tools, meaning here specific factors of assessment, have so far been formulated to evaluate this impact. An avenue which this book seeks to explore is whether a market-orientated test, such as is applied in the US functionality doctrine, and focused primarily on the availability of substitutable goods, may also be applicable in the EUTM.

This kind of assessment ties into the analysis of the effects registration of functional signs may have upon market competition. The ‘law and economics’ analytical approach to trade marks has generally emphasized the beneficial, pro-competitive role of trade marks as source-identifiers that reduce consumer search costs for goods/services corresponding to their preferences and incentivize right-holders to invest in product quality and develop goodwill in the

Graeme Dinwoodie, Mark Janis (eds.) *Research Handbook on Trademark Law Reform* (Elgar 2021) 137.

29 C-395/16 *Doceram v. CeramTech*, EU:C:2018:172; C-237/19 *Gömböc v. Szellemi*, EU:C:2020:296; C-833/18 *SI and Brompton Bicycle v. Chedech*, EU:C:2020:461.

30 Uma Suthersanen, Marc Mimler, ‘An Autonomous EU Functionality Doctrine for Shape Exclusions’ (2020) 69(6) GRUR Int 567.

firm.³¹ However, functional trade marks appear to involve anti-competitive effects that have seen much less exploration in the legal doctrine. For instance, using functional marks on goods/services in trade, especially in the initial period when they may be deprived of distinctive character, risks increasing consumer search costs. Later on, at the stage when a functional sign may become registered, it increases the costs for competitors when putting substitutable products on the market, and could involve additional societal costs, such as the threat of intimidating litigation. Functional signs may be employed – often in correlation with other IPRs – as leverage tools conferring competitive advantages that strengthen the market position of rights holders. Concerns should be raised by the issues of product features that may be used in synergy with patents and/or branding strategies, or as indispensable assets for products in interrelated markets, especially for standardisation and compatibility needs. The situation where a functional sign has developed into a brand – a powerful commercial asset that reduces the interchangeability of products on the demand side and becomes a barrier to entry for potential suppliers – appears even more problematic. All these aspects are the focus of several sections in Chapter 4, which concludes with an argument that functional trade marks ought to be evaluated upon the criterion of alternative products (substitutes). The extent of product substitutability, consumer choice, and consumer switching capabilities is captured by the concept of ‘market definition’.³² This concept is analysed both from a competition law standpoint in Chapter 4, as well as looking at how it has been analogically applied in the US functionality practice (Chapters 3 and 6 to 8). The aim is to explore how such criteria may be successfully implemented upon EUTM functionality grounds.

The author is aware of the possible critical argument that an assessment based on product substitutability brings too much flexibility and uncertain outcomes, whilst one using functionality as a cutting tool to prevent overlapping rights (i.e. trademarking items already patented or covered by utility models or design rights) would apparently bring clearer results. However, as Chapter 6 demonstrates with regard to technical functionality, in practice the marketplace is full of products with a blend of functional and non-functional elements, and in most cases there is no perfect correlation between the subject-matter of a functional trade mark and that of a patent/utility model. Functionality assessments will necessarily involve subjective points of argument, especially that EUIPO (European Union Intellectual Property Office) examiners and European courts enjoy broad competence to freely assess facts. Any examination will have to scrutinize the structure of the sign at hand and

31 William Landes, Richard Posner, ‘Trademark Law: An Economic Perspective’ (1987) 30 *The Journal of Law & Economics* 265.

32 Instead of many: Herbert Hovenkamp, Mark D. Janis, Mark A. Lemley, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law*, volume I Supplement 2009.

decide on the following issues: which features are the ‘most important’ vs. ‘less important’; which ones are ‘functional’ vs. ‘non-functional’; what the weight of non-functional features is within the overall combination of features in order to ultimately rule whether a sign consists ‘exclusively’ of functionally determined features. These points of subjective assessment lead to the situation where there is a range of products of different appearance and incorporating similar functionality that may be relevant for conferring/denying trade mark protection. For these reasons, Chapter 6 aims at construing a test based on equivalents in terms of product appearance and function. Additionally, this test should integrate some of the competition factors introduced by Chapter 4 in order to establish whether such equivalent products are also substitutable in terms of consumer choice and the manufacturing capabilities of competitors.

Along similar lines, aesthetic functionality also involves difficult and imprecise points of assessment. First of all, there is a central conflict between the interests of a right holder to invest in and protect a trade mark that acquires and enhances recognition/reputation³³ – which meet also the needs of branded-orientated consumers – vis-à-vis the interests of competitors in keeping (aesthetically) functional features unprotected and in the public domain. EUTM jurisprudence has not yet found a stable way of fixing this balance of interests. In addition, the catalogue of criteria suggested by the CJEU to assess aesthetic functionality does not indicate how to weigh various sources of value in order to identify those giving substantial value to goods and link them to specific product features. Chapter 8 looks into the details of the legal assessment and complements it with input drawn from aesthetics research. This aims to reveal the complex reality that surrounds designing a product that brings ‘value’ in the eyes of consumers and stimulates their purchase motivation.³⁴ Because the notion of ‘value’ has multiple meanings and trade marks lie at the core of branding strategies, the marketing view of brands and consumer perception and co-creation of brands – as discussed by Chapter 4 – represents another piece of information useful for understanding aesthetic functionality. A point that the CJEU has to date left unsolved, yet where future practice will demand clarification, relates to the identification and quantification of a distinct value of reputation, especially when a trade mark generates attractiveness for customers stemming from branding strategies. Summing up all these problematic issues, assessment of aesthetic functionality will always reach a point of subjective interpretation and weighing criteria against one another. For these reasons the author considers that the most practical solution, tailored also to market realia and including consumer preferences, is to apply a multi-factor test which combines the CJEU’s guidance with the US approach focused on competitive need and measured by the extent of alternative, substitutable products.

33 Andrew Griffiths, *An Economic Perspective on Trade Mark Law* (Elgar 2011).

34 Ilanah Fhima, ‘Consumer Value as the Key to Trade Mark Functionality’ (2022) 85(3) *Modern Law Review* 661.

EUTM functionality also includes a distinct prohibition pertaining to product features resulting from the nature of goods. In practice, certain features falling within this category may be interpreted as also fulfilling utilitarian purposes according to the prohibition of technical functionality, or, differently, as bringing substantial value to goods in light of aesthetic functionality. As the intent of the EUTM legislator was to preserve the autonomy of the functional prohibition of signs resulting from the nature of goods, and the CJEU's guidance has also shaped its scope to cover what may be termed as 'generic' functionality, this book discusses generic functionality separately in Chapter 7. The possibility of generic functionality overlapping with other refusal grounds is notable, however, the author considered it useful to find a legal interpretation that is not a complete break with the current CJEU's *acquis*, and that has better chances of being applied in practice.

An important caveat is needed: for reasons of easy reading, the author primarily employs the terms 'technical' and 'aesthetic functionality', also to facilitate the parallel with US law, assuming that generic functionality is somehow split in-between the two. When it needs to be specifically identified, with explicit reference to 'signs resulting the nature of goods' under the EUTM, the book uses this normative phrase or the term 'generic functionality'.

4. How should the functionality of trade marks be explored?

The usual path for conducting a legal analysis of the aforementioned topics would follow the line of European case-law and explore the different schools of thought. However, as most of the advanced legal tests focus on how functionality may prevent overlapping rights, this may be too restrictive and could lead to insufficiently constructive results. At this point, taking a comparative look³⁵ at the US functionality doctrine, especially as applied in relation to trade dress, may cast new light on methods of assessing functionality that could also work for the EUTM system.

US functionality practice is rich, complex, and non-uniform, due to the common law system and the US federal structure.³⁶ There is an impressive amount of litigation, covering a wide range of product features, from a range of industries. Legal solutions have of necessity followed business needs and provided flexible answers. This may be helpful for enabling the EUTM to formulate better tests to address the diversity of functionality cases still to come, especially with regard to new types of non-traditional marks.

Following the idea of applying a functionality test based on the criterion of alternative products, the need to assess the extent and closeness of substitutes requires product delineation, in other words identifying the relevant product

35 Graeme Dinwoodie (ed.) *Methods and Perspectives in Intellectual Property* (Elgar 2013).

36 Instead of many: Graeme Dinwoodie and Mark Janis, *Trade Dress and Design Law* (Aspen Publishers 2010).

and its possible alternatives. Some US functionality rulings have dealt with this issue.³⁷ This triggers the consideration of whether taking a competition (US: antitrust) perspective on a product's substitutability may also be of use in trade mark functionality practice. Indeed, one tool traditionally applied to explore the issue of market dominance/power for competition purposes is 'market definition'. As previously indicated, this concept ties into the availability of substitutable goods, understood as the possibility and willingness of customers to switch to alternative products in the case of a price increase. Exploring the usefulness of such a comparative approach constitutes another purpose of this book.

Some concerns may arise over whether comparative analysis is an accurate method of legal interpretation, especially given that it occurs at two different levels, that is, between the US and EUTM on functionality trade mark rules, and between competition rules and trade mark law. However, US trade mark law is based on the economic theory that trade marks are pro-competitive, which justifies the reference to interdisciplinary arguments. In addition, as functionality cases must balance the public interest against the private interests of trade mark holders, the author finds it useful to formulate criteria of assessment that reflect, as much as possible, market realities and the needs of all stakeholders. A necessary caveat is that this book can only cover certain aspects of US functionality practice and competition law with potential relevance to the EUTM, and those are subjectively chosen by the author.

Another objection to a test based upon the availability and closeness of substitutes would be that it seemingly requires time- and money-consuming evidentiary efforts, which could be an unnecessary waste of resources, a burden on the courts, and may see litigation limited to wealthy entities. However, technological advancement fosters enormous possibilities for using artificial intelligence (AI) within administrative/judiciary proceedings – for instance, patent offices worldwide are using AI to assess the similarity of signs versus similarity of goods/services, or to verify the accuracy of the designated product category.³⁸ More importantly, in the online market space AI is used to guide consumers to make accurate choices by listing recommended alternatives from different brands, which the system sees as substitutes. These examples show how AI has already been applied to huge collections of market data in search of similar/substitutable products. Looking further ahead, AI capabilities may be used within functionality assessment to integrate evidence on the availability of equivalents with data about the competition environment of the product market. Chapters 4, 6 and 8 will look further into the evidence needed to assess functionality.

37 Mark McKenna, 'Is Pepsi a Really Substitute for Coke? Market Definition in Antitrust and IP' (2011–2012) 100 *Geo. L.J.* 2055.

38 Dev Ganjee, 'Eye, Robot: Artificial Intelligence and Trade Mark Registers' in Niklas Bruun, Graeme B. Dinwoodie, Marianne Levin, Ansgar Ohly (eds.) *Transition and Coherence in Intellectual Property Law* (CUP 2021) 178.

5. The structure of the book

The book has the following structure:

Chapter 1 starts by setting forth the current EUTM legal framework containing distinct functionality provisions. It discusses the impact of the Paris Convention and TRIPS (Agreement on Trade-Related Aspects of Intellectual Property Rights) on issues of functionality, as a bridge to refer to the specificities of the domestic laws of European countries which have challenged the clarity that EUTM harmonization aimed to deliver. The last section focuses on the differences between functionality provisions in EU design law and the EUTM, in order to argue why potential overlap between trade marks and designs remains unavoidable – both kinds of right serve to protect aspects of a product's appearance.

Chapter 2 touches upon the axiology of functionality doctrine, with a specific insight into the interpretation of the notion of 'public interest', as conferred by the CJEU. Before turning to functionality cases, the CJEU has used that criterion to interpret other absolute grounds for refusal, that is, descriptiveness, genericness and (absence of) distinctiveness. For this reason, the discussion delves into the concept of 'public interest' for the purpose of these three refusal grounds, as well as for assessing functionality with regard to technical and aesthetic subject-matter. Whilst addressing trade mark overprotection, the final section argues that functionality serves as a barrier against overlapping IPRs. However, as the concept of 'public interest' does not represent a clear-cut criterion for delineation between functionality and other refusal grounds, functionality must preserve its autonomous status and assessment.

Chapter 3 introduces US functionality doctrine with the aim of capturing the specifics of several functionality tests that could serve in the interpretation of EUTM functionality rules as explored by Chapters 6 to 8. A chronological discussion describes how US functionality has developed in correlation with the protection of trade dress. An important part engages with arguments presented in recent US scholarship that take a holistic approach to functionality across the IP (Intellectual Property) system. The aim is to discuss the challenges currently faced by the US functionality doctrine in comparison with the EUTM specifics.

Chapter 4 adopts a 'law and economics' analysis focused on the competition concerns that result from granting exclusivity to functional signs. It begins with setting IPRs within the competition framework with a focus on the pro-competitive role of trade marks in the marketplace. Next, it looks into the various ways in which trade marks, and particularly functional signs, may negatively affect competition. The discussion touches upon how trade marks may help to maintain market dominance and supra-competitive prices after the expiration of other IPRs, especially via branding built on locked-in consumers. Examples of synergy between trade marks and patents (e.g. with regard to medicines), or of product features being indispensable for follow-on 'new products', are discussed. Another section looks into the issues of the 'value'

and ‘valuation’ of a trade mark, which are relevant for cases of aesthetic functionality, here discussed in the context of branding strategies. The final part explores how market definition and product substitutability may be instrumental for the purposes of trademark functionality tests under EUTM, developed in Chapters 6 to 8.

At this point, the book turns to issues of legal interpretation.

Chapter 5 discusses the category of signs that are caught by the EUTM functional provisions, by exploring the meaning of a ‘sign consisting exclusively of a shape, or another characteristic’ (of goods). It looks into the specifics of registering shapes and other product features under the EUTM and the implications trade mark categorization has for the choice of legal assessment, that is, testing functionality and/or distinctiveness. Another element examines how the CJEU initially understood the notion of a (functional) ‘shape’, and how this guidance may apply to the addition of ‘another characteristic’ of goods. The final part of the chapter sets the functionality of service marks in a *de lege ferenda* perspective.

Chapter 6 deals with technical functionality, discussing the EUTM algorithm of assessment developed under *Philips*, *Lego*, and other judgments, with a focus on the notions of ‘technical’ (result v. function) and ‘necessity’ (i.e. the relationship between features and function). Complimentarily, it refers to the criteria of US tests. A key issue is the balancing of ‘non-functional’ v. ‘functional’ features, which helps to dismiss any functionality objections. This ties into assessing the similarity of various technical results incorporated within combinations of features. The category of equivalent products is, precisely, a reflection of product substitutability from a competition law perspective. This chapter advances a market-orientated test, especially suitable for solving the problems of hybrid combinations of functional/non-functional features, which constitute the ‘grey’ area of overlap between patents and trade marks.

Chapter 7 addresses the functionality of signs determined by the nature of goods. It retraces the evolution of EUTM practice – which initially adopted a realistic interpretation – through the incorporation of inputs of the German, Benelux, and UK judiciaries – until it reached momentum through the CJEU guidance concerning ‘generic features’ in the *Hauck* judgement. Part of the chapter discusses the shortcomings of the CJEU’s interpretation, as juxtaposed with the need to examine the actual market environment, considering the interests of rights holders, consumers, and competitors. To this end, US genericness practice may enlarge the EUTM perspective.

Chapter 8 concerns the functionality of signs giving substantial value to goods. Although there are controversies as to its meaning and purpose, this prohibition targets ‘appealing’ product features that determine consumer purchase decision. The first part examines the development of EUTM jurisprudence, especially through the *Bang&Olufsen* and *Hauck* judgments, with a parallel look into US aesthetic functionality practice. The core analysis consists of critically examining the set of criteria introduced by the CJEU in

Hauck – that is, the nature of the goods; the artistic value of the shape; its dissimilarity from other products commonly used in trade; the price difference from alternatives; a promotion strategy touting aesthetic characteristics; and the consumer’s perception. As the key issue of the assessment constitutes the multivalent notion of ‘value’ and the need to prioritize amongst the different value-conferring sources for a product, a set of interdisciplinary remarks from psychology, neuroscience, marketing, and design production shed light on the complex meaning of aesthetics, product value, and what influences consumer perception and purchase decision. Another element of the chapter identifies the situations in which source-identification and reputation-related value(s) should not contribute to aesthetic functionality. The final section analyses the criteria of recent US scholarship that relate to socio-cultural, psychologically pre-determined, or empirically tested consumer preferences. For EUTM purposes, this leads to the presentation of a multi-factor test incorporating *Hauck* criteria, focused on competitive need, as measured by the extent of substitutable products.

The final conclusions of chapter nine advocate for more flexibility in the functionality tests to fit the specificities of non-traditional trade marks.

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1 The legal framework of trade marks' functionality in the EU

In EUTM law, the functionality of trade marks only received distinct legal provisions upon harmonization of the national laws of EU members. This legal framework is outlined at the beginning of this chapter. In the pre-reform years, national legislations took different approaches towards functional trade marks. One reason for this divergence was the modest impact of those international conventions signed by European countries which had not clearly addressed issues of functionality. A brief historical overview of these conventions follows. This allows for a better understanding of some national specificities of pre-reform practice, discussed in a third section, as they later challenged the clarity aimed for by harmonization. The final remarks succinctly address the neighbouring functionality provisions of EU design law for reasons of interference with trade mark rules – both are means for protecting the appearance of a product.

1.1. The EU provisions on functional signs

The process of harmonizing European trade mark law was twofold.³⁹ First, the unification of substantive law of national legislations was achieved by implementing Directive 89/104/EEC (First Directive).⁴⁰ The second stage consisted of enacting Council Regulation (EC) No 40/94 (First Regulation),⁴¹ which introduced Community-effective trade mark (CTM) rights. CTMs were registered by the Office for Harmonization in the Internal Market (OHIM),⁴² renamed later as European Union Intellectual Property Office (EUIPO).

Both the First Directive and Regulation contained identical provisions which enshrined functionality as an absolute ground for refusal of a trade mark

39 Annette Kur, 'Harmonization of the Trademark Laws in Europe – An Overview', 1997 IIC 1; Catherine Seville, *EU Intellectual Property Law and Policy* (Elgar 2018) 268.

40 First Council Directive 89/104/EEC of 21 December 1988 to approximate the laws of the Member States relating to trade marks [2002] *OJL* 40/1.

41 Council Regulation (EC) No 40/94 of 20 December 1993 on the Community trade mark [1994] *OJL* 11/1.

42 Situated in Alicante, Spain.

registration and as an invalidity ground, correspondingly.⁴³ For this reason, these provisions are interchangeably referred to in this book as functional prohibitions/exclusions/legal bars. They stipulate:

The following shall not be registered or, if registered, shall be liable to be declared invalid: (...)

e) signs which consist exclusively of:

- (i) the shape which results from the nature of the goods themselves;
- (ii) the shape of goods which is necessary to obtain a technical result;
- (iii) the shape which gives substantial value to the goods.

As explicitly indicated, functionality was bound to the notion of shapes, however subsequent case-law has adjusted this definition to cover combined signs or two-dimensional representations of shapes (Chapter 5). Later amendments of EUTM law under Directive 2008/95/EC (Codified Directive) and Regulation (EC) No 207/2009 (Codified Regulation)⁴⁴ did not alter the text.

The last EUTM reform brought important changes. A slightly enlarged scope of functional provisions was inserted in a renumbered Art. 4 (1)(e) (i)–(iii) of new Directive (EU) 2015/2436 (hereinafter EUTMD),⁴⁵ and, symmetrically, in Art. 7(1)(e) (i)–(iii) of Regulation (EU) No 2015/2424. This regulation was later codified and replaced by the currently binding Regulation (EU) No 2017/1001 (hereinafter EUTMR).⁴⁶ On this basis, ‘Community trade marks’ were renamed to ‘European Union trade marks’. The new law read:

...

e) signs which consist exclusively of:

- (i) the shape, or another characteristic, which results from the nature of the goods themselves;

⁴³ Art. 3(1)(e) tiret 1–3 of First Directive and Art. 7(1)(e)(i)–(iii) of First Regulation.

⁴⁴ Directive 2008/95/EC of the European Parliament and of the Council of 22 October 2008 to approximate the laws of the Member States relating to trade marks [2008] *OJ L 299/25*; Council Regulation (EC) No 207/2009 of 26 February 2009 on the Community trade mark [2009] *OJ L 78/1*.

⁴⁵ Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks [2015] *OJ L 336/1*. It required full implementation by Member States by 14 January 2019.

⁴⁶ Regulation No 2015/2424 of the European Parliament and of the Council of 16 December 2015 amending Council Regulation (EC) No 207/2009 on the Community trade mark and Commission Regulation (EC) No 2868/95 implementing Council Regulation (EC) No 40/94 on the Community trade mark, and repealing Commission Regulation (EC) No 2869/95 on the fees payable to the Office for Harmonization in the Internal Market (Trade Marks and Designs) [2015] *OJ L 341/21* entered into force on 23 March 2016 and replaced Regulation No 207/2009. Next Regulation No 2015/2424 was replaced by Regulation No 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union trade mark [2017] *OJ L 154/1* which came finally into force on 1 October 2017.

- (ii) the shape, or another characteristic, of goods which is necessary to obtain a technical result;
- (iii) the shape, or another characteristic, which gives substantial value to the goods.

The addition of the term ‘another characteristic’ appears to extend the previous scope of functionality to colours per se or a combination thereof. However, the change may also encompass various types of product features, which has a significant impact on the protection of non-traditional trade marks (Chapter 5).⁴⁷ This is because from the point of enactment, EU functionality has also aimed to prevent the registration of functional signs upon proofs of acquired distinctiveness.⁴⁸ Functionality has been in a critical setting towards other refusal grounds (i.e. relating to undistinctive, descriptive or generic signs) ever since. EU practice is still grappling to find a viable demarcation between these different legal bars (Chapter 2).

For ease of reading, a few issues require introduction and clarification.

The second functionality provision may be termed as ‘technical functionality’, whilst the third one, ‘aesthetic functionality’. Closer inspection reveals some tangency both between technical and aesthetic functionality, individually taken, and the first functionality prohibition of signs determined by the nature of goods. However, the book follows the traditional structure with three distinct chapters (6 to 8). One reason to do this is that the CJEU (Court of Justice of the European Union) has consequently upheld the autonomy of each functionality prohibition.⁴⁹ Registration may be denied on more than one refusal ground, however each must apply fully. Hybrids or combinations of elements from different refusal grounds are not allowed.

To properly understand the significance functionality bears, the implementing regulations which accompanied the aforementioned regulations⁵⁰ must also be considered. The reformed Implementing Regulation No 2017/1431⁵¹ initiated technological developments to facilitate the registration of non-traditional trade marks (such as motion, multimedia). It was replaced by Implementing Regulation No 2018/626 (EUTMIR),⁵² currently in force.

47 Bently et al. (n 24) 963–964.

48 This rule resulted from a contrario interpretation of the provision of Art. 3(3) of First Directive and Art. 7 (3) of First Regulation, which enabled acquired distinctiveness to overcome other absolute grounds for refusal, save for functional signs. The amended EUTM maintained it.

49 Case C-205/13 *Hauck* ..., EU:C:2014:2233, paras 39–43.

50 The implementing regulations mostly deal with registration proceedings, control, and communication with OHIM/EUIPO.

51 Commission Implementing Regulation (EU) 2017/1431 of 18 May 2017 laying down detailed rules for implementing certain provisions of Council Regulation (EC) No 207/2009 on the European Union trade mark [2017] *OJ L* 205/39.

52 Commission Implementing Regulation (EU) 2018/626 of 5 March 2018 laying down detailed rules for implementing certain provisions of Regulation (EU) 2017/1001 of the European Parliament and of the Council on the European Union trade mark, and repealing Implementing Regulation (EU) 2017/1431 [2018] *OJ L* 104/37.

Landmark EUTM functionality cases have emerged from the practice of the CJEU. The court represents the highest appeal instance with competences over substantive and procedural matters embodied in any EU regulation and/or directive. Concerning trade marks, one field of control covers the registration and invalidation of EUTM by EUIPO. The intermediary steps of review constitute the EUIPO's Board of Appeal (BoA), and, next, the General Court (previously known as the Court of First Instance, CFI). The CJEU only hears appeals on points of law.

Separately, the CJEU has competence for issuing preliminary rulings on matters of interpretation of EU law, embedded both in regulations or directives, following referrals submitted by national courts.⁵³ A typical scenario is that a court or an administrative body (the Patent Office), when hearing a case based on provisions of national law subject to EU harmonization, may stay the proceedings and seek guidance from the CJEU. In this case its interpretation would be binding, and effective not only inter partes, but also for future cases dealing with that provision in a similar context. Several important cases on functional signs followed this path, although the lion's share came via registration/invalidity proceedings of EUTM/CTM.

1.2. Functionality rules within international conventions

Prior to EUTM harmonization, the functionality of trade marks was not explicitly addressed by any international convention dealing with matters of substantive law. The following part discusses the relevance of the Paris Convention with regard to the registration of non-traditional marks (such as three-dimensional), and the introduction of minimal standards of trade mark protection by the TRIPS Convention. An interesting issue is the compliance of trade mark regulations to general objectives and principles set forth in the Art. 7 and 8 of TRIPS, by exploring the possible application to functional signs.

1.2.1. Paris Convention initiating IP protection

Amongst the principles governing different aspects of industrial property, the Paris Convention for the Protection of Industrial Property of 1883⁵⁴ introduced the 'telle quelle' rule in relation to trade marks. It stipulated that a trade mark duly registered in the country of origin must be accepted for filing in another contracting country; the latter would apply their own registration rules, yet, if registration was accepted, the sign had to be protected 'as is' (fr. 'telle quelle'), cf. Art. 6.⁵⁵ The filing could be opposed if the sign was con-

53 See Art. 267 of Consolidated version of the Treaty on the Functioning of the European Union [2012] OJ C 326/ 47.

54 <https://wipo.lex.wipo.int/en/text/287780>

55 Sam Ricketson, *The Paris Convention for the Protection of Industrial Property* (OUP 2015) paras 12.10–25.

trary to public order and morality.⁵⁶ There was no definition of a trade mark, categories of eligible signs, or any requirement for protection. Each member state enjoyed the autonomy to determine their conditions for registration, yet were prevented from discriminating against foreign applicants, who could invoke the application of the same rules of domestic legislation as for national applicants, according to the principle of 'national treatment'.⁵⁷

Although historically the rationale behind 'telle quelle' was to overcome an impediment of Russian law which only allowed signs depicted in Cyrillic characters⁵⁸ to be registered, concerns later arose about the scope of the 'telle quelle' privilege. Was it related only to the external appearance/form of a sign, or did it also encompass the content/meaning conveyed by that sign?⁵⁹ The latter would have addressed the requirements of protection, inter alia distinctive character, to facilitate the registration of trade marks via the 'telle quelle' rule in countries where national filings of such signs were not successful.

A recent historical analysis of conference documents, including session minutes, argued that the explicit lack of consensus of contracting members over the notion of (protectable) trade mark, together with the autonomy of individual countries over the content of filings, especially the freedom to deny protection to non-distinctive signs, suggested that shapes, and generally non-traditional marks, were left outside the application of Paris Convention.⁶⁰ An earlier commentator noticed that interpretation of the 'telle quelle' rule concerned rather registration of simple numbers or letters, surnames, and geographical names, whilst shapes, that is, three-dimensional objects – set in contrast to two-dimensional pictorial representations – were listed as controversial subject-matter.⁶¹ The 'telle quelle' principle was not an instrument for harmonizing the trade mark notion; therefore, if a member state would not accept a three-dimensional object as a trade mark, there should be no obligation to register and protect it, notwithstanding the possibility of an earlier registration in another country (of origin).⁶² The example offered in this context was Germany, which tended to deny registration of shapes via the public order and morality interdiction.⁶³

The Washington revision of 1911 brought important additions – in fact exceptions – to the 'telle quelle' principle, namely a catalogue of legal grounds

56 Art. 6 in fine.

57 It is one of the fundamental principles introduced by Paris Convention of 1883 (Art. 2) to apply to all categories of industrial property rights defined by the act.

58 Anette Kur, 'Markenrecht' in Eichmann, Kur (eds.) *Designrecht. Praxishandbuch* (1st ed. 2009 Nomos) 185 fn 352.

59 Ricketson clearly reads this principle in relation only to the 'form of the mark', *ibidem* (n 55) para 12.14, 538.

60 Ng-Loy Wee Loon, 'Absolute Bans on the Registration of Product Shape Marks. A Breach of International Law?' in Calboli, Senftleben (n 22) 150–160.

61 G.H. Bodenhausen, *Guide for the Application of Paris Convention for the Protection of Industrial Property* (BIRPI Geneva 1969) at www.wipo.int/edocs/pubdocs/en/intproperty/611/wipo_pub_611.pdf 6^{quinquies} section A (b) 108, also fn 1.

62 Bodenhausen, *ibidem* 6^{quinquies} section A (c) 111.

63 Bundespatentgericht, ruling of 29/4/1965, case No 4 W (pat) 632/641965, GRUR Int, 1965, 508.

which allowed a member state to deny or invalidate a trade mark registration. Apart from the initial public order clause – which some scholarship⁶⁴ perceived as adequate grounds to deny protection to functional signs – it inserted a prohibition on signs infringing the rights of third parties, and of signs deprived of a distinctive character or containing product information. The latter would nowadays fall under the ambit of descriptive and customary signs. The legal doctrine perceives this catalogue as the result of ‘compromise rather than of deliberate law-making’⁶⁵ by arguing that the effectiveness of the ‘telle quelle’ upon these provisions could not overcome the differences in domestic practice.

This provision was discussed during subsequent revisions,⁶⁶ and after the Lisbon conference (1958), it was enshrined as Art. 6^{quinquies} Section B,⁶⁷ a version maintained unmodified by the Stockholm treaty. Section B(2) carried possible implications of functional signs. It covered trade marks consisting ‘exclusively of signs or indications which may serve, in trade, to designate the kind, quality, quantity, intended purpose, value’. Drawing a parallel here, ‘kind’, ‘quality’, ‘quantity’ may suggest signs resulting from the nature of goods, whilst ‘intended purpose’ may cover features performing a technical function, and ‘quality’ and ‘value’ relate to aesthetic functionality. However, such an analogy brings little benefit in light of harmonized EUTM. This part of Art. 6^{quinquies} Section B became the object of refusal grounds distinct from functionality, set forth in Art. 3(1)(b)–(d) of First Directive and Art. 7(1)(b)–(d) of First Regulation, and subsequently amended.

1.2.2. The TRIPS⁶⁸ convention and global standards

Following the Paris Convention, other treaties – currently governed by WIPO – contained more administrative provisions than substantive law, with none of them explicitly touching upon functionality. The Madrid Agreement (1891, with revisions) and Madrid Protocol (1995) organized the international

64 Martin Senftleben, ‘Public Domain Preservation in EU Trademark Law’, 2013 Trademark Reporter 784–786.

65 Anette Kur, Martin Senftleben, ‘International Protection’ in Kur, Senftleben (n 24) para 2.46 (quotation) – 2.48.

66 Other conferences were held at Hague (1925), London (1934) Lisbon (1958) and Stockholm (1967), www.wipo.int/treaties/en/ip/paris/

67 Bodenhausen indicated that this conference ruled over the limitative character of refusal/invalidity grounds, i.e. member states could not apply other grounds to block the ‘telle quelle’ principle, Bodenhausen. Ibidem 6^{quinquies} section B and C (c) 114, fn 4. However in disputes arising over Art. 15(2) of TRIPS Agreement (below) – which indirectly refers to the refusal grounds of Paris Convention – the panels in cases *United States: Section 211 Omnibus* (2002) WT/DS176/AB/R and *European Communities-GI*. (2005) WT/DS174/R decided that WTO members may invoke other refusal grounds, which implied that the Paris Convention list is not ‘limitative’, see Lisa Ramsey, ‘Reconciling Trademark Rights and Free Expression Locally and Globally’ in Daniel Gervais (ed.), *International Intellectual Property. A Handbook of Contemporary Research* (Elgar 2015) 359.

68 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), as amended 23 January 2017 www.wto.org/english/docs_c/legal_e/31bis_trips_01_e.htm

registration scheme, whilst the Trademark Law Treaty (1994) also dealt with administrative procedures. The Singapore Treaty on the Law of Trade Marks (2006) was first to recognize the category of 'non-traditional marks' (visible and non-visible).⁶⁹ This paved the way for changing the trade mark definition through the EUTM reforms, together with enabling the filling of non-traditional signs.

The TRIPS Agreement of 1995 represents the most important piece of international regulation covering the aspects of substantive IP law. This convention encapsulated the tension between the need for free trade, and the barriers resulting from embedding intellectual property rights (IPRs) in traded goods – a certain level of barriers was accepted in the negotiations.⁷⁰ This was the minimum level of IP protection, introduced as a supplement to the Paris and Berne Convention⁷¹ standards. Member states enjoyed a degree of autonomy of implementation and also the possibility to increase that level, provided that such changes did not contravene the Agreement (here including the general objectives and principles inserted in the text as a tool for balancing rights and duties for higher public interest goals⁷²).

1.2.2.1. TRIPS' definition of a trade mark and functional signs

As regards trade marks, Art. 15(1) TRIPS adopted a functional definition of protectable subject-matter, identified as 'any sign, or any combination of signs' which is 'capable of distinguishing the goods or services of one undertaking from those of other undertakings'. A list of examples followed, including figurative elements, combinations of colours and any combination of such signs, yet shapes/product configuration or colour per se were not mentioned.⁷³ Members were allowed to make registration contingent upon the capability of signs to be visually perceptible – an exclusion no longer relevant following the reformed EUTM, which abolished the requirement for

69 Full texts at www.wipo.int/treaties/en/

70 Susy Frankel, 'Some Consequences of Misinterpreting the TRIPs Agreement', 2009 WIPOJ No 1, 39–40 <http://papers.ssrn.com/abstract=1862672>

71 Berne Convention for the Protection of Literary and Artistic Works of 1886, <https://wipolex.wipo.int/en/treaties/textdetails/12214>

72 Art. 7 TRIPS indicates amongst the objectives 'the promotion of technological innovation' and 'transfer and dissemination of technology' and a 'balance of rights and obligations'. To achieve the objectives, Art. 8 indicates that 'members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition ...' (1), whilst measures may also be needed as to 'prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology' (2).

73 Earlier drafts of these provisions, such a 1987 US proposal or a 1988 EC proposal, mentioned accordingly a 'distinctively shaped three-dimensional object' and 'the shape of goods or of their packaging', see UNCTAD –ICTSD *Resource Book on TRIPs and Development* (CUP 2010) 219–220, <https://doi.org/10.1017/CBO9780511511363>

graphical representation. Pursuant to Art. 15(2) TRIPS, members were also free to refuse registration on other grounds on condition of the conformity of those grounds with the Paris Convention of 1967. In addition, Art. 15(1) TRIPS dealt with signs without inherent distinctiveness, allowing registrability by effect of acquiring distinctiveness through use. This rule has diverged into different national approaches. The EU adopted uniform criteria of assessment for all types of signs, although consumer perception is said to perceive product features differently, which has rendered the registration of non-traditional marks difficult (Chapter 5).⁷⁴ The USA has adopted the rule that product configuration – in contrast to product packaging – cannot be inherently distinctive, registration being possible only with acquired distinctiveness/secondary meaning (Chapter 3).⁷⁵

TRIPS did not address functionality, yet, the question remains of whether the introduction of such a refusal ground by a signatory would be consistent with the treaty. The absence of explicit reference to shapes in Art. 15(1) TRIPS did not deny their status as eligible subject-matter. Prof. Gervais noted that the omission was due to the difficulty of reaching a consensus over a common list of exemplary signs accepted by all signatories.⁷⁶ Further clarification was brought by the WTO Appellate Body's decision in *United States: Section 211 Omnibus*⁷⁷ which differentiated between the sign 'capable of' and 'eligible for' registration cf. Art. 15(1) TRIPS, which translated into the obligation to introduce the functional definition into domestic legislation, and a situation imposed on members to 'register automatically' such signs.⁷⁸ The latter situation was not intended by TRIPS. One scholar gave the example of Singapore's legislation, which comprises functional exceptions pertaining to shapes, according to the discretion given by Art. 15(2) TRIPS.⁷⁹ Wee Loon argued that, assuming the Paris Convention did not cover product shapes, the Singaporean prohibition of functional shapes was compliant with Art. 15(2) TRIPS. Another lenient interpretation of Art. 15 TRIPS held the view that without explicit discrimination, purely functional signs were registrable upon proof of acquired distinctiveness.⁸⁰ It is worth recalling that TRIPS introduced

74 For the CJEU uniform distinctiveness standard see: *Linde* (C-53/01), *Winward* (C-54/01) *Rado* (C-55/01), EU:C:2003:206.

75 *Wal-Mart Stores, Inc. v. Samara Brothers, Inc.* 529 US 205 (2000); by contrast, earlier *Two Pesos, Inc. v. Taco Cabana, Inc.* 505 US 763 (1992).

76 Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis* (4th ed. Sweet & Maxwell 2012) 319.

77 (2002) WT/DS176/AB/R, at: <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=Q:/WT/DS/176ABR.pdf&Open=True>

78 (2002) WT/DS176/AB/R, 155.

79 Wee Loon (n 60) 163–164.

80 Nuno Pires de Carvalho, *The TRIPS Regime of Trademarks and Designs* (4th ed. Wolter Kluwer 2019) paras 15–49. The author seemingly links functionality with the lack of arbitrary appearance to be dealt within the distinctiveness criterion, an issue also relevant for sounds, scents, taste, see paras 15–44.

a standard of minimum obligations, whilst Art. 1(1) TRIPS allowed members to go beyond that standard and confer more extensive protection, provided that it complies with TRIPS.⁸¹ This flexibility may be interpreted as meaning that signatories can decide upon the conditions of protecting shapes, including functional ones. In another context, Prof. Gervais argues that ‘finding a ceiling – [i.e. the “maximum levels of protections” disputably fixed by TRIPS, addition LB] – absent a clear obligation to limit protection in the text’ is difficult to sustain, provided, for instance, a case of barriers to legitimate trade.⁸² *Mutatis mutandis*, denying or accepting the protection of (functional) shapes has arguably remained within the competence of signatories.

1.2.2.2. *Trade marks in the context of Arts. 7 and 8 TRIPS*

A complementary query is whether there is any relevance of the general principles laid down in Art. 7 and 8 of TRIPS for matters related to trade marks functionality. This touches upon the public interest policy underlying the functional provisions (Chapter 2). One way of understanding it is as a means of preventing overlaps between different IPRs that may impair competition, such as simultaneous or subsequent cumulation between patents and trade marks protection with regard to technical subject-matter. There is ample literature discussing the political genesis and importance of Art. 7 and 8 of TRIPS in the multinational context of balancing the interests of developed countries – focused on the strengthening of IPRs, especially copyright and patents, justified by a need to incentivize creators and innovation – with the interests of less developed countries targeting access to basic assets via exceptions and limitations to IP rights, fair licensing schemes and so on.⁸³ Leaving aside legal controversies around the mandatory or non-mandatory character of these general provisions and the way they were implemented in (or neglected by) the WTO debates, as well as suggestions for a better application, most cases concerned vital public sectors (such as health and food) with issues of access to essential medicines, protection of plant varieties, or fair use privileges.

Trade marks fall under the ambit of public health measures set within the scope of Art. 8 TRIPS in the case of the Australian Tobacco Plain Packaging Act of 2011

81 Gervais (n 76) 174–175.

82 *Ibidem* 175.

83 Reading TRIPS in the perspective of trade liberalization, Professor Frankel noted: The ‘TRIPS Agreement is a balance of rights and a balance of goals to protect intellectual property for the benefit of trade but not for its distortion. The TRIPS Agreement’s minimum standards are the basis on which individual states develop their intellectual property laws, and are the methods by which states can achieve the intellectual property balance domestically’ – Susy Frankel, ‘The WTO’s Application of “the Customary Rules of Interpretation of Public International Law” to Intellectual Property’, 4 VUWLRP 2/2014, at <http://ssrn.com/abstract=795986>, 42. Consult Peter Yu, ‘The Objectives and Principles of the TRIPs Agreement’ (2009) 46(4) *Hous. L. Rev.* 979, <https://scholarship.law.tamu.edu/facscholar/457>

(TPP). This Act prohibited the appearance of trade marks (including colours and other eye-appealing elements) on tobacco packaging, with the exception of brand names, as a measure intended to decrease the attractiveness and sales of tobacco products, and increase the significance of graphic health warnings.⁸⁴ The TPP Act raised complaints from several countries under the WTO Dispute Settlement Process regarding trade restrictions and violation by Australia of TRIPS trade mark obligations, and after eight years of disputes, a final decision was reached in 2020.⁸⁵ The Appellate Body confirmed that the TPP measures were not more trade-restrictive than necessary to fulfil the legitimate objective, that is, reducing the use of, and exposure to, tobacco products.⁸⁶ They were held consistent with justified encumbrances to trade mark rights that a Member may provide under Art. 20 TRIPS – here the Panel read Art. 8 TRIPS as conferring ‘useful contextual guidance’ for the interpretation of the term ‘unjustifiably’ in Art. 20 TRIPS.⁸⁷ The Panel acknowledged the legitimate interests of a trade mark owner in using their mark in the course of trade, however, the balance was tilted in favour of the significant societal interest of ‘public health’ reflected by Art. 8(1) TRIPS, which allowed members to pursue this and adopt measures that may affect IPRs, if there was sufficient support for the resulting encumbrance.⁸⁸ In addition, the Panel held that TPP was not inconsistent with Australia’s obligations under Art. 16(1) TRIPS – the objection was that TPP affected the ability to maintain distinctiveness of trade marks. The Panel’s reasoning was that Art. 16(1) TRIPS did not establish a positive right to use a registered trade mark on behalf of its owner, but only a (negative) right to prevent infringement by unauthorized third parties, and this was not abolished by the TPP.⁸⁹ Although distinct from a European perspective, the Panel’s approach showed how the minimum acceptable standards of TRIPS had to accommodate different perspectives on the nature of trade mark rights that reflected the specifics of the legislation in each member state.

84 www.legislation.gov.au/Details/C2011A00148

85 Australia – Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging – Appellate Body reports and Panel reports – Action by the Dispute Settlement Body WT/DS435/28 WT/DS441/29 – 2 July 2020, at: www.wto.org/english/tratop_e/dispu_e/cases_e/ds441_e.htm

86 Reports of the Appellate Body, WT/DS435/AB/R; WT/DS441/AB/R, at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/435ABR.pdf&Open=True>

87 Reports, *ibidem* 6.625–6.659. The WTO’s approach to the role and meaning of Art. 8 TRIPS followed the views expressed earlier by Susy Frankel and Daniel Gervais, ‘Plain Packaging and the Interpretation of the TRIPS Agreement’ (2013) 46 *Vanderbilt Law Review* 1149, 1202–1206.

88 Reports, *ibidem* 7.11–3. By contrast, Professors Frankel and Gervais advocated for a cautious decision, with regard to the impact on other IPRs (n 87) 1213–1214.

89 Reports, *ibidem* 6.558–6.619, 7.7–10. Convincingly and critically about the negative-right arguments, Frankel and Gervais (n 87) 1178–1198. The authors opined: ‘the context of negative rights does not preclude there being some positive rights and interests to register and use a trademark’ (1197).

As concerns the other contexts of using Art. 7 and/or 8 TRIPS with possible relevance for trade marks, Professor Gervais read Art. 7 TRIPS as an instrument to restore balance when the benefits of an IPR neglected the public interest of promoting innovation and enhancing the dissemination of technology.⁹⁰ This view concerned over-extending patent protection with the effect of stifling competition, a concern that may also arise in cases of trademarking items covered by lapsed patents. In the context of investment agreements, Professor Frankel argued against the strategy of right holders claiming expropriation of investment (such as revocation/invalidation of patent rights) upon alleged standardization of IP protection via international agreements (e.g. TRIPS), whereas these aspects remained within the flexible boundaries of domestic laws, safeguarded by the object and purpose of those treaties.⁹¹ It was emphasized that TRIPS aimed more than protecting private rights, as the availability and dissemination of creativity and innovation, and the transfer of technology – for example with regard the affordability and availability of medicines – represented additional goals belonging to the object and purpose of TRIPS.⁹² Again, these arguments could *mutatis mutandis* apply against the use of trade mark protection to monopolize items that should otherwise fall into the public domain.

The issue of overlapped copyright protection, too long for certain type of works, was also examined through the perspective of Art. 7 and 8 TRIPS;⁹³ the more this may concern trade marks due to their possible termless prolongation. Derclaye and Leistner concluded that although the goal of reducing the negative impact of cumulative protection on market competition could a fortiori match the policies of Art. 7 and 8 TRIPS, general application of these provisions to any issue of overlap would be too ‘far-reaching’ a solution, thus application on a case-by-case basis would be more appropriate.⁹⁴ There are also voices that pleaded for the inclusion of the right to freedom of expression within the ambit of this balance, with a special focus on cases of restrictions of free speech through trade mark overprotection.⁹⁵

Interestingly, Advocate General *Campos Sanchez-Bordona* in the *Brompton* case⁹⁶ (conc. copyright protection to a bicycle featuring technical function)

90 Gervais (n 76) 231–233.

91 Susy Frankel, ‘Interpreting the Overlap of International Investment and Intellectual Property Law’ (2016) 19 *Journal of International Economic Law* 121, 122, 129 referring *Eli Lilly and Company v The Government of Canada*, UNCITRAL, ICSID Case No. UNCT/14/2.

92 Frankel, *ibidem* 135.

93 Derclaye, Leistner (n 26) 25–27.

94 *Ibidem* 28.

95 Ramsey, ‘Reconciling Trade Marks ...’ (n 67) 354–356; Lisa Ramsey, ‘Free Speech and International Obligations to Protect Trademarks’ (2010) 35 *Yale Journal of International Law* 445–447.

96 C-833/18 *SI and Brompton Bicycle v Chedech*, Opinion AG Campos ECLI:EU:C:2020:79, paras 37–39.

discussed the principle of IP cumulation with direct reference to Art. 7 TRIPS and emphasized the differences in goal between industrial property protection (patents, industrial designs) and copyright. He warned against using 'disproportionate' copyright protection as a 'brake on the system for protection of industrial property' – the AG (Advocate General) opted to deny protection to the bicycle's appearance due to the technical necessity.⁹⁷ However, the CJEU did not follow the AG's arguments and refrained from making any reference to the issue of IP overlaps or TRIPS.⁹⁸ Similarly, in the *Dyson* case,⁹⁹ which concerned the attempt to register a transparent bin of a multiply shaped configuration, AG Léger mentioned Art. 7 TRIPS, yet the CJEU¹⁰⁰ focused only on the general (i.e. in abstracto) incapacity of that kind of sign to be a source identification.

1.2.2.3. Some concluding thoughts

Summing up, TRIPS did not contain explicit grounds for refusal or invalidity in relation to functional signs. Their trade mark eligibility remained within the autonomy of national legislations; it was generally accepted, unless the capability of being an indicator of origin was questioned. The real obstacle to registering shapes and other non-traditional signs was contained in the distinctiveness requirement, tested in concreto in relation to chosen goods/services, with prohibitions formulated by Art. 6^{quinquies} of Paris Convention. The fact that functionality was not mentioned as a refusal ground by Paris Convention – although reasons of order public could be invoked – sheds some doubt on its compatibility with the treaty.¹⁰¹

It remains an open question whether Art. 7 and 8 of TRIPS may constitute additional grounds that could sustain and strengthen the importance of functionality within the regime of exclusive rights, as a means of limiting legal exclusivity for the beneficial effects of public interest, and more specifically of market competition. The recent emphasis by AG in *Brompton* of the need for 'proportionality' when setting the boundaries between industrial property and copyright in terms of cumulative protection, 'so as to prevent the excessive protection of the latter from leaving the former devoid of substance',¹⁰² anticipates future developments in this area.

97 Ibidem para 39.

98 C-833/18 *Brompton*, ECLI:EU:C:2020:461.

99 C-321/03 *Dyson v. Registrar of Trade Marks*, Opinion AG Léger ECLI:EU:C:2006:558, para 94.

100 C-321/03 *Dyson*, ECLI:EU:C:2007:51, para 45.

101 Perceiving a certain incompatibility, Professor Kur considers functionality a vulnerable ground to deny protection according to the *telle quelle* rule, see Kur, 'Absolute grounds for refusal' in Kur, Senftleben (n 24) para 4.172.

102 C-833/18 Opinion ECLI:EU:C:2020:79, 45.

1.3. Historical background of EUTM functionality – a glimpse into national legislations

EUTM could not replace all trade mark concepts that lay behind the rules applied previously at a national level.¹⁰³ The conditions in which a shape could enjoy trade mark protection under national laws later determined the approach to functionality through EUTM. The following section looks into the specifics of several pre-harmonized legislations where they concern the status of three-dimensional (functional) signs. The overview shows that registration of three-dimensional marks was generally disputable, whilst issues of functionality, if any, were rather placed within the topic of distinctiveness, unless the legislation featured dedicated provisions. Although Benelux law served as an example for the future EUTM, the UK and German judiciary deserve attention, because their specificities nurtured future queries to the CJEU to define the standards of protection for three-dimensional, other non-traditional, and also functional signs.

1.3.1. *Benelux law*

The EU Directive was inspired by the Uniform Benelux Trade Mark Act, considered to be legislation adapted to the modern market needs.¹⁰⁴ Significantly, this legislation contained provisions pertaining to functional signs. Benelux law accepted a wide definition of a trade mark, inclusive of 'shapes of goods or their get-up' and 'any other symbol', upon sole capability of distinguishing goods/services (Art. 1 sentence 1).¹⁰⁵ However, the second part of this definition specified that 'shapes determined by the very nature of the goods or which affect their actual value or produce industrial results cannot be considered marks' (Art. 1 sentence 2). With minor modifications, these provisions were incorporated into the EUTM (see 1.1.).

Benelux law separated clearly functionality from the issue of distinctiveness, be it inherent or acquired through use.¹⁰⁶ The question was not whether a functional shape was capable of distinguishing a mark, but whether public policy reasons – that is, the risk of abusive monopolization of shapes essential

103 Joachim Bornkamm, 'Harmonising Trade Mark Law in Europe' (1999) 3 IPQ 284.

104 Charles Gielen, 'Harmonisation of Trade Mark Law in Europe: Directive of the European Council' (1992) 14(8) EIPR 262; Kur, 'Harmonization ...' (n 39) 5.

105 Convention Benelux en matière de marques de produits of 19 March 1962 (in force 1 July 1969), amended on 10 November 1983 as Loi uniforme Benelux sur les marques (in force since 1 January 1987). See Thomas Helbling, 'Shapes as Trade Marks? – The Struggle to Register Three Dimensional Signs: A Comparative Study of United Kingdom and Swiss Law' (1997) IPQ 421, referring to Charles Gielen, 'Three-dimensional Marks in Europe' (1996) 5 Trademark World 31.

106 Frauke Hennig-Bodewig, Heijo Ruijsenaars, 'Alternative Protection for Product Designs: A Comparative View of German, Benelux and US Law' (1992) 23 IIC 655.

for competitors – would speak against conferring trade mark protection.¹⁰⁷ For the economy of proceedings, assessment of functionality ought to precede distinctiveness, because even proof of acquired distinctiveness could not dismiss objections on functionality grounds. The EU legislator followed a similar approach.

1.3.2. UK law

English practice took a different perspective towards shapes. Since the end of the 19th century, three-dimensional representations of products had been denied registration due to the alleged impossibility of separating a mark from the traded object.¹⁰⁸ This case-line continued under the 1938 Trade Marks Act.¹⁰⁹ An important decision concerned the Coca-Cola bottle, the registration of which was refused for two main reasons: the shape of the container was not a 'mark' within the meaning of Art. 68(1),¹¹⁰ and there was a risk of perpetual monopoly against containers of identical/similar shapes.¹¹¹ In a neighbouring context, passing off protection was granted against the infringement of an unregistered, but distinctive and reputed, get-up/product configuration of a lemon-shaped container of lemon juice, which was not considered an industry standard that would affect competitors.¹¹² The first real step towards the registration of three-dimensional signs came with a 1994 Act which implemented the First Directive and introduced the functionality exclusions.¹¹³ Sceptical

107 Benoit Strowel, 'Benelux: A Guide to the Validity of Three-dimensional Trade Marks in Europe' (1995) 17(3) EIPR 155–156 citing Benelux Court of Justice judgment of 23 December 1985 in case 83/4 Adidas, GRUR Int 1987, 707.

108 *In re James' Mark* (1885) 31 Ch.D. 340; (1886) 33 Ch.D. 392 dealt with the application of a dome-shaped black lead; registration was conferred for the two-dimensional picture but not for the plain shape – cf. Audrey Horton, 'Design, Shapes and Colours: A Comparison of Trade Mark Law in the United Kingdom and the United States' (1989) 11(9) EIPR 315.

109 www.legislation.gov.uk/ukpga/1938/22/pdfs/ukpga_19380022_en.pdf

110 It read: "'mark" includes a device, brand, heading, label, ticket, name, signature, word, letter, numeral, or any combination thereof'.

111 *Coca Cola Trade Marks* 1986 RPC 421, <https://doi.org/10.1093/rpc/1986rpc421>. A two-dimensional representation of the bottle's contours has, nevertheless, been registered in Ireland since 1956 and in UK since 1959. After the enactment of the 1994 Trade Mark Act, the three-dimensional sign was granted UK registration no 2000548. A follow-up occurred at the EU level: the three-dimensional classic sign was registered as CTM 2754067 in 2005, however an attempt to register its modified shape, named 'The Contour Bottle Without Fluting', was unsuccessful, due to lack of distinctiveness, see case T-411/14, EU:T:2016:94.

112 *Reckitt and Colman Products Ltd v. Borden Inc.*, 1988, FSR 601 (CA); [1990] 1 All E.R. 873 (HL). The JIF product enjoyed a reputation of more than 30 years on the market with a de facto 'monopoly', while the US defendant entering the UK market did not take the steps necessary to differentiate their container so as to avoid consumer deceit.

113 Mark Elmslie, 'The New UK Trade Marks Bill' (1994) 16(3) EIPR 119, about the abolishment of two categories of trade marks corresponding to Register A and B; Anselm Kamperman Sanders, 'Some Frequently Asked Questions about the 1994 UK Trade Marks Act' (1995) 17(2) EIPR 67, discussing shapes' registrability towards Benelux experience.

voices questioned consumers' capability to recognize shapes and other non-traditional signs as commercial identifiers of goods/services – the trend of expanding the boundaries of registrability was, thus, perceived as bringing uncertainty and enhanced litigation.¹¹⁴

1.3.3. *German law*

The German Act of 1968 defined trade marks in a general manner, upon the capability to individualize the commercial origin of goods/services, yet without mentioning shapes or packaging.¹¹⁵ No specific provisions pertained to functional signs, whilst absolute grounds for refusal set in Sect. 4 addressed a lack of distinctiveness and other interdictions modelled upon Art. 6^{quinquies} Section B of Paris Convention. However, registration did not deal with plain shapes, only with two-dimensional representations of goods. A restrictive approach stated that lifelike reproductions of goods without embellishments or capricious additions were not capable of being a badge of origin: first, because of the conceptual difficulty of separating a sign from its signified substrate, and second, because of the lack of distinctive character.¹¹⁶ Similarly to English passing off and pursuant to Sect. 25 (*Ausstattungsschutz*), protection was available, independently from registration, to get-up, shapes, and other trade symbols with goodwill acquired via substantial use; however, functional configurations were excluded as constituting 'the essence of goods'.¹¹⁷ By transposing the First Directive into the law of 1994,¹¹⁸ Art. 3(1) defined trade marks as encompassing 'three-dimensional designs, the shape of goods or their packaging'. Similarly to Benelux law, Art. 3(2) construed a negative part of the definition to exclude functional signs. Early commentaries considered that practice would follow the path undertaken previously by two-dimensional representations of products, that is, distinctiveness playing a major role and functionality being of modest importance.¹¹⁹ The statutory wording implied, though, that these two issues required separate treatment.

114 David Bainbridge, 'Smell, Sound, Colour and Shape Trade Marks: An Unhappy Filtration' (2004) 3 JBL 220–222.

115 See § 1 of *Warenzeichengesetz* of 2 January 1968, BGBl. I S. 29 which amended *Warenzeichengesetz* of 5 May 1936, RGBl. II S. 134. The latter replaced the first law on trade marks of 12 May 1894 (RGBl. S. 441).

116 Thomas Sambuc, 'Zur Schutz (un)fähigkeit von Produktgestaltungen als Ware oder Ausstattung' (1989) GRUR 548–551, with reference to BGH GRUR 1964, 454 *Palmolive*; GRUR 1921, 145 *Seeligs Gerstenkaffee*; GRUR 1927, 187 *Mundharmonikadecke*.

117 Friedrich-Karl Beier, 'Basic Features of Anglo-American, French and German Trademark Law' (1975) IIC 300–301; Hennig-Bodewig, Ruijsenaars (n 106) 648; Sambuc (n 116) 552–556, referring to BGH GRUR 1954, 121 *Zählkassetten*; BGH GRUR 1959, 289 *Rosenthal-Vase*; BGH GRUR 1952, 516 *Hummel-Figuren I*; BGH GRUR 1962, 144 *Buntstreifenatm I*.

118 Gesetz über den Schutz von Marken und sonstigen Kennzeichen of 25 October 1994 BGBl. I S. 3082.

119 Paul Ströbele, 'Registration of New Trademark Forms' (2001) IIC 162–169; Bornkamm (n 103) 286–290 discussing BGH GRUR 1995, 732 *Füllkörper*; BGH GRUR 1997 527 *Autofelge*; Bundespatentgericht GRUR 1998, 1018 *Honigglas*.

1.3.4. Nordic countries

In parallel to the Benelux efforts towards harmonization of trade mark legislation, during the years 1959–1964 four countries (Denmark, Norway, Sweden, Finland) adopted similar statutory provisions in order to create the Nordic Trademarks Acts.¹²⁰ For three-dimensional signs, including get-up, protection was conferred either via the registration system or through established use, in a way resembling German *Ausstattungsschutz*. Concerns regarding the impairment of competition by technical/aesthetic subject-matter underpinned the scope of Section 5. Protection was denied to a sign ‘solely formed by the characteristic shape of the goods, the shape of the goods necessary for achieving a technical result, or a shape that has essential effect on the value of the goods’.¹²¹ A commentator noticed that this provision mainly concerned signs that made the goods or packaging more practical, or performed other functions (e.g. technical or aesthetic) apart from being a source-identifier.¹²² This distinction between being a badge of origin and fulfilling other purposes will be also central to the axiology and interpretation of EU functionality rules.

Despite similar laws, Nordic jurisprudence towards functional signs varied, as the *Philips* and *Lego* sagas demonstrated. In Sweden the court accepted the registration of the *Philips* rotary head, because it did not restrain market competition.¹²³ However, in case of *Lego* the Supreme Court disagreed with the lower instances and found the brick functional, irrespective of proofs of acquired distinctiveness. A similar approach was taken by the Finish Supreme Administrative Court vis-à-vis the *Philips* shaver, whereas in Norway *Philips* was successful in registering the mark. In Denmark, *Lego*'s unfair competition claims were dismissed.¹²⁴

1.4. A corollary: functional provisions in EU design law

The appearance of a product may attract the cumulative protection of trade mark, design, and copyright law. The negative effects of overlapping rights are widely discussed in the scholarship,¹²⁵ whilst functionality rules may help

120 Marianne Levin, ‘Recent Developments in Nordic Design Protection’ (1988) IIC 616, 617; see for example Finnish Act of 1964 https://finlex.fi/en/laki/kaannokset/kumotut/1964/en19640007_20000056.pdf

121 Ibidem sect. 5 of Finnish Act.

122 Levin (n 120) 616–617.

123 Use of alternative shapes did not entail a difference in price or effectiveness, cf. Guy Tritton, *Intellectual Property in Europe* (2nd ed. Sweet & Maxwell 1999) para 3.065.

124 Levin (n 120) 617 citing cases 1966 RÅ 35; 1968 NIR 165 (Sweden); 1962 HD II 475 (Finland); appl. no 103.733 (Norway); 1961 U 46; 1962 NIR 102 (Denmark).

125 Martin Senftleben, *The Copyright/Trademark Interface: How the Expansion of Trademark Protection is Stifling Cultural Creativity* (Wolters Kluwer 2021); Estelle Derclaye (ed.) *The Copyright/Design Interface* (CUP 2018); Calboli, Senftleben (n 22); Tischner (n 26) 32–41, 58–66; Derclaye, Leistner (n 26), Calboli, ‘Non-traditional Trademarks ...’ (n 22) 12–17.

attenuate these (below 2.3 and 3.3). In the EU, functionality provisions are found in trade mark and design law. Despite statutory differences, practice has drawn parallels between them, with respect to axiology and criteria of interpretation.¹²⁶ The assessment of trade mark technical functionality (Chapter 6) will reveal certain similarities with the field of functional designs, for example, the notion of 'technical function' or the relationship between appearance and function. However, appearances can be deceiving. The following remarks discuss synthetically what functional provisions in design law are, and specifically in which aspects they differ from those of trade marks.

EU design law, also harmonized through Directive 98/71/EC (DD)¹²⁷ and Regulation (EC) No 6/2002 (RCD)¹²⁸ enacted quasi-identical functionality rules in Art. 7 DD and Art. 8 RCD. The wording of Art. 8 RCD is the following:

1. A Community design shall not subsist in features of appearance of a product which are solely dictated by its technical function.

2. A Community design shall not subsist in features of appearance of a product which must necessarily be reproduced in their 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 connected to or placed in, around or against another product so that either product may perform its function.

3. Notwithstanding paragraph 2, a Community design shall under the conditions set out in Art. 5 and 6 subsist in a design serving the purpose of allowing the multiple assembly or connection of mutually interchangeable products within a modular system.'

The first provision stays close to the trade mark exclusion of signs necessary to obtain technical results. The second is the so-called 'must fit' exception, modelled upon a UK regulation,¹²⁹ without analogical provision in trade mark law. A sensible query emerges around whether there is need for the introduction of such a provision (Chapters 6 and 8). The third provision is a peculiarity of design law, strenuously lobbied for by *Lego*, which targets principally modular systems. Basically, functionality in design law corresponds to 'technical' functionality in trade marks (Chapter 6).

126 Generally, the interpretation of concepts of design law followed rulings of trade mark practice.

127 Council Directive 98/71/EC of 13 October 1998 on the legal protection of designs, *OJ L* 289, 28.10.1998, pp. 28–35.

128 Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs, *OJ L* 3, 5.1.2002, pp. 1–24.

129 Sect. 213 (3)(b)(1) of CDPA (1988) adopted as a consequence of a landmark judgment *British Leyland v Armstrong Patents*, of 22 February 1986 (1986) RPC 279.

The purpose of design functionality shares similarities with that of trade marks (Chapter 2). The recitals 14 DD (Recital 10 RCD) explained the rationale for denying protection to design features technically dictated, so as to prevent hampering of technical innovation, whereas in case of mechanical fittings, to ensure the interoperability of mechanically connected products manufactured by different entities. Scholars emphasize the anti-monopoly purpose of preventing situations in which legal exclusivity on behalf of one entity would restrict the possibilities of other designers to ‘develop around existing designs because functional restraints severely limit design choice’.¹³⁰ Another weakness of EU design law is that of circumventing the patent system, because the lack of substantial control over design filings facilitates the granting of exclusive rights over patentable subject-matters in a faster and cheaper way. This concern has underlined another rationale of design functionality, that of channelling technical subject-matter to patents or utility models. In this context, it is worth indicating that pursuant to another part of recitals 14 DD (recitals 10 RCD) the functional exclusion ‘does not entail that a design must have an aesthetic quality’. This translates into a normative concept of ‘design’ being independent of aesthetics or eye-appeal connotations.¹³¹ As a result, objects of functional purposes are generally registrable, and only the design features covered by functionality provisions are specifically denied protection.

However, the issue of the legal effects and scope of design functionality displays more differences than common aspects with trade mark functionality. Similarly to trade marks, design functionality presents an invalidity ground to declare the nullity of a design registration in ex post control.¹³² By contrast, it is not a refusal ground ex ante, because the scarce substantive control of design applications does not cover functionality.¹³³ In addition, design functionality serves as infringement defence to calibrate the scope of protection conferred by a design right.¹³⁴ In consequence, a design that is predominantly functional may not be enforced against a design with similar functional features. This may be a solution to counteract bullying litigation (Chapters 3.4.

130 Jens Schovsbo, Graeme Dinwoodie, ‘Design Protection for Products that Are “Dictated by Function”’ in Annette Kur, Marianne Levin, Jens Schovsbo (eds.) *The EU Design Approach: A Global Appraisal* (Elgar 2018) 142 (quote) 170.

131 Anette Kur, Marianne Levin, ‘The Design Approach revisited: Background and Meaning’ in Kur, Levin, Schovsbo *ibidem* 7–19.

132 Art. 11(1) DD; Art. 25(1) RCD.

133 Art. 47(1) RCD restricts the object of control to compliance with the definition of a ‘design’ and with standards of order public and morality. EU countries have adopted similar national rules, consult Christopher V. Carani (ed.) *Design Rights: Functionality and Scope of Protection* (2nd ed. Kluwer Law International 2022).

134 Functional design features are not protected ex lege and disregarded from the comparison of the overall impressions of two designs at issue – Lavinia Brancusi, ‘Article 8’ in Gordian Hasselblatt (ed.) *Community Design Regulation: Article-by-Article Commentary* (2nd ed. Hart 2018) 143; Schovsbo, Dinwoodie (n 130) 146; David Stone, *European Union Design Law: A Practitioners’ Guide* (2nd ed. OUP 2016) 94.

and 4.2.1.3.), but is an option currently unavailable for trade marks. When it comes to details, another difference from trade marks (Chapter 5) is that design functionality applies to product features taken individually, and does not always affect the whole design/product appearance.¹³⁵ It requires a distinct type of assessment.¹³⁶

Summing up, EU design law is construed so as to capture and protect functional products, whilst the functionality rules operate restrictively and incidentally. Their main purpose is not to deprive an entire design of protection, but rather to 'adjust' its scope of protection in case of conflict with similar products. There are similarities to trade mark functionality, however the range and significance of differences is visible. Even as regards the shared anti-monopoly rationale, the risk of over-extending legal exclusivity over product features is lessened in the case of designs, which are subject to temporal constraints.¹³⁷ The above discussion advocates for caution when applying analogical interpretations between trade mark and design functionality rules. Additionally, as design functionality cannot ensure channelling the technical subject-matter to patents or utility models, there is still space for overlaps between trade marks, designs, and patents or utility models.

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135 For a design to be entirely invalidated, EUIPO requires that all its dominant features are prohibited upon one (or both) functional provisions: EUIPO Design Guidelines – Examination of Design Invalidity Applications, 5.3.1 <https://euipo01app.sdlproducts.com/1004805/904777/designs-guidelines/5-3-1-rationale>

136 Lavinia Brancusi, 'Designs Determined by the Product's Technical Function: Arguments for an Autonomous Test' (2016) 38(1) EIPR 23. As discussed in Chapter 5, the assessment of trade marks addresses a sign as a whole whilst balancing the functional/non-functional elements in order to conclude whether the sign consists 'exclusively' of shape or other product characteristics defined by the functional prohibitions.

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2 ‘La raison d’être’ of functionality in the EUTM

A tool for balancing interests between legal exclusivity and enhancing competition

Since the enactment of EUTM, ‘public interest’ has become the key notion placed at the core of interpreting any functional provision. This is not a normative concept,¹³⁸ and it is distinct from the grounds of public policy or morality. As developed by CJEU, ‘public interest’ has dynamically embodied various meanings over time. Before dealing with functionality cases, the CJEU laid down the principle that other absolute grounds for refusal, that is descriptiveness, genericness, and (absence of) distinctiveness, should be interpreted through the lenses of ‘public interest’. A chronological discussion explores how the concept of ‘public interest’ defined the scope of assessment of these three refusal grounds (2.1.). The second part focuses on the CJEU’s understanding of ‘public interest’ for functionality purposes, with regards to both technical/utilitarian and appealing subject-matter (2.2.). The third part sets functionality within the broader perspective of other refusal grounds and explores whether and to which extent they may attenuate the effects of trade mark overprotection (2.3). This chapter argues that functionality serves as a useful *ex ante* obstacle against overlapping rights – however, as ‘public interest’ does not represent a clear-cut criterion for delineating functionality from other refusal grounds, functionality needs to preserve its autonomous legal status and assessment.

2.1. Public interest at the core of other grounds for refusal of registration

The following part examines how the criterion of ‘public interest’ has been applied to the assessment of the refusal grounds pertaining to distinctiveness, descriptiveness, and customariness which are currently set in Art. 4(1)(b)–(d)

138 Fhima, ‘The Public ...’ (n 25) 311. For a broader discussion of a multivalent concept of ‘public interest’ across various IPRs, ‘composed of distinct and differentiated identities and needs’, Karen Walsh et al., ‘Intellectual Property Rights and Access in Crisis’ (2021) 52 IIC 379, 380, 383.

TMD¹³⁹ and Art. 7(1)(b)–(d) EUTMR.¹⁴⁰ The analysis will show the overlap and lack of consistence as concerns the interpretation of this criterion across these three legal provisions. Such shortcomings will shed light on why public interest cannot be a reliable factor for delineating the scope of refusal grounds related to distinctiveness/descriptiveness/genericness from that of functionality, discussed separately in part 2.2.

2.1.1. *Setting the scene*

In earlier years of EUTM jurisprudence, the relationship, hence intersection, between functionality grounds and a lack of distinctive character was not just a matter of theory. Functionality operated mostly as a subsidiary ground to sustain the absence of distinctive character, which constituted the main legal ground invoked to deny protection. Functional components of a sign either demonstrated commonness/standardisation for that type of goods or were too weak to ensure distinctiveness.¹⁴¹ Other voices pointed to the redundancy of functional provisions, and even suggested their deletion, as long as distinctiveness grounds seemed to suffice.¹⁴² The argument was that functional features that must remain free for use to other traders cannot identify the commercial origin of goods/services of one undertaking. At some point the CJEU separated the sphere of application of functionality, by giving it priority over matters of distinctive character. The Court also made clear that even if functionality was overruled in *casu*, other absolute grounds may still play a part.¹⁴³ However, functionality had its own specific purposes, mingling anti-monopoly concerns with delineating between various IPRs and being quite a restrictive subject-matter: it was confined to shapes. By contrast, the other refusal grounds could cover any sign that matched the basic definition of an eligible sign.¹⁴⁴

As mentioned in 1.1., the extended scope of functional exclusions to any product characteristic has already blurred the lines between other categories of

139 Previously Art. 3 (1) b)–d) of the First Directive.

140 Registration is denied to trade marks 'devoid of any distinctive character' (b); 'which consist exclusively of signs or indications which may serve, in trade, to designate the kind, quality, quantity, intended purpose, value, geographical origin or of the time of production of the goods or of rendering of the service, or other characteristics of the goods or service' (c); or 'which consist exclusively of signs or indications which have become customary in the current language or in the bona fide and established practices of the trade'(d).

141 Arnaud Folliard-Monguiral, David Rogers, 'The Protection of Shapes by the Community Trade Mark' (2003) 4 EIPR 173–175, referring to BoA EUIPO' decisions in cases R 70/1998-2; R 142/1999-1; R 563/1999-1; R 272/1999-3; R 74/1998-3 (followed by GC judgment T-122/99).

142 David T. Keeling, 'About Kinetic Watches, Easy Banking and Nappies That Keep a Baby Dry: A Review of Recent European Case-law on Absolute Grounds for Refusal to Register Trade Marks' (2003) 2 IPQ 137–138; Helbling (n 105) 419.

143 C-53/01 to C-55/01 *Linde, Winward, Rado*, EU:C:2003:206, paras 45, 66–67.

144 These were abstract capabilities to distinguish goods/services and graphical representation.

signs that were previously tested on distinctiveness. Recently, whilst discussing the rationale of functionality, the Advocate General (AG) in the *Louboutin* case referred per analogiam to the concept of public interest established by the CJEU for evaluating distinctiveness of colours or a combination of colours. He noted the similar goal of keeping undistorted competition, expressed there by a 'general interest in not unduly restricting the availability of colours'.¹⁴⁵ Also in the context of refusal grounds pertaining to descriptiveness and genericness, the CJEU has frequently articulated an availability need towards signs, raising anti-competitive concerns. This calls here for an examination of how public interest has been interpreted for the purpose of these legal bars, where the differences between them lie, and how this may affect the possible overlap with functionality.

2.1.2. A vexing overlap between grounds related to distinctive character

The concept of public interest has raised serious doubts in relation to the notions of distinctiveness, descriptive character, or customariness of a sign. The issue depends on the way these three provisions are mutually interrelated. Is descriptiveness or customariness a mere exemplification of the lack of distinctive character, or does each have autonomous status? Do they share, up to a certain point, the same public interest policies, or do different reasons call for denying trade mark protection in each case?

From literal interpretation, there is a strong argument implying the subsidiary status of descriptiveness or customariness towards distinctive character, which stems from the provision related to acquired distinctiveness. The provision of Art. 4(4) TMD (Art. 3(3) of First Directive) indicates that acquired distinctiveness may help overcome not only a lack of inherent distinctiveness (b), but also other refusal grounds set out in paras c) and d), namely descriptiveness or customariness. From a logical and practical perspective, a descriptive or generic sign is also without distinctive character, although there may be signs devoid of distinctive character that do not match the other two legal bars.¹⁴⁶ This shows a clear sphere of overlap between these three grounds, where a principal role is played by the notion of distinctive character, earning the term of a 'catch-all' or 'umbrella' provision. Although it has not completely eliminated any possibility of interference, the CJEU has consequently tried to enforce the principle that each legal ground is independent from the others, has its own sphere of application, and reveals a separate, discrete notion of public interest. However, such a formalistic approach tends to be problematic, and even incoherent, as the following remarks will demonstrate.

145 C-163/16 *Louboutin*, EU:C:2017:495, para 43–47 referring to C-104/01, *Libertel*, EU:C:2003:244, paras 54, 60, and C-49/02 *Heidelberger Bauchemie*, EU:C:2004:384, para 41.

146 Michael Handler, 'The Distinctive Problem of European Trade Mark Law' (2005) 27(9) EIPR 307–310.

2.1.2.1. Public interest and descriptiveness

The leading case in this area was *Windsurfing Chiemsee*, concerning the trade mark registration of a geographical name (i.e. a Bavarian lake).¹⁴⁷ The CJEU defined the rationale of Art. 3(1)(c) of First Directive¹⁴⁸ as 'preventing such signs from being reserved to one undertaking' so that 'may be freely used by all, including as collective marks or as part of complex or graphic marks'.¹⁴⁹ This need to remain available to other traders was justified not only because such a sign carries information on quality or other goods' characteristics, but because it may positively 'influence consumer tastes' through an association between goods and 'a place that may give rise to a favourable response'.¹⁵⁰ The CJEU adopted an enlarged view to encompass not only signs that currently function with a descriptive meaning in the mind of relevant consumers, but also signs that have such a capacity and where 'it is reasonable to assume that such an association may be established in the future'.¹⁵¹ Such a pro-future interpretation was supported by the wording of the provision of Art. 3(1)(c) which employed the term 'may serve', although the fact that the legislator had used different forms (and tenses) for the refusal grounds set in paras b) to d) did not constitute sufficient proof of deliberate law-making.¹⁵²

The core issue of public interest consisted of CJEU's rejection of the German doctrine (*Freihaltebedürfnis* – in translation, 'a need to keep free') for the interpretation of the descriptiveness requirement. The CJEU distanced itself from the national registrability standards of EU members. An unwritten but settled principle of German practice was to deny registration for a certain type of signs (e.g. colours, numerals, personal and geographical names) if competitors' interests showed that there was a 'real, current and serious' requirement of availability for that sign.¹⁵³ Similarly, in UK law a sign that was in fact fully

147 Joined cases C-108/97 and C-109/97 *Windsurfing Chiemsee* ..., EU:C:1999:230. The CJEU gave guidance on preliminary questions asked by the Regional Court of Munich hearing an infringement case.

148 Currently Art. 4(1)(c) TMD.

149 *Windsurfing*, ibidem para 25.

150 *Windsurfing*, ibidem para 26.

151 *Windsurfing*, ibidem paras 30–31.

152 Philips 'Trade Mark Law ...' (n 25) 396.

153 Availability was assessed in relation to the goods/services described in the filing for registration; the risk of impairing competition could not be simply hypothetical, although future risk supported by current accurate data was also accepted; the need must have been important. In case of a refusal of registration based on this principle the administrative organ did not proceed with assessing distinctiveness, but it asked the applicant to produce the evidence of distinctive character and lack of availability imperative; more Reinhard Ingerl, Christian Ronke, *Markengesetz* (C.H. Beck 2010) §8, 92, 197, 209–215; Georg Fuchs-Wissemann, 'Absolute Schutzhindernisse' in Friedrich Ekey, Achim Bender, Georg Fuchs-Wissemann (eds.) *Markenrecht. Band 1 (Markengesetz und Markenrecht ausgewählter ausländischer Staaten)* (C.F. Müller 2014) §8, paras 11–15; Detlef von Schultz, 'Absolute Schutzhindernisse' in Detlef von Schultz (ed.) *Kommentar zum Markenrecht* (Deutscher Fachverlag 2012) §8, 105–120.

distinctive could be refused registration if it belonged to a type of mark where public interest (leaving them free to other traders) stood against conferring a commercial monopoly to one entity. Such a sign could not match the unwritten concept of 'legal distinctiveness', established in the jurisprudence of pre-Directive days, and then considered removed by the EUTM and the new case-line, including *Windsurfing*.¹⁵⁴ As concerns the threshold of acquiring distinctiveness through use, the Court did not permit any differentiation in standards because of a presumed availability requirement, here the example of a geographical name needed by other undertakings. The CJEU specifically declined any reference to a predetermined percentage, such as above 50 per cent of recognition (trade acceptance) of the sign as badge of origin among consumers, a criterion that German practice usually required in a proportion determined by the need to keep free.¹⁵⁵

In subsequent years, the *Windsurfing* guidance has been developed to encompass signs consisting of descriptive words, which were not necessarily 'exclusively descriptive' according to the actual conditions of use.¹⁵⁶ For the refusal ground to operate, it sufficed that one 'possible' meaning of the term composing the mark may designate a product characteristic, and it concerns not only present interests, but also potential competitors who may wish to use that sign in a descriptive manner.¹⁵⁷ Similarly, it is not required that the sign should be the only way of designating the product characteristics at issue, although opinion could equally take the contrary position, namely that various ways of conveying the same information may represent proof of lack of descriptiveness.¹⁵⁸ It was also irrelevant whether the characteristic at issue had secondary importance rather than being 'commercial essential'.¹⁵⁹

This refusal ground was also found suitable for three-dimensional signs (shapes), independently of the possibility to invoke one of the functional exceptions.¹⁶⁰ Another case concerning the colour and shape of a container used for liquid detergent marked the point where objections of descriptiveness (and functionality too) extended to the packaging of goods without an intrinsic

154 Angela Fox, 'Does the Trade Mark Harmonisation Directive Recognize a Public Interest in Keeping Non-distinctive Signs Free for Use?' (2000) EIPR 1, 4 quoting a judgment of 1913 in *W&G du Cros Ltd. Application*, 1913 RPC 660, 672 where it was stated that distinctiveness of a mark 'must ... depend upon whether other traders are likely, in the ordinary course of their business and without any improper motive, to desire to use the same mark, or same mark nearly resembling it, upon or in connection with their own goods'.

155 C-109/97 *Windsurfing* paras 41–52.

156 C-191/01 *OHIM v. Wm. Wrigley Jr. Company* (conc. word DOUBLEMINT), EU:C:2003:579, paras 32–35; C-363/99, *Koninklijke KPN Nederland v. Benelux-Merkenbureau* (conc. word 'Postkantoor') EU:C:2004:86, paras 55–58.

157 Recently in joint cases T-117/18 to T-121/18, *Agencja Wydawnicza Technopol v. EUIPO*, EU:T:2019:447, paras 26–59.

158 Fhima (n 25) 313.

159 Seville (n 39) 295.

160 C-53/01 *Linde* EU:C:2003:206, paras 69–77.

shape, such as granules, powder, or liquids.¹⁶¹ Although the CJEU proclaimed a territorial limitation of the relevant public to the country where registration is sought,¹⁶² registration of descriptive shapes may create barriers to legitimate free trade, a critical issue amongst TRIPS signatories. An interesting case concerned an attempt to register the shape of a soft cake in Germany, known in the former USSR under the standardized name of ‘Zefir’ cake – the Düsseldorf Court of Appeal was sensitive to the risk of undue monopolization and denied registration on bad faith grounds.¹⁶³

2.1.2.2. *Public interest and genericness*

Another refusal ground set out in Art. 3(1)(d) of the First Directive¹⁶⁴ deals with trade marks that consist exclusively of signs that have become customary in contemporary language, or in the bona fide and established practices of the trade for defining an entire class/genus of products, such as the terms ‘BSS’ (an abbreviation for ‘balanced salt solution’ used by ophthalmologists) or ‘kornspitz’ (a type of roll).¹⁶⁵ This problem mostly concerns word marks; however, practice has shown that a combination of graphics and colours – a red rose design used for England rugby shirts¹⁶⁶ – may also fall foul of this provision. Shapes also may become generic, for instance, a rectangular box. More examples are discussed in Chapter 7, which deals with product features resulting from the nature of goods. This type of functionality intersects clearly with generic signs.

Although a general interest in keeping generic signs free for use of other traders could also be placed at the core of this registration bar,¹⁶⁷ the CJEU has focused on the incapability of such signs to properly perform the source identification function of a trade mark.¹⁶⁸ Without denying a possible overlap

161 C-218/01 *Henkel KGaA v. Deutsches Patent- und Markenamt*, EU:C:2004:88, paras 33, 44.

162 This means that a descriptive or generic term in a given language may be registered in another EU country where the language is not spoken C-421/04 *Matratzen Concord v. Hukla Germany*, EU:C:2006:164.

163 Anke Moerland, ‘The Registration of Descriptive Terms in International Trade’ in Christopher Heath, Anselm Sanders, Anke Moerland (eds.) *Intellectual Property Rights as Obstacles to Legitimate Trade?* (Wolters Kluwer 2018) 85–94 referring to the German court’s dec. of 31 December 2002 in case 20 U 120/02) at 92–93, fn 83.

164 Currently Art. 4(1)(d) TMD.

165 C-192/03 *Alcon Inc. v. OHIM*, ECLI:EU:C:2004:587; C-409/12, *Backaldrin Österreich The Kornspitz Company v. Pfahnl Backmittel*, ECLI:EU:C:2014:130.

166 Case *RFU and Nike v. Cotton Traders*, 2002 ETMR 861, mentioned by Cornish et al. (n 24) 726, at fn 265.

167 See opinions of AG Colomer in C-404/02 *Nichols plc v. Registrar of Trade Marks*, ECLI:EU:C:2004:30, para 43 in fine; and AG Jacobs C-329/02P *SAT.1 SatellitenFernsehen GmbH v. OHIM*, ECLI:EU:C:2004:143, para 23.

168 C-517/99 *Merz & Krell ...*, ECLI:EU:C:2001:510, paras 24–28. The mark at issue was the word ‘Bravo’ filed for ‘writing implements’. It was also irrelevant whether such a sign was used as an advertising slogan, an indication of quality or an incitement to purchase (paras 40–41).

with descriptive signs, it was held that customary signs may only designate the goods/services at issue, understood so as to convey a looser link with them.¹⁶⁹ Importantly, and by contrast with descriptiveness, the timeline for assessing customariness does not consider potential developments, that is, whether traders in the future will still need such generic features. The CJEU asks for proof that the sign has already gained a generic meaning. Another difference, this time against US law, is that a trade mark found generic under US law can never be registered/protected,¹⁷⁰ whereas in the EU acquired distinctiveness renders a customary sign registrable.

2.1.2.3. *Public interest and distinctiveness*

The main refusal ground pertaining to lack of distinctive character embedded in Art. 3(1)(b) of the First Directive¹⁷¹ raises most of the criticisms about inadequate and incoherent interpretations of the notion of 'public interest'. In earlier years of CJEU practice, this ground was frequently invoked together with objections of descriptiveness and/or customariness and/or even functionality. The effect was frequently confusing legal argumentation, which could be regarded as a consequence of the overlapping nature of these provisions.¹⁷² However, the CJEU has emphasized the autonomous character of the distinctiveness requirement, reflected also by a separate understanding of the public interest rationale, which was read in direct connection with the essential function of a mark. Trade marks devoid of distinctive character are denied protection because of their incapacity to guarantee consumers the specific origin of the marked products by enabling them to distinguish the goods/services of one entity from those of another without any risk of confusion.¹⁷³ This principle was set apart from the interpretation of public interest adopted for descriptive signs.¹⁷⁴ More precisely, in relation to most of the signs (words, figurative,

169 Bently et al. (n 24) 1004 refers to AG Opinion in *Merz & Krell* ECLI:EU:C:2001:40, para 50 which implied that the term 'designation' did not mean a description or a specific degree of association between sign and goods/services.

170 Rochelle Cooper Dreyfuss, 'Expressive Genericity: Trademarks as Language in the Pepsi Generation' (1990) *Notre Dame L. Rev.* 397 <http://scholarship.law.nd.edu/ndlr/vol65/iss3/1>; Lisa Ramsey, 'Descriptive Trademarks and the First Amendment', *San Diego Legal Studies Paper No 06-13*, May 2005 <http://ssrn.com/abstract=728572> 1006-1008; 1021-1024; Steven Weber, 'Trademarks and Genericness: Loss of a Mark to the Public Domain through Its Transformation into a Generic Term' (1990) *17 W. St U. L. Rev.* 415.

171 Currently Art. 4(1)(b)TMD.

172 In practice the fact that the judiciary body laid down arguments related to legal grounds formerly unmentioned in the plea raised procedural objections over impairing a party's right to a fair hearing, more Keeling, 'About Kinetic Watches ...', 140-145.

173 C-102/77 *Hoffmann-La Roche v. Centrafarm* EU:C:1978:108; Joined Cases C-456/01 P and C-457/01 P *Henkel v. OHIM* EU:C:2004:258, para 48; C-329/02 P *SAT.1 Satelliten-Fernsehen GmbH v. OHIM*, paras 25-28 and 36.

174 This issue of interrelation was not obvious; for instance AG *Colomer* in C-102/07 *Adidas AG and Adidas Benelux BV v. Marca Mode CV & others*, opined that the principle of

shapes), the CJEU rejected the possibility to take into account a 'need to keep free' for the benefit of other traders, although, as previously noted, German or UK practice had considered an availability requirement for denying protection to certain signs, raising anti-competitive effects. The EU judiciary carefully refrained from taking market alternatives into account as a factor of assessment. Even when reference was made to signs commonly used in trade or to existing products from competitors, the CJEU consequently clarified that it was for the purpose of verifying the intrinsic characteristics of the sign, in its distinctiveness capacity.¹⁷⁵

The only exception to interpreting the distinctiveness standard through the availability need concerns the registration of colours per se (i.e. without spatial delimitation). The landmark case *Libertel* brought attention to a theory of scarcity by emphasizing the risk of a 'small number of trade mark registrations for certain services or goods' 'exhausting the entire range of colours available'; thus registration on behalf of one trader would constitute an 'unjustified competitive advantage' incompatible with the principle of undistorted competition.¹⁷⁶ The risk of an 'extensive monopoly' was particularly expressed in the context of a large number of goods/services mentioned in a registration demand. On closer look these statements may sound too general. The opposite could also be argued, namely that the range of colours is practically infinite – speaking here about hues – and that competition embarrassment might occur only in rare situations, namely for particular industries with specific needs for using certain hue(s) of colour(s) for certain type of goods/services. Unfortunately the Court refrained from requiring market proofs to demonstrate the possible competitive interests of a particular industry. This issue will be revisited further in this book.

The *Libertel* judgment was followed by a more flexible case-line towards registering combinations of colours; however critical attention was paid to colours claimed in abstract, for use in 'every conceivable form'. Reiterating the risk of unduly restricting other traders, the CJEU has required a systematic, uniform arrangement of colours with precise determination of the subject-matter.¹⁷⁷ Recently the CJEU has taken a stricter approach and upheld the invalidity of the *Red Bull* blue and silver trade mark.¹⁷⁸ The GC (General Court) reluctantly stated that the mere indication of a ratio of two colours (here blue

availability applies equally to descriptiveness, distinctiveness and functionality grounds, EU:C:2008:14, para 44.

175 For example, eight variants of stand-up pouches (packaging) for fruit drinks were not sufficiently unusual to be perceived by average consumer as an indication of specific commercial origin, see C-173/04 P *Deutsche SiSi-Werke GmbH & Co. Betriebs KG v. OHIM*, EU:C:2006:20, paras 60–69.

176 C-104/01 *Libertel Groep BV and Benelux-Merkenbureau* (conc. orange colour filed for telecommunication goods and services), EU:C:2003:244, paras 52–60.

177 C-49/02 *Heidelberger Bauchemie*, EU:C:2004:384, paras 41–42.

178 C-124/18P *Red Bull v. EUIPO & Optimum Mark sp. z o.o.*, EU:C:2019:641.

and silver), such as ‘approximately 50%–50%’ or ‘in equal proportion’, for any arrangement with open spatial position did not satisfy the requirement of a sufficiently clear and precise graphical representation and could not enable consumers to repeat with certainty a purchase experience.¹⁷⁹

2.1.3. *Some concluding remarks*

The concept of ‘public interest’ lacks a uniform understanding across all the absolute grounds of refusal pertaining to descriptiveness, genericness, and distinctiveness. In addition, the CJEU only applies an interpretation related to ‘availability needs’ with respect to descriptiveness and distinctiveness of colour marks. From the systemic point of view, such an inconsistent approach is difficult to understand, that is, why is an indistinctive, basic shape or a generic word less plausibly needed by other traders than a descriptive or colour sign? (See also 2.3 and Chapters 7–8.)

Even when considering the availability need, the CJEU does not adopt a viewpoint adjusted to market realia. CJEU argumentation has trouble when attempting to accommodate two contradictory stages. The first stage is when a descriptive/non-distinctive sign is denied protection due to the current or future availability needs of market actors. The second stage relates to the intensive use of that sign by its owner in order to reach the turning point of establishing acquired distinctiveness. As a result, the interests of other traders become eclipsed; moreover, according to the CJEU’s current approach, such interests are not factored into the overall assessment of acquired distinctiveness. The scholarship opines that it is one thing to let the market decide when a descriptive or other inherently non-distinctive sign becomes a registrable trade mark, but something else entirely to raise the necessity of taking into account the position of other traders.¹⁸⁰ Unfortunately, the CJEU has consequently refrained from using market parameters for the purpose of assessing refusal grounds pertaining to distinctiveness. For instance, concerning descriptive or generic signs, it would have been useful to take into account such factors as the number of traders with an actual interest in keeping the sign free, and the extent of alternative signs that denote/describe, sometimes in a common manner, the same product characteristics.¹⁸¹ As elaborated in 7.3.1, US genericness practice has used market-orientated criteria to assess whether a market stakeholder would be better off with or without trade mark protection of an

179 T-101/15 & T-102/15, *Red Bull*, EU:T:2017:852, paras 38–90.

180 Jennifer Davis, ‘Promoting the Public Interest and the European Trade Mark Directive: A Contradictory Approach’ (2013) 14 ERA Forum Journal of the Academy of European Law 117, 120. About difficulties in dealing with a ‘hierarchy of public interests’ at different market stages see Philips (n 25) 395.

181 C51/10 P *Agencja Wydawnicza Technopol v. OHIM* (conc. numeral sign ‘1000’ used for periodical with crossword puzzles), EU:C:2011:139, paras 39–40, discussed by Davis, *ibidem* 123.

alleged generic sign. Such guidance could be analogically implemented into the examination of EU refusal grounds pertaining to descriptiveness, and/or genericness, and/or distinctiveness.

As part of the interpretation of the criterion of ‘public interest’ for distinctiveness purposes ties into competition aspects, this criterion cannot properly serve to delineate the assessment of a trade mark’s registrability from the realm of functionality refusal grounds, which are also centred on enhancing market competition (see below). Additional layers of intersection between the assessment of functionality and that of distinctiveness refusal grounds result from the representation and categorization of the sign, as filed, and from specifics of the EU proceedings framework. The latter plays a role as to the choice and scope of control concerning the registrability of a sign, that is, distinctiveness v. functionality (Chapter 5).

2.2. The ‘public interest’ rationale of functional trade marks in the light of the CJEU

2.2.1. *Beginning with technical functionality*

The *Philips* case concerned the shape of a rotary shaver, challenged as being necessary to obtain a technical function, pursuant to Art. 3(1)(e) first 2 of First Directive. The CJEU first defined the rationale of the entirety of Art. 3(1)(e) as to ‘prevent trade mark protection from granting its proprietor a monopoly on technical solutions or functional characteristics of a product which a user is likely to seek in the products of competitors’.¹⁸² Historically, this principle was perceived as being congruent with the statements of the Explanatory Memorandum of the European Commission to a proposal on the First Directive.¹⁸³ In *Philips*, the CJEU specified this aim as being to prevent the expansion of trade mark protection ‘beyond signs which serve to distinguish’ goods/services, but which incorporate a technical functionality needed by competitors.¹⁸⁴ This statement placed functionality within the realm of signs with multiple meanings. Doubts followed over whether a functional sign means a general incapacity to be a badge of origin, or if the exclusion applies to a sign with additional messages besides source identification when its registration generates adverse effects on competition.¹⁸⁵ One commentator

182 C-299/99, *Philips v. Remington*, EU:C:2002:377, para 78.

183 ‘New Trade Mark System for the Community’, E.C. Bull. Supp. 5/1980, p. 57, stating that ‘the shape of goods will not be refused registration unless the fact of registration would make it possible for an undertaking to monopolize that shape to the detriment of its competitors and of consumers’.

184 C-299/99, para 78.

185 Alison Firth, Ellen Gredley, Spyros Maniatis, ‘Shapes as Trade Marks: Public Policy, Functional Consideration and Consumer Perception’ (2001) 23(2) EIPR 86, 88, notice that these are ‘situations where the signal emitted by the shape conveys the wrong kind of message’

opined that the ability of a sign to have ‘split personalities and functions’ makes it capable of fulfilling the requirements of protection set by different IP regimes, which is how the phenomenon of cumulative protection generally occurs.¹⁸⁶ Therefore, the rationale of functional exclusions should mean more than a simple anti-cumulation rule. In *Philips*, the CJEU elaborated upon the purpose of technical functionality to keep unregistered a shape whose essential characteristics perform a technical function in order to give free access to all (competitors) which would like to supply products ‘incorporating such a function’ and are limited in the choice of ‘technical solution’(s) to incorporate ‘such a function’.¹⁸⁷ These words sound unclear on whether the exclusion targets identical or similar functionality. The *Philips* case rather implied a need for access to different shapes/configurations performing the same technical function.

The aforementioned competition rationale was tied to another important aspect of the ‘public interest’, namely the interdiction of using trade marks as means of perpetuating legal exclusivity over technical solutions. *Philips*’s history of lapsed patents made such a case. In the Opinion to the *Philips* judgment, AG *Ruiz-Jarabo* focused on the balance of interests between conferring legal exclusivity as reward for innovation and enabling free access to results to foster further development. The AG saw the technical exception mostly as a demarcation criterion between different IPRs related to technical subject-matter, whilst patent law constituted the primary regime of protection.¹⁸⁸ This explains the AG’s reference to the design exception of features solely dictated by the product’s technical function, although, as argued in 1.4., the rationale for the latter is slightly different. As designs and patents are both time restricted, the aim of design functionality is to prevent design protection becoming a shortcut and substituting for patent protection.

A significant continuation that consolidated the scope of technical functionality was brought by the litigation over the trade mark status of *Lego*’s red brick. The CJEU reiterated several arguments from *Philips* and highlighted the purpose of technical functionality ‘to help establish a healthy and fair system of competition’.¹⁸⁹ The ‘public interest’ was refined in relation to the specific character of the technical solution incorporated in the brick, which was found to be the ‘technically preferable solution for the category of goods concerned’.¹⁹⁰ This would justify the interest of competitors in leaving the sign unprotected, otherwise they are unable to place on the market shapes ‘constituting a real alternative,

although it is not about the incapability of being a mark, but about the ‘overriding public interest’ in keeping such signs free.

186 Uma Suthersanen, ‘The European Court of Justice in *Philips v. Remington* – Trade Marks and Market Freedom’ 2003 IPQ 266–267.

187 C-299/99 *Philips* para 79.

188 C-299/99 *Philips*, Opinion of AG Ruiz-Jarabo, EU:C:2001:52, paras 31–32.

189 C-48/09P *Lego Juris v. OHIM & Mega Brands* ECLI:EU:C:2010:516, para 44.

190 The application for registration was for goods of class 28, inter alia ‘for games and playthings’.

that is to say, shapes which are not similar and which are nevertheless attractive to the consumer from a functional perspective'.¹⁹¹ These words seem to reflect the aim of giving consumers a choice of substitutable products, which matches the concept of 'real market' alternatives. What remains unclear is the extent of (dis)similarity of configuration between products remaining within the ambit of functionality. Does it cover (dis)similar shapes incorporating the same technical solution (as in *Philips*), or does it extend to (dis)similar shapes with different technical solutions, but nevertheless representing a less 'real market alternative(s)'? The author reads the *Lego* judgment within the latter, broader perspective.

AG *Mengozzi's* opinion to *Lego* offered an interesting view on technical functionality, as its pro-competition focus suggested the need to 'compare other compatible market options' and evaluate the alternative shapes within the needs for 'interoperability' and 'availability'.¹⁹² Absent additional clarification, the AG referred to a US functionality approach, namely that of preventing the grant of an industrial property right if it leads to a 'significant non-reputation related disadvantage' for competitors.¹⁹³ These words originate from the US *Qualitex* judgment¹⁹⁴ which dealt with the aesthetic, not technical, functionality of a colour per se. The *Qualitex* standard was mentioned also by *TrafFix*,¹⁹⁵ a landmark US judgment on technical functionality (Chapter 3), referenced by the AG several times. Although the AG perhaps skirted some US nuances, his interpretation addressed the technical functionality of the *Lego* brick. This approach reflects a more flexible understanding of competition rationale than the clear-cut delineation that denies the possibility of trade mark protection after a lapsed patent, or design/utility models. The interdiction of subsequent cumulation raises difficult issues. Does it operate only for identical subject-matter, or does it extend to products of different appearance? Where does the border lie – which kind of differences make another product a 'real' alternative to consumers, eliminating doubts of competition embarrassment to allow trade mark protection? Chapters 4 and 6 elaborate further.

These parts of the AG's *Mengozzi* argumentation were not followed by the CJEU in *Lego* or any subsequent technical functionality cases. In the judgment concerning the *Rubik's* cube – its inner mechanism having been also subject to a patent – the CJEU repeated the anti-monopoly rationale in the context of separating trade marks from patents.¹⁹⁶ However, AG Szpunar presented an enlarged pro-competition approach to apply to all functional exclusions. The AG opined that

Art. 7(1)(e) of Regulation No 207/2009 serve[d] to avoid a situation in which registration of a shape — by reserving the exclusive right to the

191 C-48/09P, para 60.

192 C-48/09P *Lego Juris*, Opinion, EU:C:2010:41, paras 55, 61, 74.

193 *Ibidem* 74.

194 *Qualitex Co v. Jacobson Prods Co*, 514 US 159 (1995).

195 *TrafFix Devices v. Marketing Displays*, 532 US 23 (2001).

196 C-30/15 P *Simba Toys GmbH v. EUIPO*, EU:C:2016:849, para 39. Similarly, C-337/12 P to C-340/12 P *Pi-Design ... v. Yoshida ... & OHIM*, EU:C:2014:129.

basic features of goods essential to competing effectively on the market concerned — would make it possible to obtain an unfair competitive advantage. That would lead to an undermining of the purpose of the system of trade mark protection.¹⁹⁷

The AG had previously expressed this view in the case of the *TrippTrapp* chair, whose ergonomic, broadly speaking utilitarian aspects were challenged as resulting from the nature of the goods and as increasing substantially the value of the goods.¹⁹⁸ This approach to public interest shares similarities with the AG's opinion in *Lego*, in which the key issue constituted the risk of an unfair advantage over competitors. In such cases, the resulting query consists of finding the exact scope of features needed by competitors and the circumstances of an existing or possible unfair competition advantage which might result from granting and exercising a trade mark right.

Interestingly, in a later case concerning the trade mark eligibility of the four-fingered (chocolate) *KitKat* bar, the CJEU took a lenient approach concerning the functionality resulting from the process of manufacturing the goods. It was stated that '[f]rom the consumer's perspective, the manner in which the goods function is decisive and their method of manufacture is not important'.¹⁹⁹ Setting aside some critical remarks against such a restrictive way of interpreting the notion of a sign 'necessary to obtain a technical result' (Chapter 6),²⁰⁰ it may be stated that CJEU focuses not on the direct interest of competitors, but on the reflection of their interests in consumer needs, by asking what a user (here a consumer) is likely to seek in the 'goods of competitors'. This may be again rephrased as ensuring consumers' access to available substitutes, a matter still open to further judicial scrutiny.

As concerns the functional exclusion pertaining to signs resulting from the nature of goods, the *Hauck* case²⁰¹ represents a landmark judgment adopting an enhanced market competition approach. The CJEU concluded that this exclusion covers essential characteristics of a sign, inherent to the generic function(s) of the product and 'which consumers may be looking for in the products of competitors'.²⁰² The Court closely followed the AG opinion which attempted to read functionality in a broader context, oriented more to economics and market effects (Chapter 4). AG *Szpunar* described the category of functional characteristics sought by consumers as being 'in economic terms ... features of a shape for which there is no equally good substitute (perfect

197 C-30/15 P *Simba Toys*, Opinion of AG Szpunar, EU:C:2016:350, para 32.

198 C-205/13 *Hauck*, EU:C:2014:322, para 33.

199 C-215/14 *Société ... Nestlé v. Cadbury* EU:C:2015:604, para 55.

200 In US law, an important line of jurisprudence interprets technical/utilitarian functionality with regard to the methods of production and/or costs determining the choice of certain appearance (features).

201 C-205/13 *Hauck*.

202 *Ibidem* para 27.

substitute feature). ... It would result in the trade mark proprietor obtaining a significant advantage which would have an unfavourable effect on the structure of competition on the market concerned?²⁰³ The same approach was extended to aesthetic functionality.

The technical functionality rationale set out in the *Philips* and *Lego* judgments was re-affirmed in the *Gömböc* case²⁰⁴ (concerning a self-righting toy shape) – however, the CJEU did not develop the topic of public interest, but restrained itself to matters of legal interpretation (Chapters 6–8). Interestingly, in the parallel *Brompton* case (concerning the copyrightability of a bicycle with technical features covered by an expired patent) AG *Campos Sanchez-Bordona* amply discussed IPR overlaps and the role that functionality exclusion should play towards trade marks, designs and copyright.²⁰⁵ The AG clearly favoured a holistic view of functionality across IP regimes, similar to a noticeable trend in US scholarship (Chapter 3.3.). In *Brompton* AG's suggestion was to analogically apply on copyright grounds the trade mark functionality guidance of *Philips* and *Lego*,²⁰⁶ whilst noting the congruence between trade marks and design functionality rules.²⁰⁷ Again, the CJEU did not elaborate on these aspects, yet future practice will enhance the meaning and purpose of functionality across the IP system.

2.2.2. *The uplifting of aesthetic functionality*

The legal bar pertaining to shapes, or other product features, giving 'substantial value' to goods has created the most controversial case-law to date. This is not only because of difficulties in implementing objective assessment criteria, but also because of the impossibility of conferring a rationale which can achieve coherence within the IP structure and match the market conditions of consumer purchase decisions. Due to the legislative influence of Benelux (1.3.1.), it is worth examining how the Benelux preparatory acts explained the purpose of this exclusion. The aim was 'to impose a certain limitation to the possibility that trade mark protection coincides with the protection that it can be derived from copyright or design rights. ... When considering the nature of goods, this "attractiveness value" is of major importance, the chosen shape cannot be eligible for the protection as trademark.'²⁰⁸ Aesthetic functionality was not targeted to exclude all cumulation between trade marks and

203 C-205/13 *Hauck*, Opinion, EU:C:2014:322 paras 57–58.

204 C-237/19 *Gömböc v. Szellemi*, EU:C:2020:296, paras 25–26.

205 C-833/18, *Brompton Bicycle*, Opinion EU:C:2020:79, paras 39–45, 47–56.

206 *Ibidem* paras 66–76.

207 The seminal ruling interpreting functionality in EU design law was C-395/16 *Doceram*, EU:C:2018:172.

208 Explanatory Memorandum to Benelux Uniform Trade Mark Law, as quoted by Charles Gielen, 'Substantial Value Rule: How it Came into Being and Why it Should Be Abolished' (2014) 36(3) EIPR 165.

copyright/designs – a thing hardly sustainable today in view of the range of protectable subject-matter and the requirements of protection of design and copyright law – instead it was intended to operate restrictively under specific circumstances.²⁰⁹ Such circumstances relate, on one hand, to the category of goods for which the sign is used, and, on the other hand, to those factors which determine an increased value (read attractiveness) in consumer eyes. The criteria for assessing aesthetic functionality are discussed in more detail in Chapter 8, whilst the remarks below touch upon the way CJEU has understood its rationale over the years.

Starting with the recent *Gömböc* case, the CJEU read the rationale of aesthetic functionality through the lens of competition – the benefits from the attractiveness of a product should not belong to a single undertaking, otherwise it ‘would distort the conditions of competition on the market concerned’.²¹⁰ The aim of separating trade marks from designs/copyright was recognized, yet clearly downplayed. The *Gömböc* shape had already enjoyed design protection. However, the CJEU acknowledged the coexistence and autonomy of designs and trade marks, by noticing that there was no hierarchy in-between and no blanket prohibition on subsequent trade mark protection.²¹¹ This reasoning concurs with the rationale of EU design protection (1.4.), which is not to cover aesthetic creations, as shown by the EUIPO database. Therefore, a prior design does not say much about the ‘substantial value’ of a product to imply aesthetic functionality of trade marks. The *Gömböc* judgment tilts the balance in favour of a pro-competition approach, although in the early years the CJEU/GC considered using aesthetic functionality as a means of preventing the cumulation of rights.

One of the first GC decisions concerned the pencil shaped *Bang & Olufsen* loudspeaker. The GC did not offer a distinct explanation for the rationale underlying the aesthetic functionality provision and instead took the view that it was the same as for technical functionality.²¹² The reference to the AG opinion in *Philips*, that is, the need for delineation between trade marks and other time-limited forms of protection, served to formulate its purpose generally and vaguely as ‘to prevent the granting of a monopoly on those shapes’.²¹³

209 For accepting the imminence of overlaps between trademarks and copyright/designs, see Alison Firth, ‘Signs, Surfaces, Shapes and Structures – The Protection of Product Design Under Trade Mark Law’ in Jan Rosén (ed.) *European Intellectual Property Law* (Elgar 2016) 289; Estelle Derclaye, ‘Overlapping Rights’ in Rochelle Dreyfuss, Justine Pila (eds.) *The Oxford Handbook of Intellectual Property* (OUP 2018) 632–641; Craig Mende, Belinda Isaac, ‘When Copyright and Trademark Rights Overlap’ in Neil Wilkof, Shamnad Basheer (eds.) *Overlapping Intellectual Property Rights* (OUP 2012) 138–144.

210 C-237/19 *Gömböc*, para 40.

211 *Ibidem* paras 51–55.

212 T-508/11 *Bang & Olufsen v. OHIM*, EU:T:2011:575, para 64.

213 *Ibidem* paras 65–66.

Later on, the *Hauck* judgment reaffirmed the anti-cumulation rationale, adding further guidance that aesthetic functionality may encompass products performing both aesthetic (decorative) and ‘other essential functions’ (practical) – the in casu chair’s ergonomic construction was highly valued by consumers.²¹⁴ The CJEU’s broadening of aesthetic functionality to products with multiple functions was a confirmation of the AG *Szpunar* Opinion, which focused on preventing an ‘unfair market advantage which does not result from competition based on price and quality’, but resulting from an enhanced attractiveness of goods that ‘strongly influence consumer preferences’.²¹⁵

An important issue that to date has not been properly dealt with by the CJEU concerns how reputation (goodwill) attached to a trade mark may impact the finding of aesthetic functionality. In the opinion to the *Louboutin* case, AG *Szpunar* expressed the view that the characteristics of goods linked to the reputation of a trade mark – which would raise consumer appeal even in case of an unattractive shape per se – should not be factored to determine the substantial increase of value in the eyes of consumers.²¹⁶ This would permit keeping the scope of aesthetic functionality within reasonable limits, so as not to collide with other important interests of a trade mark holder, namely building a trade mark’s goodwill. The CJEU in *Louboutin* did not address this topic either, although it would have been interesting to see if their position had changed over time. In an earlier case concerning the three-dimensional appearance of a stitching motif applied to a pair of jeans – considered a ‘shape’ for the purpose of this provision – the referral submitted to the CJEU asked whether the attractiveness of a shape could derive from the recognition of a trade mark.²¹⁷ The facts were such that intensive advertising campaigns had ensured great commercial success for the trousers because of their association with the reputed trade mark ‘G-Star’, although the latter mark did not form part of the shape. The CJEU avoided considering this recognition as enhancing the value of goods, yet transposed it within the discussion of acquiring distinctive character. The whole controversy therefore shifted to the well-known rule that distinctiveness acquired through use could never help to overcome the interdiction against registering a functional sign.²¹⁸ As has already been critically noticed in the legal doctrine, the CJEU missed an opportunity to engage in a thorough discussion about the attractive characteristics of a product that may function as commercial origin indicators.²¹⁹ A similar role is played by red soles on high-heeled shoes, which most women perceive as originating

214 C-205/13 *Hauck*, para 31.

215 C-205/13 *Hauck*, Opinion, paras 79–80.

216 C-163/16 *Christian Louboutin*, Opinion, EU:C:2018:64, para 54.

217 C-371/06 *Benetton Group v. G-Star International*, EU:C:2007:542, paras 13–20.

218 *Ibidem* paras 24–28.

219 Annette Kur, “Cumulation of Rights with Regard to Three-Dimensional Shapes” – Two Exemplary Studies’ in Alexandre Cruquenaire, Severine Dusollier (eds.) *Le cumul des droits intellectuels* (Larcier 2009) 164–165.

from *Louboutin*, a highly reputed luxury brand. The AG tended to acknowledge the incentive facet of a trade mark registration, namely stimulating the rights holder to invest in the sign, affix it to products of consistent quality, engage in promotion strategies, and build a trade mark with a reputation. Whilst consumers are getting to know and appreciate a trade mark, functionality should not block this natural path of acquiring and enhancing recognition. The remaining question is how to fix the balance between the interests of a trade mark's holder and the public interest to keep (aesthetically) functional features unprotected and in the public domain. If this is a question of setting out a hierarchy among different interests, to date the jurisprudence has not offered much guidance. These aspects will be revisited further within a 'law and economics' perspective (Chapter 4.3.).

Perhaps the most constructive view is to focus on the competition rationale and consumer choice. An interesting AG's second Opinion to *Louboutin* discussed the dynamism of consumer preferences that can evolve over time – depending on 'external circumstances', such as changing fashion trends – implying that it could have an impact on the assessment of aesthetic functionality.²²⁰ This thought calls for further consideration, also in the context of technical/utilitarian functionality (Chapters 6 to 7), although the CJEU did not elaborate on the issue. Such a pro-competitive logic for the aesthetic rationale seems acceptable, however, the difficulty consists of setting out boundaries to an exclusion that may cover any product enjoying marketing success and consumer appeal. Nowadays most products are publicly displayed in a way encouraging purchase. What 'increasing value' may – and should – mean for the purpose of an exception of trade mark protection requires careful interpretation of the legal concepts together with and insight into the market specificity of a given case (Chapter 8). This may help achieve a sensible judgment over the risk of impairing competition.

2.3. In search of appropriate methods of solving the difficulties of trade mark overprotection

The current CJEU jurisprudence on distinctiveness matters has generally faced severe criticism.²²¹ The issue is not only about the 'formalistic' view taken on public interest, adopted to distinctly preserve the sphere of application of the provisions concerning distinctiveness, descriptiveness, and customariness. The current standards for acquiring distinctiveness through use seem somehow unsuitable, even unpredictable. It was argued that the CJEU's assumption that consumers are not in the habit of perceiving these kinds of signs as indicators of commercial origin, that is, the principal impediment towards their registrability may not be sustained by empirical psychological studies describing

220 C-163/16 *Louboutin*, Opinion of AG Szpunar EU:C:2018:64, paras 47–52.

221 Extensively Kur, 'Absolute Grounds for Refusal' in Kur, Senftleben (n 24) paras 4.61–75.

models of consumer perceptions.²²² By contrast, consumers may be easily educated to perceive any sign as a badge of origin if it is consequently presented in a ‘typical trademark-use context’.²²³ This would favour and facilitate entities with the financial means to engage in long-term strategies, working inherently non-distinctive signs into consumers’ minds until they acquire secondary meaning and qualify for registration, with possible detrimental effects on the public interest. As previously discussed, an open-ended definition of public interest may consider a market-orientated, economic perspective of consumers and competitors’ needs, which has found a certain element of confirmation in some CJEU judgments. However, there are instances that call for a broader view, encompassing societal and cultural needs. Sometimes, trade marks, should mean more than ‘a potential economic asset’,²²⁴ and such needs are outlined below.

A ‘need to keep free’ is advocated for signs with so-called ‘inherently valuable expression’, which have already conveyed to the public an established set of messages – product information, ideas, emotions, and so on – where monopolization via registration on behalf of one holder would heavily restrict or deprive free use and communication of these messages in various areas of activity.²²⁵ A sign embedding this kind of additional ‘expressive’ layer preserves it alongside the ‘signalling’ function²²⁶ required to distinguish goods/services in trade. Thus, the need to refer to a sign’s expressive meaning for business communication (such as descriptive use, honest referential use, comparative advertisement), and beyond (e.g. for news, reviews, critics, parody, education, and artistic activities) could risk claims of trade mark infringement, especially in cases of marks with reputations protected outside the realm of specialization. This would advocate for keeping such signs in free use in the public domain, as it is perceived that this kind of societal impairment runs against the optimal balance, presumably set between rights holders’ incentives and benefits versus societal restrictions and costs.²²⁷

Even more negative effects could result from registering works of art or important cultural assets, most of these having fallen into the public domain

222 On the inconsistencies between the findings of cognitive psychology about consumer decision-making and the application by courts of the normative model of consumer, Kimberlee Weatherall, ‘The Consumer as the Empirical Measure of Trade Mark Law’ (2017) 80(1) *Modern Law Review* 57, 61–80.

223 Lotte Anemaet, ‘The Public Domain Is Under Pressure – Why We Should Not Rely on Empirical Data When Assessing Trademark Distinctiveness’ (2016) *IIC*, 314–23.

224 Jennifer Davis, ‘A European Constitution for IPRs? Competition, Trade Marks and Culturally Significant Signs’ (2004) 41(4) *Common Market Law Review* 1005, 370.

225 Lisa Ramsey, ‘Non-Traditional Trademarks and Inherently Valuable Expression’, in Calboli, Senftleben (n 22) 338–341. The given examples match aesthetic functionality such as a vodka bottle shaped on a Yucatan skull, environmentally friendly green-coloured packaging, pina colada scent for a ukulele (see Chapter 8).

226 This is a classification operated by Dreyfuss (n 170) 400–401.

227 Dreyfuss, *ibidem* 405–412; Ramsey, ‘Non-Traditional ...’ *ibidem* 358–360.

after previously being protected by copyright.²²⁸ Concerns are voiced about a ‘corrosive effect on cultural follow-on innovation’, as any creation, even in artistic domains, must develop on – or in contrast to – known pieces from the public domain, which makes the further possibility to copy and adapt so important.²²⁹ There is also a serious risk of depreciation, or ‘desecration’,²³⁰ of an artwork by commercial use as a trademark in relation to goods/services, and sometimes in a context incompatible with the values originally expressed by the work and/or intended by its author.

The legal doctrine offers different solutions for concerns of trade mark overlaps and overprotection, some of them being relevant for the interaction with functionality (see also 3.4.). The main focus is on ex ante control, namely on carefully scrutinizing the circumstances and legal grounds applied at the registration stage. Another issue, which goes beyond the scope of this analysis, concerns ways of calibrating the scope of already conferred protection, by reducing the enforceability of a trade mark right by means of defences and exceptions. At the opposite pole lies an approach denying a general social interest in keeping certain signs free, by arguing that the existing closed system of refusal/invalidity grounds suffices to rule out questionable registrations – ultimately, the possibility of acquiring distinctiveness through use would legally prevail, as distinctive character has to be measured in relation to specific goods /services and dynamically evolves over years.²³¹ Such an approach apparently does not see the ‘availability need’ as a separate and essential factor for assessing distinctiveness, let alone the thorny hypothesis that there may be public interests put above acquiring distinctiveness, such as functionality or public order grounds.

A radical choice may consist in ex ante denying any possibility to overlap trade mark rights with (already) copyrighted material, because – in breach

228 Senfleben, *The Copyright/Trademark* (n 125) 283 ff.; Irene Calboli, ‘Overlapping Rights: The Negative Effects of Trademarking Creative Works’ in Susy Frankel, Daniel Gervais (eds.) *The Evolution and Equilibrium of Copyright in the Digital Age* (CUP 2014) 52; Robert Tomkiewicz, *Intellectual Property Overlaps: Theory, Strategies, Solutions* (Routledge 2012) 93–96; Viva R. Moffat, ‘Mutant Copyrights and Backdoor Patents: The Problem of Overlapping Intellectual Property Protection’ (2004) 19 *Berkeley Tech L. J.* 1473, 1520–1521, referring for the concept of ‘mutant copyright’ to *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23 (2003).

229 Martin Senfleben, ‘A Clash of Culture and Commerce: Non-Traditional Marks and the Impediment of Cyclic Cultural Innovation’, in Calboli, Senfleben (n 22) 315–318; Martin Senfleben, ‘Viegeland and the Status of Cultural Concerns in Trade Mark Law – The EFTA Court Develops More Effective Tools for the Preservation of Public Domain’ (2017) IIC, 683.

230 Judgement of EFTA Court of 6 April 2017 in *Viegeland* case E-5/16, paras 92–93, at www.eftacourt.int/uploads/tx_nvcases/5_16_Judgment_EN.pdf

231 Tobias C. Jehoram, *Constant v. Nispen*, Tony Huydecoper, *European Trade Mark Law: Community Trademark Law and Harmonized National Trademark Law* (Kluwer Law International 2010), taking as a starting point the principle that ‘there are no such free marks’, 164–165. Similarly, Philips, ‘Trade mark ...’ (n 25) 392.

of the copyright bargain – concurrent or sequential trade mark protection impedes fair use and the creation of derivative works, as well as foreclosing public access to works that have otherwise fallen into the public domain.²³² Implementing this option in the EU would be difficult, considering the lax requirements of protection against a broad notion of protectable creative (artistic) works which may cover almost all categories of signs,²³³ perhaps with minimal impact on words and combinations of.²³⁴ Significantly, the CJEU recently confirmed the principle of cumulation of copyright with other forms of protection, autonomously and upon terms set by each IP regime, and refrained from clear-cut prohibitions or delineations between IPRs, even in case of works consisting of partially technical subject-matter.²³⁵ In addition, looking at registration proceedings, it is not clear whether an administrative body of EU members is – or should be – capable of appreciating ex ante the alleged copyrightability of a sign. As concerns an item (sign) already subject to copyright protection, the existing refusal ground related to collision with a third party's earlier right, for example copyright, designs, persona rights, and so on, has a relative nature. It is invoked only after a demand filed by interested parties during opposition or nullity actions. An approach requiring categorical exclusion of copyrightable signs would need modifications to the rules of substantive and administrative law, which would have to concur with the two-tiered harmonized structure of the EUTM system and the fact that the trade mark directives kept the specifics of national proceedings within the autonomy of Member States. In such conditions, the aesthetic functionality prohibition examined ex ante may, at least in some cases, help achieve the goal of preventing overlap with copyrightable works.

Amongst less radical choices to deal de lege lata with overlaps, one option concerns excluding trade mark protection upfront, but only in relation to certain categories of signs. For those embedding cultural, symbolic value, another refusal ground, namely that of public order and morality, is considered to be more robust and a better fit than the currently invoked objections of lack of distinctiveness and/or functionality.²³⁶ This view concurs with the pre-harmonized German practice, which applied the public policy refusal ground

232 Calboli (n 228) 70–76.

233 Eleonora Rosati, *Copyright and the Court of Justice of the European Union* (OUP 2019) 91–93, discussing the difficulties of accepting taste (see C-310/17 *Levola Hengelo v. Smilde Food*, EU:C:2018:899) and perfumes as copyrightable work; for a discussion of harmonized originality standards, and implicit of a subject-matter; more in Eleonora Rosati, *Originality in EU Copyright. Full Harmonization through Case Law* (Elgar 2013).

234 However, fanciful, surprising terms and slogans may qualify for copyright, too.

235 C-683/17 *Cofemel v. G-Star*, EU:C:2019:721 (works of industrial art: women apparel), discussed by Annette Kur, 'Unité De L'Art Is Here to Stay – Cofemel and Its Consequences' (9 December 2019). Max Planck Institute for Innovation & Competition Research Paper No. 19–16 <https://ssrn.com/abstract=3500845>. See Case C-833/18, *Brompton Bicycle*, EU:C:2020:461 (bicycle with a patented folding system).

236 Senftleben, 'A Clash ...' (Calboli, Senftleben n 22) 334–336.

to refrain from granting in casu 'telle quelle' protection. It is worth noting that EUTM public order/morality provisions have never been interpreted so as to cover the negative aspects of cumulative protection between trade marks and copyright.²³⁷ The future will show if the guidance of the EFTA (European Free Trade Association) Court in the *Viegeland* case finds wider support across EU practice. Another, less stringent, approach suggests 'an outright exclusion of cultural signs, descriptive signs, abstract colours',²³⁸ and perhaps also certain shapes and non-traditional marks. This may be difficult to implement, though, because in light of EUTM and TRIPS adopting a 'negative' definition of trade mark is inconceivable for these types of signs, leaving aside the need for even more precision. It is also less feasible to implement another distinct refusal ground with normative criteria suitable to catch and exclude all these categories.

In the author's opinion, the difficulty with trade mark registrations with adverse effects on public access is that they do not constitute a homogeneous category. In consequence, there are different kinds of public interests, with different addressees, that need to be considered. Some signs are famous artistic works, universally acclaimed, the status of which matters for humankind's heritage in general; others concern basic product features which are important for trade (consumers and competitors, taken individually); others are just words, but enriched with specific meanings that should be freely referred to by all and in all areas of activity, and so on. Finding a legal instrument capable to solve 'en gros' all kind of distortions stemming from trademarking useful/desirable signs is unlikely. More likely, the solution will be found in developing a patchworked structure of legal means which selectively – but sometimes also cumulatively – can address all these varied circumstances.

De lege lata functionality may effectively work – in certain instances – as an obstacle against overlapping rights, be it at the interface with technical subject-matter or with valuable, creative works. Obviously, transposing it into practice depends on interpretation of the normative criteria set out in the functional provisions. By contrast, the public order ground – unless the CJEU judiciary suddenly changes their perspective – would rather preserve its exceptional character. Even if its current scope of application expanded, it would encompass unique (unusual) subject-matter pertaining to valuable creations, without being capable of solving all questionable interfaces between trade marks and copyrightable works or designs.

237 Until now this ground has meant to protect public security and physical integrity of citizens, safeguarding legal/social order, morality; banning vulgarity or any kind of messages insulting or affecting human dignity, EUIPO Trade Mark Guidelines sect. 4 ch. 7 <https://guidelines.euipo.europa.eu/1935303/1785746/trade-mark-guidelines/chapter-7-trade-marks-contrary-to-public-policy-or-acceptable-principles-of-morality-article-7-1-f-eutm-r>. Consult Senfleben, *The Copyright/Trademark* (n 125) 338–339.

238 Anemaet (n 223) 332.

One leading voice strongly recommends adopting a so-called ‘integrated approach’ for the assessment of grounds pertaining to distinctiveness, descriptiveness and customariness, which would focus on ‘all interests involved’ (i.e. consumers, the general public, competitors).²³⁹ Such an analysis departs from the CJEU’s current formalistic practice of strictly operating with different notions of public interest, which especially refrains from considering the availability need of competitors when examining the distinctiveness requirement. Professor Kur emphasizes that the objective of achieving a ‘balanced protection system’ calls for putting the normative concept of distinctive character into the perspective of carefully scrutinizing whether the registration at issue may adversely affect competition. These considerations are formulated in respect to a specific kind of sign, namely those ‘that are in (relatively) scarce supply’.²⁴⁰ Admittedly, this category may cover not only descriptive signs and abstract colours, but especially signs consisting of product features, which would equally fall within the scope of functional exclusions. Implementing a competition dimension into the assessment of distinctive character would require somehow adapting CJEU guidance by strengthening the role of competition and market-orientated factors. It would seem necessary to examine, for instance, how many competitors are already using the same or (quasi) similar signs; whether these products are commercially feasible substitutes; and perhaps also to operate with a flexible, that is, proportionally dependent, percentage for consumers’ perception and recognition, all of this being rather ostensibly denied (or neglected) by current CJEU practice.

The essential query remains whether, and by what means, it is possible to navigate (and optimally delineate) the different scales of competition needs for the purpose of assessing distinctive character and functionality. There is an obvious dynamism to the role of public interest (i.e. ‘a need to keep free’) for distinctiveness purposes which makes registration possible on the grounds of acquired secondary meaning, a path that cannot be followed by a sign caught by functional exclusions. Putting competitors’/consumers’ interests into the equation for solving both kinds of refusal grounds, it is frustrating, albeit impossible, to use a ‘public interests’ rationale as a clear-cut criterion for splitting the sphere of application between distinctiveness and functionality grounds. If the guidance were to operate with different facets of ‘public interest’, technical functionality could arguably be *prima facie* solved upon the imperative to separate trade mark protection from patents. However, as Chapter 6 argues, usually there is not a perfect correlation between the subject-matter of a

239 Kur, ‘Absolute Grounds for Refusal’ in Kur, *Senftleben* (n 24) paras 4.72(citation)–4.74, 4.204.

240 Kur, *ibidem* paras 4.71(in fine)–4.72. Similarly, Hendler suggested a ‘unified test of distinctiveness’, aiming at restricting registration of signs ‘that impact inordinately’ on public domain, *Handler* (n 146) 312. However such a broadly defined category of signs will require specification at a certain point.

functional trade mark and that of a patent/utility model, which raises queries as to the extent that products of different appearance incorporating similar functionality may be relevant for conferring/denying trade mark protection. Aesthetic functionality is also more amenable to following the approach of exploring competition impairment through the criterion of substitutability of goods (Chapters 4 and 8).

It is reasonable to assume that the solution for delineating the sphere of application between functionality and distinctiveness matters may surface from a restrictive interpretation of the normative concepts embedded in the functional provisions. By the same token, functionality should preserve the status of a legal ground to be analysed at a prior stage of examination. The following chapters will address possible criteria for consolidation into autonomous technical and aesthetic functionality tests.

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3 The US legal framework of functionality doctrine

Areas of convergence with EU law

Concerns about the anti-competitive effects of ‘monopolizing’ product features under trade mark protection is not a distinct issue of the EUTM. Similar legal policies, rules, and interpretation have shaped a robust body of judiciary and doctrinal guidelines that constitute US functionality doctrine. Its rich case-law, spanning a wide spectrum of product features from various industries, represents a useful and valuable comparative input to the assessment of EU functional trade marks.²⁴¹ This chapter aims at capturing the particular aspects of the US functionality tests that could serve functionality matters under the EUTM. Following a short introduction, the chapter chronologically describes how functionality has developed in tight correlation with fostering the protection of trade dress. The discussion aims primarily at familiarizing the reader with the various US functionality tests, while a more focused analysis of chosen cases will follow in Chapters 6 to 8, dedicated to the interpretation of the EUTM functionality provisions. The final remarks discuss the challenges currently faced by the US functionality doctrine and their analogical relevance for the EUTM.

3.1. Brief introduction to the US functionality doctrine

When compared to the EUTM, the US legal framework of functionality is far more complex. Currently, functionality rules are codified and perform clearly statutory roles. In a similar manner to the EUTM, functionality constitutes an autonomous ground for refusing the registration of trade marks on the Principal Register;²⁴² it also addresses marks on the Supplemental Register²⁴³ which is a distinctive feature of US law.²⁴⁴ However, unlike in the EUTM, functionality represents a defence which a defendant can raise against infringement claims

241 For a parallel between EU and US functionality doctrine: Lavinia Brancusi, ‘Alternative Products as a Factor in Determining the Functionality of Trade Marks – How the Criteria of US Functionality Doctrine Could Be Applied in EU Law’ in Susy Frankel (ed.) *Is Intellectual Property Pluralism Functional?* (Elgar 2019) 178–205.

242 § 2 (15 U.S.C. § 1052) (e)(5) of US Trade Mark Law (i.e. a systematized version of Lanham Act).

243 More on this distinction in 3.2.3.

244 § 23 (15 U.S.C. § 1091) (c) of US Trade Mark Law.

over a registered trade mark.²⁴⁵ Additionally, a plaintiff wishing to establish infringement of unregistered trade dress has to prove the non-functionality of the trade dress at issue.²⁴⁶

The major difference with the EUTM lies in the judicial roots of the US functionality doctrine, which is correlated with the development of US trade mark law.²⁴⁷ Functionality's origins can be traced back to the end of the 19th century, to the first attempts of protecting against copying of the appearance of goods/services which performed the source identification function typical for a trade mark. As the appearance of products and services – or, more generally, of how the business was conducted, known legally under the term 'trade dress'²⁴⁸ – was usually unregistered (or not easily registrable), the first legal ground for its protection constituted unfair competition law. Functionality consisted of a body of rules that emerged from courts' judgments and applied without mandatory statute in order to settle the conditions in which competitors were allowed, or not, to copy rival product features. As a rule, the monopolization of features was acceptable in patent or copyright law, but the fact of becoming a by-product of unfair competition law was problematic. A prevailing judicial theory said 'that there exist[ed] a fundamental right to compete through imitation of a competitor's product, which right can only be temporarily denied by the patent or copyright laws.'²⁴⁹ These two kinds of exclusive (monopoly) rights enjoyed a privileged position in US law, due to their constitutional source stemming from the Constitution's Intellectual Property (IP) Clause.²⁵⁰ This provision authorized the Congress to enact federal legislation in order '[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries'. As legal exclusivity was temporarily justified by the 'utilitarian' purposes attached to patent and copyright law of promoting and rewarding innovation and creation, after the exclusivity period items should fall into public to be freely copied by all.²⁵¹ The basic aim of trade mark law was entirely different – not to reward ingenuity and creativity,

245 § 33 (15 U.S.C. § 1115) (b) 8) in rel. to § 32 (15 U.S.C. § 1114). Functionality applies even to incontestable trade marks, i.e. which right to use has become incontestable after five years of consecutive use from the date of the federal registration.

246 § 43 (15 U.S.C. § 1125) (a) (3).

247 Mark P. McKenna, 'The Normative Foundations of Trademark Law' (2013) 82 *Notre Dame L. Rev.* 1839, 1858–1943, amply demonstrating that 19th-century trade mark law was quite limited in its ambit, protecting against improper diversion of trade, and represented a 'species of the broader law of unfair competition' (1860).

248 Darius Gambino, William Bartow, *Trade Dress: Evolution, Strategy, Practice* (OUP 2013) 21–40 with numerous examples.

249 *In re Morton-Norwich Products, Inc.*, 671 F.2d 1332, 1336 (C.C.P.A. 1982) with further references.

250 U.S. CONST. Art. I, § 8, cl. 8.

251 Jeanne C. Fromer, 'Expressive Incentives in Intellectual Property' (2012) 98 *Va L. Rev.* 1745, 1750–1753 discussing the utilitarian theory of IP rights.

but to prevent the use of confusingly similar signs as to source indicator and stimulate the development of goodwill.²⁵² This was the reason why the US Supreme Court did not accept that the source of trade mark law could originate from the Constitution's IP Clause.²⁵³ In exchange, the statutory ground for enacting trade mark legislation became the Commerce Clause of the US Constitution which regulated interstate commerce.²⁵⁴

These essential differences between trade mark law and patents and copyright have underlined the substance of functionality doctrine, which has arisen at the intersection of two major needs: ensuring free access to unprotected public domain subject-matter, whilst preserving the boundaries of patent law – which translates into the principle of ‘free competition’ – and protecting the source-identifying appearance of goods/services against deceit in order to maintain the standard of ‘fair competition’.²⁵⁵ However, what was supposed to be protected as a badge of origin – a notable economic reason for helping consumers find the exact goods/services they looked for (Chapter 4) – has most frequently transformed into the quest to ‘monopolize’ on behalf of one entity a bundle of product features that usually performed multiple purposes, needed to various extents by other market actors. Some features were related to the technical/utilitarian realm of how a product worked, others contained creative or culturally important aspects, whose grounds for protection should be resolved under other legal regimes, better suited to addressing the production of creative content (e.g. design or copyright). Unlike trade dress protection, all other regimes contained some time limitation, which helped safeguarding the boundaries of the public domain. Professor Frankel once emphasized – using the example of Barbie and other works of important commercial value – that various products of intellectual property have become ‘pervasive’ in our modern culture and ‘have driven the boundaries of the law outwards creating more and more protection’.²⁵⁶ This triggers questions about the issue of permissible use, the benefits of creating ‘derivative’ products, and the legal certainty of the freedom to operate needed by other market stakeholders.

252 Dinwoodie (n 27) 628–630. For an argument about the creative layer of trade marks residing especially in building a distinctive, unique link between sign and goods, Jeanne Fromer, ‘The Role of Creativity in Trademark Law’ (2011) 86 *Notre Dame L. Rev.* 1885.

253 As discussed by Theodore Davis, ‘Copying in the Shadow of Constitution: The Rational Limits of Trade Dress Protection’ (1996) 2408 *Minnesota Law Review* 595, 605–607, the first Trade Marks Acts of 1870 and 1876 were invalidated by the Supreme Court decision in *United States v. Steffens (The Trade-Mark Cases)*, 100 U.S. 82 (1879), as improperly passed upon the IP Clause of US Constitution, due to different purposes of patent and copyright, as opposed to trade mark law.

254 US Const. Art. I, § 8, cl. 3 mentioned ‘Commerce with foreign Nations, and among the several States, and with the Indian Tribes’.

255 Samuel Oddi, ‘The Functions of “Functionality” in Trademark Law’ (1985) 22 *Hous. L. Rev.* 925, 926–927.

256 Susy Frankel, ‘From Barbie to Renoir: Intellectual Property and Culture’ (2010) 41(1) *Va. U. of Well. L. Rev.*, 10–12.

The fact that trade names and trade dress so easily mutated into other forms of protection constituted one of the core issues that functionality aimed to redress. Functionality had to accommodate the interplay of different IP regimes, especially on the axis between trade marks, patents, and/or utility designs, but also copyright, and to install a hierarchy of goals and values, in a quest to determine the most appropriate and equitable judiciary solutions. Additionally, in some instances functionality captured the clash between the dispositions of patent federal law and common law unfair competition rules, or local statutes which accepted some form of protection for trade dress. The specificity of the US judiciary system, also resulting from the country's federal structure, has shaped the functionality doctrine by ensuring its breadth, variety, and flexibility. The differences in interpretation adopted by appellate courts have frequently created splits between circuits and urged the Supreme Court to clarify and refine the functionality 'tests'.

Interestingly for European lawyers, the US concept of trade dress can be surprisingly broad, reaching beyond the realm of non-traditional signs. As literally understood, 'trade dress' means the way a product is 'dressed up', usually through labelling and packaging. However, its scope actually covers 'the total image and overall appearance'²⁵⁷ of a product, defined by any design features of shape, dimensions, positioning, colour, graphics, texture, or any combination of these. Protectable trade dress has even been constituted by restaurant décor, sales techniques²⁵⁸ or golf course design.²⁵⁹ Similarly to the EUTM, trade dress is currently protected under the basic requirements of inherent distinctiveness or acquired secondary meaning.²⁶⁰ The protection of trade dress is also confronted with similar problems: the expansion of subject-matter encroaching with other IPRs, the risk of easily granting protection which circumvents the stricter requirements of other IP regimes, an unbalanced IP system with detrimental effects upon market competition. For these reasons, functionality may appear to be a corrective tool to help navigation through troubled waters where there is too much protection of too many product features. The following part discusses the troubled history of US functionality, deeply intertwined with the changing conditions of protecting trade dress.

257 *Qualitex v. Jacobson Prods.*, 514 U.S. 159 (1995); *Wal-Mart Stores v. Samara Brothers* 529 U.S. 205 (2000).

258 Joseph Feretti, 'Product Design Trade Dress Hits the Wall ... Mart: Wal-Mart v. Samara Brothers' (2002) 42 IDEA 417, 422–430 referring, inter alia, *John Harland v. Clarke Checks* 711 F.2d 966, 980 (11th Cir. 1983) conc. block checks, and *Two Pesos v. Taco Cabana*, 505 U.S. 763, 23 U.S.P.Q.2d 1081 (1992) conc. the appearance and motif of a Mexican restaurant.

259 *Pebble Beach v. Tour 18I*, 942 F. Supp. 1513 (S.D. Tex. 1996) discussed by Ryan Steinman, 'Taking a Mulligan: Moral Rights and the Art of Golf Course Design' (2011) 51 IDEA 47, 57–58.

260 15 U.S.C. § 1051 et seq.

3.2. Developing the functionality doctrine within the protection of trade dress

The development of the US functionality doctrine closely followed the paths of protecting trade dress. It first emerged under unfair competition grounds and slowly migrated to the registration of trade marks. Adopting a historic, chronological discourse is necessary here to illustrate the evolution of the meaning and roles that functionality doctrine has had to play over the years.

3.2.1. *The early years*

At the turning point of the 19th and 20th centuries, trade dress was not considered a proper subject-matter of a trade mark, either for registration or enforcement.²⁶¹ Jurisprudence confined registration to so-called ‘technical trade marks’, a category meant to encompass a ‘name, symbol, figure, letter, form or device’, while consequently dismissing descriptive words and trade dress.²⁶² One argument, known also to European legal systems, was that a product itself could not act as source indicator due to the intrinsic inseparability between the symbol and the marked object.²⁶³ Other justifications focused on utility and the assumption that consumers looked for products of a particular utility, whilst a product or its utility could not stand for a trade mark.²⁶⁴ This went further, stating that for useful, functional product features, trade marks should not serve as ‘an avenue to escape the limitations of the patent law’ (3.1 and 3.3.),²⁶⁵ so functional trade dress had been routinely denied registration.²⁶⁶

Although unregistered but used in trade, the appearance of a product could become a distinctive source-identifier of goods/services while the undertakings developed goodwill. A need emerged for protection against deceit (false

261 Trade Marks Act of 1905 and 1920 had limited scope and offered little guidance on protectable subject-matter, leaving untouched the issues of product configuration or functionality, see Th. Davis (n 253) 605–607; McKenna, ‘The Normative’ (n 247) 1862, retracing the distinction between ‘technical trade marks’ (protectable in actions of trade mark infringement) and ‘trade names’ (only unfair competition claims) to old English cases.

262 Glynn Lunney, ‘The Trade Dress Emperor’s New Clothes: Why Trade Dress Does Not Belong on the Principal Register (2000) 51 Hastings L.J. 1131, quoting at 1141 *McLean v. Fleming*, 96 U.S. 245 (1879) and other cases.

263 As noted in the case *Davis v. Davis*, 27 F.490 (C.C.D. Mass. 1886) 492, ‘the merchandise itself, or any method of arranging various packages, can[not] be registered as a trademark. ... the trademark must be something other than, and separate form, the merchandise’, referred by Caitlin Canahai, Mark McKenna, ‘The Case Against Product Configuration Trade Dress’ in Graeme Dinwoodie, Mark Janis (eds.) *Trademark Law and Theory: Reform of Trademark Law* (Elgar 2021), at <http://ssrn.com/abstract=3336366>, 1, fn 1–3 with further references.

264 Oddi (n 255) 930, referring *In re Denison Mfg Co*, 39 F.2d 720 (CCPA 1930).

265 Amy Cohen, ‘Following the Direction of Traffix: Trade Dress Law and Functionality Revisited’ (2010) IDEA 593, 600–602 quoting *Herz v. Loewenstein*, 40 App. D.C. 277 (D.C. Cir 1913) 278 conc. toothpicks packaging with a corrugated embossing on margins, and also *In re Oneida Community*, 41 App. D.C. 260 (D.C. Cir 1913) conc. an O-shaped film against corrosion covering spoon bowls.

266 Th. Davis (n 253) 608, fn 55 mentioning case-law from 1928–1939.

representation causing the likelihood of confusion) and the proper avenue of protection constituted unfair competition torts of palming/passing off.²⁶⁷ However, conferring an injunction against copying trade dress collided with the jurisprudential principle: ‘everyone has a right to copy publicly accessible ideas not protected by copyright or patent’ (3.1).²⁶⁸ Jurisprudence mostly articulated the fear of extending a monopoly over product features, patentable or already patented, via trade dress protection.²⁶⁹ Functionality doctrine arose as an instrument to reconcile these conflicting interests. The courts strove to gauge the extent that certain product features were necessary to be copied. If the need was defined as to sell the ‘same’ product, courts adopted a ‘product-level market’ inquiry that concentrated on the features that consumers exactly wished to find when purchasing goods, without looking into possible alternatives.²⁷⁰ By contrast, if the necessity was to effectively compete in a broader market, defined by the type/class of goods, then the assessment considered the availability of viable equivalents.²⁷¹ In both situations, the solution mitigating consumer confusion was to require newcomers to distinguish their products through wording and labelling, which made functionality a limited defense to be raised by defendants, thus not an absolute bar to plaintiffs’ claims, as applied in modern law.²⁷²

267 Mark Alan Thurmon, ‘The Rise and Fall of Trademark’s Law Functionality Doctrine’, (2004) 56 Fla. L. Rev. 244, 258–259, mentioning the requirements of a palming off claim: distinctiveness of plaintiff’s product (features); defendant’s copying of these distinctive features; consumers confused by the appearance of defendant’s product.

268 Robert Bone, ‘Trademark Functionality Reexamined’ (2015) vol. 7(1) Journal of Legal Analysis 183, 192. Professor Bone explains that, apart from patents or copyright, the right to copy was a natural, common law right, originating from the belief that an ‘idea’ made publicly accessible, which the owner couldn’t control by excluding others, became the ‘common property’ of everyone (at 194). Regarding ‘the design idea that the feature embodied’, ‘everyone, including competitors ... had the right to copy product features in all their specific detail’ – at 192, referring *Upjohn v. Wm. S. Merrell Chem.*, 269 F.209, 210–211 (6th Cir. 1920); *Daniel v. Electric Hose & Rubber*, 231 F.827, 833–834 (3rd Cir. 1916).

269 Seminal case *Kellogg v. National Biscuit* 305 U.S. 111 (1938) conc. a pillow-shaped biscuit ‘Shredded Wheat’, produced under a lapsed patent, at <https://supreme.justia.com/cases/federal/us/305/111/>, discussed by Dinwoodie, Janis (n 36) 108–111.

270 Bone (n 268) calls it an ‘intrinsic necessity’ determined by how necessary was the feature at issue for plaintiff’s product (at 198–199), and reads it through the rulings: *George G. Fox Co v. Glyn* (191 Mass. 344 (1906) (at 196–08) conc. copying bread’s appearance; *Flagg Mfg. Co. v. Holway*, 178 Mass. 83, 59 N.E.667 (1901) (at 199) conc. copying shape and arrangement of zithers; *Pope Auto. Merch v. McCrum-Howell*, 191 F.979 (7th Cir. 1911) (at 200) conc. a vacuum cleaner.

271 Thurmon (n 267) discusses at 268 – through a ‘competitive need rationale’ defined by the availability of ‘equally effective alternatives’ – some of the cases revisited by prof. Bone, together with *Lektro-Shave v. General Shaver*, 19 F. Supp. 843 (D. Conn. 1937) conc. the shape and housing of a cutter and at 270 the case of *McGill Manufacturing v. Leviton Manufacturing* 43 F.2d 607 (E.D.N.Y. 1930) conc. lighting fixtures.

272 Thurmon, *ibidem* 270–271. See also *Crescent Tool v. Kilborn & Bishop*, 247 F. 299 (1917) ‘The proper meaning of the phrase “nonfunctional” is only this: That in such cases the injunction is usually confined to nonessential elements, since these are usually enough to distinguish the goods, and are the least burdensome for the defendant to change’ at <https://cite.case.law/f/247/299/>

3.2.2. *The changing landscape of the First Restatement of Torts*

In 1938, the American Law Institute published the First Restatement of Torts,²⁷³ which reaffirmed unfair competition law as the appropriate ground for trade dress protection against copying via the newly named tort of ‘unprivileged imitation’.²⁷⁴ This document set up a broader standard of functionality. Paragraph §742 defined a feature as functional ‘if it affects their purpose, action or performance, or the facility or economy of processing, handling or using them; it is non-functional if it does not have any of such effects’.²⁷⁵ In practice, the focus shifted from the distinction between essential and unnecessary copying to the query of whether the feature ‘affected’, that is, ‘contributed’ to the aforementioned purposes. The effect was a broadening of the scope of functionality to encompass any utilitarian meaning, that is, product performance, manufacture, aspect of use, and marketing. Many courts followed the Restatement literally and rejected the assessment based on competitive necessity and relevance of substitutes,²⁷⁶ although an initial commentary to §742 implied that a determination of functionality should verify whether the prohibition of imitation by a trade mark holder will ‘deprive them [i.e. competitors, LB] of something which will substantially hinder them in competition’.²⁷⁷

An important input, touching upon IP cumulation, came from the conflict between federal patent law and unfair competition state law. The Supreme Court cast two famous rulings, known as the ‘Supremacy Clause cases’ or ‘*Sears-Compco*’ doctrine, in which federal law was said to preempt patent-like claims based on unfair competition.²⁷⁸ Twenty years later, a significant addition

273 Restatements is not a statute according to European standards, but a comprehensive collection of guidance in a particular field of law, more www.ali.org/publications/show/torts/

274 Requirements regarding the imitated product were: non-functionality; acquired distinctiveness; likelihood of confusion, see ‘The Public Interest and the Right to Copy Nonfunctional Product Features’, (1977) 19 Wm. & Mary L. Rev. 317, 320 fn 17, at <https://scholarship.law.wm.edu/wmlr/vol19/iss2/7>

275 Arthur L. Goodhart, ‘Restatement of the Law of Torts Volume III: A comparison between American and English Law’ (1941) 89 University of Pennsylvania Law Review 265, 304 fn 169, at http://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=9122&context=penn_law_review

276 ‘Unfair Competition and the Doctrine of Functionality’ (1964) 64 Colum. L. Rev. 544, discussing at: p. 563 elements of a toggle clamp found functional upon expired patent, amply quoting prior case-law *West Point Mfg. v. Detroit Stamping* 122 F. Supp. 741 (E.D. Mich. 1954), *rev’d*, 222 F.2d 581 (6th Cir.), *cert. denied*, 350 U.S. 840 (1955) at <https://casetext.com/case/west-point-mfg-co-v-detroit-stamping-co>; p. 562 size and shape of a marking device limited by its function in *Speedry Prods. v. Dri Mark Prods.* 271 F.2d 646 (2d Cir. 1959); p. 560 pink colour functional because of psychosomatic effects in *Norwich Pharmacal v. Sterling Drug*, 167 F. Supp. 427 (N.D.N.Y. 1958), *rev’d*, 271 F.2d 569 (2d Cir. 1959), *cert. denied*, 362 U.S. 919 (1960).

277 As noted in *In re Morton-Norwich Products, Inc.*, 671 F.2d 1332, 1340 (C.C.P.A. 1982).

278 *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225 (1964) conc. a lamp <https://supreme.justia.com/cases/federal/us/376/225/> and *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964) conc. a lighting fixture <https://supreme.justia.com/cases/federal/>

was brought by the *Bonito Boats* judgment, in which the Supreme Court ruled that federal patent law preempted a Florida statute that prohibited the process of copying by direct moulding of unpatented boat hulls and thus restricted the free access via reverse-engineering to product functional features otherwise belonging in the public domain.²⁷⁹ Although it did not concern the case at hand, the Court highlighted the need to counterbalance the preemption rules with the rationale of unfair competition law of preventing consumer confusion, by stating that ‘the application of *Sears* and *Compco* to non-functional aspects of a product which have been shown to identify a source must take account of competing federal policies in this regard’.²⁸⁰ These rulings fuelled the doctrinal discussion around the nature of the ‘right to copy’ – whether it was constitutionally or prudentially founded – and its scope – whether it encompassed unpatented designs (product configurations) or those covered by an expired patent, or those subject to expired utility patents.²⁸¹ As professor Dinwoodie emphasized, the ‘supremacy clause’ was not meant to solve all types of conflict in IP law. Most notably, any preemption arguments could not apply to the conflict between federal patent law and federal trade mark law (meaning here the Lanham Act, below). In such cases, the proper solution would involve balancing the conflicting interests and the public policies underlining each regime, in order to foster an interpretation that accommodates the effects of both statutes.²⁸² Significantly, the supremacy clause could also not serve as a legal basis to prohibit all protection to unpatented yet source-identifying product features.²⁸³

3.2.3. *The Lanham Act, and trade dress becoming registerable on the federal register*

In 1946, Congress enacted the Lanham Act, a trade mark statute subject to several amendments, which provided federal registration on the Principal Register with nation-wide substantive rights for ‘any word, name, symbol, or device, or

us/376/234/. Both cases dealt with copying articles from the public domain because prior patents had been invalidated. The Supreme Court acknowledged the possibility to require precautionary steps through labelling in order to avoid source-misleading cf. Cohen (2010) 617–618; Thurmon (n 267) 309–311. In 1964 several prominent scholars (such as Ralph Brown, Milton Handler, Walter Derenberg) commented on those judgments in the collective study Ralph Brown et al., ‘Product Simulation: A Right or A Wrong’, 1964 Colum. L. Rev. 1179, at https://digitalcommons.law.yale.edu/fss_papers/2721/

279 *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 168 (1989) <https://caselaw.findlaw.com/us-supreme-court/489/141.html>

280 Ibidem 166–167. The Florida statute granted patent-like protection without requiring any consumer confusion or breach of trust/secretcy which would have been the prerequisites of initiating a claim under the law of unfair competition or trade secrets.

281 Amply discussed by Dinwoodie, (n 27) 621, 627–632, 717 fn 402, 712–718, who favoured a prudentially, conditional right to copy (i.e. to practice an expired patent) while prioritizing the safeguarding of patent system’s integrity.

282 Dinwoodie, *ibidem* 631–632.

283 Dinwoodie, *ibidem* 667.

any combination thereof' used for source identification of goods/services.²⁸⁴ Alternatively, for unregistered marks it provided federal unfair competition protection under section 43(a) of the statute.²⁸⁵ A Supplemental Register for protection equivalent to state or common law was introduced for subject-matter unregistrable on the Principle Register, but having such prospects in future (e.g. descriptive words). The register gathered 'marks' defined as 'any trademark, symbol, label, package, configuration of goods, name, word, slogan, phrase, surname, geographical name, numeral, or device or any combination of the forgoing'.²⁸⁶ These differences in statutory terminology were interpreted by certain scholars as direct proof that Congress did not envisage the protection of product configuration and packaging on the Principal Register, or intend to allow cross-registration between registers, while the Supplemental Register had a reduced ambit of simply recording a mark to facilitate its protection in those jurisdictions abroad that conferred trade mark protection.²⁸⁷

In the early post-Lanham years, the previous practice of denying registration to product features, due to incapacity of distinguishing goods/services or due to functionality issues, was maintained.²⁸⁸ But the critical turning point came in 1958, with the registration on the Principle Register of the Dimple scotch bottle during appellate proceedings in front of the Court of Customs and Patent Appeals (CCPA).²⁸⁹ The ruling marked a significant shift: from the dogmatic perspective of considering trade dress unregistrable subject-matter per se on the Principal Register, to the factual question of whether a bottle

284 Trademark Act of 1946, 60 Stat. 427, 428–429. Registration enabled federal infringement claims and several evidentiary benefits, such as presumption of ownership and validity, and incontestability after five years of continuous use. An important revision of 1998, known as 'Trademark Law Treaty Implementation Act' (Pub. L. No. 105–330, 112 Stat. 3064 (1998)) www.govinfo.gov/app/details/PLAW-105publ330 introduced functionality as a statutory ground for cancellation and a statutory defence against the infringement of incontestable trademarks.

285 Trademark Act of 1946, 60 Stat. 427, 441. A plaintiff had to prove that the trade dress is protectable (i.e. is distinctive) and had been infringed, more about section 43(a), Christopher Kellner, 'Rethinking the Procedural Treatment of Functionality: Confronting the Inseparability of Useful, Aesthetically Pleasing, and Source-Identifying Features of Product Designs' (1997) 46 *Emory L J* 913, 920–923.

286 Trademark Act of 1946, 60 Stat. 427, 435–436.

287 Glynn Lunney, 'Non Traditional Marks. The Error Costs of Making an Exception the Rule', in Calboli, Senftleben (n 22) 220–223; Lunney, 'Trade Dress ...' (n 262) 1139–1152. Professor Lunney argued that Lanham Act adopted the common law definition of 'technical trademark' set by the Trademark Act of 1905, with 'device' referring only to a 'coat of arms' or 'other heraldry', and 'symbol' only to 'emblem', so that federal registration should exclude package and product configuration.

288 *Ex parte Minnesota Mining & Manufacturing*, 92 U.S.P.Q. (BNA) 74 (1952) conc. shape of adhesive cellophane tape as unregistrable subject-matter, and *Sylvania Electric Products v. Dura Elec. Lamp* 247 F.2d 730 (3rd Cir. 1957) conc. invalidated functional flashbulbs with a blue dot used as a defect indicator, both discussed by Oddi (n 255) 933–934.

289 *Ex parte Haig & Haig, Ltd*, 118 USPQ 229 (Dec. Comm'r Pat. 1958).

shape falls within the trade mark definition of a ‘symbol or device’ and can act as source indicator, that is, be distinctive.²⁹⁰ However, uncertainty persisted over whether the relaxation of the eligibility standards applied only to containers, and in the following years the same CCPA continued to deny trade dress protection to product shape, mainly for functionality reasons.²⁹¹

The consolidation of the favourable turn towards protecting trade-dress came with the first recognition of federal unfair competition claims (based on section 43(a) of the Lanham Act) at the federal appellate level, in an infringement case concerning the appearance of a truck trailer.²⁹² As the arguments ontologically challenging the protectability of trade dress began to fade, the debate moved to issues of prerequisites of protection, namely, fulfilling the positive parameter of distinctiveness and avoiding the negative parameter of functionality.²⁹³ The period starting from 1980 has been marked by a series of influential rulings which have been instrumental in establishing the conditions and boundaries of trade dress protection to date.

3.2.4. *Consolidating the path of full trade dress protection and the uplifting of functionality*

The theoretic willingness to accept trade dress’s capability of being a trade mark²⁹⁴ did not prevent that courts faced difficulties in handling distinctiveness, and especially in finding inherent distinctiveness.

290 Critically Lunney, ‘Trade Dress ...’ (n 262) 1155–1156.

291 *In re Deister Concentrator*, 289 F.2d 496 (C.C.P.A. 1961), <https://law.justia.com/cases/federal/appellate-courts/F2/289/496/392223/>, denying registration despite secondary meaning to rhomboidal tables used for ore concentrating and coal cleaning, found ‘in essence utilitarian’; *In re Shakespeare*, 289 F.2d 506 (C.C.P.A. 1961) <https://law.justia.com/cases/federal/appellate-courts/F2/289/506/392572/>, denying registration to spiral markings of fishing rods, as resulting from a patented manufacturing process. In both cases Judge Giles Rich noticed: ‘The true basis of such holdings is not that they [the marks] cannot or do not indicate source to the purchasing public but that there is an overriding public policy of preventing their monopolization, of preserving the public right to copy’. By contrast, in *In re Mogen Davis*, 328 F.2d 925 (C.C.P.A. 1964) <https://law.justia.com/cases/federal/appellate-courts/F2/328/925/418780/> CCPA reversed PTO’s denial of registration by finding the shape ‘purely arbitrary’ while other containers could ‘equally well’ perform the same ‘incidental’ function of holding wine. Judge Rich posited that ‘[w]hether competition would in fact be hindered is really the crux of the matter. ... Others can meet any real or imagined demand for wine in decanter-type bottles ... without being in the least hampered in competition by inability to copy the Mogen David bottle design’.

292 *Truck Equipment Service v. Fruehauf. Corp* 536 F.2d 1210 (8th Circ. 1976).

293 Dinwoodie (n 27) 652–654 considers distinctiveness and functionality as ‘two corollaries to the foundational principle’ (of ontological neutrality of the subject-matter of a trade mark), whereas functionality plays the role of a ‘negative parameter’.

294 For approving the neutral categorization of trade marks, Jane C. Ginsburg, “‘See me, feel me, touch me, hear me, smell and taste me too’: I am a trademark – a US perspective” in Lionel Bently, Jennifer Davis, Jane C. Ginsburg (eds.) *Trade Marks and Brands: An Interdisciplinary Critique* (CUP 2011) 92–97.

As thoroughly examined by professor Dinwoodie, the methodology was initially influenced by the criteria of assessing word and figurative marks, which ultimately failed due to the complex structure of modern trade dress, its context of use, and the specific way its reached consumers.²⁹⁵ In 1992, the Supreme Court decided in the *Two Pesos* case concerning the unregistered décor of a Mexican restaurant that trade dress with established inherent distinctiveness may be enforced without proof of secondary meaning (acquired distinctiveness).²⁹⁶ This judgement, understood as a confirmation of trade dress's capability to be inherently distinctive, had a wide impact on facilitating not only the protection of unregistered trade dress on unfair competition law, but more generally, its registrability as a trade mark.²⁹⁷ Along this line, in 1995, the *Qualitex* case confirmed the registration of a colour per se, that is, a hue of golden green used in relation to dry-cleaning pressing pads²⁹⁸ (Chapter 8.2). However, this favourable trend was tempered in 2000 by the same Court in the *Wal-Mart* judgement²⁹⁹ concerning the protection of the overall appearance of a line of clothing. The Court's argumentation was based on the assumption that attaching a word to a product, or 'encasing it in a distinctive packaging' could be a badge of origin, thus inherently distinctive, however, product design or colour did not usually generate such consumer predisposition. Upon this distinction between product packaging and product design, the Court installed the rule that any features matching the category of product configuration or product design could be registered or enforced only upon the proof of acquired distinctiveness.

295 Graeme B. Dinwoodie, 'Reconceptualizing the Inherent Distinctiveness of Product Design Trade Dress' (1997) 75 N.C. L. Rev. 471, 485–516 discusses the yardstick test of *Abercrombie & Fitch Co. v. Hunting World*, 537 F.2d 4 (2d Cir. 1976) (pp. 485–487) – which introduced a classification of marks holding that for inherent distinctiveness a mark had to be either 'arbitrary', 'fanciful', or 'suggestive' in relation to the affixed goods – and the shortcomings of applying it to trade dress in *Chevron Chemical v. Voluntary Purchasing Groups* 659 F.2d 695,702 (Former 5th Cir. 1981) (pp. 508–511) – as well as the alternative test of *Seabrook Foods v. Bar-Well Foods* 568 F.2d 1342 (C.C.P.A. 1977) (pp. 512–516), which determined inherent distinctiveness by comparison to others designs from the field. The bottom line of the latter differentiated between 'a "common," basic shape or design, whether it [is] unique or unusual in a particular field, or whether it [is] a mere refinement of commonly-adopted and well-known forms of ornamentation for a particular class of goods viewed by the public as a dress or ornamentation for the goods' (p. 513 referring case-law). This kind of argumentation lies closely to the current EUTM approach to shapes.

296 *Two Pesos v. Taco Cabana*, 505 U.S. 763 (1992).

297 Famous registrations of non-traditional signs include the shape of the Coca-Cola bottle (reg. no. 696,147 of 12.04.1960); the sound of NBC's three chimes (reg. no. 523,616 of 4.4.1950), the scent of plumeria blossoms on sewing thread (reg. no. 916,522 of 13.07.1971) (July 13, 1971), *In re Clarke*, 17 U. S. P. Q. 2d 1238, 1240 (TTAB 1990). More examples in Jeffrey S. Edelstein, Cathy L. Lueders, 'Recent Developments in Trade Dress Infringement Law' (2000) 40 IDEA 105, 117–122.

298 *Qualitex v. Jacobson Prods.*, 514 U.S. 159 (1995) 165.

299 *Wal-Mart Stores v. Samara Brothers*, 529 US 205 (2000).

Complementarily, the doctrine of functionality was frequently applied in both registration proceedings and infringement litigation, but jurisprudence has been swinging between two opposite approaches.³⁰⁰ On one side, the ‘right to copy’ functional features applied to items that had fallen/were about to fall into the public domain after design/patent law protection expired. On the other side, functionality was measured by the ‘need’ of competitors to copy certain product features in order to compete effectively, that is, trade in viable alternatives.

The latter view seemed congruent with the Restatement (Third) of Unfair Competition of 1995, which maintained the place of functionality along the competitive necessity rationale. According to § 17

a design is <<functional>> for purposes of the rule stated in §16 if the design affords benefits in the manufacturing, marketing, or use of the goods or services with which the design is used, apart from any benefits attributable to the design’s significance as an indication of source, that are important to effective competition by others and that are not practically available through the use of alternative designs.

A commentator on an earlier draft read the last part of this definition as confirmation that functionality doctrine represented a balancing tool between trade mark protection and free competition such as to prevent the monopolization of ‘valuable’ design features raising unfair competitive advantages.³⁰¹ Functionality remained a prohibition to trade mark registration or protection,³⁰² but its legal effects were also considered as defining the ‘scope of permissible use’ of a trademark by a competitor who should freely copy functional features, regardless of their source-identification capacity.³⁰³ This approach preceded the 1998 amendment to the Lanham Act which made functionality a statutory infringement defence.³⁰⁴

In parallel with the guidance set forth by the Third Restatement, evolving market needs generated a series of landmark judgments that established the

300 Mark McKenna (n 27) 824–836.

301 Harvey S. Perlman, ‘The Restatement of the Law of Unfair Competition: A Work in Progress’ (1990) 80 Trademark Rep 461, 468 explaining these design features as ‘valued by consumers, not for ... identification’ but for enhancing ‘the beauty, efficiency, or cost of the product’.

302 Robert C. Denicola, Harvey S. Perlman, ‘A Foreword to the Symposium on the Restatement of Unfair Competition’ (1995–1996) 47(4) Art. 3 S.C. L. Rev. i, viii, noting that functionality ‘defines the permissible subject-matter of trademark protection’.

303 Paul J. Heald, ‘Filling Two Gaps in the Restatement (Third) of Unfair Competition: Mixed-Use Trademarks and the Problem with Vanna’ (1996) 47 S.C. L. Rev. 783, 796 referring the Reporters’ note to cmt. b of § 17.

304 Maury Audet, ‘Functionality Unanimously Trumps Incontestability after TLT Act and Wilhem Pudenz v. Littlefuse, Inc. ...?’ (2000) 40 IDEA 473, discussing functionality defence prior to its enactment.

functionality tests still currently in use. The following remarks briefly retrace the essential inputs of these cases, whilst in-depth details of interpretation are discussed within Chapters 6 to 8.

In *Morton-Norwich*³⁰⁵ the CCPA reversed the PTO's refusal to register on the Principal Register the configuration of a container of spray starch and remanded the case to be reexamined on distinctiveness. Judge Rich provided ample analysis of functionality, introducing the emblematic distinction between functionality *de facto* – that is, the utility intrinsic of any object performing a function – from functionality *de jure*, which expressed the degree of design utility that determined the scope of the legal prohibition.³⁰⁶ The Court articulated the functionality standard 'as not the *right* to slavishly copy articles which are not protected by patent or copyright, but the *need* to copy those articles, which is more properly termed the right to compete *effectively*.'³⁰⁷ The Court established a multi-factor test, including the availability of alternatives, to apply to utilitarian products.

Another important ruling of 1982 was *Inwood Laboratories v. Ives Laboratories* in which the Supreme Court reviewed the appellate grounds for contributory infringement of the appearance of a prescription drug, with a colours scheme adapted to different dosages, and favoured a turn to the right to copy.³⁰⁸ Functionality was not the object of direct analysis by the Supreme Court, however some *dicta* expressed in footnotes defined it as 'essential to the use or purpose of the article or ... affect[ing] the cost or quality of the article'.³⁰⁹ This reminded the wording of Restatement of 1938, especially that references to *Sears* and *Kellogg* judgements favoured a restrictive 'right to copy' approach (3.2.2.). Previously, the District Court held the capsules' colours and shapes functional because they represented a 'shorthand code' to pharmacists, doctors, and patients to correctly identify the drug and its dosage.³¹⁰ The *Inwood* functionality standard seemed distanced from *Morton Norwich*, as established functionality in an absolute way, without considering competitive necessity or the extent of competition foreclosure. Soon a query arose over whether *Inwood* represented a modification done on purpose of *Morton*

305 *In re Morton-Norwich Products, Inc.*, 671 F.2d 1332 (C.C.P.A. 1982).

306 *Ibidem* 1338. The judge rejected the arguments which contested the shape's capability to be a trade mark, by emphasizing that 'this is not a "configuration of goods" case but a "configuration of the container for the goods" case' (1336).

307 *Morton-Norwich*, *ibidem* 1339, 1340.

308 *Inwood Laboratories v. Ives Laboratories* 456 U.S. 844 (1982). The action was brought against the generic manufacturer of cyclandelate (a vasodilator) for the acts of pharmacists who, complying with prescription standards, were obliged to dispense capsules to consumers in bottles without initial labelling.

309 456 U. S. 850, fn 10, referring *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U. S. 225, 376 U. S. 232 (1964) and *Kellogg Co. v. National Biscuit Co.*, 305 U. S. 111, 305 U. S. 122 (1938).

310 The coloured scheme ensured safe administration, and maintained psychologically reassuring and proper therapeutic effects, especially in older patients, who reacted negatively to any change in a drug's appearance, 456 U.S. 853.

Norwich test, or just a Court's digression.³¹¹ Future case-law faced difficulties reconciling both tests or finding the arguments to choose between them.

The final change to the right to copy was consolidated by the Supreme Court's judgment in *TrafFix*,³¹² an infringement case of a technically configured product, that is, a dual-spring road design mechanism, the subject of a lapsed utility model. The Supreme Court reversed the 6th Circuit's dismissal of functionality objections which was based on the competitive necessity analysis, that is, the absence of disadvantages towards competitors.³¹³ The Court ruled that where a design is functional under the *Inwood* formulation, there was no need to proceed further to consider competitive necessity or inquire about secondary meaning. *TrafFix* judgement was read as a strong return to the right to copy approach, especially given that the Court emphasized the progressive role of copying items from the public domain, lacking patent or copyright protection³¹⁴ and ultimately placed functionality within the patent bargain context.³¹⁵

3.3. Where next for US functionality? Common concerns shared with the EU

Intricate, vast, dynamic – these epithets can barely illustrate the complex nature of the functionality doctrine. The difficulties of distinguishing between the different kinds of functional aspects of a product (such as those pertaining to utility or eye-appeal), choosing the adequate test, and conferring a coherent interpretation, should not minimize the role that functionality plays in US trade mark law. Its importance has been recently bolstered by various scholarships that have advocated a holistic approach, which reaffirms the meaning and operative capacity of functionality rules across different IPRs (design, trade mark, patent, copyright) in search of a proper balance across the IP system.³¹⁶

311 Harold R. Weinberg, 'Trademark Law, Functional Design Features, and the Trouble with *TrafFix*' (2001) 9 J. Intell. Prop. L. 1, 17–21; Andrew F. Halaby, '“The Trickiest Problem with Functionality” Revisited: A New Datum Prompts a Thought Experiment' (2007) 63 NYU Annual Survey of American Law 151, 167.

312 *TrafFix Devices v. Marketing Displays*, 532 U.S. 23 (2001).

313 6th Circuit adopted the approach of *Qualitex v. Jacobson Prods.*, 514 U.S. 159 (1995) 166, 170. By contrast in *TrafFix*, the Supreme Court considered that *Qualitex* test was confined to aesthetic functionality, especially in a case of a green colour without impact upon the use/purpose or cost/quality of the cleaning pads 532 U.S. 23 (2001) 24–26.

314 *TrafFix*, 29, reference to *Bonito Boats* 489 U.S. 141, 168 (1989) and the pre-emptive role of patent protection.

315 *TrafFix*, 34–35. The Court highlighted important differences between the Lanham Act and patent law, namely that it was not the purpose of trade mark law to reward innovation or an investment made in a functional trade dress to become a source identifier, nor should its effect be to encroach on the limited period of legal exclusivity, which remains the privilege of patent law.

316 Chronologically descending: Canahai, McKenna (n 28); Jeanne Fromer, Mark McKenna, 'Claiming Design' (2018) 167 University of Pennsylvania Law Review, 123; Buccafusco,

The requirement of a more coherent development of functionality doctrine within the IP environment is also relevant to the challenges currently faced by the EUTM (see 2.2 and 2.3).

3.3.1. *A holistic view of functionality within the IP system*

Functionality rules are said to perform a ‘screening’ task, aimed at channeling items with a blend of functional and non-functional elements at various degrees into dedicated legal regimes.³¹⁷ The choice of regime is usually determined legally, looking at the subject-matter and terms of protection; however, an additional economic dimension is useful to capture the tradeoff between the benefits conferred to right owners and the burdens/costs incurred by society, and specifically the effects upon market competition. Dogmatically, patent law stands for protecting function, at the other extreme copyright covers creative, artistic works, and in between the two, designs serve hybrid works, and trade marks protect source-identifiers, independent of creativity, novelty or non-obviousness. The main assumption is that no other regime than patents should protect function, thus preventing ‘backdoor’ patents. Historically, US law has preferred clear-cut demarcations, especially between copyright and patent law, and between utility and design patents,³¹⁸ and once even applied a doctrine of election, which required a person to choose only one form of protection for the given features.³¹⁹ Today, the IP landscape is blurred, as functional features can obtain copyright protection,³²⁰ the non-functionality standard of design

Lemley, Masur, ‘Intelligent ...’ (n 28); Lunney, ‘Non Traditional ...’ (n 287); Buccafusco, Lemley, ‘Functionality ...’ (n 28); Christopher Buccafusco, Jeanne C Fromer, ‘Forgetting Functionality’ (2017) 166 U. Pa. L. Rev. Online 119; McKenna, Sprigman (n 28); Sandra L Rierson, ‘Toward a More Coherent Doctrine of Trademark Genericism and Functionality: Focusing on Fair Competition’ (2017) 27 Fordham Intell Prop Media & Ent LJ 691; Jason J. Du Mont, Mark D. Janis, ‘Functionality in U.S. Design Patent & Community Design Law’ (30 April 2016). *Research Handbook on Design Law*, at <https://ssrn.com/abstract=2773070>; Mark A. Lemley, Mark P. McKenna, ‘Scope’ (2016) 57 Wm. & Mary L. Rev. 2197; Jeanne C. Fromer, Mark A. Lemley, ‘The Audience in Intellectual Property Infringement’, (2014) 112 Mich. L. Rev. 1251; Jason J. Du Mont, Mark D. Janis, ‘Functionality in Design Protection Systems’ (2012) 19 J Intell Prop L 261; Mark P. McKenna, ‘An Alternative Approach to Channeling?’ (2009) 51 Wm. & Mary L. Rev. 873.

317 Buccafusco, Lemley, ‘Functionality’ (n 28) 1295–1306.

318 Orit Fischman Afori, ‘Reconceptualizing Property in Designs’ (2008) 25 Cardozo Arts & Entertainment Law Journal 1106, 1118; Du Mont, Janis, ‘Functionality in Design’ (n 316) 262–264; Moffat (n 228) 1494.

319 Buccafusco, Lemley, Masur, ‘Intelligent ...’ (n 28) 127 with further references.

320 Jane C. Ginsburg, ‘“Courts Have Twisted Themselves into Knots” (and the Twisted Knots Remain Untangle): US Copyright Protection for Applied Art after *Stars Athletica*’ in Estelle Derclaye (ed.) *The Copyright/Design Interface* (CUP 2018) 297; Buccafusco, Fromer (n 316) 119–126 critically of Supreme Court’s breakthrough ruling in *Star Athletica v. Varsity Brands*, 137 S. Ct. 1002 (2017) <https://casetext.com/case/athletica-v-varsity-brands-inc>

patents is low and merges with the functionality level of utility patents,³²¹ and trade dress's treatment of utilitarian and/or aesthetic features is complicated.

EU law shares similar problems, perhaps even further exacerbated, as copyright does not employ a blank prohibition on functional items, especially following the last CJEU judgment in *Brompton Bicycle*,³²² and design law operates with a dynamic standard of functionality, ranging from exclusion of features solely dictated by the technical function, to including other kinds of functional features within the analysis of the scope of designer's freedom (see 1.4.).

All functionality doctrines enshrined in IP laws serve two main objectives: preserving the boundaries between patent and other IP regimes, and protecting market competition from distortions resulting from using the monopolization of function as a leverage tool to enhance market position, detrimental to competitors and consumers (more in Chapter 4).³²³ However, implementing functionality rules rigorously requires not only a consistent interpretation of the legal provisions within one IP regime, but also clearly defining the boundaries of patent law. The kind of technical functionality covered by patents is instrumental for determining, by contrast, the kind of functionality that may belong to other IPRs³²⁴ – it is here assumed that some broadly understood useful features, matching the distinction of functionality *de facto* from Judge Rich (see 3.2.4.), may, nevertheless, enjoy protection under design or trade mark laws. Unfortunately, European legislators do not define the terms of 'technology'/'technical function' for the purpose of patentable inventions, nor do the EU design or trade mark regulations define functionality. Clarifying these issues remains the task of case-law and legal doctrine, whereas an integrated approach to functionality across the whole IP system would have beneficial effects.

Interestingly, the notion of 'channelling' (e.g. technical/functional innovations being limited to patent law) is usually understood by legal doctrine as preventing the cumulation of IPRs, simultaneously or sequentially, on the same product features. Another understanding of 'channelling' relates to the cumulation of different forms of IP protection over *separate* product features, each conferring distinct economic benefits (for example a drug may encompass patents on medical compounds, packaging designs, and trade marks for the brand name) (LB).³²⁵ The suggestion is to evaluate the IP options to

321 McKenna, Sprigman, 'What's ...' (n 28) 516–523, discussing the requirement of ornamentality for patentable designs understood in the negative, as non-functional, with the proof of alternative designs; Du Mont, Janis, 'Functionality ...' (n 316) 3, 7–26 discussing designs in validity and infringement cases; Sarah Burnstein, 'Commentary *Faux Amis* in Design Law' (2015) 105 Trademark Rep. 1455, 1457–1460, arguing for applying different meanings than in trade mark law.

322 *SI, Brompton Bicycle v. Chedech/Get2Get*, C-833/18, ECLI:EU:C:2020:461.

323 Buccafusco, Lemley, Masur, 'Intelligent ...' (n 28) 78, 84.

324 McKenna, Sprigman, 'What's ...' (n 28) 492–495.

325 McKenna, 'An Alternative ...' (n 316) 878, 881–883 referring the *Tylenol* case.

determine which gives more market value to a product, viewed as a whole and not as distinct parts: is it the technical invention, the branding, or both, and then to decide on this basis on ‘channeling’ it towards the (only) type of appropriate protection. This approach acknowledges the ‘synergistic’ effects between branding strategy and patent protection, and broadly, the economic benefits stemming from the interaction of different IPRs (see 4.2.2). These considerations are also important for functionality purposes, as the aim is to ‘reduc[e] the ability of firms to leverage multiple rights to capture redundant economic benefits’, ‘because the balance we choose between various form of protection will affect the incentives we create’.³²⁶

3.3.2. *How does functionality work, though perhaps not well, in trade dress cases?*

The screening performed by functionality in US trade mark law is said to be ‘filtering’, that is, sorting functional features from non-functional ones, and conferring protection only to the latter. According to this model, utilitarian functionality under *TrafFix* extends to both ‘purely functional’ and of ‘dual nature’ product configurations, while protection is reserved to ‘separable’, non-functional features.³²⁷ Similarly, aesthetic functionality is understood as separating between source-identification and (primarily) attractiveness, but the additional requirement of (features) putting ‘competitors at a disadvantage’ softens the standard in favour of the trade mark’s holder.³²⁸ Another two screens are discussed in relation to copyright and designs, namely exclusions and thresholds³²⁹.

If analogically transposed to the EUTM, a trade mark screen would look like a combination of filtering and threshold effects, because it applies to the whole sign without the possibility of disclaiming unprotectable features. This makes the proper interpretation of the statutory terms of ‘(a sign) consisting exclusively’ important, because it sorts out the category of signs that are captured, or not, by the functional prohibitions (Chapter 5). EU design law clearly operates with ‘filtering’, as functionality addresses individual features (1.4.). European copyright legislation rejects an ‘exclusion’ model, and

326 McKenna, *ibidem* 894 and 895.

327 Buccafusco, Lemley (n 28) 1311–1312; 1344–1345. This sorting exercise should be read bearing in mind that the Lanham Act, differing from the EUTM, applies both to registered and non-registered trade marks/trade dress.

328 Buccafusco, Lemley, *ibidem* 1346–1348.

329 Buccafusco, Lemley, *ibidem* 1310–1354. Exclusion denies protection to an item, even if containing non-functional aspects, and it applies to a whole category of works/designs/marks (at 1310). ‘Threshold’ technique starts from ‘sorting’ non-functional from functional elements and weighing each part against the whole, while introducing next a ‘threshold’ for the whole item; the effect is of either giving protection to the non-functional elements, or to deny protection to the whole item (at 1313–1314). US copyright law applies all three types of screens (at 1316–1341), while in design law functionality should be an exclusion, but it is so narrowly constructed that hardly applies – the authors name it differently as ‘inclusion’ (at 1354).

perhaps should reconsider the ‘filtering’ option, while the CJEU’s practice is currently fostering a liberal, flowing ‘threshold’ of unclear boundaries.³³⁰

There are several deficiencies in the way that functionality rules actually work in US trade dress practice. Although being both a refusal ground and an infringement defense, functionality is mostly applied as an ‘all-or-nothing’ validity tool, albeit one with uncertain results. In many situations, invalidity proceedings follow earlier infringement claims.³³¹ There are cases when a weak, limping sign deserves invalidation and/or denial of protection, but courts are hesitant, especially as regards aesthetic functionality. Conversely, because functionality can sweep too broadly, courts may leave trade dress wholly unprotected, although it would suffice to narrow the scope of protection and dismiss infringement claims.³³²

The difficulties mostly derive from the unclear claiming of the subject-matter of trade dress, and/or from errors at the registration stage (such as registering descriptive or functionally *de jure* signs). In case of complex trade dress with multiple features (such as get-up), the plaintiff tactically describes the subject-matter vaguely and widely, as if to anticipate future infringements, and assumes that confusion will be asserted although many similarities relate to unprotectable features.³³³ At the infringement stage, courts do not always properly calibrate the scope of protection of weak signs and may cast the wrong decision. For instance, a court may find infringement based on the risk of confusion, although the similarities pertain to functional and undistinctive elements, whilst cohabitation of these two similar signs could work on the market without creating consumer deceit. The enforcement of imprecise, or partially indistinctive/functional subject-matter brings the issues of asserting rights too broadly and against parties who may have legitimate reasons to use parts of the sign (e.g. for referential use, creative transformative use, non-commercial communication etc.). Also, a competitor interested in using a similar trade mark, that is, a mix of distinctive/non-distinctive or protectable/non-protectable elements, needs to know the boundaries of his/her ‘freedom to operate’ and how plausible the risk of infringement is. Thereby arises the suggestion that because courts cannot handle the issue of narrowing the scope of protection properly, it is better to deny registration upfront to weak signs that may generate conflicts.³³⁴

Litigation costs are unanimously viewed as a negative social value, an unnecessary burden that the trade mark system should endeavor to minimize, if not eliminate. There is an argument that the risk of under-protecting trade-dress, because of a presumably too broad application of the functionality screen, is lower and involves fewer negative effects (known as ‘false positives’) than the opposite situation of over-protection/or conferring protection to that which

330 C-683/17 *Cofemel v. G-Star*, ECLI:EU:C:2019:721.

331 Lemley, McKenna, ‘Scope’ (n 316) 2213–2224 and 2225.

332 Lemley, McKenna, *ibidem* 2255–2259.

333 Fromer, McKenna (n 316) 150–160.

334 Lemley, McKenna, *ibidem* 2283.

should be refused (known as ‘false negatives’).³³⁵ That is because there are always other options for compensating a refusal to protect a given trade dress – for example source-identification can be achieved via words and graphics – yet, a right hastily granted on functional features would affect market competition, whilst rebalancing it would be time and money consuming. Rebranding of trade dress by a competitor in order to avoid infringement seems more expensive than re-labelling. It is argued that even if imitation is allowed (e.g. upon functionality grounds), a competitor prefers to keep ‘more distance’ than necessary from the trade dress of another entity, due to a fear of litigation – the effect is that a particular competitor may refrain from trading in valuable substitutes.³³⁶

All these concerns are relevant to the EUTM, especially given that functionality provisions do not constitute an infringement defense, only an invalidity ground or a refusal ground.

This raises the significance of *ex ante* control at registration, and of invalidity proceedings, as a final solution. Additionally, the EUTM functionality provisions do not allow for partial registration/invalidity. In other words, no disclaimers to carve out some unprotectable features leaving the remaining part of the sign apt for protection upon general terms are accepted. Thus, granting a right without careful scrutiny cannot easily be ameliorated by narrowing the scope of protection at the enforcement stage. Defendants can only try to invalidate the right. It is true that for EUTM registrations, EU regulation provides for an invalidity counter-claim to be submitted and ruled upon before the main infringement claims. However, national trade mark registrations are governed by national proceedings rules. There are countries with invalidity paths separated from infringement and ruled by distinct bodies (administrative v. common court) – this frequently leads to forum shopping and tactically prolongating proceedings, to postpone the outcome of the validity case. Some countries have invalidity proceedings ruled on together with the infringement by common courts which surely helps with achieving coherent, predictable, and fast solutions.

Summing up, dealing with functionality in the EU law really means an ‘all-or-nothing’ game: either there is careful registration, or risk of over-enforcement and litigation costs, and the ultimate result always applies to the sign in its entirety.

3.3.3. What options are on the table?

The diversity and challenges of functionality rules have prompted US scholars to reach different conclusions about the future of trade dress protection.

One option, quite extreme, is to advocate for a return to the days of denying any trade mark protection to product features, accepting however unfair

335 Boccafusco, Lemley (n 28) 1373–1374.

336 Lunney, ‘The Error ...’ (n 287) 218, 228–229.

competition claims based on deceit.³³⁷ Historical arguments are given as justification (i.e. based on the distinction of technical trade marks v. trade dress) together with arguments pertaining to the pre-emptive primacy of patent law. An economic dimension would show that product configuration brings too few benefits, being a weak source identifier while requiring too many costs when litigating its secondary meaning, non-functionality, and enforceability, let aside the harm produced for competitors and consumers.³³⁸ An accompanying consideration is that lessening the trade mark protection of product features would simultaneously encourage the development of innovation in other IP areas, such as utility or design patents, and bolster the importance of traditional source identifiers, namely word and figurative trade marks.³³⁹ However, the assumptions about how consumers react to different features of product configuration (shape, colour, logo) and which elements should deserve protection, in terms of the trade-off between incentives and costs, also depends on advanced branding strategies (more in Chapter 4).³⁴⁰ An element that in theory may not indicate product source per se, can be transformed by branding to ultimately catch consumers' attention – there is still much incongruence between the legal understanding of the capability of signs to convey meanings and the real effects of branding (see 4.3). EUTM cannot follow the path of outright exclusion of trade dress, especially in light of the CJEU's rejection of the upfront discrimination of non-traditional signs as to trade mark eligibility. In addition, the hypothesis of confining trade dress only to the realm of unfair competition claims between competitors is also not a suitable tool, because in the EU the legislation concerning unfair B2B competition is unharmonized.³⁴¹

Another option is to accept trade mark protection for trade dress, but keep its boundaries flexibly corrected to avoid overbroad protection detrimental to market competition.³⁴² A bundle of possibilities emerges, from denying registration/protection to unclear subject-matter and weak functional signs, to calibrating (narrowing) the scope of protection, when necessary, at the enforcement stage. Such careful scrutiny is also necessary on the EUTM grounds, yet, because functionality does not constitute an infringement defence, the control of registration proceedings requires strengthening. The feasibility of adopting an EUTM functionality infringement defence remains outside the scope of this book.

The focus on the purpose of trade mark law to preserve free and fair competition should determine the way functionality doctrine is applied. There are

337 Canahai, McKenna (n 263) 2–5. For older voices against trade dress' protection, Lunney 'Trade Dress ...' (n 262) 1181–1198; Margreth Barrett, 'Consolidating the Diffuse Paths to Trade Dress Functionality: Encountering Traffix on the Way to Sears' (2004) 61 Wash. & Lee L. Rev. 79, 136–158; Cohen 'Following' (n 262) 696.

338 Canahai, McKenna (n 263) 5–15; Boccafusco, Lemley (n 28) 1373–1374.

339 McKenna, Sprigman (n 28) 540.

340 Fromer, Lemley, 'Audience ...' (n 316) 1290.

341 This does not mean here antitrust regulations.

342 Lemley, McKenna (n 316) 2066 ff.

voices that advocate for a pro-competitive approach, which has at its core an inquiry about the ability to compete in a product market, with prime attention paid to the issue of alternative designs, yet without neglecting the risk of unbalancing the IP system (e.g. by extending patent monopoly via trade dress).³⁴³ This path should be followed also by EUTM judiciary, as this book tries to demonstrate. What substitutes mean, and how determinant they are for a sufficient level of competition, are both questions that IP law cannot neglect – not only in relation to functional trade marks. Professors Fromer and Lemley emphasize that market substitution should play a central role in assessing the boundaries of infringing use: ‘[m]arket substitution ... is tied to IP’s goal of encouraging innovation. A use that does not interfere with the IP owner’s market generally does not interfere with the incentives to innovate that IP rights create’.³⁴⁴

Legal solutions should adjust to diverse business necessities. Functionality in trade mark law needs a flexible assessment, suitable for the new categories of non-traditional signs, and far from ossified dogmatic exclusions. Certainly, the assessment requires an insight into the market environment of rights holders and the way they make use of their IP portfolio to extract economic benefits. Putting functionality into a ‘law and economics’ perspective represents useful guidance for a court that is bound to understand and decide over the anti-competitive effects of protecting functional trade marks (see Chapter 4).

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343 Rierson, ‘Toward ...’ (n 316) 723–726. The author suggests a ‘reconfiguration’ of the *Morton Norwich* test, in which the criterion of alternative designs should be verified as to the impact on the product’s cost or quality. Additionally, this factor should be irrelevant in the case of product features expanding a backdoor patent monopoly, for instance if these features constitute a ‘significant inventive aspect’ of an expired utility patent (ibidem 747–748). The scholarship promoting an assessment focused on competitive necessity includes: clearly Dinwoodie (n 28) 701–746 and Thurmon (n 267) 340–370; with certain reserve McKenna (n 28); within a pro- and contra analysis, Bone ‘Trademark ...’ (n 268) 227–242.

344 Fromer, Lemley, ‘Audience ...’ (n 316) 1291. The authors suggest that a relevant product market may be determined by sales of products in the same market as the defendant or by the likelihood of entering that market in the nearest future (at 1293).

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4 Functionality within the framework of law and economics

Competition concerns against protecting functional trade marks

The importance of ensuring an appropriate level of market competition lies at the core of the ‘public interest’ rationale that underlies trade mark functionality rules. This complements the discussion with a competition law insight into the economic implications and risks of granting legal exclusivity to functional signs. The chapter begins by setting trade marks within the framework of competition law, with a focus on their economic benefits (4.1.). It next explores how trade marks may negatively affect competition, keeping in mind the possible application to functional signs (4.2.). The discussion comprises the issues of higher societal costs generated by the strategic use of trade marks (e.g. in conjunction with other IPRs, or for compatibility needs) which helps maintain market dominance and supra-competitive prices. These issues are particularly relevant for technical functionality. Another topic, this time significant for aesthetic functionality, consists of mapping the concept of ‘value’ of reputation against goodwill and brand components (such as brand image), with an insight into consumer co-branding and economic, marketing and accounting standards (4.3.). The last part explores how a competition perspective on market definition and product substitutability may be instrumental for trade marks functionality practice (4.4.). The chapter advances a market-orientated tool to be integrated within the functionality assessment, one which sufficiently reflects sufficient market competition and satisfies consumer needs.

4.1. Placing IP and trade marks within the framework of competition law

Competition’s prime purpose of ensuring market access to competitors seemingly collides with the exclusionary nature of IPRs. At a deeper level, though, competition and IP are viewed as seeking compatible, complementary objectives. The following part outlines the purposes of EU competition law and looks into how trade marks may beneficially match this framework, by reducing consumer search costs and stimulating the output of quality products.

4.1.1. *A brief introduction to the objectives and framework of EU competition law*

The purpose of EU competition law is shaped by a plurality of – often – conflicting policies, societal values, public interests, and economic models. From an economic perspective based on a static definition of competition, competition law should promote economic welfare, determined by a maximization of consumer surplus through increased allocative and productive efficiencies – intervention is needed when a monopolist may impose higher prices without constraints and reduce output while creating deadweight losses.³⁴⁵ Complementarily, the dynamic approach, of competition seen as a process, considers that what matters is the pace of innovation and the ability to introduce new products or make use of new production processes, thus not necessarily lowering prices, so that competition law should prevent restraints on innovation (e.g. thwarting better technologies from entering the marketplace).³⁴⁶ Apart from these economic goals, EU jurisprudence has added certain welfare purposes as necessary for the proper functioning of the EU, namely the integration of internal market, the prevention of consumer harm, and the economic freedom of undertakings to compete on the market.³⁴⁷ The latter is perceived as a reflection of the ordoliberal German doctrine that influenced the creation of the Single Market and European Economic Community (later EU), that is, the vision of a European structure, with its economy constitutionally interrelated with the political and legal system, in which there is increased state interventionism, whilst competition law acts as the guardian of ‘complete’ (perfect) competition, in which ‘no firm has the power to coerce other firms

345 Efficiency is an economic tool with multiple meanings and is an indicator of welfare – it may refer to the amount of goods/services produced for which there is a demand, that is, willingness to pay (i.e. allocative), or to a level of output supplied at a lowest cost (i.e. productive). The notion of welfare is based on the assumption that consumers tend to maximize their utility, by getting the right amount of goods at a lowest possible price – kept closely to costs – in conditions of allegedly perfect static price competition. C. Scott Hemphill, ‘Intellectual Property and Competition Law’ in Rochelle Dreyfuss, Justine Pila (eds.) *The Oxford Handbook for Intellectual Property Law* (OUP 2018) 875–877; Jeffrey Harrison, *Law and Economics in a Nutshell* (6th ed. West Academic Publishing 2016) 30–78. In reality there are many limitations to the efficiency model challenged by a diversity of economic theories.

346 Herbert Hovenkamp, ‘Restraints on Innovation’ (2007) 27(1) *Cardozo Law Review* 247, 253–254; Luc Peeporkorn, Vincent Verouden, ‘The Economics of Competition’ in Jonathan Faull, Ali Nikpay (eds.) *The EU Law of Competition* (OUP 2014) paras 1.120–133 referring the seminal work Robert Solow, ‘Technical Change and the Aggregate Production Function’ (1957) *Review of Economics and Statistics*, 312–320 at www.jstor.org/stable/1926047 – who argued that more economic growth came from innovation than from increased price competition.

347 Ioannis Lianos, ‘Some Reflections on the Question of the Goals of EU Competition Law’ CLES Working Paper Series 3/2013, 14–32 at <http://dx.doi.org/10.2139/ssrn.2235875>. For a discussion integrating the tenets of EU Treaty, see Walter Frenz, *Handbook of EU Competition Law* (Springer Verlag 2016) 3–20.

in a market'.³⁴⁸ This approach, embedded in the first EC Treaty, emphasized the need 'to preserve a competitive market structure' which meant that the guarantee of 'undistorted competition' represented a value per se, protected as an institution that indirectly protected all market participants.³⁴⁹

Competition law intervenes only in situations of market dominance/power, which means the power of an undertaking to charge higher than competitive prices by reducing market output, which competitors cannot answer with an increase of substitutable products offered to consumers.³⁵⁰ A central tool to determine market dominance is market definition, which serves to identify the range of close substitutes to provide a constraint on the behaviour of the undertakings supplying those products – market dominance has been traditionally determined using the calculation of market shares of the investigated undertaking(s).³⁵¹ There are different ways to assess market dominance and its impact on competition, and EU practice has shifted from a so-called normative, 'form-based' approach – easy to handle by lawyers due to reduced economic analysis and favouring foreseeable results and legal certainty – to a more 'economic', 'effect-based' approach, requiring case-by-case empirical evidence and economic models that may lead to differentiated, perhaps unpredictable outcomes.³⁵²

From a legal standpoint, there are three types of economic behaviour that may be challenged by competition authorities, that is, abuse of dominant position, anticompetitive agreements, and consolidation of businesses. In the

348 J. Thomas Rosch, 'Can Consumer Choice Promote Trans-Atlantic Convergence of Competition Law and Policy' in Paul Nihoul, Nicolas Charbit, Elisa Ramundo (eds.) *Choice: A New Standard for Competition Law Analysis?* (Institute of Competition Law 2016) 265, at 268 quoting David Gerber, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (1994) 42 Am. J. Com. L. 25, 36.

349 Josef Drexel, 'Consumer Welfare and Consumer Harm: Adjusting Competition Law and Policies to the Needs of Developing Countries' in Michal Gal et al. (eds.) *The Economic Characteristics of Developing Jurisdictions: Their Implications for Competition Law* (Elgar 2015) 272–274 discussing the seminal case C-6/72 *Europemballage Corporation & Continental Can v. Commission* EU:C:1973:22.

350 Hovenkamp (n 32) 4–2ff.

351 Alison Jones, Brenda Suftrin, *EU Competition Law* (6th ed. OUP 2016) 56; Christian Melischek, *The Relevant Market in International Economic Law: A Comparative Antitrust and GATT Analysis* (CUP 2013) 29; as to other than market-share methods of assessment: Jan Kupeik, 'Firm's Own Price Elasticity of Demand in Dominant Position Analysis' (2022) JECL&P, published 17 March 2022, <https://doi.org/10.1093/jeclap/lpac015>; Werner Berg, Sophia Real, 'How Close is Too Close? A Critical Review of the European Commission's Assessment of Closeness of Competition' (2016) 7(7) JECL&P 442.

352 For an overview Claudia Seitz, 'Economic Principles in Antitrust law in the Aftermath of the More Economic Approach' in Klaus Mathis (ed.) *Law and Economics in Europe: Foundations and Applications* (Springer 2014) 368–383; for tracing EU developments Josef Drexel, 'Is There a "More Economic Approach" to Intellectual Property and Competition Law?' in Josef Drexel (ed.) *Research Handbook on Intellectual Property and Competition Law* (Elgar 2008) 27–35.

EU, the basic legal frame is conferred by the Treaty on the Functioning of the European Union (TFEU), in particular by the Art. 101 TFEU which deals with anticompetitive agreements and Art. 102 TFEU banning abuse of a dominant position.³⁵³ There are multiple additional EU acts, that is, regulations followed by Commission guidelines, such as those pertaining to mergers and acquisitions³⁵⁴ or to agreements covering the transfer and exploitation of IPRs.³⁵⁵ The exclusionary power of IPRs does not equal the ability to exclude competitors in economic terms, and is rarely perceived as unique source of market dominance, however, no IP regime is immune to an external correction based on the competition rules.³⁵⁶ The query about the extent to which IPR contributes to developing and consolidating market dominance, and the types of behaviour related to the ownership and/or exercise of an IPR that may violate the competition rules of Arts. 101–102 TFEU and/or secondary acts, falls far beyond the scope of this book.³⁵⁷

The following remarks will touch upon certain aspects of the interface between IP and competition law that are useful to map the role of trade marks in the marketplace.

4.1.2. *The pro-competitive discourse on trade marks within the perspective of IP and competition goals*

Any IPR confers exclusive control over the exploitation of the protected asset, which enables the right holder to charge a higher price for an item than in conditions of distribution governed by free market and lack of legal privileges.³⁵⁸

353 Treaty on the Functioning of the European Union, Dec. 13, 2007, 2007 O.J. (C306) 1. Previous versions of the TFEU had Art. 101 numbered as 81 (also 85) and Art. 102 as 82 (also 86).

354 Council Regulation (EC) No. 139/2004 of 20 January 2004 on the control of concentrations between undertakings, [2004] *OJ L* 24/1.

355 Commission Regulation (EU) No. 316/2014 of 21 March 2014 on the application of Art. 101(3) of the Treaty on the Functioning of the European Union to categories of technology transfer agreements, [2014] *OJ L* 93/17 and Commission Regulation (EU) No. 330/2010 of 20 April 2010 on the application of Art. 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices [2010] *OJ L* 102/1 – both replacing earlier versions. These acts introduced exemptions to the application of Art. 101 TFEU to the agreements therein defined, however there is no exemption from a challenge of abusive behaviour cf. Art. 102 TFEU.

356 Mariateresa Maggolino, *Intellectual Property and Antitrust: A Comparative Economic Analysis of US and EU Law* (Elgar 2011); Katarzyna Czapracka, *Intellectual Property and the Limits of Antitrust: A Comparative Study of US and EU Approaches* (Elgar 2010).

357 For a succinct classification of EU competition cases applied to IPRs: Gustavo Ghidini, *Rethinking Intellectual Property: Balancing Conflicts of Interests in the Constitutional Paradigm* (Elgar 2018) 338–380. David Miąsik, *Stosunek prawa ochrony konkurencji do prawa własności intelektualnej* (Wolter Kluwer Warszawa 2012) 358–412.

358 This price is hypothetically calculated as being above the marginal cost of reproducing an IP-protected work or invention, Hovenkamp (n 32) 1–9 to 1–12.

IPRs come at a price: there are administrative costs to operating the system (see registration/opposition/invalidity proceedings), transaction costs of infringement litigation and negotiating licences, and costs of rent seeking activities.³⁵⁹ However, there is a market and societal need for IPRs. Despite critics, innovation and creation are considered crucial for economic growth and intangible results should be covered by property rights, otherwise there would be no further incentive to pursue and invest in such activities at the detriment of dynamic competition.³⁶⁰ Although sometimes disputable, a restriction of competition at the consumption level – due to higher prices of the assets covered by IPRs – may be justified by enhancing competition at the production or innovation levels.

From this economic perspective, trade marks have appeared as beneficial, pro-competitive market tools, mainly thanks to the works of William Landes and Richard Posner of Chicago Law School, which constitute the benchmark for any discourse on the relationship between trade marks and competition.³⁶¹ A trade mark helps consumers select goods/services corresponding to their needs and preferences through the information it carries about the commercial origin and the characteristics of those goods/services.³⁶² Because it is impractical or impossible for a consumer to test and learn about all noticeable and unnoticeable qualities of different products/services before purchase, the consumer chooses them upon favourable past experiences, recommendations,

359 William Landes, Richard Posner, *The Economic Structure of Intellectual Property Law* (Harvard 2003) 16–21; Graham Dutfield, Uma Suthersanen, *Global Intellectual Property Law* (2nd ed. Elgar 2020) 39–40.

360 Justine Pila, Paul Torremans, *European Intellectual Property Law* (OUP 2016) 615–17. Ample debates have gauged the extent to which an IP ‘monopoly’ may positively serve as platform for innovation, which would call for cautiousness whenever deciding on a competition intervention. One argument says that a certain amount of (price) monopoly is necessary to achieve economies of scale – thus generating more output at a lowered price – but also to transfer profits to R&D activities which stimulate further innovation and dynamic efficiencies. This approach goes back to Joseph A. Schumpeter, *The Theory of Economic Development* (Harvard Economic Studies, 1934) and *Capitalism, Socialism and Democracy* (1942), more in Federico Etno, *Competition, Innovation and Antitrust: A Theory of Market Leaders and its Policy Implications* (Springer 2007) 189–195 focusing on patents. Critically, Steven Anderman, ‘Overplaying the Innovation Card: The Stronger Intellectual Property Rights and Competition Law’ in Peter Drahos, Gustavo Ghidini, Hans Ullrich (eds.) *Kritika: Essays on Intellectual Property* (vol. 1 Elgar 2015) 22–25; Michele Boldrin, David Levin, *Against Intellectual Monopoly* (CUP 2008) 243–267 pointing at the shortages of IP system in line with Fritz Machlup’s considerations of 1958 in ‘An Economic Review of the Patent System’, at www.mises.at/static/literatur/Buch/machlup-economic-review-patent-system.pdf. However, Christopher Buccafusco et al., ‘Experimental Tests of Intellectual Property Laws’ Creativity Thresholds’ (2014) 92 *Tex L Rev* 1921, 1935–1977, explored via experimental tests the impact of extrinsic motivation (i.e. incentives provided by copyright and patent, and thresholds of legal protection) and intrinsic factors (internal motivation) upon the process of creation/innovation.

361 Landes, Posner (n 31) 265, (n 359).

362 *Ibidem* (n 31) 268–270.

or advertisement of trade marks.³⁶³ For this reason trade marks are seen to reduce consumer search costs.³⁶⁴ In response to this mechanism, trade mark owners are motivated to maintain a consistent quality of goods/services – more precisely, ensuring that there is the set of ‘product characteristics’ which consumers expect – and to develop goodwill through a specific relationship with customers (see 4.3.1.2.); complementarily, trade mark owners are interested in shaping the consumer mind through informative and persuasive advertising.³⁶⁵ Putting together these two positive effects, that is, the economizing role of lowering consumer search costs and incentivising right holders towards quality maintenance, trade marks are sought to ensure market transparency and stimulate vigorous competition.³⁶⁶ The pro-competitive effects of trade marks give grounds to the system of non-limited in time trade mark protection as long as a sign is in use. The argument says that legal exclusivity covers the commercial source of goods/services of one undertaking as distinguished from another – in other words, the link between consumers and the entity controlling the trade mark – and there is no monopoly covering the sign or the goods as such.

Consumers’ optimized search for quality explains why trade mark holders are able to charge a higher price for goods/services bearing a trade mark than for non-trademarked ones. The trade-off is considered societally beneficial; it also becomes a self-enforcing promise, which stimulates the need for product variety, in other words, for more competing products. Admittedly, trade marks’ function of identifying the commercial origin of goods/services, sustained by a guarantee of specific quality, inevitably leads to product differentiation. This is theoretically a good thing, as long as product differentiation is supported by objective differences in product characteristics which account for demanding a higher price.³⁶⁷ However, market deficiencies may also occur: an over-optimal number of differentiated products, underproduction of some

363 Nicholas S. Economides, ‘The Economics of Trademarks’ (1998) 78 *Trademark. Rep.* 523.

364 Landes, Posner (359) 166–168.

365 Griffiths (n 33) 54–62 and 105–110; for a seminal study about trade marks as indicator of quality George A. Akerlof, ‘The Market for “Lemons”: Quality Uncertainty and Market Mechanism’ (1970) 84 *Q. J. Econ.* 488; for a critique that a business cost savings strategy may opt for maintaining ‘a good reputation at least cost’ where a lower quality is compensated by marketing strategies fuelling consumers beliefs of its (alleged) consistent level, Jonathan Aldred, ‘The Economic Rationale of Trade Marks: An Economist’s Critique’ in Bentley, Davis, Ginsburg (eds) (n 294) 271–272.

366 For a correcting view that incentives are not a sufficient justification for trade marks, Mark Lemley, ‘Property, Intellectual Property, and Free Riding’ (2005) 83 *Texas Law Review* 1031; for an analysis of trade marks value through rivalrous/non-rivalrous uses David W. Burnes, ‘A New Economic of Trademarks’ (2006) 22 *Nw. J. Tech. & Intell. Prop.* 22.

367 Peter Davis, Kirsten Edwards-Warren, ‘An Introduction to the Competitive Effects of Branding’ in Deven R. Desai, Ioannis Lianos, Spencer W. Waller (eds.) *Brands, Competition Law and IP* (CUP 2015) 13; William Cornish, *Intellectual Property – Omnipresent, Distracting, Irrelevant?* (OUP 2004) 81–82.

trade marked products, distorted purchase decisions resulting from persuasive advertising,³⁶⁸ or from the branding phenomenon which metamorphoses the image and value of trade marks independently from the quality and objective properties of the signified goods/services (4.3.1.1.). Concerns about the impact of trade marks on a state of imperfect competition was the object of Edward Chamberlin's investigations from the early 1930s, where he believed that product differentiation enabled each seller to impose a price for his own product and enjoy a monopoly to an extent determined by the existence and scale of other competitors' products, perceived as imperfect substitutes.³⁶⁹ Chamberlin thought that trade marks, and IPRs generally, were diminishing effective product substitution, due to consumers' preferences for items covered by IPRs.³⁷⁰ Because consumer preferences are today steered by strategic branding, debatable questions remain as to the optimal amount of trade marks and product differentiation needed for economic and social welfare. The proliferation of trade marks/brands may be seen as artificially stimulating demand and creating dead-weight losses, because consumer money is not being spent on generating innovation or qualitative differentiation of products. The capability of trade marks enhanced by branding strategies to model and determine consumers preferences so as to diminish the choice of similar goods/services from different brands (i.e. reducing product substitutability) represents a vivid concern of policy-makers and legislators. To a certain extent this issue is also significant for understanding the competition rationale underlining the functionality rules (see 2.2.).

From another angle, a driver of healthy competition resides in the capability for subsequent innovation built on pre-existing material available in the public domain.³⁷¹ The scholarship amply discusses the costs and barriers created by IPRs for follow-on innovation, for example, how the scope, terms, and length of protection of IPRs determine a creator or innovator's choice of innovation path, namely, deciding whether to use existing IPRs and pay licence fees, or to generate something new by working around existing IPRs.³⁷² A utilitarian

368 Economides (n 363) 532–535.

369 Edward Chamberlin, *The Theory of Monopolistic Competition* (1st ed. 1933).

370 Deven R. Desai, Spencer W. Waller, 'Brands, Competition, and Antitrust Law' in Desai, Lianos, Waller (eds.) (n 367) 84–85.

371 Robert P. Merges, Amy L. Landers (eds.) *Intellectual Property and Public Domain* (Elgar 2017).

372 Christopher Buccafusco, Stefan Bechtold, Christopher Jon Sprigman, 'The Nature of Sequential Innovation' (2017) 59 *Wm. & Mary L. Rev.* 1, 4–47, discussing factors affecting follow-on innovation, such as the maturity of innovation space, consumers tastes, creators' behavioural attitudes; Stefan Bechtold, Christopher Buccafusco, Christopher Jon Sprigman, 'Innovation Heuristics: Experiments on Sequential Creativity in Intellectual Property' (2016) 91(4) *Indiana Law Journal* 1252, 1255–1266, discussing the less rational side of decision making, in light of 'behavioristic' experiments: creators/innovators are more influenced by their own beliefs about the innovation environment than by objective factors, such as borrowing costs and the benefits from innovating (at 1283).

approach argues that the economic rationale underlying the proper functioning of each IPR reveals a balance of interests between right holders' incentives and public need of reduced access cost to information/assets covered by the IPR.³⁷³ In this context, the model of time-limited protection of most IPRs, whose subject-matter should fall into the public domain after the lapse of legal exclusivity, serves the proper balance between public costs and benefits.³⁷⁴

The exception of perpetual protection of trade marks – considered without risk of monopolizing either the sign or the goods/services themselves – creates distortions if the sign at issue consists of product characteristics and matches the subject-matter of other time-limited IPRs, so that trade mark protection may effectively 'monopolise' certain aspects of goods/services. This explains the general concern about situations of overlapped protection, in which different layers of IPR exclusivity add and interfere simultaneously or sequentially. For instance, trade mark protection should not prolong the legal exclusivity of an invention after the lapse of a patent, not only because it interferes with the principle of free access to the public domain, but also because it generates additional societal costs (4.2.). For this reason, at the inner level of each IP regime, there are certain instruments, covered by the category of exceptions and limitations to the exploitation of the IP right, which the legislator has purposely introduced as 'levers' of the public interest.³⁷⁵ Their aim is to supersede the individual interests of right holders for the benefit of the competition needs of other market actors. Such a corrective tool represents the functionality prohibitions, which are embedded in both trade marks and design law. The following part aims to confer some economic support to the public interest rationale for denying trade mark protection to functional signs, especially given that EUTM jurisprudence considers public interest a key concept for interpreting these absolute refusal grounds.

4.2. Challenging the mainstream narrative: Anti-competitive avenues of functional trademarks

If the general rule reads that trade marks are pro-competitive, the situation of competition distortions caused by trade marks appears unintuitive. Indeed, this is not an issue at the forefront of the discourse, instead it is rather one incidentally encountered. For this reason, the attempt to accentuate certain

373 Hovenkamp, (n 31) 1–10; Fromer, 'Expressive ...' (n 251) 1752.

374 Herbert Hovenkamp, 'Innovation and the domain of competition policy' (2007–2008 Meador lecture series on empire) 104–108, www.law.ua.edu/pubs/lrarticles/Volume%2060/Issue%201/Hovenkamp.pdf

375 Thorsten Käseberg, *IP, Antitrust and Cumulative Innovation in the EU and the US* (Hart Publishing 2012) 62–65 and 249–251. The author identifies multiple 'levers', such as refusal grounds, the scope, degree, and length of protection, exceptions (at 249–250) and advocates for 'integrated thinking' over IP/antitrust relationship with a focus on IP self-regulatory tools (at 64).

anti-competitive facets of trade mark exclusivity may resemble a piecemeal exploration. If the issue of possible relevance to functional signs were to be added, the investigation appears cumbersome. Still, the author finds it useful to initiate such discussion, even with the risk of a subjective selection. This part is comprised of two parts. First, it sets trade marks within the cost paradigm, by looking into the reasons behind the higher societal costs generated by the exploitation of functional signs. Second, it touches upon strategies leveraging the use of trade marks as a means of extracting competitive advantages. Part 4.2.2.1. focuses on how trade marks integrate with patent protection in order to strengthen market position and deter competition, with a focus on the functional trade dress of pharmaceuticals. Part 4.2.2.2. investigates whether functional product features may reach the status of indispensable assets for products on interrelated markets, with a focus on standardization and compatibility.

4.2.1. Functional signs increasing societal costs

This part explores how functional signs increase consumer search costs, the costs for competitors of putting substitutable products on the market, and other societal costs, such as that of intimidating litigation.

4.2.1.1. Compromising the paradigm of lowering consumer search costs

Still meaningful today sounds Schechter's view that a trade mark's selling power 'depends for its psychological hold upon the public, not merely upon the merits of the goods ..., but equally upon its own uniqueness and singularity'.³⁷⁶ This selling power of a sign is usually linked to its distinctiveness, a basic requirement of protection.³⁷⁷ By contrast, undistinctive signs, including functional ones, should not be protected because of the increased chances of consumer confusion, which generates higher search costs, and because of emerging conflicts that entail litigation between traders, that brings other unnecessary societal costs. Such findings come directly from the analysis of Landes and Posner (more below) who, although advocating the benefits

376 Frank Schechter, 'The Rational Basis of Trademark Protection' (1927) 40 Harv. L. Rev. 813, 832. For a consideration of the uniqueness of distinctive signs, equalled to creative input and understood as building a new 'link' between the sign and chosen goods/services, Fromer (n 252) 1902 ff.

377 Beebe distinguished between 'source distinctiveness' and 'differential distinctiveness', the latter being associated with a sign's singularity and its salience, which generates persuasion and affects consumers' preferences. These two facets of distinctiveness do not always concur symmetrically – a strong origin identifier is not necessarily a catchy symbol, Barton Beebe, 'Search and Persuasion in Trademark Law' (2005) 103 Mich. L. Rev. 2020, 2030, 2043–2045.

flowing from trade mark protection, were aware of the negative effects of functional signs on market competition.

Landes and Posner employed the classification of trade marks used in the US practice for distinctiveness purposes to demonstrate the absence of anti-competition concerns in cases of fanciful (arbitrary) and suggestive signs.³⁷⁸ Put differently, descriptive and generic signs were seen to impede competitors due to the higher costs of informing users about a product's important features, whilst functionality was considered a category akin to genericness.³⁷⁹ Conferring trade mark protection to these signs would lead to insufficient alternative products, higher prices, and deadweight losses, an outcome that economic efficiency definitely aims to avoid. One step earlier, common symbols, such as geometrical figures, shapes, and primary colours, were placed close to descriptive signs.³⁸⁰ Unlike word marks, belonging to an allegedly unlimited supply and easily invented – an assumption which today seems controversial, as a recent study demonstrated the exhaustion of competitively effective word trademarks³⁸¹ – common shapes and colours may involve a risk of scarcity, especially if they become attractive and desired by many competitors in a particular industry sector. Although this might appear debatable in theory – if there is always some possibility of modifying a basic geometric shape while still keeping it simple, or selecting a specific hue from a seemingly unlimited palette of colours – in practice scarcity is about market necessities. Scarcity represents the consequence of the specific needs of market actors: only certain product features meet consumer expectations and tastes and therefore are worth use in trade by competitors. Interestingly, EUTM jurisprudence has raised the scarcity arguments with regard to colour and sound marks,³⁸² leaving open the path of a follow-up concerning functional signs.

It is true that descriptive signs – in the EU also generic ones – may be protected as trade marks upon the proof of acquired distinctiveness. This involves some noticeable transition costs: the continuous use of a descriptive sign by

378 Landes, Posner (n 31) 289 quoting *Abercrombie & Fitch v. Hunting World*, 537 F.2d 4 (2d Cir.1976).

379 Landes, Posner (n 359) 187–197. For other discussions of economic inefficiencies of protecting generic signs: Stacey Dogan, Mark Lemley, 'A Search-Costs Theory of Limiting Doctrines in Trademark Law' (2007) 97 *The Trademark Reporter* 1223, 1242–1246; Ralph Folsom, Larry Tepley, 'Trademarked Generic Words' (1980) 89 *Yale LJ* 1323, 1333–40; John Coverdale, 'Trademarks and Generic Words: An Effect-on-Competition Test' (1984) 51 *U Chi L Rev* 868, 879–882.

380 Landes, Posner (n 31) 290.

381 Barton Beebe, Jeanne Frommer, 'Are We Running Out of Trademarks? An Empirical Study of Trademark Depletion and Congestion' (2018) 131 *Harv. L. Rev* 945, 947 with an analyse of USPTO database since 1985.

382 C-104/01 *Libertel* EU:C:2003:244 (orange shapeless colour); C-283/01, *Shield Mark v. Joost Kist*, EU:C:2003:197 (cockcrow and first accords of Für Elise), Opinion of AG Ruiz-Jarabo Colomer, EU:C:2003:197, paras 49–52 against trademarking signs that constitute a direct manifestation of nature or parts of cultural heritage.

one holder imposes costs for competitors to inform buyers about the same product attributes in another way, but after acquiring secondary meaning, the benefits for consumers of economizing search-costs would presumably outweigh the costs incurred by competitors. The difficulty is that there are no clear methods of measuring this kind of cost dynamic, leaving aside the fact that such measuring rarely takes place.³⁸³ This makes it problematic to evaluate how the process of trade mark maturation for descriptive/customary signs may impact various market stakeholders. It is also a current concern for the EUTM practice.

Turning strictly to functional signs, bearing in mind that they consist of product features, they are frequently undistinctive per se and in practice tend to be used in conjunction with elements of more inherent distinctiveness, such as graphics, words, or combinations of colours. The question of what determines the consumer's choice of a product in circumstances of multiple symbols being affixed to the product has recently been echoed in CJEU's answers in the *KitKat* four-finger wafer case. The Court required that for a (plain) shape to function as a badge of origin separately from other signs applied to goods, it was not enough that consumers recognized the shape or associated it with goods of one undertaking; instead, consumers must rely upon the shape as an 'exclusive' indicator of the origin of those goods when making purchase decisions.³⁸⁴ The UK court contemplated whether a consumer in front of a basket with chocolate bars of various manufacturers, unwrapped and separate from packaging containing additional symbols, would be able to distinguish the *KitKat* bars from those originating from other sources.³⁸⁵ This argument supports the assumption that if the shape alone cannot help a consumer choose the exactly intended product, the consumer must engage in a trial-and-error search, which means higher search costs. The reverse hypothesis, that a functional sign is capable of being a badge of origin and lowers consumer search costs, would require specific proofs.

It is worth noting that the issue of how consumers actually perceive and respond to marks is complex – recent studies show the ambiguous nature of consumers' purchase behaviours, with an emphasis on the importance of unconscious processes and 'reconstructed' memory, background knowledge and the context of use.³⁸⁶ European practice shares the assumption that labelling including wording prevails over any non-traditional signs, and EUIPO has tightened the requirements for assessing the distinctiveness of shape marks in case of combined signs. As a rule, a plain shape will be

383 This is precisely the conclusion reached by Landes and Posner (n 31) 290.

384 C-215/14 *Société des Produits Nestlé SA v. Cadbury* UK ECLI:EU:C:2015:604, paras 65–67.

385 *Nestlé SA v. Cadbury* [2017] EWCA Civ 358 [105].

386 Weatherall (n 222) 67–70; 74–78; about applying cognitive psychology to trade marks Robert Burrell, Kimberly Weatherall, 'Towards a New Relationship between Trade Mark Law and Psychology' (2018) 71(1) *Current Legal Problems* 87.

deemed inherently non-distinctive and it is only because of the distinctive character of other elements, their positioning, and also the nature of goods/services applied for, that the shape mark as a whole may pass the threshold of distinctiveness.³⁸⁷ However, even assuming that a functional sign proves to be distinctive and capable of lowering consumer search costs, such a finding alone is not sufficient to overcome the functionality bars and enjoy trade mark protection under EUTM.

4.2.1.2. *Increasing the costs of substitutable products*

Apart from affecting consumers, functionality increases competitors' costs of trading substitutes. This is a point that EU and US legal doctrines (see 2.2–2.3 and 3.2–3.3) and 'law and economics' school of thought converge on. Part 4.4. explores the issue of product substitutability from different angles, whilst the remarks below retrace the main lines of the analysis by Landes and Posner.

From a utilitarian angle, a feature may be important for the functioning of a product, or may result from a cheaper (i.e. more optimal) technological production process, which, as such, confers specific value/attractiveness to consumers.³⁸⁸ Any other product which cannot simply incorporate this feature must introduce a 'copied around' alternative, which will necessarily cost more and produce deadweight losses.³⁸⁹ For this reason, the manufacturer of a utilitarian feature may restrain competitor and consumer access to the product itself, and to the product market.³⁹⁰ This economic deficiency justifies the arguments that allowing a certain amount of copying may even stimulate further creativity/innovation, with beneficial effects upon market competition.³⁹¹ As ensuring product availability seems more important than protecting source designation, even if a functional sign has acquired distinctiveness – a circumstance irrelevant under the EUTM – the risk of consumer confusion induced by the copied functional features can be minimized through word and graphic

387 EUIPO Common Practices CP9 on convergence https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/News/cp9/CP9_en.pdf (April 2020). For instance, a distinctive word /logo will ensure distinctiveness if affixed on a fountain pen, but not on a bottle or as a part of a chocolate packaging containing typical, and also multiple descriptive elements and colours.

388 Landes, Posner (n 359) 198 giving the examples of a tire and container.

389 Ibidem (n 31) 297.

390 Dogan, Lemley (n 379) 1246–1248.

391 Glynn Lunney, 'Trademark Monopolies' (1999) 48 Emory L. J. 367, 440; Beebe, Hemphill (n 316) 1385–1386 discussing circumstances of 'free riding on product attributes' as congruent with trade mark policy; Katya Assaf-Zakharov, 'Non-Traditional Trademark Protection as (Non-Traditional) Means of Cultural Control' in Calboli, Senftleben (eds.) (n 22) 364–368 discussing sociological aspects of imitation efficiency; for a seminal study concerning fashion Kai Raustiala, Christopher Sprigman, 'The Piracy Paradox: Innovation and Intellectual Property in Fashion Design' (2006) 92 Virginia Law Review 1687.

labelling which properly informs the public about the source designation of the goods/services.³⁹²

Aesthetic functionality is somewhat more difficult to gauge, because it is not about practical, utilitarian features, but about any kind of feature that makes a product more valuable in the customer's eyes.³⁹³ Producers are generally incentivised to trade attractive products tailored to consumers' preferences of quality, appeal, and so on, as product choice is frequently determined by appearance. Even if manufacturing a better-looking product is costlier, this triggers product differentiation, for which consumers are willing to pay more. It is certain that producers seek to protect their investment in making their output more attractive, whilst prohibiting its copying via various IPRs (design, trade mark, even copyright).³⁹⁴ What raises doubts is the situation of an aesthetic feature that becomes a product 'attribute' vital for its marketing, that is, a market necessity desired by customers. This would impose additional costs on producers if they need to compete effectively – some classic examples are golden pages for a cookbook, or yellow colour for butter/margarine.³⁹⁵

Unlike technical features, the need to ensure the cheapest access to certain 'aesthetic' features for competitors does not seem so obvious. The input of aesthetically functional features to the success of a product is difficult to map because of its link with the sign's capability of source identification and the legitimate need to build reputation, mostly through advertising activities. Because worthwhile advertising is anything that helps sell a product, this includes aesthetic/appealing features, which may then become of utmost importance for a given product, later essential for the market offer, and finally excluded from protection as functional. There is a risk of vicious circle of developing marks becoming valuable and popular, then losing trade mark eligibility due to popularity. In the author's opinion, one solution to minimizing it would be to require some additional 'negative' economic circumstances in the case of aesthetic functionality. This could include using a trade mark as a rent-seeking tool to maintain supra-competitive prices after patent expiration, or using a trade mark as a strategic asset and 'barrier to entry' in order to hamper competition by substitution (more below).

4.2.1.3. *The strategy of deliberate litigation costs and competition agreements*

Protecting functional signs triggers other important societal costs. The need for competitors to use a similar functional feature as part of their own goods/

392 Robert Denicola, 'Freedom to Copy' (1999) *The Yale L. J.* 1661, 1672–1673 also citing Ralph S. Brown, 'Design Protection: An Overview' (1987) 34 *UCLA L.J.* 1341; Dogan, Lemley (n 379) 1249.

393 Landes, Posner (n 31) 297.

394 *Ibidem*, 299.

395 *Ibidem* (n 359) 200 referring to US case *Publications International v. Landoll*, 164 F.3d 337 (7th Cir. 1998).

services increases the chances of conflicts and litigation costs. This is because functional features are usually ‘weak’ and undistinctive, and sometimes incorporated as information part of a combined sign.³⁹⁶ Acquiring trade mark protection over the functional sign entails registration difficulties, as competitors usually monitor trade mark filings and initiate opposition or invalidation proceedings. Later, assuming trade mark protection is granted, enforcement follows, as the trade mark owner may sue competitors over the use of similar signs, with the aim of driving them away from the market.³⁹⁷ The outcomes of such legal confrontations depend on the financial and organizational strength of the business entities involved: a deep-pocket player may easily exhaust a smaller rival with a litigation burden.

Economic studies show that large incumbent firms strategically oppose trade mark applications from rivals – and then delay proceedings – not only to force re-allocation of resources to the dispute, but in fact to interrupt their producing and marketing processes.³⁹⁸ Filing oppositions directly increases the value of trade mark portfolio, especially if an undertaking builds ‘a reputation for toughness’.³⁹⁹ Another study that discussed the congestion/depletion of word marks argued that incumbent strong corporations adopt ‘trade mark bullying’ intimidation strategies to prohibit smaller entities from the use of a similar (and frequently descriptive) element, even if it is non-confusing as to source identification.⁴⁰⁰ Such examples may support the assumption that similar behaviours may occur in relation to functional signs. Strategists frequently describe IPRs as a business leverage tool because of the ability to file infringement suits against vulnerable competitors.⁴⁰¹

396 More on reducing the scope of protection granted for combined signs containing ‘weak’ elements, Annette Kur, ‘Relative Grounds for Refusal or Invalidation’ in Kur, Senftleben (eds.) (n 24) paras 4.351–353.

397 Lemley, McKenna (n 316) 2214–2219 and 2224–2225; Canahai, McKenna (n 263) 21–23.

398 Philipp Schautschick, Christine Greenhalgh, ‘Empirical Studies of Trade Marks – The Existing Economic Literature’, Department of Economics Discussion Paper Series 2013 (No. 659), University of Oxford, referring on pp. 33–34 to a study undertaken on a dataset of Canada opposition cases between 1996 and 2009 by E.J. Collete, ‘Increasing Rival Costs: Trade-mark Opposition as a Tool for Entry-Deterrence’, chapter of dissertation, Carleton University, Canada (2012). Along similar lines Lunney, ‘The Error ...’ (n 287) criticizes the over-protection of trade dress as used ‘to scare off competitive entry’ (at 231) and exemplifies it with *Two Pesos v. Taco Cabana*, 505 U.S. 763, 23 U.S.P.Q.2d 1081 (1992), in which finding Two Pesos liable of the infringement of the restaurant décor of Taco Cabana put him out of business and forced to sell it to the plaintiff Taco Cabana (fn 42, at 229).

399 Philipp Sandner, *The Valuation of Intangible Assets: An Exploration of Patent and Trademark Portfolios* (Gabler Wiesbaden 2009) 46, referring Georg von Graevenitz, ‘Which Reputations Does a Brand Owner Need? Evidence from Trade Mark Opposition’ (2007) Discussion Paper No. 215, 1 DOI: 10.5282/ubm/epub.13337.

400 Beebe, Frommer (n 381) 1022, giving the example of ENTREPRENEUR trade mark efficiently litigated by Entrepreneur Media.

401 Gerald B. Halt, Jr. et al., *Intellectual Property and Financing Strategies for Technology Start-ups* (Springer 2017) 59.

From another angle, contracts may serve to solve this kind of emerging legal conflict. One example is co-existence agreements, which gather holders of highly similar marks to delineate the use of their signs in relation to specific categories of goods/services in order to avoid unnecessary and unpredictable judicial disputes.⁴⁰² If letting the situation be litigated, the outcome could be a double-edged sword, that is, a finding of either infringement, or honest concurrent use, an extremely risky gamble for the first party to sue, who may then face further invalidation proceedings, potentially even leading to the loss of the trade mark at issue. For this reason, licence agreements may condition production, distribution, and other activities upon a prohibition on licensees challenging the validity of the trade mark at issue.⁴⁰³ However, in the EU the inclusion of this type of restriction in a licence or co-existence contract is not always left entirely to the discretion of parties; it may be investigated under the competition law framework of Art. 101 TFEU (previously Art. 85). EU jurisprudence has demonstrated that competition concerns may be raised by no-challenge clauses upon which a party should refrain from submitting a cancellation motion (for reasons of lack of genuine use) or opposing a registration, or submitting an invalidity claim based on absolute grounds for refusal, such as lack of distinctiveness, descriptiveness, or genericness.⁴⁰⁴ In those cases, the authorities looked for ‘appreciable’ restrictions of competition and analysed whether the maintenance of a trade mark would amount to an unjustified barrier to entry for competitors, or if the contractual restrictions had the main purpose of hampering distribution of new goods/services to a new territory. This trend of scrutinizing contractual prohibitions from a competition standpoint is still visible. EU Regulation No. 316/2014 pertaining to technology transfer agreements⁴⁰⁵ does not insulate from competition control the so-called ‘termination on challenge’ clauses which allow a licensor to terminate a license agreement, if the licensee attempts to challenge the validity of the IPR; however, such clauses are still permitted in case of exclusive licenses.⁴⁰⁶

402 The legislator’s acquiescence to such agreements may be inferred from the EUTM’s formulation of the scope of a trade mark right, where reference is made to ‘third parties not having his [right holder] consent’ (LB), as argued by Ghidini (n 357) 289–290.

403 Valentine Corah, *Intellectual Property Rights and the EC Competition Rules* (Hart 2006) 126–128.

404 Case C-35/83 *BAT Cigaretten-Fabriken v. Commission*, [1985] E.C.R. 00363, paras 32–37 (as an appeal from Commission Decision of 16 December 1982, Case IV/C-30.128); *Moosehead/Whitbread*, Commission Decision No. 90/186/EEC, 1990 *O.J. L. 100*, 32; case *Airam/Osram* reported in the Eleventh Report on Competition Policy (1981) 97. These cases were discussed in Lavinia Brancusi, ‘Assessing the Impact of Registering Non-Traditional Marks: A European Union Competition Law Analysis’ in Calboli, Senftleben (eds.) (n 22) 240–242.

405 See fn 355.

406 Thomas Vinje, ‘European Union’ in Thomas Vinje (ed.) *The Intellectual Property and Antitrust Review* (3rd ed. The Law Reviews 2018) 50.

Putting these findings in the perspective of functional signs, there are grounds to suggest analogical application. If functionality means a set of desirable features for a certain product category, a trade mark holder can orchestrate a series of contractual relationships with selected third parties in order to delimitate their use in correlation with no-challenges clauses. The latter would protect licensees against legal action from the trade mark owner, whilst simultaneously conferring market advantages to them when compared to those competitors left outside the agreements. Such competitors would then have been denied access to a functional sign which presumably would have been invalid from the start. From a competition standpoint this type of agreement has to be evaluated as a whole and on a case-by-case basis – if obligations are not justified or well balanced by contractual advantages enjoyed by each party, whereas the main effect of the contract consists of restricting market competition, then the contract may appear questionable.⁴⁰⁷

4.2.2. The leveraging capabilities of functional trade marks to induce competitive advantages

The notion of leveraging IP defines the means of extracting and exploiting the value of IP portfolios in order to confer competitive advantages to the rights holders.⁴⁰⁸ Business strategy development describes how IPRs may effectively counterbalance the different types of market forces that influence the market position of an undertaking. One model belongs to prof. Michael Porter, who has extensively analysed the development of competitive strategy.⁴⁰⁹ This model places an undertaking in a ‘hub’ under pressure from five forces: the degree of rivalry among existing firms, customers’ purchasing power, barriers to entry, suppliers’ power, and threats of substitutes.⁴¹⁰ The undertaking may engage in responding strategies based on ‘overall cost leadership’, ‘differentiation’, and ‘focus’ on a customer or product segment or geographical market. What bears significance for trade marks is the strategy linked to product differentiation, that is, providing a unique product, especially via brand image and technology features. The approach, supported by market data and studies, is that a branding identity generates price insensitive and switching costs whilst exerting influence upon purchasing power, availability of substitutes, and barriers to entry. The following part addresses two kinds of competitive

407 Ibidem, 52–53.

408 Halt (n 401) 51.

409 For a seminal work: Michael E Porter, ‘Competitive Strategy: Techniques for Analyzing Industries and Competitors (1980)’ University of Illinois at Urbana-Champaign’s Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship, <https://ssrn.com/abstract=1496175>

410 Christopher Arena, Eduardo Carreras, *The Business of IP* (OUP 2008) 85–89 referring to Michael Porter, *Competitive Strategy, Technique for Analyzing Industries and Competitors* (NY The Free Press 1980) 4.

advantage: the complementary use of trade marks as means of reinforcing patent strategies, with a focus on the pharma industry, and the use of indispensable assets to block access to interrelated markets. These issues are discussed in view of their possible application to functional signs.

4.2.2.1. The synergy between trade marks and patents

There are studies that suggest that trade marks belong to market-specific business decisions in order to not only capture innovation and support growth strategies focused on product and quality differentiation, but also complement the protection of technological innovation.⁴¹¹ Although no universal rule applies, as there are many strategic and industry-dependent motivations for filing for trade mark registration,⁴¹² firms are generally interested in using multiple forms of protection (such as patents and trade marks) in relation to different product features, in order to enhance the economic benefits that can be achieved individually, complementarily, and at different moments of time.⁴¹³ This concerns, for instance, the medicine and chemical sectors, and somewhat applies to the information and communication sectors.⁴¹⁴

Patents usually play an essential role in the early phases of the innovation value chain, whilst trade marks operationalize later product commercialization,⁴¹⁵ development of reputation, brand creation, and extension to new markets⁴¹⁶. It is acknowledged that trade marks can be used to prolong, or substitute for other IPRs (e.g. in relation with small product changes) – this, in itself, is not a negative thing, if trade marks become an indicator of incremental innovation⁴¹⁷ – but concerns arise when accumulating layers of IPRs protection, that is, ‘IPR stacking’⁴¹⁸ turn into barriers to entry. As a rule, the existence of one IPR can rarely block new entrants – a more dangerous en-

411 Charles de Grazia, Amanda Myers, Andrew Toole, ‘Innovation Activities and Business Cycles: Are Trademarks a Leading Indicator?’ (2020) 27(2) *Industry and Innovation* 184, 186–187.

412 Extensively and critically, Dev Gangjee, ‘Trade Marks and Innovation?’ in Graeme Dinwoodie and Mark Janis (eds.) *Trademark Law and Theory II: Reform of Trademark Law* (Elgar 2021) at: <https://ssrn.com/abstract=3658725>

413 McKenna, ‘An Alternative’ (n 316) 873–884.

414 Gangjee, *ibidem*, 23–24.

415 Companies prioritize trade marks’ procurement, so protection for packaging/ design/product shape is generally sought at a later stage of development, see Halt (n 401) 54.

416 Carolina Castaldi ‘On the Market: Using Trademarks to Reveal Organizational Assets, Strategies and Capabilities’ (March 2019) 8–9 at <http://dx.doi.org/10.2139/ssrn.3255864>; however, for service sectors and creative/cultural industries, trade marks may substitute for patents as ‘soft innovation’.

417 Meindert Flikkema, Carolina Castaldi, Ard-Pieter de Man, Marcel Seip, ‘Trademarks’ Relatedness to Product and Service Innovation: A Branding Strategy Approach’ (2019) 48 *Research Policy* 1340, 1341–1342 <https://doi.org/10.1016/j.respol.2019.01.018>

418 Carolina Castaldi, ‘The Economics and Management of Non-Traditional Trademarks’ in Calboli, Senftleben (n 22) 270.

vironment is created by IPR exclusivity in correlation with other factors that affect new entrants, such as increased production costs and marketing time or decreased product functionality.⁴¹⁹

During the term of patent protection, a combination with trade marks may successfully sustain IP competitive advantages. *Geox's* story is an example of the synergy of trade marks with technology. By capturing and positioning specific product functionality (covered by patents on materials, part of products, methods of manufacturing) and creating in consumers' minds enormous brand awareness of the 'shoe that breathes', they later expanded to other lines of windproof and waterproof apparel and shoes.⁴²⁰ Another type of strategy, that is, 'product space packing', consists of using trade marks along with patents, designs, and utility models in order to fill any profitable niches of products in possible demand, such as the approaches adopted by the market leaders *Kellogg* in the breakfast cereals industry or *Henkel* into detergents.⁴²¹ Broad IP portfolios allow entities to choose a convenient right from their 'menu' and enforce it against smaller rivals, in order to obstruct or discontinue their activity. It is reasonable to assume that many of the trade marks intersecting with the subject-matter of patents or designs fit the category of shapes or position marks which generate litigation upon legal grounds related to distinctiveness or functionality. Indeed, a quick search of the EUIPO database displays, for instance, a long list of *Henkel* trade mark registration/opposition/invalidity proceedings concerning the shapes of dishwasher tablets, toilet devices, packaging, as well as design proceedings concerning toilet blocks and cosmetics containers.⁴²² To achieve strategic leverage, a trade mark portfolio usually contains signs consisting of product features, because this is an efficient way of impeding competitors from offering alternatives of similar functionality.

After the expiration of a patent, trade marks reinforced by branding strategies ensure the maintenance of higher, supra-competitive prices charged during the exclusivity period, which enables strong undertakings to continue and extend their market dominance.⁴²³ Several frequently discussed cases have oc-

419 Arena, Carreras (n 410) 148.

420 Francesca Cecchinato, Tiziano Vescovi, 'The Geox: The Shoe that Breathes' in ByoungHo Ellie Jin, Cedrola Elena (eds.) *Product Innovation in the Global Fashion Industry* (Palgrave Macmillan 2018) 57, 66–69.

421 Markus Reitzig, 'Strategic Management of Intellectual Property' (2004) April MIT Sloan Management Review 5–6, <https://sloanreview.mit.edu/article/strategic-management-of-intellectual-property/>

422 Among 27 trade mark decisions see: T-393/02 (CTM 001162395); C-457/01P (CTM 000703231); EUIPO appeals R 1237/2013-1 (CTM 010401255); R 1153/2004-1 (CTM 001272541); EUIPO Inv. Dec. 31/08/2012 (CTM 010630317); 05/08/2004 (CTM 003024189). Among 18 design decisions see: EUIPO appeals R 2113/2015-3, T-296/17 (RCD 001663618-0003); R 2113/2015-3, T-296/17 (RCD 001663618-0003) and Inv. Dec. 08/09/2006 (RCD 000387089-0002).

423 Josef Drexler, 'Real Knowledge Is to Know the Extent of One's Own Ignorance: On the Consumer Harm Approach in Innovation Related Competition Cases', MPI Research Paper

curred in the pharmaceutical industry. *Bayer* aspirin is a remarkable example of how the initial technological advantage of producing a ‘pure and durable form of acetylsalicylic acid’ by the end of 19th century was strategically enhanced over years by the trademark ‘Aspirin’, and developed through consumer brand awareness, loyalty, and a stable perception of superiority over any other equivalents. This, in turn, conferred *Bayer* a persistent market share even in the countries where the trade mark became generic (USA), whilst in those where registration was preserved (Argentina, Germany) analgesic market shares demonstrated its dominant position.⁴²⁴ *Bayer*’s additional advantages came from a global distribution network and high price positioning, hence a higher absolute profit margin, which encouraged the pharmacies to stock more *Bayer* products than cheaper substitutes, generating more demand and consolidating the company’s position.⁴²⁵ Indeed, stocking policy represents a sensitive factor to influence significant cost savings in case of shifting medicine consumption to lower priced generics.⁴²⁶

Bayer’s successful story was based off the asset of a word mark, as was appropriate for that period. Nowadays, the pharma industry complements business deterrence strategies with protection of trade dress, that is, shapes, colours, packaging, by means of non-traditional signs. Because a large part of US (aesthetic) functionality cases deal precisely with the shape, size, and/or colour of pills,⁴²⁷ it is useful to have a market perspective on this matter.

4.2.2.2. *A focus: functional trade dress as a deterrent to the entry of generic medicines*

In the pharma industry there is a clear interdependency between the value and lifecycle of a trade mark and an owner’s attitudes and business strategies, such as the intent to gain and maintain market power.⁴²⁸ Trade marks belong

Series 09–15, at <http://ssrn.com/abstract=1517757>, 19–20. For a different study suggesting that patent/trademark synergy can be efficiency-enhancing (i.e. lower prices during patent exclusivity anticipate higher profits during subsequent trade mark protection), Gideon Parchomovsky, Peter Siegelman, ‘Towards an Integrated Theory of Intellectual property’ (2002) *Faculty Scholarship at Penn Law*, 1364 https://scholarship.law.upenn.edu/faculty_scholarship/1364

424 Klaus Jennewein, *Intellectual Property Management: The Role of Technology-Brands in the Appropriation of Technological Innovation* (2005 Physica Verlag) 31–53.

425 *Ibidem*, 55.

426 Alexandra Cameron et al., ‘Switching from Originator Brand Medicines to Generic Equivalents in Selected Developing Countries: How Much Could Be Saved?’ (2012) 15 *Value in Health*, 671 <https://doi.org/10.1016/j.jval.2012.04.004>.

427 Arul Acaria, Kavya Mammen, ‘Non-Traditional Trademarks in the Pharmaceutical Sector’ in Calboli, Senfleben (n 22) 274–285; Irene Calboli ‘Beyond Patents: The Problems of Non-Traditional Trademark Protection for Medicines and Health Technologies’ (2020) 51 *IIC* 1.

428 Shukhrat Nasirov, ‘Trademark Value Indicators: Evidence from the Trademark Protection Lifecycle in the U.S. Pharmaceutical Industry’ (2020) 49(4) *Research Policy* 1, <https://doi.org/10.1016/j.respol.2020.103929>

to a larger process of ‘lifecycle management’ which refers to the subsequent patenting of minor variations of the original active pharmaceutical ingredient (i.e. secondary patents), or adding other forms of exclusivity, in order to stifle competitor access to the market – if they are undertaken by the originating company, such practices are known as ‘evergreening’.⁴²⁹ Trade marks supports the practice of introducing patent variants together with new brands that benefit from, and/or supersede consumers’ loyalty towards older brands, so as to maintain premium prices.⁴³⁰ Even in relation to word marks, because of external regulations around chemical and generic names which create difficulties when developing a drug’s brand name, companies use the tactic of pre-emptive registration to block the access of competitors to valuable trade marks.⁴³¹

However, it is the protection of trade dress that has become the main strategic tool of controlling consumer preferences. One reason for this is that in the US, unlike in the EU, prescription drugs are repackaged by pharmacies before being sold to patients, so consumers cannot rely on word and graphic trade marks affixed on packaging, but mostly on the appearance of the drug itself. Repeated habits are important, therefore a colourful and appealing look for a daily pill makes it easy to remember and irrationally bonds consumers to that particular brand. An important study by Hannah Brennan argues that consumers and doctors prefer branded drugs to generics because the complex branding strategies, especially the heavy advertising of trade marks, create ‘artificial differentiation’ based on the alleged superiority of the originator branded drug.⁴³² Another study argues that patients subject to direct advertising have an influence on prescription drug demand, as doctors willingly prescribe medicine that a patient has learnt about and expects to receive.⁴³³

429 Robin Feldman, ‘May Your Drug Price be Evergreen’ (2018) *Journal of Law and the Bio-sciences* 590, 596; Chie Hoon Song, Jeung-Whan Han, ‘Patent Cliff and Strategic Switch: Exploring Strategic Design Possibilities in the Pharmaceutical Industry’ (2016) 5 *SpringerPlus*, 692, 6–11 <https://doi.org/10.1186/s40064-016-2323-1>; Hazel Moir, Luigi Palombi, ‘Patents and Trademarks: Empirical Evidence on “Evergreening” from Australia’, 2013, paper presented at 4th Asia-Pacific Innovation Conference, National Taiwan University, <https://openresearch-repository.anu.edu.au/handle/1885/11418?mode=full>, 1–3; C. Scott Hemphill, Bhaven N. Sampat, ‘Evergreening, Patent Challenges, and Effective Market Life in Pharmaceuticals’ (2012) 31 *Journal of Health Economics* 327, 328. Sometimes the originator decides to provide their own generics and positions them advantageously against other generics, cf. Hemphill, ‘Intellectual ...’ (n 345) 891–892 discussing withdrawals and ‘product switch’.

430 Song, Han, *ibidem*, 12 (see table); Moir, Palombi, *ibidem*, 4–5. Sometimes the new brand ‘cannibalises’ the older one, but frequently ‘face-lifting’ the original brand with letters or words (such as adding ‘XR’ or ‘Plus’) suffices for further exploiting the branding benefits.

431 Nasirov (n 428) 7.

432 Hannah Brennan, ‘The Cost of Confusion: The Paradox of Trademarked Pharmaceuticals’ (2015) 22 *Mich. Telecomm. Tech. L. Rev.* 1. Doctors are also encouraged to prescribe branded drugs, which itself increases patients’ certainty of the drug’s effectiveness.

433 Anish Vaishnav, ‘Product Market Definition in Pharmaceutical Antitrust Cases: Evaluating Cross-Price Elasticity of Demand’ (2011) *Colum Bus L Rev* 586, 599–601.

In reality, generics must be bio-equivalent in order to get market approval, therefore arguments about lower the quality and presumably worse manufacturing conditions of generics are not sustained by clear proof (such as inspection of facilities).⁴³⁴ When competitors are forced to change the appearance of a generic drug because the original form is covered by a trade mark, there are proofs of reduced adherence from the perspective of vulnerable patients who considered the change in appearance confusing.⁴³⁵ There is also a reduction in drug effectiveness via placebo effects, because patients usually mistrust any change and doubt the quality of a generic.

In many cases, trade-dress protection contributes to a self-fulfilling myth of the superiority of a particular brand over any other substitute, which allows the rights holder to maintain higher prices and revenues. A prominent example is the famous ‘Purple Pill’ of AstraZeneca, used for the drug omeprazole and sold under the name Prilosec – the world’s top-selling drug in 2000, and later replaced (yet not ‘cannibalised’) by the new patented version of the active enantiomer, named ‘Nexium’. The new drug, dressed as a new version of the existing purple pill, enjoyed the shift of reputation, brand salience and consumer loyalty from Prilosec and maintained its sales level for a period of ten years after the expiration of the first patent on omeprazole.⁴³⁶

As the US jurisprudence has confirmed, in specific circumstances the functionality doctrine prevents the conferring or enforcing of trade mark protection for features of appearance of a drug for purposes related to the use or the effectiveness of a drug (Chapters 3, 6, and 8). Similar application may occur under the EUTM, now that the reworded functional exceptions encompass colours, alone or within combinations of other kinds of product features.

4.2.2.3. Functional features as ‘indispensable’ asset for follow-on ‘new products’

It is generally accepted that protecting a product’s functionality via IPRs affects product substitutability, especially when coupled with brand loyalty and sale strategies (rebates, tying/bundling). This is even more true when the protected asset is essential for the functioning of other products/services. Some assets physically connect products, others simply embody the features or information that need to be copied/transformed to develop follow-on products. Legal exclusivity over the asset enables the rights holder to transfer various

434 Brennan (n 432) 19–24. For an argument about the lack of quality assurance from generic manufacturers, Richard Posner, ‘Intellectual Property: The Law and Economics Approach’ (2005) 19 *Journal of Economic Perspectives* 57, 67.

435 Brennan (n 432) 33–35; Moir, Palombi (n 429) 17 referring to an Australian trial concerning variants of the anti-depressant drug Efexor, in which the court justified an injunction against a generic upon evidence that mentally ill patients were confused about switching to a medication of a different appearance.

436 Brennan (n 432) 27–29; Moir, Palombi (n 429) 27–31; Song, Han (n 429) 7.

benefits generated in the original market of the core product, to other interrelated, downstream markets, such as consolidating their position on the existing market, facilitating entry to a new market, or bringing in additional revenues. A classic example represents original spare parts and/or add-on accessories, as compared to independently manufactured parts.⁴³⁷ More recent revolutionizing examples constitute ‘smart connected products’, comprised of software and connectivity components enabling their functioning within an ‘Internet of Things’ network (e.g. the Bose wi-fi system, coupled with a product cloud which allows music streaming over the Internet, or Tesla cars which have software connected to a monitoring system running remote services and upgrades).⁴³⁸ Product standardization and connectivity amount to a disruptive wave of ‘IT driven transformation’ which changes both the external competition environment and the internal organization of manufacturing companies.⁴³⁹ This renders topical the issue of how to protect such valuable assets by means of IPRs, and in which conditions they should be made available to competitors. There is a huge area of law dealing with the conditions in which pools of standardized essential patents – instrumental for global interoperability technologies such as Wi-Fi, USB, 4G, or Bluetooth – are licenced upon ‘fair’, ‘reasonable’, and ‘non-discriminatory’ (FRAND) terms, set by the standard-development organizations.⁴⁴⁰ It is beyond this chapter to engage in a discussion, but here it will be noted that compatibility can be essential for various industries, and, apart from patents on products or processes, product appearance may be covered by designs or functional trade marks, which equally serve to block competitors’ access to product features. The purpose of this part is to explore the general guidance that EU competition ‘refusal to license/deal’ cases – concerning assets held essential for supplying products or services on inter-related markets – have conferred on the criteria of ‘new product’ and ‘indispensable’ character (of the asset), in order to hypothetically consider the situation of product functionalities covered by trade marks.

Starting from the principle that owning and exercising an IPR is not abusive per se, even for an undertaking with a dominant position, the CJEU laid down the ‘exceptional’ circumstances when a refusal to licence constituted an

437 Laure Schulz, ‘The Economics of Aftermarkets’ (2015) 6 JECL&P 123.

438 Michael Porter, James Heppelmann, ‘How Smart Connecting Products are Transforming Competition’ (2014) 11 Harvard Business Review, <https://hbr.org/2014/11/how-smart-connected-products-are-transforming-competition>

439 Michael Porter, James Heppelmann, ‘How Smart Connecting Products are Transforming Companies’ (2015) 10 Harvard Business Review, <https://hbr.org/2015/10/how-smart-connected-products-are-transforming-companies>

440 Rafał Sikorski, ‘Access to Standard Essential Patents and Antitrust Enforcement: The Case for Licensing Component Manufacturers’ (2020) 82(2) RPEiS 19, 20–31; Jorge Contreras, ‘Global Rate Setting: A Solution for Standards-Essential Patents?’ (2019) 94 Wash. L. Rev. 701, 713–721; on classification of standards and setting organisations, Alexandra Kuźnicka-Cholewa, *Standaryzacja nowych technologii – jej wpływ na zakres swobody wykonywania uprawnień z patentu* (Warszawa C.H. Beck 2022) 9–47.

abuse of dominant position. The flagship ruling *IMS Health*,⁴⁴¹ which built notably on *Magill*,⁴⁴² and *Oscar Bronner*,⁴⁴³ formulated the following requirements: (i) the protected asset was indispensable to compete in a market; (ii) the refusal prevented the appearance of a new product/service for which there was potential consumer demand; (iii) the refusal had no objective justifications; and (iv) it restricted/excluded competition in the secondary market.

The ‘new product’ requirement emerged in the *Magill* case, in which access was refused to copyrighted information about individual TV programmes, necessary for compiling a comprehensive weekly TV guide. Such a product had not previously existed, as viewers accessed only listings for individual stations, it was not offered by the IP holder, and met a ‘specific, constant and regular potential’ consumer demand.⁴⁴⁴ The *IMS Health* judgment (concerning copyright over a database containing pharmaceutical sales data gathered from local German pharmacies according to a ‘brick structure’ built upon geographical sectors) emphasized the specificity of the new product through its different nature, understood as not duplicating pre-existing goods/services.⁴⁴⁵ *AG Tizzano* indicated that although the compared products could be in partial competition due to a limited degree of substitutability, the new product should answer new consumer needs, unsatisfied by the existing offer.⁴⁴⁶ One divergent commentator noted that in the *IMS* case, competitors were not interested in making a different alternative, but in copying the existing product, thus forcing price competition.⁴⁴⁷ An interesting development was brought by the *Microsoft* judgment, which found abusive the refusal of sharing interoperability information with competitors in the workgroup server operating market, even if no particular new product had been identified, as long as the conduct at issue limited ‘technical development’.⁴⁴⁸ In other words, Microsoft’s ‘artificial interoperability advantage’ and market position discouraged competitors from developing alternative server operating systems.

The requirement of an ‘indispensable’ character of the asset (for conducting business activities on the secondary market) represented a key issue known as the ‘essential facilities’ doctrine.⁴⁴⁹ The *Bronner* case brought important explanations, however, it did not deal with IPR. The case concerned

441 C-418/01 *IMS Health v. NDC Health*, EU:C:2004:257, paras 49–52.

442 Jointly C-241/91P, C-242/91P *RTE and ITP v. Commission (Magill)* EU:C:1995:98.

443 C-7/97 *Oscar Bronner v. Mediaprint*, EU:C:1998:569.

444 C-241/91P, C-242/91P *Magill*, paras 52–54.

445 C-418/01 *IMS*, para 49.

446 C-418/01 *IMS* Opinion, EU:C:2003:537, paras 62, 66.

447 Josef Drexl, ‘Intellectual Property and Antitrust Law: *IMS Health* and *Trinko* – Antitrust Placebo for Consumers Instead of Sound Economics in Refusal-to-Deal Cases’ (2004) 35 *IIC* 788, 799–800.

448 T-201/04 *Microsoft v. Commission*, EU:T:2007:289, paras 653–665. Another type of abuse concerned bundling services: in the media player market, Microsoft tied the media functionality of Windows Media Player to their Windows PC operating system.

449 Maggiolino (n 356) 141–179.

the inclusion of a small locally distributed newspaper in the only nationwide home delivery distribution scheme, developed by another publisher of newspapers reaching half of the Austrian market share. The Court noticed a difference with the *Magill* case, when the input constituted ‘raw material’ (i.e. basic information)⁴⁵⁰ indispensable for creating a new product. Here the issue was whether there was actual or potential substitute for the asset (i.e. means of distribution), understood as an economically viable, realistic alternative. AG *Jacobs* suggested a stricter interpretation, defined by some extremely difficult or impossible conditions around duplicating the facility ‘owing to physical, geographical or legal constraints’, public policy reasons, or when the costs alone constituted a barrier to entry.⁴⁵¹ Putting it bluntly, the ‘deal’ was not about getting the most advantageous option. The Court concurred with the AG’s view and denied the indispensability of the asset, as a daily newspaper could function through other methods of distribution, perhaps less advantageous (sales in shops/kiosks), whereas another home delivery scheme was also possible to implement, although it would suggest collaboration between publishers for reasons of cost-effectiveness.⁴⁵² The *IMS Health* case also linked the necessity of the asset to the ability of an equally efficient competitor to come with an alternative – this was difficult to achieve because the ‘brick-structure’ had become an industry standard, with locked-in effects, since it was used by every interested party (pharmaceutical companies, pharmacies, doctors). Therefore, licensing the asset was essential for activity on the downstream market, that is, marketing studies on regional sales of medicines.⁴⁵³ However, a stronger pro-competition approach was taken in the *Microsoft* case. The information was deemed indispensable for competitors in order ‘to compete viably’, and to ‘interoperate with Windows domain architecture on an equal footing’.⁴⁵⁴ Undoubtedly of significance was also the fact that competitors were offering systems with improved operational/technical parameters.⁴⁵⁵

It is reasonable to assume that the aforementioned EU competition guidance could find analogical application⁴⁵⁶ to certain situations involving functional product features. Technically determined features may become essential for creating new or improving old products. Significantly, even those who found the ‘new product’ requirement unsuitable for copyright due to

450 C-241/91P, C-242/91P *Magill*, para 56.

451 C-7/97 *Bronner*, Opinion EU:C:1998:264, paras 65–66.

452 C-7/97 *Bronner*, paras 41, 45–46.

453 C-418/01 *IMS*, paras 45–47; Opinion paras 55–59, 60.

454 T-201/04, *Microsoft*, paras 230, 248.

455 T-201/04 *Microsoft*, para 240.

456 For an application of competition law to copyright owners’ refusal to licence which hinders the development of content repositories and aggregation services necessary for cultural follow-on innovation, see Martin Senftleben, ‘Impact of Competition Law: Monolithic Copyright, Market Power and Market Definition’ in K.-C. Liu, R.M. Hilty (eds.) *Remuneration of Copyright Owners* (Springer 2017) 258.

it impairing the intended owner's incentives, still accepted its application to technical IPRs, because of their different purpose, encouraging improvements, and follow-on innovation.⁴⁵⁷ Such an approach corresponds with the goals of Art. 7 TRIPS, which subordinates the purpose of IPRs – at least certain types of protection – to contributing to the promotion, transfer, and dissemination of technological innovation. This is even more true for features that ensure the compatibility/interoperability of products. Incidentally, these aspects came to the attention of AG *Mengozzi* in the *Lego* case, where the suggestion was made to analyse the existence of alternative shapes with respect to the interoperability and availability needs of competitors.⁴⁵⁸

Additional source of guidance represents the 'must fit' prohibition of EU design law (1.4.). Protection is denied to features enabling the mechanical connection between two products (i.e. the classic example of exhausting pipe) which requires exact reproduction of shape and dimensions so that each product can perform its function.⁴⁵⁹ Its purpose was clearly pro-competitive, that is, enhancing interoperability between products of different origins. For reasons of IP convergence, must-fit features should also not qualify for trade mark protection, otherwise this would undermine all competition priorities set by the design regulation. Indeed, enabling a mechanical interconnection by must-fit features would arguably match the definition of a sign necessary to achieve a technical result (see technical functionality in Chapter 6 with a focus in 6.2.2.2.). Perhaps for trade mark purposes the compatibility requirement should be understood more broadly, as including market standardization. In other words, apart from the technical imperatives of connectivity, it should address product features that have become industry standards, or have served to develop them. Although prima facie acceptable in cases of utilitarian functionality, the necessity of copying for standardization reasons seems disputable in cases of products that comprise aesthetically must-have requirements, if any such can be argued to exist. The latter category depends more on subjective consumer tastes and preferences. Standardization should not be identified by some ephemeral trends; instead, it needs objective proofs based on market studies that show a constant demand and the competitive significance of such features (see aesthetic functionality in 8.4.). These issues call for further research.

Findings of abusive behaviour in refusal-to-deal cases have required competition-related factors, such as objective justifications for denial and assessment of the impact of the refusal on the interrelated market(s) and the structure of competition. For functionality purposes an analogical use would suggest

457 Henrik Meinberg, 'From Magill to IMS Health: The New Product Requirement and the Diversity of Intellectual Property Rights' (2006) (28) EIPR 398, 402–403.

458 C-48/09 P *Lego v. OHIM*, Opinion EU:C:2010:41, paras 73–74.

459 Art. 8(2) of Regulation 6/2002 and Art. 7(2) Directive 98/71. More Bently et al. (n 24) 754–755; Brancusi (n 134) 157–161.

the adoption of a complex approach integrating competition considerations, especially if product features are involved in an up-streamed/down-streamed relationship. A more cautious control at the registration stage would be more beneficial than waiting for competition law ‘refusal to deal’ instruments to later correct any questionable IPRs which are paralysing follow-on innovation.⁴⁶⁰ As *IMS Health* ultimately showed, imitation should be allowed not only when it leads to innovation, but also when the market circumstances exclude competition by substitution, such as fostering a locked-in effect by seeing an IPR as an industry standard which affects supply and price competition.⁴⁶¹

4.3. The vexing problem of (brand) ‘value’ for aesthetic functionality

A dilemma of aesthetic functionality is when the attractiveness of a sign that gives substantial value to goods stems from its reputation, separately or mingled with values from other sources (e.g. product’s appearance, designer’s fame). Upfront denial of protection to reputable trade marks collides with the core-incentive rationale that encourages trade mark holders to invest in and develop their reputation. As indicated in 2.2.2., the issue of the value of reputation has twice evaded the CJEU’s attention. In the *G-Star* case, the attractiveness of their jeans allegedly flowed from ‘the recognition as *G-Star* product’.⁴⁶² In *Louboutin, AG Szpunar* contended that the assessment should discount ‘the reputation of the trade mark or its proprietor’, understood as ‘to exclude the characteristics linked to the reputation’.⁴⁶³ *Gömböc* next reaffirmed that the ‘characteristics of the product not connected to its shape, such as ... the reputation of the product are ... irrelevant’ to the assessment.⁴⁶⁴

Some important questions arise. Is it possible to identify and quantify a distinct value of reputation? If every trade mark was sought in order to generate attractiveness for customers as an autonomous value, would it be different from the value of reputation? What is the link between reputation, goodwill, brand image, and brand value? Is it possible to discard a sign’s features pertaining to reputation? The following remarks are an attempt to give some answers, while leaving space open for future research.

4.3.1 *Starting with some delineation*

There is always a risk that certain inter-related terms are used interchangeably, although they do not describe exactly the same reality. Just as brands come

460 *Czapracka* (n 356) 47, 52, 60 discussing the weakness of IPRs investigated by competition proceedings.

461 *Drexl*, ‘Intellectual Property ...’ (n 447) 806–807.

462 C-371/06, *Benetton*.

463 C163/16 *Louboutin*, 2nd Opinion AG Szpunar, ECLI:EU:C:2018:64, para 54.

464 C-236/19, *Gömböc*, para 42.

close to trade marks, so reputation, (brand) image, and goodwill show some bonds. As Part 4.3. aims at mapping the value of reputation, this introductory part clarifies some basic concepts.

4.3.1.1. Brands build on trade marks as powerful societal tool

Today we live surrounded by trade marks, as they are sought to bring economic benefits to business and consumers. But most frequently this is a world of brands.⁴⁶⁵ Branding is instrumental for the growth strategies of any company, shapes their market position, and has potential for anticompetitive effects. Brands have evolved from trade marks to become a complex organization system. It is based on the use of certain catching symbols coordinated with different strategies (e.g. marketing, distribution, communication, pricing) which are intended to ensure a distinguishable and exclusive identity, that is, ‘personality’ for a company that competitors cannot easily copy and that raises persistent loyalty from the ‘patronizing’ consumers.⁴⁶⁶ Albeit open to various interpretations, the essence of a brand consists of the dynamic interaction between the firm’s input, that is, the set of imbued values and expectations, and consumer perceptions, which interpret and redefine those values according to their self-image, functional and emotional needs.⁴⁶⁷ A brand has a multi-layered structure: at its core lies the ‘brand cue’, usually consisting of a trade mark (word, graphics, but also design or product packaging); next, there are ‘brand attributes’ represented by some characteristics of a product that indicate objective differences between brands; then, significantly, every brand conveys ‘benefits’ and ‘brand attitudes’, that is, the subjective qualities of a brand (e.g. values, preferences) in the eyes of emotionally involved consumers.⁴⁶⁸ Marketing considers this bundle of tangible and intangible product benefits as ‘real’ product differentiation, an added value meant to command premium prices – sceptics name it an artificial differentiation diminishing the consumer welfare.⁴⁶⁹ Apart from distinguishing one brand from others and choosing

465 Instead of many, Susannah Hart, John Murphy (eds.) *Brands: The New Wealth Creators* (Palgrave 1998).

466 Deven Desai, ‘From Trademarks to Brands’ (2012) 64(4) *Florida Law Review* 981, 988–1009; Celia Lury, ‘Trade Mark Style as a Way of Fixing Things’ in Bently, Davis, Ginsburg (n 294) 216–221 – brands as management asset; Mario Biagioli, Anupam Chander, Madhavi Sunder, ‘Brands R Us’ in Haochen Sun, Barton Beebe, Madhavi Sunder (eds.) *The Luxury Economy and Intellectual Property* (2015 OUP) 77 – socio-cultural effects of branding.

467 Leslie de Chernatony, Francesca Dall’Ormo Riley, ‘Defining a “Brand”: Beyond the Literature with Experts’ Interpretations’ (1998) 14(5) *Journal of Marketing Management* 417, 428.

468 Mark McKenna, ‘Testing Modern Trademark Law’s Theory of Harm’ (2009–2010) 5 *Iowa L. Rev.* 63, 92–94 citing David Aaker, Kevin Keller, ‘Consumer Evaluations of Brand Extensions’ (1990) 54 *J. Marketing*, 27–28.

469 G. Gundlach, J. Phillips, ‘Brands and Brands Management: Insight from Marketing for Antitrust’ in Desai, Lianos, Waller (n 367) 117–124.

products accordingly, consumers use brands as self-expression and as a means of socializing by displaying their social position or affiliation to a group with similar values.⁴⁷⁰ Because the main aim of a brand is to make consumers believe in its distinct identity, this ultimately acts against inter-brand competition, because each brand is supposed to keep their loyal consumers locked-in.⁴⁷¹ It is for these reasons that brands affect the cross-elasticity of demand and supply – in other words, brands diminish product substitutability and hamper the entry of competing alternatives.

One of the most important characteristics of a brand consists of its ‘salience’, namely the transferability of image/positive associations, including customer loyalty across different categories of products.⁴⁷² Thanks to brand salience, a company enjoys competitive advantages when introducing new products or a line of them, for the same category of goods or when entering completely different markets. The owners of strong brands seek to enforce trade mark protection throughout brand extensions beyond the principle of specialization – in the name of protecting the ‘investment’ function and the whole entourage of the brand image⁴⁷³ – sometimes without conclusive proofs of being harmed by competitors.⁴⁷⁴ These aspects fuel the anti-competitive concerns around brands leading to the lessening of product choice.

Branding is a dynamic phenomenon, keeping pace with technological developments and societal needs. For instance, there has been a noticeable shift from advertisement imagery to sonic branding, as AI technologies increasingly relate to voice (e.g. virtual assistants, voice searches). Sonic branding emotionally resonates with consumers and brings new layers to a brand’s personality – one example is the sound heard when a Mastercard is used at a point of sale, by which the marketers mean to suggest that ‘we are not just ... a piece of plastic in your wallet’, but ‘a bold distinctive look and feel across every touch

470 Sonia Katyal, ‘Cosmopolitanism and the Transnational Trademark’ in Sun, Beebe, Sunder (n 466), arguing about brands building a global consciousness and citizenry.

471 Spencer Waller, Deven Desai, ‘Brands Competition and the Law’ (2010) *BYU L. Rev.* 1425; Gustavo Ghidini, *Innovation, Competition and Consumer Welfare in Intellectual Property Law* (Elgar 2010) 178–179 emphasizing the selling power based on image of uniqueness; Lunney, ‘Trademark ...’ (n 391) 426–428.

472 Beebe, ‘Search ...’ (n 377) 2030.

473 Apostolos Chronopoulos, ‘Legal and Economic Arguments for the Protection of Advertising Value Through Trade Mark Law’ (2014) 4 *Queen Mary Journal of Intellectual Property*, 257; Apostolos Chronopoulos, Spyros Maniatis, ‘Property Rights in Brand Image: The Contribution of the EUIPO Boards of Appeal to the Free-Riding Theory of Trade Mark Protection’ in *20 Years of the Boards of Appeal at EUIPO, Liber Amicorum* (EUIPO ed. 2017) 147, arguing that “‘Image Transferability’” suggests that the trade mark proprietor is entitled to internalise the benefits of an attractive brand image in all markets where a brand extension is considered plausible, or in technical terms, a “Good Fit”; at 156.

474 McKenna, ‘Testing ...’ (n 468) 107–110; Barton Beebe, C. Scott Hemphill ‘The Scope of Strong Marks: Should Trademark Law Protect the Strong more than the Weak?’ (2017) 92 *New York University Law Review* 1339.

point’, meant to convey ‘trust and reliability’.⁴⁷⁵ This sustains the rule that sound creeps easily into the subconscious and enhances a consumer’s repetitive actions by reaching out to the brand and enjoying positive emotions.⁴⁷⁶

There are numerous examples of the strategic use of brands to influence consumer choice. What bears significance for the analysis of functional trade marks is that whenever a brand builds upon a sign consisting of product features, be it a shape, colour, sound, or touch, and so on, competitors are restrained in offering consumers suitable products with identical/similar features. This makes trade mark functionality a correcting tool, enhancing the extent of market competition.

4.3.1.2. A trade mark’s goodwill, notoriety and reputation versus brand components

Intuitively, reputation and goodwill may seem inextricably connected, but legally they are two distinct notions.

‘Goodwill’ is a term in the common-law system, related to the protection of trade marks against the tort of passing off.⁴⁷⁷ UK jurisprudence defines goodwill as ‘the attractive force that brings custom’,⁴⁷⁸ ‘the magnetism’ which encourages customers to buy again from the same source.⁴⁷⁹ Goodwill is usually built upon a distinctive symbol/trade mark which is/has been successful in creating a reputation, but it is essentially attached to the business itself and captures the relationship between a trader and the public.⁴⁸⁰ The UK Supreme Court confirmed that reputation acquired through advertising even among a significant number of people was insufficient to establish goodwill, as it was necessary for there to be actual customers in the jurisdiction.⁴⁸¹ Goodwill has to be localized, meaning here customer access and payment for the goods/services within a territory. In the US scholars argue that goodwill can

475 Susie Khamis, Brent Keogh ‘Sonic Branding and the Aesthetic Infrastructure of Everyday Consumption’ (2021) *Popular Music* 1, 5–6 and 9–12. Another example is the sonic re-branding of HSBC, via music of J.M. Jarre, which infuses the feelings of being ‘open, dependable and connected’.

476 The aim is ‘steer[ing] consumers sensory perceptions in predictable, commodifiable ways’ – Khamis, Keogh, *ibidem*, 13.

477 Successful claims require proofs of goodwill, misrepresentation, and damage, see Cornish et al. (n 24) 651–653 ff.

478 UK seminal case *IRC v. Muller & Co.’s Margarine*, [1901] AC 217, 224.

479 Bently et al. (n 24) 86.

480 Cornish et al. (n 24) paras 17.01–10, 651–656.

481 *Starbucks (HK) Ltd. v. British Sky Broadcasting Group Plc.* [2015] UKSC 31, www.bailii.org/uk/cases/UKSC/2015/31.html, commented by Jennifer Davis, ‘The Continuing Importance of Local Goodwill in Passing Off’ (2015) *Cambridge Law Journal*, 419. The case concerned an Internet television provider in Hong Kong, which had no broadcasts or subscribers with billing addresses in the UK, but whose programs were known among UK Chinese speakers.

be associated with a brand, firm, or a trade mark and generally encompasses a set of positive values, revealed by ‘favourable mental states’ that determine consumers to repetitive purchase habits.⁴⁸² Goodwill is linked to reputation, as enhanced by the capability of a trade mark to ensure consistent quality of goods and acquire reputation via advertising, communication, and investment functions – nevertheless, the goodwill of a business is more than the reputation of an individual asset (trade mark). It is important to note that accounting standards value goodwill differently than the value of trade marks/brands (4.3.2.2.).

Under EUTM, reputation is a prerequisite for granting enhanced trade mark protection beyond the confusion of origin and outside the principle of speciality against specific forms of use, that is, one that takes unfair advantage of, or is detrimental to, the distinctive character or the repute of a trade mark – the law provides for an infringement ground and for a relative ground for refusal or invalidity of a trade mark.⁴⁸³ This special regime aims to protect registered trade marks that have developed a reputation and supersedes the previous means of protection in EU countries, which mostly relied on trade mark claims based on dilution or civil law tort liability.⁴⁸⁴ The regime is compliant with Art. 16(3) TRIPS and differs from the model of protecting well-known marks set forth in Art. 6bis of the Paris Convention. The latter model, although implemented much earlier, only protects unregistered trade marks within the principle of speciality and against registration or use by third parties of identical or similar signs for identical/similar goods or services in case of a likelihood of confusion.⁴⁸⁵

Some doubts concerned the interaction, especially the differences between the concepts of ‘well-known’ and ‘reputation’. The former was linked to notoriety, that is, being known by parts of the public, whilst the latter seemingly related to the ‘independent attractiveness’, ‘advertising value’, ‘the quality’ of a trade mark.⁴⁸⁶ At that time professor Kur had already opined that ‘some degree of renown’ among the public could be required to prove reputation,

482 Extensively, Robert Bone, ‘Hunting Goodwill: The History of the Concept of Goodwill in Trademark Law’, 2006 Boston University Law Review 547, 549–554; 569–572. Professor Bone considers goodwill an ‘amorphous, abstract’ notion (at 583), variously defined by lawyers, economists, accountants, which raises difficult queries as to the kind of ‘property’ that it represents, its source and link with other business assets, its transferability conditions (usually upon the sale of the business), and the means of enjoying trade mark protection.

483 Arts. 8(5) and 9(2(c)) of EUTMR and Arts. 5(3)(a) and 10(2(c)) of TMD.

484 Comparatively, Michal Bohaczewski, *Special Protection of Trade Marks with a Reputation under European Union Law* (Wolters Kluwer 2020) 10–30.

485 The protection was introduced by the Hague Conference of 1925 (with amendments) initially only to cover goods, cf. Bodenhausen (n 61) 92, whereas Art. 16(2) TRIPS extended its scope to include services.

486 Annette Kur, ‘Well-Known Marks, Highly Renowned Marks and Marks Having a (High) Reputation What’s It All About?’ (1992) IIC 218, 224–227.

⁴⁸⁷ an issue later confirmed by the CJEU, which favoured a quantitative approach.⁴⁸⁸ Reputation has been defined upon the knowledge of a trade mark by a ‘significant part’ of the relevant public, and not through a qualitative assessment indicating positive associations or a specific ‘image’ acquired in the course of trade.⁴⁸⁹ Due to similar quantitative criteria being used both for defining well-known marks and marks with reputation, the differences between these two regimes pertain mostly to the type and scope of protection afforded,⁴⁹⁰ which diminishes the practical importance of well-known marks as compared to those with reputation.⁴⁹¹

Although the CJEU does not equate reputation with uniqueness, originality, exclusive image, or other qualitative indicators of a trade mark, notoriety amongst the relevant public must imply positive consumer feedback: the public were able to learn about the trade mark either via personal experience (plausibly, repeated purchases) or through the effects of promotion, which, per se, bolsters and disseminates the attractiveness of that mark against other. Professor Griffiths noted that a trade mark, having been functioning on the market and ‘recognised’ by consumers, undergoes a transformation and acquires ‘reputation’. This reputation is a conglomerate of information concerning quality and product characteristics, ‘encapsulat[ing] consumers’ expectations of these products based on their collective experience and other information available to them’.⁴⁹² If it is not prestige and fame, but consistent quality level and consumer predictable expectations of the trademarked goods/services that determine reputation, then ‘everyday consumer products, which are rarely associated with excellent quality, can also be qualified as reputed’.⁴⁹³ However, doubts remain as to what extent positive messages – those that may be summed up as the ‘attractiveness’ of a trade mark – constitute an essential layer of reputation. To make things more complicated, what if a trade mark serves as the core of a brand, or is a brand? Would reputation mean something different to the other positive components that define the brand?

These concerns have been exacerbated by the EUTM enforcement practice that has developed new types of trade mark functions akin to branding. In relation to high-class/luxury goods, the CJEU has already based the ‘value’ of a trade mark upon the ‘allure’, ‘aura of luxury’, ‘prestigious image’ of goods, which required protection under the traditional quality or advertising

487 Ibidem, 228.

488 C-375/97 *General Motors v. Yplon*, EU:C:1999:408.

489 Senftleben, in Kur, Senftleben (n 24) paras 5.193–5.204; Kur in Kur, Senftleben (n 24) paras 4.411–4 discussing a gradual scale with well-known and famous marks.

490 As indicated, reputation protects registered trade marks, with respect to identical/similar signs even when applied to dissimilar goods/services.

491 Bohaczewski (n 484) 70–75, indicating the usefulness of relying on well-known marks in case of ‘vintage’ signs that may be revoked for non-use reasons.

492 Griffiths (n 33) 111.

493 Bohaczewski (n 484) 46.

function.⁴⁹⁴ Subsequently, a new ‘communication’ function addressed the capacity of a sign to communicate ‘important’ messages (i.e. positive associations), by capturing the marketing efforts aimed at building a brand ‘image’.⁴⁹⁵ Afterwards, the ‘investment’ function emerged as ‘acquiring or preserving a reputation capable of attracting consumers and retaining their loyalty’ via advertising or other commercial techniques.⁴⁹⁶ The CJEU contended that any kind of trade marks, not necessarily just those with reputation, was capable of performing the communication and/or investment functions.⁴⁹⁷

These rulings have mingled reputation with the other values and associations characterizing brands in a way that it is difficult to tell what ‘value’ is at stake. Scholars argue trade marks have acquired autonomous value in need of protection.⁴⁹⁸ However, branding techniques (especially persuasive advertising) make consumers assign value to attributes, that is, product ‘atmospherics’⁴⁹⁹ that are, predominantly, unrelated to quality and real product differentiation. These values interconnect and metamorphose to ensure the specific personality of a product.⁵⁰⁰ This was, and still is, the quintessence of branding. For example, an older survey showed how branding was primarily referred to as ‘values’ and ‘personality’, and to a lesser extent ‘accumulated weight of goodwill’.⁵⁰¹ Recently, another study showed that ‘brand experience’ (in terms of being unique, memorable, or superior) determines most of the perceived value of a brand for consumers.⁵⁰² Although conceptually there are differences between trade marks and brands, the values underlining

494 C-337/95 *Dior v. Evora* ECLI:EU:C:1997:517, para 45; C-59/08 *Copad v. Dior* ECLI:EU:C:2009:260, paras 24–26; Seville (n 39) 361–362.

495 C-487/07 *L’Oréal v. Bellure* ECLI:EU:C:2009:378, paras 49–50; Opinion AG Mengozzi ECLI:EU:C:2009:70, para 54.

496 C-323/09 *Interflora v. Marks & Spencer*, ECLI:EU:C:2011:604, paras 62–63. For a broader discussion of applying the ‘functions theory’ in practice and interference with domestic rules of unfair competition law, see Annette Kur, ‘Trademarks Function, Don’t They? CJEU Jurisprudence and Unfair Competition Practices’, Max Planck Institute for Innovation & Competition Research Paper No. 14–05, at <https://ssrn.com/abstract=2401536>, 10 ff.

497 C-323/09 *Interflora*, para 40.

498 Michel Vivant, ‘Revisiting Trade Marks’ (2013) 3(4) *Queen Mary Journal of Intellectual Property* 307, 310–311.

499 This term belongs to Jessica Litman, ‘Breakfast with Batman: The Public Interest in the Advertising Age’ (1999) 108 *Yale L.J.* 1717, 1726–1730. Discussing advertising agencies’ role on the trade marks/brands relationship, Patricio Sáiz, Rafael Castro, ‘Trademarks in Branding: Legal Issues and Commercial Practices’ (2018) 60 *Journal of Business History* 1105.

500 Andrew Griffiths, ‘Brands, “Weightless” Firms and Global Value Chains: The Organisational Impact of Trade Mark Law’ (2019) 39 *Legal Studies* 284, 293.

501 Chernatony, Riley (n 467) 432.

502 Klaus-Peter Wiedmann et al., ‘The Power of Experiential Marketing: Exploring the Causal Relationships among Multisensory Marketing, Brand Experience, Customer Perceived Value and Brand Strength’ (2018) 25(2) *J Brand Manag* 101, 105 – here discussing the strategy of multisensory marketing in the luxury hotels business.

each of them tend to mix and overlap over time.⁵⁰³ For these reasons, discussing the value of trade marks by using branding concepts brings unclear outcomes. Additionally, if there is a need for differentiating reputation and its value within overall trade mark value and brand components, then the task grows immensely, and may be unfeasible.

4.3.2. The multi-faceted 'value' of a brand

A brand represents a commercial notion, not a legal one. The value of a brand is captured by the term 'brand equity', meaning 'the economic value of a brand as a source in the creation of value for brand owners'.⁵⁰⁴ The following part first explores how marketing places brand image and reputation amongst the other compartments of brand value. A complimentary approach discusses whether financing and accounting standards capture the value of brand image and reputation when valuating trade marks and brands. A final point accentuates the significance of consumer input in brand creation and valuation.

4.3.2.1. Brand image – A marketing view

Amongst various ways of measuring brand equity, marketing mostly uses consumer perceived value, defined as the differential impact of 'brand knowledge' that a branded product has on individual consumer as compared to a non-branded one.⁵⁰⁵ Brand knowledge is defined by two major components: brand awareness and brand image.

'Brand awareness' refers to the strength of a brand in the memory of a customer, tested on two frontlines: recognizing a brand when confronted with it amongst other competing brands – called 'brand recognition' – and recalling a specific brand while browsing different products or experiencing specific needs, 'brand recall'.⁵⁰⁶ This capability depends on a brand's salience, that is, the transfer of positive information across product categories. 'Brand image' occurs later based on brand awareness. Brand image is about consumers' perceptions and associations, the meaning of a brand to customers, how they see and feel about it.⁵⁰⁷ The bundle of positive associations (categorized as

503 Jennifer Davis, 'The Value of Trade Marks: Economic Assets and Cultural Icons' in Ysolde Gendreau (ed.) *Intellectual Property: Bridging Aesthetics and Economics* (Montreal 2006) 110–125; Jonathan Schroeder, 'Brand Culture: Trade Marks, Marketing and Consumption' in Bently, Davis, Ginsburg (n 294) 161–176 seeing brands as 'combination of strategy, culture and consumer imagination' (at 176).

504 Neil Wilkof, 'Branding, Co-branding and Innovation: Expectations and Limitations' (2018) 13 *JIP&P* 611–612, 614 (citation).

505 For a seminal work, Kevin Lane Keller, 'Conceptualizing, Measuring, and Managing Customer-Based Brand Equity' (1993) 57(1) *Journal of Marketing* 1, 8–9.

506 *Ibidem*, 3.

507 *Ibidem*, 3–4.

attributes, benefits, attitudes) interact reciprocally and should be ‘favourable’, ‘strong’, and ‘unique’ in order to induce consumer loyalty and increase the probability of brand choice.⁵⁰⁸ Overall, this marketing model considers brand equity as a ‘multidimensional concept’ that depends on the brand ‘knowledge structures’ existing in consumer minds, and on an undertaking’s actions capitalizing on these knowledge structures.⁵⁰⁹ Strictly speaking, brand equity does not include reputation as a distinct component.

Attempting an analogy, if the trade mark concepts of recognition and reputation were to fit into this model, recognition would mean the identification of a mark/brand among other brands on the market,⁵¹⁰ whilst reputation would lie closer to brand image and deal with consumer beliefs and perceptions about the mark/brand.⁵¹¹ However, it would be very difficult to gauge the differences between reputation and brand image (as part of brand experience), much less their intrinsic value (see 4.3.1.2.). There are studies that use these two concepts, albeit without clear delineation. For example, the WIPO Report on brands took a two-dimensional approach focused on ‘reputation’ and ‘image’. It described reputation in the context of ‘quality, functionality, reliability and other attributes’, whilst ‘brand image’ via examples of ‘luxury, trendiness or social responsibility’.⁵¹² The Report acknowledged that successful branding strategies ‘combine[d] reputation and image in such a way that reinforce[d] each other and appeal[ed] to a variety of consumers tastes’.⁵¹³ In the author’s opinion, the Report illustrates how difficult is to conceptually separate reputation from brand image, especially if reputation is understood through a set of brand components that actually pertain to the realm of ‘brand image’.

4.3.2.2. *Valuation of trade marks and brands – a financial and accounting view*

Searching for the value of a trade mark and its reputation needs facts and figures, which brings to mind the financial records of companies. Several difficulties appear. Such documents usually show an aggregate of all trade marks, which may obstruct identifying the value of each trade mark. Another general issue is that corporate group reports feature little transparency concerning the type and extent of IPRs allocated between the parent and the different subsidiary holding companies.⁵¹⁴ The way economists assess trade mark value

508 Ibidem, 8.

509 Ibidem, 14.

510 Unless recognition is equated with reputation measured upon public awareness.

511 Although CJEU rejects a qualitative standard, see 4.3.1.2.

512 WIPO Report 2013: *Brands – Reputation and Image in the Global Marketplace*, 21 (hereafter WIPO Report) at www.wipo.int/publications/en/details.jsp?id=384

513 WIPO Report, 114.

514 Janice Denoncourt, ‘Company Classification Taxonomy and Corporate Intellectual Property Rights Owners’ in Daniel Gervais (ed.) *The Future of Intellectual Property* (Elgar 2021) 55, 69–72.

does not tell us much about the value of reputation alone. Although trade marks as reputational assets tie into brand valuation, the dissonance between the accounting standards of calculating brand value and the marketing/management perspective on brand valuation creates difficulties when disentangling and quantifying brand image, goodwill, much less reputation. The following remarks attempt to outline these issues.

Economic studies demonstrate that when intangibles are evaluated for the purpose of determining the value of a company, the financial markets mostly focus on knowledge assets, that is, R&D investments and patents due to their prospective returns on investment than on trade marks.⁵¹⁵ When evaluation includes trade marks, the indicators used for determining the value of a trade mark are the following: the Nice Classification of covered goods/services (indicating the ‘breadth’ of a trade mark); the number of previous identical/similar registrations in other jurisdictions (these ‘seniorities’ indicate consumer familiarity with the trade mark); the number of oppositions lodged against rivals (the greater the tendency to defend a portfolio, the more valuable it becomes); the number of oppositions received from rivals.⁵¹⁶ There are studies that see trade marks as ‘indicators of reputational assets’,⁵¹⁷ which means that reputation influences the market value, however, reputation on its own is not a quantified, leading factor of measurement. It is also argued that trade marks combined with strong branding investment create a ‘market for brands’, as trade marks become extensively traded commodities.⁵¹⁸ Similarly, financial markets favour trade marks that develop existing brands, especially when future cash flows are expected from brand extensions.⁵¹⁹ In certain industries trade marks can account for a significant share of a firm’s market value, also depending on their relationship with branding strategies.⁵²⁰ In the author’s opinion, these studies suggest that when trade marks contribute to a firm’s value, then valuation does not describe the value of trade marks alone, even less so their reputation, but instead exists in regard to the developed brands.

As concerns brand valuation, this task is the hardest, because traditional tax/accounting methods do not capture the essence of a brand and its real value. Brands, qualified by accounting as ‘non-recognisable’/‘self-created’/‘internally generated’ intangible assets, cannot appear in the balance sheet and are not distinguished from the cost of developing the overall business

515 Sandner (n 399) 35–39 with references.

516 Ibidem, 37, 44–47.

517 Carolina Castaldi ‘All the Great Things You Can Do with Trademark Data: Taking Stock and Looking Ahead’ (2020) 18(3) *Strategic Organization* 472, 474.

518 Ibidem, 478.

519 Joern Block, Christian Fisch, Philipp Sandner, ‘Trademark Families: Characteristics and Market Value’ (2014) 21(2) *Journal of Brand Management* 151, 167.

520 Mafini Dosso, Antonio Vezanni, ‘Firm Market Valuation and Intellectual Property Assets’ (2020) 27(7) *Industry and Innovation* 705, 720–723 discussing the significance of trade marks for automobiles, computers, and pharmaceuticals.

activity – any brand investment is deducted from income and considered ‘current expenses’.⁵²¹ From an economic standpoint, though, brands constitute assets bringing future benefits.⁵²² Accounting requires disclosure of the brand value in the balance sheet only in case of mergers or acquisitions.⁵²³ For such transactions, the value of an acquired brand is determined by that part of the price exceeding the fair market net value of identifiable assets, shown in the balance sheet under the term of ‘goodwill’. Accounting understands ‘goodwill’ as a miscellaneous category comprising intangible assets allocated to five broad categories, one being ‘marketing assets’, such as trade marks and brands.⁵²⁴ There is much criticism against valuing brands under goodwill. For instance, the value of acquired goodwill is fixed at the point of acquisition; therefore, it cannot capture the possible increase of brand value over time.⁵²⁵ Another problem is that if the price paid for shares is less than the book value, there is no goodwill, so no brand value is included.⁵²⁶

The difficulty of capturing the value of brands across the different stages of business activity has prompted management specialists to advance new perspectives. ‘Finance should recognize that brand is about value creation. Brands exist in the minds of targeted customers. They aren’t something a company owns. A brand is the value that a customer adds to the intrinsic value of a product’⁵²⁷. This subjective consumer value can be transformed into financial resources for a company, especially if business activities are focused on performance, investment and maintaining consumers’ loyalty. A brand is considered an intangible financial asset that a company ‘controls’ and should monetize for its purposes.⁵²⁸ This shift towards defining value via experience/perception is reflected by the branding literature that operates with the terms of ‘brand’ and ‘(corporate) reputation’. Salinas offers the definition of ‘corporate reputation’ by Charles Fombrun as ‘the overall estimation in which a company is held by its constituents, representing the “net” affective reaction of customers, investors, employees, and the general public to the company’s name’.⁵²⁹ However, Salinas criticizes the synonymous use of ‘brand’ and ‘reputation’, by consider-

521 Thomas Günther, Catharina Kriegbaum-Kling, ‘Brand Valuation and Control: An Empirical Study’ (2001) 53 *Schmalenbach Business Review* 263, 264; Gabriela Salinas, *The International Brand Valuation Manual* (Wiley 2009) 3–4. An example of ‘recognised intangible assets’, as acquired separately by an entity, are trade marks.

522 Salinas (n 521) 3.

523 <https://corporatefinanceinstitute.com/resources/knowledge/accounting/goodwill/>

524 Salinas (n 521) 25–26; Sandner (n 399) 43 fn 37; www.freshbooks.com/hub/accounting/goodwill-accounting-definition

525 Davis, ‘The Value ...’ (n 503) 106, fn 28.

526 Salinas (n 521) 358 with references.

527 Bobby J. Calder, Mark L. Frigo, ‘The Financial Value of a Brand’, *Strategic Finance*, 1 October 2019, at <U><https://sfmagazine.com/post-entry/october-2019-the-financial-value-of-brand/>, 3</U>

528 *Ibidem*, 4.

529 Salinas (n 521) 8.

ing that because ‘corporate reputation’ results from brand management and is about ‘granted’ perception, that is, something ‘non controllable’, ‘corporate reputation does not qualify as an intangible asset because it fails to meet the separability criterion; it cannot be bought, sold or transferred’.⁵³⁰

This discussion teaches us two things. First, there is a distinct, still ambiguous concept of (corporate) reputation in the branding area that should not be aligned with the concept of ‘reputation’ in trade mark law. Second, if public perception indeed represents an important dimension when determining value (for a brand or of a corporate reputation), then specialists are still grappling with how to measure it. The importance of consumers’ experiences for the existence and value of a brand is elaborated further in 4.3.2.3. below.

Even with regard to brands, the absence of a standardized brand valuation relates to the huge diversity of calculation models applied by service providers (e.g. Brandient, Interbrand, Nielsen etc.). These models follow, or combine, one of the three general approaches focused on cost/market/income, and there is usually a two-pronged structure encompassing a financial dimension – measured by past/future profits or revenues from royalties/licensing fees – and a consumer dimension – defined by customers’ attitudes, measured directly from surveys, interviews, polls, and so on, or indirectly, by expert panels.⁵³¹ For instance, Interbrand analyses three key components: the financial performance of branded products/services, the role of the brand as purchase driver, and the brand’s competitive strength, that is, the ability to create consumer loyalty, demand, and future profit.⁵³²

Reputation is not among the ten key factors used by Interbrand to measure brand strength, such as differentiation (i.e. being a distinctive proposition), consistency (keeping promises), and maintaining a presence in consumer life.⁵³³ These factors may relate to or build reputation in a trade mark sense, but certainly they are not identical to it. Similarly, another study shows that reputation is not among the 12 enumerated main determinants of determining brand equity, whilst brand image holds first place.⁵³⁴

4.3.2.3. Consumers co-creating brand image and value

The marketing arguments that brand valuation methodology should reflect the ‘added value’ by consumers concurs with interdisciplinary discussions over

530 Salinas (n 521) 365. Differently, a study measuring corporate reputation: Benjamin Pfister, Manfred Schwaiger, Tobias Morath, ‘Corporate Reputation and the Cost of Future Equity’ (2020) 13 *Business Research* 344.

531 Roberto Moro Visconti, *The Valuation of Digital Intangibles* (Palgrave Macmillan 2020) 246–250; WIPO Report, 45–46.

532 Mike Rocha, ‘An Exceedingly Good Solution: Looking back on 30 years of Brand Valuation’, at www.interbrand.com/views/exceedingly-good-solution-30-years-brand-valuation/

533 www.interbrand.com/best-brands/best-global-brands/methodology/

534 Visconti (n 531) 252.

consumers' involvement and investment in brands, from the perspective of anthropology, psychology, and sociology. A decade ago Deborah Gerhardt posited that consumers are capable of such strong personal attachment and financial 'sacrifices' to support a brand – through various activities, that is, building fan communities, free advertising, creating brand history, discouraging purchase of counterfeit products – that they decide the existence and meaning of a brand.⁵³⁵ This approach has been recently confirmed by a study of *Burberry's* branding development, stretching over 100 years, which initially benefitted from consumer attachment to historical events and fashionable lifestyle, only to be negatively affected by incidents of football hooliganism by supporters wearing *Burberry* caps.⁵³⁶ The diminished consumer perception of the brand quickly led to a drop in demand from the primary clientele, whilst the firm needed time to reconnect with consumers and rebuilt the brand's 'aristocratic' image.⁵³⁷ Another interesting study about trade marks' communication/investment functions argued that brand image represented the result of a 'performative role of consumers', and not necessarily the fruits of investment undertaken by the trade mark owners.⁵³⁸ This argument builds on the anthropological assumption that identity is formed as a result of the process of 'intertextual performance' (of its self-image) or 'performative citation'.⁵³⁹ Consumers are seen to continuously perform the daily act of choosing/wearing a trade mark/brand, and by doing so, they co-create the brand image. Making a brand part of everyday life constitutes a key feature of the 'anthropological marketing' approach embraced by IKEA, Apple, Lego, and Google.⁵⁴⁰ This proves that anthropological marketing applies to different kinds of goods, including utilitarian ones, without being restricted to prestige goods, which are presumably chosen to conspicuously showcase money, status, or power. The doctrine names these *Veblen* goods, generally affiliated with luxury brands, after the author Thorstein Veblen who, by the end of 19th century, described women's dressing as a way of putting into evidence men's wealth.⁵⁴¹

535 Deborah Gerhardt, 'Consumer Investment in Brands' (2010) 88 N.C. L. Rev. 427, 450. Gerhardt advocated for the protection of consumers' interests in using signs as information tools.

536 Luminița Olteanu, 'Rebranding Strategies and Their Boomerang Effect – The Curious Case of Burberry' (2020) 23 JWIP 777, 784–791.

537 Ibidem, 791–792.

538 Luke McDonagh, 'From Brand Performance to Consumer Productivity: Assessing European Trade Mark law after the Rise of Anthropological Marketing' (2015) 42 Journal of Law and Society 4, 611.

539 Ibidem, 624–625, referring the seminal studies of Judith Butler, 'Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory' (1988) 40 Theatre J. 519 and Constantine Nakassis, 'Brand, Citationality, Performativity' (2012) 114 Am. Anthropologist, 629.

540 McDonagh (n 538) 626 referring IKEA marketing strategy.

541 Thorstein Veblen, *The Theory of Leisure Class* (1899), referred to in the context of the politics of clothes and women's self-creation by Diane Zimmerman, 'Upstairs/Downstairs,

Today marketers need consumers to feel and think that branded goods/services are indispensable tools for self-expression and socializing. This dynamic dialogue between consumers and brands is essential for the understanding of modern brand creation, a fact already capitalized on by marketers.⁵⁴² Lawyers still have to map its implications to trade mark law.⁵⁴³ For instance, in the context of protecting reputed trade marks, Olteanu's analysis led to the conclusion that proof of brand reputation could not be solely based upon the owner's strategies of positioning and promoting the brand, instead the focal point should be 'how the brand was received and perceived by the public'.⁵⁴⁴ This seems an interesting point for this book. The significance of a consumer's bond with a brand (co-branding) for the assessment of aesthetic functionality is discussed below.

4.3.3. The 'value' of reputation within the assessment of aesthetic functionality

The above discussion shows that the attempt to assess the value of reputation for aesthetic functionality purposes leads to some frustrating results. Lawyers, marketers, and economists face conceptual gaps in frameworks and methodology when dealing with trade marks that convey value to goods and have the potential to develop into brands. It is extremely difficult to distinguish reputation from other sources of positive information, especially those pertaining to brand image. This translates into further difficulties in separately measuring the value derived from reputation from the other economically valuable components of a trade mark/brand.

Conceptually, there is no clear correspondence between the legal notion of a trade mark and the complex market concept of a brand. Delving into the nature of the magnetism of certain symbols, there is also an unclear channel between reputation and brand image, let alone goodwill. A product may have multiple features and attributes that are valuable to a consumer, and the crux of aesthetic functionality requires distinguishing the source of some particular aspects. For a trade mark with reputation, usually surrounded by branding strategies, such an assessment is difficult to conduct. Nowadays the relationship between consumers and brands covers numerous psychological/sociological benefits. Consumers derive various values from brands, not necessarily

Fashionwise: A View of Design Protection from Lower Down the Food Chain' in Sun, Beebe, Sunder (n 466) 179–196. Similarly, Ann Bartow, 'The Gender of Trademarks and Luxury Branding' in Sun, Beebe, Sunder (n 466) 145.

542 Jeffrey Belson, 'Reflections on Branding and Trade Marks: Then and Now' (2019) 14 *JIP&P* 601, 604–605.

543 An avenue of debate will likely evolve around ensuring free access to symbols, with regard to fundamental rights and freedoms. See Jens Schovsbo, "'Mark My Words' – Trademarks and Fundamental Rights in the EU' (7 August 2017) at: <https://ssrn.com/abstract=2928031>

544 Olteanu (n 536) 791.

reflecting quality or reputation. If the upmost value represents brand experience per se, resulting from a conglomerate of brand attributes and benefits, it is not apparent whether and which part of it stems from reputation alone.

From an economic perspective, the valuation of a company's assets does not bring satisfactory solutions to the need of scanning the value of reputation. Trade mark valuation does not essentially speak about reputation. Brand valuation either does not identify the reputation of a trade mark as a component of brand value, leaving aside here the problem of separating this from the nebulous concept of corporate reputation. There is also an unharmonized methodology of brand valuation, comprised of at least as many models as there are service providers.

If a court dealing with aesthetic functionality is supposed to single out the value of reputation, a sensitive issue would be the evidence to adduce. Generally speaking, it is not easy to gain open access to a company's information on the value of reputational assets (brands). The accounting documents usually disclose such data in the context of M&A transactions. Even then, the figures indicate goodwill, and not necessarily brand value. Certainly, large companies undertake brand studies. The figures from these studies deal with components such as brand image or recognition, not necessarily reputation as pertaining to unique trade marks. It is also probable that M&A valuations or studies commissioned for calculating licence fees would be far from objective, offering high figures to present the company in the strongest financial situation. In consequence, within an aesthetic functionality case a court inquiring into the value of reputation would have to rely on time- and money-consuming proofs (e.g. expert opinions), with little chance of obtaining clear answers. An exception may occur when earlier enforcement proceedings ruled upon evidence proving the amount of 'damaged' reputation, which may then serve to infer the value of reputation in general. Such evidence could possibly serve functionality purposes, yet this issue requires further consideration.

An important issue constitutes consumer input to brand value, which is a socially undeniable phenomenon, although not easily economically quantifiable. The yardstick of marketing brand measurement represents consumer perceived value (4.3.2.1.). However, if aesthetic functionality requires separating the value of reputation from other values, whilst this assessment should be conducted from consumers' perspective (Chapter 8), this will necessarily lead to a vicious circle of argumentation, bearing in mind that consumers are instrumental for co-participating in the creation of brand image and value. Would it be possible from a consumer vantage point to assess the overall brand value, while simultaneously discounting the consumer's own input? AG *Szpunar*'s suggestion in *Louboutin*, to carve out the value of reputation, ergo those product features determining reputation, seems difficult to apply. Perhaps such discarding may work in the case of several different trade marks jointly used, for example word mark together with shape, whilst reputation is presumed to only be attached to the word mark. However, if the sign under scrutiny for functionality

represents a combination of product features, discarding would work against the general principle of assessing the sign as a whole. Some of these issues are revisited in Chapter 8, which interprets the aesthetic functionality prohibition.

The bottom line of these arguments is that in the case of a trade mark with reputation amounting to an identifiable value – assuming that there are objective methods of defining and measuring it – such reputation value affects the entire sign and is rather linked to the whole bundle of attributes and benefits that confers the image of the trade mark. In most cases this is about brand image. It seems difficult to dissect product ‘atmospherics’ while disregarding the part of a sign connected to reputation.

For these reasons, searching for a value of reputation may turn out to be a binary assessment. Either there is no reputation, with no further relevance for the assessment of aesthetic functionality, or, if reputation exists, then it is attached to the whole trade mark. The assessment must determine whether the value flowing from reputation dismisses in toto the application of aesthetic functionality, or if there are higher, public policy rationale which support proceeding with an assessment, despite the existence of reputation. In such circumstances, it can be stated that an additional criterion exploring the impact on market competition should play a conclusive role. These issues are analysed below and in Chapters 6 and 8.

4.4. Market definition and substitutes for assessing trade marks functionality

A central argument for denying trade mark protection to product features is that their appropriation on behalf of one undertaking reduces competition by substitution. Indeed, other producers would incur additional costs by designing around protected features, whilst customers may not perceive such alternative products as good substitutes, because they do not meet specific demands and preferences. This shows the importance of assessing the extent and closeness of substitutes within the key concept of market definition (4.4.1. and 4.4.2.). Another element examines how branding strategies building on locked-in consumers create barriers to entry and reduce product substitutability (4.4.3.). The last part (4.4.4.) explores the feasibility of a market-orientated tool, based on product substitutability, to assess technical and aesthetic functionality in Chapters 6 to 8.

4.4.1. An introduction: substitution and consumer choice as EU competition goal

It has been acknowledged that, although legal exclusivity prevents copying and inhibits competition by imitation, IPRs can support competition goals, if competition by substitution is enhanced.⁵⁴⁵ EU competition practice set

545 Drexl, ‘Is There’ (n 352) 47–48.

the balance of efficiencies to encompass both safeguarding effective market competition and protecting consumer interests.⁵⁴⁶ The latter, captured by the term of ‘consumer welfare’, covers various goals. In terms of a price-efficiency paradigm, lowering the price of goods/services is significant, which usually depends on the economies of scale enjoyed by strong companies with large market shares. Another purpose represents enhancing consumer choice over a variety of similar product and services.⁵⁴⁷ Indeed, US scholars emphasized that beyond minimum prices, consumers seek a wider scope of goals – such as product variety, specific product attributes (quality, safety), innovation – all of which deserve the attention and protection of competition/antitrust law.⁵⁴⁸ Effective consumer choice means the ability to choose according to their preferences amongst the existing competitive options on the market.⁵⁴⁹

Professor Paul Nihoul explored the concept of consumer choice under EU competition law.⁵⁵⁰ The scholar contended that the EU judiciary often linked abusive behaviour to restrictions on freedom of choice. Situations of consumers forced to accept the products or services of a dominant undertaking, whilst competitors were excluded, were unacceptable. The CJEU attacked wide spectrum of practices, such as predatory pricing and selling at a loss;⁵⁵¹ bundling or conditional rebates hindering commercialisation to, or purchase from competitors; developing new products of better quality;⁵⁵² restrictions in services and repair.⁵⁵³ Nihoul argued that restricted freedom of choice was determined by impeding consumers who want to ‘switch’ to products/services of different origin.⁵⁵⁴ As a rule, an open switching possibility puts pressure on the dominant company to safeguard the range of remaining competitive options.

546 Anderman (n 360) 33–49.

547 Giorgio Monti, Susanne Augenhöfer, ‘Consumer choice and fair competition on the Digital Single Market in the areas of air transportation and accommodation’ EU 2018, 9, [https://www.europarl.europa.eu/RegData/etudes/STUD/2018/626082/IPOL_STU\(2018\)626082_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2018/626082/IPOL_STU(2018)626082_EN.pdf)

548 Neil Averitt, Robert Lande, ‘Using the “Consumer Choice” Approach to Antitrust Law’ (2007) 74 *Antitrust Law Journal* 175, 183–184.

549 Neil Averitt, ‘How “Consumer Choice” Can Unify the Fields of Competition and Consumer Protection Law’ in Nihoul, Charbit, Ramundo (n 348) 254–255.

550 Paul Nihoul, ‘“Freedom of Choice”: The Emergence of a Powerful Concept in European Competition Law’ in Nihoul, Charbit, Ramundo (n 348) 9–39. ‘Consumer’ means more than final consumers, comprising any economic actors involved in the choice of products/services offered by a dominant, (at 27–28).

551 C-202/07P *France Télécom v. Commission* ECLI:EU:C:2009:214.

552 T-201/04 *Microsoft v. Commission* ECLI:EU:T:2007:289; T286/09, *Intel v. Commission*, ECLI:EU:T:2014:547 – judgment set aside by C413/14 P ECLI:EU:C:2017:632 paras 144–147 remanding the case to GC for re-examination of the admissibility of rebates.

553 C-322/81 *Michelin NV v. Commission* ECLI:EU:C:1983:313; T-203/01 *Michelin France v. Commission* ECLI:EU:T:2003:250; C-333/94 P *Tetra Pak v. Commission* ECLI:EU:C:1996:436.

554 Nihoul, ‘“Freedom” ...?’ (n 550) 26, 29.

This discussion shows that the consumer ability to switch to substitutes lies at the core of the concept of ‘consumer choice’. The significance of this concept amidst ‘competition goals’ is still an issue for competition law to map. ‘Switching’ is also instrumental at a different stage of competition inquiries. It is used for ‘market definition’, which focuses on customer capability to choose alternative products in case of a price increase. As the availability of substitutes may contribute to solving trademark functionality cases, there is a need to look into the concept of market definition, too.

4.4.2. Market definition and product substitution for competition purposes

The following part briefly explains the meaning of market definition under EU competition law and the characteristics of demand and supply side substitution. It argues how market definition is dependent on industry and targeted customers, and emphasizes the possibility of narrowly defining it.

4.4.2.1. Outlining the concept of market definition

Competition law investigates situations of market dominance/power. As mentioned in 4.1.1., market definition constitutes a basic tool used in competition proceedings, that is, anticompetitive agreements, abuse of dominant position, or merger control, for determining market dominance/power.⁵⁵⁵ The latter point covers the power of an undertaking to charge monopoly prices for a period without facing a competitive threat. This definition mirrors the purpose of ‘market definition’, as set forth by the European Commission, namely ‘to identify those actual competitors of the undertakings involved that are capable of constraining those undertakings’ behaviour and of preventing them from behaving independently of effective competitive pressure’.⁵⁵⁶ Competition coercion is closely linked to the extent of product substitution on the relevant market. It should encompass both product and geographic dimensions. As further explained, ‘a relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer by reason of the products’ characteristics, their prices and their intended use’.⁵⁵⁷ This set of criteria underline the so-called ‘functional interchangeability’ approach to market definition, introduced by the CJEU

555 https://ec.europa.eu/competition-policy/antitrust/procedures_en

556 Commission Notice on the Definition of Relevant Market for the Purposes of Community Competition Law, 1997 O.J. L. (C 372/3) 2, hereinafter Commission Notice.

557 Commission Notice, 7, paragraph 8 reads: ‘The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighboring areas because the conditions of competition are appreciably different in those area.’

Continental Can judgment, a case that analysed the accuracy of market definition for sustaining a sufficiently reasoned competition scrutiny.⁵⁵⁸ The structure of supply and demand in a specific market and the ensemble of competitive conditions are also relevant for defining the relevant market.⁵⁵⁹

The assessment of market definition is highly industry specific, and subject to the evolution in time of business models and practices. Functional interchangeability (substitutability) does not necessarily pertain to manufacturing and trading goods/services. A recent report⁵⁶⁰ showed, for instance, that in the pharmaceuticals, herbicide, and pest control industries, in which the competition benchmark represents product and process innovation, substitutability relates to the capacity for conducting R&D activities, whereas in the digital/technology markets the parameters of competition consist of service functionalities and quality rather than price. The challenges of the digitalisation and globalisation of the economy prompted EU authorities to launch the procedure for updating the 1997 Commission Notice on market definition, set to be finalized in 2023.⁵⁶¹

4.4.2.2. *The meaning of the SSNIP test*

Regarding methodology, market definition employs the hypothetical monopolist test (HMT) – called also the ‘Small but Significant Non-Transitory Increase in Prices’ (SSNIP) test – which was introduced in 1982 by the US administration for screening mergers, and applied later to other antitrust cases.⁵⁶² A product market comprises the smallest set of products that could be profitably monopolized, that is, where the hypothetical monopolist would profitably impose a SSNIP on one of the products, with a value set around 5–10 per cent for about one year. The test focuses on the consumer’s capability to switch to alternative products in case of a price increase. It starts by examining the product at issue and its closest substitute while asking whether a SSNIP would generate a loss of sales sufficient to make this price increase unprofitable; in such a case, another next-closest substitute is added and SSNIP tested,

558 C-6/72 *Europemballage Corporation v. Commission*, EU:C:1973:22 concerning the abuse of dominant position by an undertaking which purchased the majority of shares of a competing company in the metal packaging sector, discussed by Miguel Sousa Ferro, ‘Judicial Review: Do EU Courts Care about Market Definition’ (2015) 6 JECL&P 400, 405.

559 T219/99 *British Airways v. Commission*, EU:T:2003:343; T-504/93 *Tiercé Ladbroke v. Commission*, EU:T:1997:84; T-83/91 *Tetra Pak v. Commission*, EU:T:1994:246; T-30/89 *Hilti AG v. Commission*, EU:T:1991:70.

560 Daniel Gore, ‘Market Definition in Merger Control: An Overview of EU and national case law’, e-Competitions Bulletin, 6 February 2020, Art. N°92115, 1, 4–5.

561 https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6528

562 US 1982 Merger Guidelines, www.justice.gov/archives/atr/1982-merger-guidelines; Melischek (n 351) 95–100.

while repeating this operation until the price increase becomes profitable – the resulting set of products constitutes the relevant market.⁵⁶³

Substitution, considered from the demand-side, calculates what volume of product sales is likely to be lost with an increase of price, because consumers choose alternatives, or refrain from buying at all (i.e. ‘own elasticity’ of demand), but also to which other products the lost sales are diverted (i.e. ‘cross-elasticity’ of demand).⁵⁶⁴ A second perspective evaluates the supply-side substitution, which refers to the capability of suppliers to react at a SSNIP by shifting production effectively and immediately in order to enter the market and offer substitutable products.⁵⁶⁵ The question of how easily demand and supply may shift depends also on the geography. Geographic market definition complements product market analysis. The issue is in which area competitors may supply products/services that are sufficient good substitutes in a short time, taking into account such factors as transport costs, also linked to the nature of product/service (e.g. in-person services, as healthcare, cannot relocate quickly compared to most of traded goods), or legal regulation (e.g. IPRs that are usually territorial).⁵⁶⁶ Geographic market may stretch from local to global scales.

EU competition law has adopted the SSNIP test,⁵⁶⁷ however, with certain modifications vis-à-vis the US standards. Such changes comprise including the supply-side substitutes in the relevant market and acknowledging the possibility to use other methods for determining market power.⁵⁶⁸

4.4.2.3. Some limitations/deficiencies of market definition

Market definition is often criticized as being an ‘artificial line-drawing exercise’. The reason for this is that product differentiation makes it difficult to establish the range of products to be included, or not, in the relevant group. Scholars have formulated queries on whether such a grouping should comprise ‘all products reasonably interchangeable by consumers for the same purposes’,

563 Andrew Vassallo, ‘Can One (Ever) Accurately Define Markets?’ (2017) 13(2) *Journal of Competition Law & Economics* 261, 263, discussing the merger between Coke and Dr. Pepper, which was challenged because of market defined only for carbonated soft drinks, thus not the larger one, comprising carbonated soft drinks, fruit juices and bottled water, see *FTC v. Coca-Cola*, 641 F. Supp. 1128 (1986).

564 Peepkorn, Verouden (n 346) paras 1.139–1.174.

565 Commission Notice (n 556) 28–31.

566 Kenneth Elzinga, Vandy Howell, ‘Geographic Market Analysis in the Merger Guidelines: A Retrospective Analysis’ (2018) 53 *Review of Industrial Organization* 453, 454–455; Peepkorn, Verouden (n 346) para 1.169.

567 Commission Notice, 17–18.

568 A US/EU comparison: Javier Elizalde, ‘A Theoretical Approach to Market Definition Analysis’ (2012) 34 *Eur J Law Econ* 449, 450–473.

or only ‘enough substitutes’ to enable SSNIP.⁵⁶⁹ Another issue is that consumer preferences can affect the analysis of demand-side substitutability. For instance, in the field of artistic and literary production, consumers are driven by subjective tastes rather than by objective needs.⁵⁷⁰

Although economic and market data constitute objective grounds to assess product substitutability, judgments may lead to unexpected outcomes, because the legal interpretation may favour certain subjective criteria. A classic example represents the CJEU *United Brands* case, in which bananas were found to be a distinct (narrow) market from other fresh fruits, because of specific characteristics (i.e. appearance, taste, softness, seedlessness, easy handling) which made them suitable for satisfying the constant needs of a sensitive group of consumers (i.e. those very young, old or sick).⁵⁷¹ The choice of product features and targeted public – which, as regarding bananas gained the playful name of the ‘toothless fallacy’ – was criticized as ignoring economic evidence which would have proved the opposite: that there was substitutability between bananas and other fruits.⁵⁷² The static focus on a group of consumers of inelastic demand risks neglecting the adjusting dynamism of market forces. The argument is that competition may depend on the balance between locked-in and free consumers, and also on evolving market conditions which together may determine that the free part of consumers with high price elasticity renders the increase of price for locked-in consumers unprofitable.⁵⁷³

This is not to say that it is always a mistake to define a market narrowly. Such a finding may be justified by combining a particular demand for specialized products (e.g. spare parts, luxury goods) with specific market conditions (e.g. a specific production technology or distribution system) – together they may generate the dependency of a smaller undertaking upon a dominant supplier.⁵⁷⁴ A narrow market definition may result from the specificity of the industry. For pharmaceuticals, market definition uses the classification of the

569 Joseph Farrell, Carl Shapiro ‘Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition’ (2010) 10(1) *Art. 9 The B.E. Journal of Theoretical Economics* 1, at 4 referring to *FTC v. Whole Foods* 502 F. Supp. 2d 1 (D.D.C. 2007).

570 Senfleben, ‘Impact ...’ (n 456) 262–263, discussing copyrightable works in reference to a study led by Joseph Drexel, *Copyright, Competition and Development*, Report by the Max Planck Institute for Intellectual Property and Competition Law’, December 2013, 75–80 https://www.ip.mpg.de/fileadmin/ipmpg/content/forschung_aktuell/02_copyright_competition/report_copyright-competition-development_december-2013.pdf

571 C-27/76 *United Brands v. Commission*, ECLI:EU:C:1978:22, paras 20–35, concerning the abuse of dominant position due to agreements imposing re-sale restrictions.

572 Melischek (n 351) 65; Bernard van de Walle de Ghelcke, ‘Economic Reasoning before the European Union Courts in Competition Law’ (2018) 44 *Bruges European Economic Policy Briefings* 1, 20 at <http://aei.pitt.edu/97330/>

573 Florian Wagner-von Papp, ‘Unilateral Conduct by Non-dominant Firms: A Comparative Reappraisal’ in Fabiana di Porto, Rupperecht Podszun (eds.) *Abusive Practices in Competition Law* (Ascola Elgar 2018) 225, 263–264.

574 Frenz (n 347) 675–676; by contrast, for a broad market definition even for spare parts: Anne Wagner, Sophie Oberhammer, ‘The Application of Competition Law to the Automotive Industry’ (2015) 6(9) *JECL&P* 669, 672, 677.

Anatomical Therapeutic Chemical (ATC) system which divides medicines by types of properties. However, the choice of the ATC level may restrain the market to a single drug or a molecule (e.g. a market comprised of the patent-protected drug and the generic) which may facilitate finding a dominant position held by the patented drug producer.⁵⁷⁵ The situation of a narrowly defined, one-product market, may be also linked to long-term branding strategies – an important issue of this book. Branding can induce low responsiveness to price changes and affect the substitutability of products (4.3.3. below). This issue bears significance when discussing trade marks' functionality in the context of access to, and choice of, alternative products.

In spite of the shortcomings of market definition, and although different methods have been advanced for replacing or adapting the traditional framework, ⁵⁷⁶ market definition remains a central element of competition law inquires.

4.4.3. *How can brands affect market competition and product substitution?*

The ability of a firm to hold market power and charge monopoly prices depends on the resistance of its position to new entrants. Obstacles that may deter entry or hinder the market expansion of competitors are known under the term of 'barriers to entry', although there are diverging views over its exact meaning and scope.⁵⁷⁷ The following part looks into how brands affect consumer choice and product substitution, with a distinct consideration on the link between brands and narrowly defined markets.

4.4.3.1. *Brands as barriers to entry and reducing consumer switching*

One classification of barriers to entry distinguishes sunk costs, structural barriers, and the strategic behaviour of an incumbent.⁵⁷⁸ Several parameters that determine barriers to entry may relate to trade marks/brands. Advertising and

575 Recently in T-691/14 *Servier v. Commission*, EU:T:2018:922, the GC disagreed with the Commission's confining of the relevant market to Servier's drug perindopril (appeals C-176/19P & C-201/19P); in *Losec* case T321/05, *AstraZeneca v. Commission*, EU:T:2010:266, C-457/10P, EU:C:2012:770, a proton pump inhibitor formed a distinct market from other anti-acid blockers used for ulcer treatment.

576 Farrell, Shapiro (n 569) about assessing the closeness of competition via price pressure tests; Rupperecht Podszun, 'The Pitfalls of Market Definition: Towards an Open and Evolutionary Concept' in di Porto, Podszun (eds.) *Abusive Practices in Competition Law* (Ascola Elgar 2018) 68–90.

577 R. Preston McAfee, Hugo Mialon, Michael Williams, 'Economic and Antitrust Barriers to Entry' (2003) at: <https://vita.mcafee.cc/PDF/Barriers2Entry.pdf> discuss the wider approach of Joe Bain, *Barriers to New Competition* (Cambridge 1956) who defined barriers as anything that allows an incumbent to earn above the cost of production and distribution without the threat of entry, and the more restrictive view of George Stigler, *The Organization of Industry* (Chicago 1968), who focused on the costs to be incurred by new entrants which an incumbent need not to bear.

578 Jones, Sufrin (n 351) 81–85.

promotion are usually held to be ‘irrecuperable costs’, because any newcomer needs to bear them in order to become known on the market. From a different perspective, advertising already undertaken by an incumbent constitutes a ‘first mover advantage’ that may become a structural barrier.⁵⁷⁹ As earlier discussed (4.3.), advertising, apart from informing consumers about product differentiation, is instrumental for developing reputational assets (branding, goodwill). The stronger and more positive the conveyed product image, the greater the feeling of resistance among loyal customers to trying another product – this mechanism works as structural barrier, too. An incumbent may also engage in various activities to strategically anticipate, delay, or act against the entry of competitors (e.g. tying practices, exclusivity agreements, fidelity and bundled rebates) which aim at keeping customers pleased with the current choice of product, and discouraging them from switching to alternatives.⁵⁸⁰ A classic example is offering free drug samples to doctors in order to direct their prescription habits, as they are unwilling to choose unadvertised drugs, despite similar medical efficacy.⁵⁸¹

Consumer switching capability, correlated to product substitutability, can be heavily influenced by branding. The assumption that brands allow for charging premium prices to loyal locked-in consumers and reduce inter-brand competition (4.3.1.) was colloquially verified in an experiment by professor Glynn Lunney amongst his students. It concerned the choice of Coca-Cola versus Pepsi. Initially, vending machines at the campus sold both types of sodas at a similar price; then the price of Coke was artificially increased (around the SSNIP threshold) in order to examine how many students would buy Pepsi instead.⁵⁸² The outcome proved an insensitiveness to SSNIP and an unwillingness to switch, which in competition terms meant that Coke and Pepsi were imperfect substitutes and each constituted a distinct, product market.⁵⁸³

Various factors may influence consumer decision-making to undermine the switching impulse. Manufacturers may use marketing strategies to manipulate the way consumers view, or rather fail to understand, product attributes and benefits, which induces irrationally triggered purchase behaviours – scholarship defines these sorts of controlled practices as ‘laboratories of consumerism’, a market manipulation which amounts to a market failure, due to imperfect product information and a suboptimal level of consumption.⁵⁸⁴ It still remains

579 Ibidem, 82, 84–85.

580 Ibidem, 84.

581 McKenna, ‘An Alternative’ (n 316) 889, fn 50, citing Richard F. Adair, Leah R. Holmgren, ‘Do Drug Samples Influence Resident Prescribing Behavior? A Randomized Trial’ (2005) 118 AM. J. MED. 881.

582 Lunney, ‘Trademark ...’ (n 391) 424–426.

583 See also McKenna, ‘Is Pepsi ...’ (n 37).

584 Jon D. Hanson, Douglas A Kysar, ‘Taking Behavioralism Seriously: The Problem of Market Manipulation’ (1999) 74 New York University Law Review 103, 194–217, <https://ssrn.com/abstract=1288182>

difficult to map the neuro-effects of brands triggered in brain regions that are not stimulated by direct experience of product features, such as during blind tastes. Knowledge of a brand, sometimes bolstered by high prices, makes a product taste or work better than cheaper alternatives despite having similar functional characteristics.⁵⁸⁵ For the category of luxury (*Veblen*) goods, the more expensive an item, the more it is in demand – an exclusive clientele needs expensive brands in order to demonstrate their wealth, and turns away from them when too many look-alikes target more budget-conscious clients.⁵⁸⁶ Behavioural patterns are influenced by sociological and cultural factors. Of significance are ‘network effects’, where ‘the utility that a user derives from the consumption of a good increases with the number of other agents consuming the good’.⁵⁸⁷ The popularity of a brand boosts network effects, as the more frequently consumers choose a brand to enjoy community benefits, the stronger the brand grows, becoming less vulnerable to competitive pressure.⁵⁸⁸ Finally, consumers may not engage in switching for different mundane reasons: long-term cultivated habits, the technical ease of following the beaten track,⁵⁸⁹ or an inherent reluctance to risk money on trying alternatives.

4.4.3.2. Some EU competition cases on brands

The interest of the doctrine in challenging the common view of trade marks as pro-competitive tools finds support in those EU competition cases that have captured the importance, and sometimes the negative impacts, of branding.

One example which challenges the rule that sole procurement and the existence of an IPR (here a trade mark) does not give market power and is not anticompetitive per se, shows that a trade mark or a trade mark licence, subject to a transfer of ownership or right to use, may qualify for control against concentration by acquisition of control, under EU Merger Regulation No.

585 David Eagleman, *The Brain* (Canongate 2016) 121–123; McKenna (n 37) 2081 referring Samuel McClure ‘Neural Correlates of Behavioural Preferences for Culturally Familiar Drinks’ (2004) 44(2) *Neuron*, 379–387 at <https://doi.org/10.1016/j.neuron.2004.09.019>, discussing branded drugs (at 2082–2083) and bleach products (at 2084).

586 Laurie Bagwell, Douglas Bernheim, ‘Veblen Effects in a Theory of Conspicuous Consumption’ (1996) 86 (3) *The American Economic Review* 349.

587 Mark Lemley, David McGowan, ‘Legal Implications of Network Economic Effects’ (1998) 86 *Calif. L. Rev.* 479, 483.

588 Daniel Crane, ‘Brands and Market Power: A Bird’s-Eye View’ in Desai, Lianos, Waller (eds.) (n 361) 128, 132–133.

589 Benjamin Edelman ‘Does Google Leverage Market Power Through Tying and Buying’ (2015) 11(2) *JCL&E* 365, discussing the difficulty of a user in switching from automatic, habitual activity to deliberate activity (e.g. choosing services other than Google’s), by referring (at 372) to the study of Adam Candeb, ‘Behavioral Economics, Internet Search, and Antitrust’ (2014) 9 *I/S: A Journal of Law and Policy for the Information Society* 407, <https://ssrn.com/abstract=2414179>

139/2004.⁵⁹⁰ This demonstrates that trade marks/brands do have economic value and qualify as ‘assets’. There were cases in which the transfer of a trade mark or an exclusive trade mark licence of significant importance, amounted to ‘concentration’ because the brand names and reputation conferred the undertaking with a ‘market presence’ of the required ‘market turnover’.⁵⁹¹

More significant for this book is when branding is factored into the algorithm of assessing market dominance and anticompetitive conducts. EU Merger guidelines indicate consumer loyalty to a brand and the importance of promotion and advertising as forms of barriers to entry which restrict the ability of rival firms to compete.⁵⁹² Similarly, EU guidelines on vertical restraints consider distribution agreements of branded goods or services as more harmful than restraints of non-branded goods, because of branding’s capability to induce a lower responsiveness to price changes and reduce products’ substitutability.⁵⁹³ This stimulates a price increase for branded goods which is not necessarily correlated with an increase in quality or changes in other objective product features. The practice of selective distribution⁵⁹⁴ has also raised anticompetitive concerns. Contractual restrictions linked to preferential treatment of luxury goods and brands were interpreted by the CJEU through subjective criteria of assessment, such as whether they contributed to the reputation of goods, sustained ‘the aura of luxury’,⁵⁹⁵ or preserved the ‘prestigious image’ of goods, which in total cannot account for clearly measurable societal benefits.⁵⁹⁶ There is a noticeable tendency to exploit the exclusive status of

590 Art. 3 Reg. defines concentration as a change of control causing a lasting change in the market’s structure which may emerge from the acquisition of control of the whole/parts of an undertaking(s) allowing the exercise of decisive influence, and this may result via purchase of assets or by contracts (e.g. licence).

591 Damiano Canapa, *Trademarks and Brands in Merger Control* (Wolters Kluwer 2016) 64–68 discussing EC Case No. Comp/M.5859, *Whirlpool/Privilege Rights* of 07.07.2010, https://ec.europa.eu/competition/mergers/cases/decisions/m5859_473_2.pdf

592 Guidelines on the assessment of horizontal mergers ..., *OJ C 31*, 5.2.2004, pp. 5–18, para 36.

593 Guidelines on Vertical Restraints, *OJ C 130*, 19.5.2010, pp. 1–46.

594 A selective distribution system represents a vertical restraint, because of the limited number of authorized dealers and resale options, chosen upon specific criteria, justified by the nature of the product and by the capability to perform dedicated services (e.g. special conditions for display/sale, trained staff, individual advice). These restrictions are justified by improving competition by other factors than price, cf. Frenz (n 347) 605–609.

595 C-59/08 *Copad v. Dior*, EU:C:2009:260. Critically, Martin Senftleben, ‘Trademark Transactions in EU Law – Refining the Approach to Selective Distribution Networks and National Unfair Competition Law’ in Jacques de Werra, Irene Calboli (eds.) *Law and Practice of Trademark Transactions* (Elgar 2015) <https://ssrn.com/abstract=2586765>

596 In C-230/16 *Coty DE*, EU:C:2017:941, the CJEU ruled that a selective distribution system designed to preserve the luxury image of the goods, is compatible with Art. 101(1) TFUE, whilst the prohibition on retailers using online third-party sales platforms did not constitute hardcore restrictions ‘of customers’ or ‘of passive sales to end users’, under Art. 4(b)-(c) of Regulation No. 330/2010. Such prohibitions were deemed appropriate (if uniformly applied and proportionate) and justified for the quality, presentation, and differentiated sale channels, deemed essential to preserve the brand’s ‘luxury image’. This diverged from CJEU

brands to control different types of resale activities,⁵⁹⁷ although it is debatable whether consumers would prefer a reduction of prices for goods sold in normal selling conditions. To adapt to technological developments, and especially the increase of e-commerce, there are new versions of the Vertical Block Exemption Regulation and Guidelines on Vertical Restraints, to enter into force in late 2022.⁵⁹⁸

4.4.3.3. Brands narrowly determining a 'one product' market

As market definition usually assesses the interchangeability of products with regard to a product's characteristics, prices, and intended use, branding can constitute an additional preference of consumers, diminishing product substitutability. This may result in situations of a one-product market (market segmentation), defined by a single brand.

Competition practice has dealt with cases when branding was essential to determining a separate market for locked-in consumers, creating barriers to entry and supporting a finding of market power. There are industries in which branding represents a significant competition parameter – strong marketing, advertising, and promotion activities educate consumers to think of 'brands' instead of 'companies' or 'product categories'. For instance, luxury cosmetics marketed under prestige brand name were limitedly substitutable with similar products, because the aura of exclusivity and high quality were reflected in the high price, and appropriate marketing bolstered the specific aesthetic or function quality of individual/line of products.⁵⁹⁹ Similar findings may occur for more ordinary types of products. In US jurisprudence, butter, flour, tissue, and bread constituted distinct branded market products, despite the presence of important private labels producers of these goods.⁶⁰⁰ EU practice found branding to be the major demand-driver for spirits, because brands were not

earlier approach in C-439/09 *Pierre Fabre*, EU:C:2011:649, that 'the need to maintain a prestigious image [was] not a legitimate aim for restricting competition' so that a contractual clause pursuing such aim would fall under Art. 101(1) TFUE. CJEU ruled that prohibitions of Internet sales and marketing of cosmetics/personal care products constituted a restriction 'by object' cf. Art. 101(1) TFUE, as well as 'hardcore' restrictions of active/passive sales to end users, cf. Art. 4(c) Reg. 330/2010.

597 For instance Oberlandesgericht Düsseldorf of 06.03.2018, I-20 U 113/17 forbade REAL DE (as a subsequent reseller) to sell beauty brands *Kanebo* and *Sensai* instore and online – although the goods were authentic and without physical alteration – because the location and selling conditions were detrimental to the reputation and luxury image of the brands.

598 https://ec.europa.eu/competition-policy/public-consultations/2021-vber_en

599 Commission Case No. IV/33.242 – *Yves Saint Laurent Parfums*, OJ L 12, 18.1.1992, pp. 24–35.

600 Waller, Desai (n 471) 1464 citing *United States v. Dairy Farmers of Am.*, 2001-1 Trade Cas. (CCH) 73,136 (E.D. Pa. 2000); *United States v. Kimberly-Clark Corp. and Scott Paper Co.*, 1996-1 Trade Cas. (CCH) 71,405 (N.D. Tex. 1995); *United States v. Interstate Bakeries Corp.*, 1996-1 Trade Cas. (CCH) 71,271 (N.D. Ill. 1995).

easily transferable among spirits ('there is no Johnnie Walker gin or Gordon's whisky') and each brand satisfied specific consumer demands (reflected by taste, price, and image), leading to separate markets for each branded spirit.⁶⁰¹ Similarly, bottled at source mineral water was separated from soft drinks or bottled purified tap water on the French market, because the branding policy of the main suppliers created a special 'image of natural, pure and healthy product associated with source waters' which discouraged consumers from recognizing soft drinks as substitutes for mineral water in home daily use.⁶⁰²

The picture of branding affecting consumer choice and demand-side substitution requires the addition of supply-side substitution. Brands may function as barriers to entry if a producer launching an alternative product needs something more than technical capabilities to compete on the market. A significant example is represented in the cola segment of the drinks market, which was found to be distinct from other flavoured carbonated soft drinks.⁶⁰³ Despite the fact that competitors had the capacity to use existing filling lines and switch production from one type of soft drinks to another, this was not sufficient for entering the cola market, because branding strategies and intense marketing positioning would be needed in advance.

Brands can also affect product substitutability from another angle. Long-term use of a brand may have the outcome of a price increase for a generic group of products. The consumer gets a false market picture, as they deem products interchangeable, which under lower price competition conditions would have not belonged to the same product market. This situation of a wrongly defined wide market is known in the doctrine as 'the cellophane fallacy'. It refers to a U.S. case in which cellophane was found substitutable to other flexible wrapping materials, enabling *DuPont* to avoid a finding of market power, even though the company had already charged monopolistic prices.⁶⁰⁴ The issue of the cellophane fallacy supports the hypothesis that a single brand may define a product market.⁶⁰⁵

4.4.4. Product substitution – an analogy for a market-orientated functionality test

Previous discussion in 4.4.1.–4.4.3. has argued that sufficient market competition requires that consumers enjoy free choice across a range of competitive alternatives. The extent of product substitutability and consumer switching capabilities is captured by the concept of market definition. In certain

601 Commission Case No. IV/M.938 – *Guinness/Grand Metropolitan*, OJ L 288, 27.10.1998, pp. 24–54.

602 Commission Case No. IV/M.190 – *Nestlé/Perrier*, OJ L 356, 05.12.1992, pp. 1–31.

603 Commission Case No. IV/M.794 – *Coca-Cola/Amalgamated Beverages*, OJ L 218, 9.8.1997, pp. 15–42.

604 *United States v. E.I. du Pont de Nemours*, 351 U.S. 377 (1956).

605 Canada (n 591) 145.

circumstances branding may influence market definition, either by narrowing it, or altering the competition conditions. These aspects may become relevant within the framework of functional trade marks.

4.4.4.1. Product definition for functionality purposes

At its core, the functionality doctrine is concerned with not unduly restricting competition. From a positive standpoint, it is about enabling competitors to efficiently trade in substitutes (i.e. products that meet consumer preferences). This pro-competition objective permeates all major CJEU rulings on functionality, whether technical or aesthetic (Chapter 2). As argued elsewhere, this approach advocates for conducting assessments of functional trade marks on parameters sensitive to market realia, able to capture the extent of product substitutability.⁶⁰⁶ It may be posited that beneficial effects on pricing and production conditions would flow from a situation in which an asset belongs to the public domain and may be copied. Using a parallel with the US law (Chapter 3), the ‘right-to-copy’ approach, denying trade mark protection to product features that were previously protected by other IPRs (mainly patents) would be a handy, straightforward solution that bypasses the costs of evaluating the possible alternatives. However, such a ‘one size fits all’ assessment is detrimental to certain kinds of overlapped forms of protection, especially those pertaining to combinations of product features and those arising on aesthetic grounds (Chapter 8). It would also erroneously disregard dynamic market conditions, consumer needs, technological advancement, and other social parameters that play a part when deciding whether or not to confer trade mark protection to a functional sign. For these reasons, it is preferable to give due consideration to the alternative ‘need-to-copy’ approach, which focuses on circumstances of competitive necessity. Functionality ought to be centred on evaluating substitutes and their effectiveness and commercial feasibility. US jurisprudence has ruled on cases using the competitive necessity test, both in regard to utility and aesthetic functionality (see Chapters 3, 6.1.2., 6.4.2. and 8.4.3.1.). Prominent scholars have advocated for the adoption of a market-orientated assessment, drawn upon antitrust parallels.⁶⁰⁷ Similarly, in other areas of law, market substitution was considered a useful tool for assessing the similarity of goods from the consumer’s vantage point for infringement purposes,⁶⁰⁸ or to

606 Brancusi ‘Alternative Products ...’ (n 241) 185, 204.

607 For the most comprehensive study, Dinwoodie (n 27) 684–746; similarly, Weinberg (n 311) 48–53; M. A. Cunningham, ‘Utilitarian Design Features and Antitrust Parallels: An Economic Approach to Understanding the Functionality Defense in Trademark Litigation’ (1996) 18 *Hastings Comm. & Ent. L.J.* 569, 584–588; Diana Elzey Pinover, ‘Aesthetic Functionality: The Need for a Foreclosure of Competition’ (1993) 83 *Trademark Rep* 571, 600–604; Daniel McClure, ‘Trademarks and Competition: The Recent History’ (1996) 59 *Law and Contemporary Problems* 13.

608 Fromer, Lemley, ‘Audience ...’ (n 316) 1255–1256 and 1291–1297.

establish the relevant product category and availability of substitutable terms for testing genericness.⁶⁰⁹ The analogical implementation of a market-orientated functionality test on EUTM grounds – using some criteria developed by the US jurisprudence – will be examined in Chapters 6 to 8, which discuss the interpretation of EUTM functionality provisions step-by-step.

At this stage, it is essential to note that an inquiry over product alternatives requires product demarcation. There is an inverse relation between the breadth of a product category and the extent of the possible substitutability. The wider the product category defined by specific product features, the easier to find substitutes acceptable to clients, to mitigate the risks of conferring trade mark exclusivity on behalf on one entity. Conversely, a narrow product category reduces the chances of finding substitutes, which would speak against trademarking a functional sign, as competitors would need to copy those features in order to effectively compete.

Product delineation may be modelled upon the antitrust market definition, but it is not an identical exercise. Prominent scholars support the notion that an analogy of market definition for IP purposes would mean evaluating ‘the range of rivalry’ between undertakings, and not a query over market power and capacity to impose higher prices.⁶¹⁰ This results from the assumptions that IPRs rarely confer monopoly power, brands are not markets, and rare cases of single-brand markets require something more than a powerful brand, such as ‘market dominance in an underlying product’.⁶¹¹ However, even this approach acknowledges the difficulties that might appear if product features ‘spill over into functionality’, and ‘[a] “design” that commandeers the entire set of reasonable alternatives can end up dominating a market’.⁶¹² Functionality may hinder competition in various ways, depending on the industry, a company’s market position, correlation with other IPRs, strategy of growth, and branding policies. It should come as no surprise that the market environment built upon and around IPRs reinforces the benefits of exclusively using an asset – a functional trade mark may effectively obstruct certain product features on behalf of one entity. Exploring the impact of functional trade marks on competition requires a tool that adapts market definition to the purposes of analysing the switching mechanism and product substitutability.

As already suggested, the transposition of market definition for IP purposes should focus on exploring the ‘quality’ of available competing products set within ‘a spectrum of competition’, where different factors determine their substitutability (such as price, quality, branding, other indices of product

609 Coverdale (n 379) 882–890; Folsom, Teply (n 379) 1347–1358.

610 Herbert Hovenkamp, ‘Markets in IP and Antitrust’ (2012) 100 *Geo. L. J.* 2133, 2134. This article engages with McKenna (n 37).

611 Hovenkamp (n 610) 2138 (quote); Hovenkamp, Janis, Lemley (n 32) 4–8 to 4–10; Beebe, Hemphill (n 316) 1388.

612 Hovenkamp (n 37) 2144.

differentiation).⁶¹³ The impediments on producers in terms of necessity and costs to design around certain product features should be supplemented with considerations about consumer demand showing a low degree of product interchangeability, especially if this is driven by brand-motivated choices and price insensitiveness. An additional inquiry should focus on whether the consumer preferences at issue deserve specific attention, with regard to the effectiveness of the business activity or the primacy of public policies over the IPR's purposes. For instance, wider access to drugs at convenient prices is a priority embedded by international conventions which should impact the decision of conferring trade mark protection to a functional drug's appearance. In such context, legal exclusivity on behalf of a private undertaking would undermine the higher, societal purpose of ensuring convenient access to drugs. Similarly, ensuring the compatibility of products ties into the need for standardisation, which urges careful scrutiny of functional features. Even more so, as connectivity is a key asset of the modern technological infrastructure.

4.4.4.2. Where can information about product substitution be found?

This essential query represents the type of proofs which are needed to assess product substitutability for functionality purposes. Again, an analogy can be drawn with the evidence used for market definition in competition/antitrust cases. The following remarks build on evidence mentioned by the US compendium of antitrust guidelines, although it is important to consider them more as possible starting points/suggestions.⁶¹⁴

To understand manufacturers and market conditions, the first and most direct source of information comes from the interested parties, because companies usually undertake industry studies to evaluate their status vis-à-vis competitors.⁶¹⁵ This kind of analysis covers various topics: the spectrum of a company's own products versus competing ones across different product categories, concentration of capital, business strategies concerning product innovation, brand extensions, advertisement, promotions, pricing decisions, models of consumers behaviours, and substitution patterns in response to the introduction of a new product (e.g. which product and how much volume would be lost, which competing products consumers would switch to). Bearing in mind the negative aspects of branding, evidence of market segmentation implying a 'one branded product' market can be indicative of limited substitution of the products at issue.

Business correspondence and corporate decisions are also relevant for revealing branding strategies related to the launching of new products.⁶¹⁶ Such

613 McKenna (n 37) 2102.

614 ABA Section of Antitrust Law, *Market Definition in Antitrust: Theory and Case Studies* (Chicago 2012) 9, 14, 99–112.

615 Ibidem, 102.

616 Gore (n 560) 3.

strategies are significant for functionality cases due to the fact that functional signs are usually not inherently distinctive, so filings for trademark registration occur after the owners can prove acquired distinctiveness. This requires an active presence on the market and intensive advertising and promotion. A review of activities fostering the launching of a new product, usually boasting its uniqueness, together with targeting consumers' preferences and willingness to switch, can be informative about the business environment and the availability of substitutes.

Another type of proof is represented by qualitative and quantitative descriptions of products and industries in reports commissioned by official (governmental) agencies. These are generally publicly available. There are also industry reports prepared by third-party vendors specializing in gathering and interpreting data, such as AC Nielsen, which contain information about the competitive activities of companies, sales volume, price level, and so on.⁶¹⁷ The downside of these reports, usually conducted on demand from manufacturers or distributors, is that they are expensive and often confidential.

An important perspective of substitutability is conveyed by consumer behavioural patterns around purchasing and substitution. Learning about this ties into how commerce channels have evolved over time. In cases of goods sold traditionally via supermarkets and ordinary retail channels, scanner data offers objective information about sales, retail prices, and promotions, although certain sale conditions remain beyond scanning (e.g. the use of loyalty/rebates coupons or vending machines⁶¹⁸). An additional tool is consumer interviews and surveys covering: preferences and shopping behaviours, consumer response to new products, price positioning, and sensitivity to branding components (brand awareness and brand image).

However, the ever-growing online way of doing business has stimulated consumer presence on e-commerce platforms and social media. This has translated into enormous investments into developing AI algorithms to shape consumer purchasing decisions and gather information about all aspects of consumer preferences and product selection.⁶¹⁹ For instance, an AI creates a consumer profile upon data from previous online activity and displays personalized offers, containing both previously chosen brands and alternatives.⁶²⁰ Certainly, there are concerns about how this AI selects, operates and creates content directed at, and intended to steer, consumers (e.g. issues of data provenance, transparency, biased recommendations of goods/services), yet one

617 ABA (n 614) 103–104.

618 Ibidem, 109–110.

619 Dev Gangjee, 'A Quotidian Revolution: Artificial Intelligence and Trade Mark Law' (forthcoming) in Ryan Abbott (ed.) *Research Handbook on Intellectual Property and Artificial Intelligence* (Elgar 2022) 3–5. <https://ssrn.com/abstract=4081317>

620 Martin Senftleben, 'Trademark Law, AI-driven Behavioural Advertising and the Digital Services Act – Towards Source and Parameter Transparency for Consumers, Brand Owners and Competitors' in Abbott (ed.) *ibidem*, 2, 11. <https://ssrn.com/abstract=3947739>

thing is certain – AI resources and capabilities seem inexhaustible and market actors will increasingly grow to rely on them. By the same token, the collection of operational data from AI would constitute a solid basis for assessing the mechanism of switching and the real ‘quality’ of substitutes, as determined by consumer preferences (see Chapter 6.4.3.).

In competition proceedings, an important category of evidence also comes from econometric analysis, based on mathematical models, with advance measurements of demand elasticity, for example under SSNIP. Although time-consuming and expensive, it is not inconceivable that a judge dealing with functionality may wish to understand the market conditions from various angles and require expert opinions which address the modelling of consumers switching behaviour. After all, statistics can be part of a legal assessment, as in the area of insurance. It is only a matter of context (i.e. how heavily are competitors impaired?) and determination (i.e. how much is at stake?) that such evidence may be gathered for trade mark purposes, too.

4.4.4.3. Some concluding thoughts

Certainly, objections may be raised against testing functionality using market parameters of product substitutability.⁶²¹

The first issue is that a case-by-case assessment, sensitive to competition specifics of an industry sector, does not offer ready-made solutions and necessitates lengthy and costly evidentiary proceedings. For a full understanding of market data, consumers’ behavioural patterns, competition conditions, judges, or administrative bodies need to rely on expert opinion of various expertise, that is, technology production, marketing, econometrics, psychology/sociology. However, the development of AI-backed tools will certainly bring time and cost optimisations.

A second shortcoming may be that factual and complicated assessments generally discourage examiners, so it is less probable that a market functionality test would be conducted at the registration stage alongside other absolute refusal grounds. This shortcoming may also become less relevant, depending on improvements to the search tools used by the EUIPO and national Patent Offices.⁶²² Functionality objections usually emerge later, during opposition, invalidity, or infringement proceedings.

A third concern, linked to the laboriousness of the proofs and high litigation costs, is that functionality litigation remains the privilege of strong business entities. Practice, however, shows that there are always competitors willing to fight for their market position. Such stakeholders may choose to confront the aggressive market behaviour of competitors, to pursue a better position on the market. In such a context, undertakings may anticipate the

621 I expressed some of these concerns in Brancusi, ‘Assessing ... (n 404) 254.

622 Discussing AI capabilities during trade mark registration, Gangjee (n 619) 6–11.

need to provide evidence of sufficient competition, reflected by an acceptable range of substitutes. By orchestrating their business strategies and collecting favourable studies, undertakings may facilitate the registration, protection, and enforcement of functional trade marks. The budgets required for such forward-thinking may not necessarily be within the reach of small and medium enterprises.

Despite these weaknesses, it is the author's view that an in-depth product analysis, exploring the availability and closeness of substitutes, may be beneficial when solving functionality cases, particularly those that are in conflict with the goal of avoiding IPR stacking. The extent of product substitutability seems an appropriate indication of both satisfying the specific demands of targeted consumers and enabling sufficient market competition. The way such a test may work for utilitarian or aesthetic functionality is mapped in Chapters 6 to 8. The central issue is the use of the criterion of alternative products as a necessary part of a functionality assessment.

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5 Categories of signs falling within the scope of EUTM functionality refusal grounds

This chapter discusses the categories of signs that may be caught by the EUTM functionality prohibitions. It starts by looking into the purpose of the addition of ‘another characteristic’ of goods and explains the reasons for identifying the type of sign and corresponding product features within the functionality assessment (5.1.). It next looks into the consequences of categorizing trade marks with a focus on the registration of three-dimensional signs (shapes) (5.2.). The following part moves on to the categorization of trade marks for functionality purposes (5.3.). It first examines what was placed inside the notion of ‘shape’ by the CJEU under the old EUTM, but also what has been discarded, and next maps the implications of this for examining functionality vis-a-vis lack of distinctive character. Part 5.4. applies the CJEU guidance developed upon shapes in order to define the notion of ‘another characteristic’ of goods. It looks into the specificities of the enlarged scope of functional signs. The concluding part critically evaluates the current EUTM norms rules which insulate service trade marks against the functionality prohibitions (5.5).

5.1. Introductory remarks

The amended EUTM functional provisions of Art. 4 (1)(e) EUTMD and Art. 7(1)(e) EUTMR speak about signs which consist exclusively of a shape or another characteristic, determined by the nature of goods, or necessary to obtain a technical result or giving substantial value to goods. The addition of the term ‘another characteristic’ has triggered various reactions. Its enactment was generally criticised by practitioners as allegedly obstructing the enlarged registration of non-traditional trade marks after the deletion of the graphical representation requirement.⁶²³ This argument loses impetus if consideration is given to the idea that the real obstacle to non-traditional trade marks is constituted of the new requirement for ‘clear and precise’ subject-matter and the basic distinctiveness requirement, thus not the issue of enlarged scope of

623 Maeve Lynch, ‘Product Configuration Marks: The Shape of Things to Come’ (2017) 6 *JIP&P* 465, 471 referring INTA objections to the amendment during consultation process.

functionality.⁶²⁴ Apparently, this rephrasing of functional provisions appeared at a later stage of legislative works on the amendments to EUTM, and independently from the removal of the ‘graphical representation’ criterion from the definition of eligible signs.⁶²⁵ This fact supports the view that functionality has an autonomous purpose and meaning under EUTM.

Functionality’s core purpose is not about discriminating against non-traditional marks and their owners, instead, positively, it is about fostering competition. The rewording of the EUTM functionality provisions reflected the pro-competitive aim of enabling market actors to access different types of product features, beyond simple visual appearance as captured by the initial notion of ‘shape’.⁶²⁶ This aim concurs with the suggestions of the ‘Study on the Overall Functioning of the European Trade Mark System’ by the Max Planck Institute for Intellectual Property and Competition (Max Planck Study), which considered the initial ambit of functionality to be ‘narrow’ and mismatched with regard to the scope of US functionality law.⁶²⁷ Chapter 3 demonstrated that US functionality covers all aspects of trade dress, unrestricted as to shapes, and in relation to both goods and services. This is a leap ahead from the EUTM, which confines the functionality assessment to goods (5.5.). Construing a functionality filter comprising different product properties, also variably combined (5.4.), has become a necessary step to keep pace with the expanding spectrum of non-traditional marks.

Identifying the scope of the functionality prohibitions requires a two-stage synchronized assessment. The first stage consists of defining the notions of ‘shape’ and ‘another characteristic’ (of goods), going beyond the literal meaning of the words, yet retaining the connection with the nature of goods and their contextual market use. EUTM jurisprudence has broadened the meaning of ‘shape’ in relation to signs that combined different visual features (contours, graphics, words, colours). This guidance may analogically serve for cases involving other types of product characteristics.

However, even when a sign matches the description of a ‘shape or another characteristic’ (of goods), functionality does not yet apply. The second stage of the assessment focuses on the term ‘exclusively’. Its meaning must be determined through the relationship between product features and the product’s

624 Annette Kur, ‘The EU Trademark Reform Package – (Too) Bold a Step Ahead or Back to Status Quo?’ (2015) 19 *Marq. Intellectual Property L. Rev.* 15, 25–26; Eleonora Rosati, ‘The Absolute Ground for Refusal or Invalidity in Art. 7(1)(e)(iii) EUTMR/4(1)(e)(iii) EUTMD: In Search of the Exclusion’s Own Substantial Value’ (2020) 15(2) *JIP&P* 103, 113.

625 Richard Menies, ‘Characteristically Vague: Clarifying Which “Other Characteristics” May Be Excluded under Article 7(1)(e) of EUTMR and Article 4(1)(e) EUTMD’, 6 at <https://ecta.org/ECTA/documents/RichardMenzies2ndStudentAward20202150.pdf>

626 Bently and other (n 24) 963 mentioning the consumers need of finding certain product features in the offers of competitors.

627 Max Planck Study para 2.31, p. 72, at <https://op.europa.eu/en/publication-detail/-/publication/5f878564-9b8d-4624-ba68-72531215967e#> (accessed 24 April 2023).

functionality. Features must match one of the definitions of ‘resulting from the nature of goods’, or ‘(being) necessary to obtain technical result, or ‘giving substantial value to goods’. This step requires weighing the extent of features matching the functionality definition against ‘non-functional’ ones. All these findings are summed up in an overall evaluation of whether the sign consists ‘exclusively’ of technically or aesthetically functional features, in which case it is left without protection.

Although in practice these different parts of the assessment closely interrelate, clarity calls for a theoretical separation. The present chapter explores only that part of the assessment which is common to all kinds of signs, independent from the chosen functionality, that is, technical or aesthetic. Separately, Chapters 6 to 8 focus on interpreting the specific legal criteria of technical and aesthetic functionality under EUTM.

5.2. Categorizing ‘shapes’ amidst other signs pertaining to product appearance for registration purposes

The notion of ‘shape’ intuitively relates to the appearance of an object conferred by its outlines/contours. Such a definition mirrors the term of a ‘plain shape’ viewed three-dimensionally. More often, additional elements of wording, graphics, colour(s), and so on, may enrich plain shapes. In practice, the public register should fulfil the task of clarifying the subject matter of a trade mark and its type. However, registration documentation, especially if reduced to two-dimensional graphical representation, often raises doubts as to the kind of mark the applicant sought to register. This part starts by succinctly introducing the legal consequences of trade mark classification. It next focuses on the legal framework for registering shapes, as embedded in the old and new EUTM structures, and the role that indication, description, and representation play within the registration documentation.

5.2.1. Legal consequences of categorizing trade marks

It seems a natural market necessity that a person seeking to register a trade mark should submit a clear and precise-subject matter.⁶²⁸ The applicants should also know what type of sign they are registering. Categorization should not be a difficult or unclear task. In practice it has many times been shown to be otherwise, but this was often due to intended, strategic, moves by applicants.⁶²⁹

EUIPO guidance provides that categorization of trade marks serves primarily to ensure legal certainty to those consulting the public register. It facilitates searches through EUIPO databases and helps searchers understand what the

628 Art. 3(b) of EUTMD together with Recitals 13 of the Preamble, and Art. 4(b) of EUTMR, together with Recitals 10 of the Preamble.

629 Dev Gangjee, ‘Paying the Price for Admission: Non-Traditional Marks across Registration and Infringement’ in Calboli, Senfleben (n 22) 64–73.

applicants sought to register.⁶³⁰ Application forms usually have a standardised format in which various types of trade marks are indicated by ‘boxes’ to be ticked. However, the fact that an applicant for EUTM selects a specific type of trade mark at this stage does not determine or induce specific treatment on the part of the EUIPO. The Office conducts a full examination of each demand with regard to all legal conditions, as seen fit.⁶³¹ One notable disclaimer is that all examples of trade marks mentioned by the Guidelines serve only administrative/formality purposes, without determining the outcome of the registration proceedings or the scope of protection conferred to a filed sign.⁶³²

Designating the category of the sign lies first within the applicant’s discretion. However, if the applicant fails to indicate the type of trade mark, or provides an indication which is inconsistent with the graphical representation and/or description, the EUIPO will accord the appropriate indication (or object to the improper one), give the applicant two months for observations, and take a decision after this limit expires.⁶³³ As discussed below (5.2.2.), the paramount requirement to file a clear and precise subject matter of a trade mark presupposes not only clarity and accuracy of the representation, indication, and description (when applied), but also consistency between all parts of the registration documentation.⁶³⁴ Failure to fulfil this requirement results in the denial of registration under the absolute refusal ground that the sign cannot constitute a trade mark (cf. 4(1)(a) EUTMD or 7(1)(a) EUTMR).⁶³⁵ For instance, registration was refused due to inconsistencies within the application of a sign indicated as a ‘colour’ mark (blue and grey) without contours, filed for mineral water, but supported by a drawing showing a ribbon-like pattern with defined contours that matched the indication of a ‘figurative’ sign.⁶³⁶ Once a trade mark is registered, its classification cannot be changed afterwards by EUIPO ex officio; even if subsequent invalidity proceedings are instigated, contesting the nature of the mark remains within the autonomy of the claimant and parties’ argumentation.⁶³⁷

630 EUIPO Guidelines Part B Examination Section 2, 9.3.

631 This issue was discussed by AG Spunar in his second Opinion to *Louboutin* C-163/16, EU:C:2018:64, paras 27–34.

632 EUIPO Guidelines, *ibidem*.

633 Georg Schneider, ‘Article 4’ in Gordian Hasselblatt (ed.) *European Union Trade Mark Regulation. Article-by-Article Commentary* (2nd ed. Nomos 2018) 68–69; EUIPO Guidelines, *ibidem*, 9.1.

634 Lavinia Brancusi, ‘The Procrustean Fitting of Trade Marks Under the Requirements of Clear and Precise Subject-matter in the EU Trade Mark Law – A Case of Position Marks’ (2022) 25 JWIP 45, 57–61.

635 Common Communication (hereinafter CP 11), New Types of Marks: Examination of Formal Requirements and Grounds for Refusal’ (2021), 20, at: https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/contentPdfs/EUIPN/CP11/common_communication_cp11_en.pdf (accessed 24 April 2023).

636 C-578/17 *Oy Hartwall*, EU:C:2019:261, paras 36–43.

637 T-274/20 *MHCS v. EUIPO & Lidl*, EU:T:2021:592, concerning the orange colour applied to the *Veuve Clicquot* champagne bottle, registered as ‘figurative’, despite disputes concerning its status of ‘colour’ or ‘another’ mark.

Trade mark categorization is not only a vital registration requirement, it has also consequences at the point of substantive law. It impacts the application of the legal requirements under which the registrability of the sign is assessed. Different types of marks may variously influence consumer perception and affect assessment of their distinctive character, accordingly.⁶³⁸ Certain categories of signs (e.g. three-dimensional) may specifically imply the application of other absolute refusal grounds, such as functionality. These issues are discussed in detail in 5.3.3. below.

Furthermore, classification determines the boundaries of the scope of protection of a trade mark. Categorization may be strategically used by owners to seek advantages against competitors by flexibly stretching the subject-matter so as to encompass multiple variations, including dimensional shifts or use within composite signs.⁶³⁹ Infringement practice has faced difficulties of enforcing trade marks registered as two-dimensional against three-dimensional real products.⁶⁴⁰ Similarly, the assessment of the likelihood of confusion between composite signs, in which shape is used jointly with words/logo, colour/graphics brings unclear outcomes.⁶⁴¹ These issues fall beyond the scope of the book.

5.2.2. *The legal framework for registering shapes under EUTM*

The old EUTM defined signs as eligible for trade mark registration upon two requirements: abstract capability to distinguish, assessed independently from any category of goods/services, and graphical representation.⁶⁴² Commission Regulation No. 2868/95 implementing Council Regulation No. 90/94 (with amendments, hereinafter CTMIR⁶⁴³) involved procedural rules, which gave applicants interested in registering shapes the following options.

638 Gordon Humphreys, Nedim Malovic, Stefan Martin, 'Round-up of Non-traditional EU Trade Mark Decisions in 2021' (2022) 17(4) *JIP&P* 350, 354; Gordian Hasselblatt, 'Article 7' in Hasselblatt (ed.) (n 633) 96–97.

639 Fromer, McKenna, 'Claiming ...' (n 316) 147–160.

640 Gangjee (n 629) discussing the lilac Spanish mop (at 74) and Crocs clog infringement saga (at 86–88); Michael Handler, 'What Should Constitute Infringement of a Non-Traditional Mark? The Role of "Trademark Use"' in Calboli, Senftleben (n 22) 166, 172–177, discussing the dismissal of the Philips infringement claims against Remington in Australia, because trading goods (shavers) did not constitute 'trademark use' of the functional shape. In Australian and New Zealand law, there are no functional exclusions pertaining to shapes, the only way of ensuring free access to product features for third parties is to invoke lack of 'trademark use' (at 175).

641 Annette Kur, 'Yellow Dictionaries, Red Banking Services, Some Candies, and a Sitting Bunny. Protection of Colour and Shape Marks from a German and European Perspective' in Calboli, Senftleben (n 22) 89, 94–104 discussing the impact of similarity of weak/indistinctive elements upon the lack of likelihood of confusion generated by the entire trade mark, especially with regard to *Lindt* chocolate bunny (at 96–97).

642 Instead of many: Kur, 'Signs Eligible for Protection' in Kur, Senftleben (n 24) 92–102.

643 Commission Regulation (EC) No. 782/2004 of 26 April 2004, *OJ L123/88*; Commission Regulation (EC) No. 1041/2005 of 29 June 2005, *OJ L 172/44*; Commission Regulation

The application for registering an explicit three-dimensional sign had to be specifically indicated and submitted with a graphical representation (a photograph or graphic representation) showing up to six perspectives (Art. 3(4) CTMIR). If the applicant wished to file a sign claiming graphic features or colour – that is, a sign that did not consist solely of words, letters, numerals cf. Art. 3(1) CTMIR – this also required indication and reproduction (Art. 3(2) CTMIR). Because Art. 3(3) CTMIR enabled the optional submission of a description in all cases that were not word marks and that claimed ‘special graphic features or colour’, it could be inferred that three-dimensional signs could also be filed with a description. Such a practice was accepted by the EUIPO until 1 October 2017,⁶⁴⁴ irrespective of whether a sign depicting an object was filed as plain shape or comprised graphics, colours, wording, or combination thereof.

The provisions of Art. 3(5)-(6) CTMIR laid down separate requirements for colour and sound marks, however, other types of non-traditional marks (e.g. position, pattern) did not enjoy their own guidance. EUIPO accepted the indication of ‘other’ (type of trade mark),⁶⁴⁵ although in practice it did not represent the applicants’ first choice. For example, if the mark referred to the positioning of a sign on a specific part of a product, applicants tended to use the categories of ‘figurative’, ‘colour’, ‘three-dimensional’ instead of ‘other (position)’.⁶⁴⁶ Therefore, doubts persisted as to what type of mark shown on the register was actually sought by its proprietor.

The new EUTM replaced the requirement for graphical representation with that of representing the subject-matter of a ‘trade mark’ in a ‘clear and precise’ manner (Art. 4 b) EUTMR). Additional procedural guidance to match the representation of new non-traditional trade marks was embedded in Art. 3 of Implementing Regulation 2018/626 (EUTMIR).⁶⁴⁷ The main principle is that representation may take any form enabled by generally available technologies, provided that it is ‘clear, precise, self-contained, easily accessible, intelligible, durable and objective’ (Art. 3(1) EUTMIR). These requirements

(EC) No. 355/2009 of 31 March 2009 OJ L 109/3 (synchronized with Council Regulation No. 207/2009).

644 This was the date when the new Commission Regulation (EU) 2017/1431 entered into force, [2017] OJ L 205/39, being shortly afterwards replaced by the current Commission Regulation (EU) 2018/626, [2018] OJ L 104/37.

645 Old EUIPO Guidelines of April 2008 Part B Examination 2.7.1, p. 8 <https://euipo.europa.eu/ohimportal/en/web/guest/guidelines-repository>. Georg Schneider, ‘Article 4’ in Gordian Hasselblatt (ed.) *European Union Trade Mark Regulation: A Commentary* (1st ed. Beck 2015) 58.

646 Brancusi, ‘The Procustean ...’ (n 634) 47–52.

647 Ines Ribeiro da Cunha, Jurgita Randakeviciute-Alpman, ‘New Types of Marks Available after the European Union Trade Mark Reform: An Analysis in the Light of the U.S. Trade Mark Law’ (2019) 10 *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 375.

were earlier articulated in *Sieckmann*,⁶⁴⁸ concerning the eligibility of perfumes, unable to be perceived visually, and *Libertel*,⁶⁴⁹ concerning the means of representing colours per se. The *Sieckmann* judgment is considered the benchmark of determining precise and objective protectable subject-matter for any type of trade mark.⁶⁵⁰ Its importance has also been recently accentuated in the copyright area when the CJEU denied the status of protectable work to a food taste.⁶⁵¹

EUTMIR explicitly stipulates that the representation defines the subject-matter of a trade mark and prevails over any description, which cannot extend the scope of what was represented (Art. 3(2) EUTMIR). Similarly, the indication of the type of mark must accord with representation (Art. 3(3) EUTMIR). The requirements of clarity and consistency of the registration documentation, although entirely legitimate, may have an unintended impact on non-typical trade marks registered under the old EUTM, which did not have their own registration category and were often filed as three-dimensional, figurative, colours, yet with descriptions that added important clarifications. Applying the new standards to old registrations may result in the description being neglected due to an alleged lack of alignment with the graphical representation.⁶⁵²

Currently, three-dimensional signs can only be filed by means of graphical reproduction (including CAD imaging) or photographic representation, involving up to six different views (Art. 3(3)c EUTMIR). Notably, a description is not permitted for signs ‘consisting of or extending to’ three-dimensional shapes, which are understood as encompassing plain shapes or shapes containing other elements (word, figurative, labels).⁶⁵³ EUTMIR accepts a description

648 C-273/00 *Ralf Sieckmann v. DPMA*, ECLI:EU:C:2002:748, paras 42–55. In this case the following elements did not suffice: chemical formula, word description, odour sample, combination of thereof.

649 C-104/01 *Libertel*, ECLI:EU:C:2003:244, paras 29–38, indicating that sample and description should be joined by designating the colour upon an international code.

650 Simon Geiregat, ‘Trade Mark Protection for Smells, Tastes, Feels – Critical Analysis of Three Non-Visual Signs in the EU’ (2022) 53 IIC 219, 225–226; Martin Senftleben, ‘Signs Eligible for Trademark Protection in the European Union: Dysfunctional Incentives and a Functionality Dilemma’ in Irene Calboli, Jane Ginsburg (eds.) *Cambridge Handbook on International and Comparative Trademark Law* (CUP 2020) 207–208.

651 C-310/17, *Levola Hengelo v. Smilde Foods*, EU:C:2018:899 rel. to Opinion of AG Whatlet, EU:C:2018:618, 56. Caterina Scanga ‘Say Nay to a Tastier Copyright: Why the CJEU Should Deny Copyright Protection for Taste (and Smells)’ (2019) 14(3) JIPL&P 187, 194 argues for similar functions played by the graphic representation under the EUTM and the notion of ‘expression’ in copyright law.

652 T-796/16, *CEDC v. Unterberg*, ECLI:EU:T:2020:439 conc. French (position) mark related to the bottle of *Žubrówka* vodka. The discrepancies between the drawing and description led the GC to neglect the blade of grass, with the detrimental effect of unproved genuine use, see Lavinia Brancusi, ‘“A Bottle with a Diagonal Line on It” Or “A Bottle with a Blade of Grass Inside It”’, 2020 JIPL&P 15(12) 942.

653 EUIPO Guidelines, 9.3.3.

only in cases of position, pattern, combination of colours without contours, motion, and the ‘other’ (than explicitly enumerated therein) category, such as tracer, olfactory, taste, and tactile marks.⁶⁵⁴ Filing for a three-dimensional sign also requires an indication (cf. Art. 3(3) CTMIR). For instance, if there is only one view filed without indicating the mark type, EUIPO considers the sign to be ‘figurative’. For a registration with colours, a coloured representation is needed, whereas a description of the colours is not permitted.⁶⁵⁵ The ‘other’ category remains the only type exempted from the requirement for indication.

Against this background, an applicant seeking to register a given type of sign related to product appearance has sufficient means to precisely indicate its subject-matter. The choice between a three-dimensional or a two-dimensional sign should simply result from the overall registration documentation, that is, indication and representation, optionally supported by a description under the old EUTM. However, EUIPO case-law on product appearance proves the opposite. There are many three-dimensional registrations camouflaged under the banner of ‘figurative’ trade marks. For example, *Novartis’s* ‘Exelon’ yellow-white transdermal patch was filed as a ‘figurative’ mark with a single photo, while the Board of Appeal (BoA) qualified it as a ‘two-dimensional shape’ for functionality purposes.⁶⁵⁶ Likewise, for the shape of a three-dimensional inhaler registered as figurative, the BoA held it to be a complex ‘two-dimensional shape’ with colours and wording.⁶⁵⁷ *Pirelli* registered a ‘figurative sign’ corresponding to a single groove of a tyre tread, whilst the BoA saw it as representing a complete tyre tread, by implying features not visible from the application.⁶⁵⁸ Finally, a classic mismatched application concerned Rubik’s cube in colours, which was indicated as a ‘colour mark per se’ with an ambiguous description – the EUIPO rejected it as imprecise subject-matter and suggested instead the classification of a ‘three-dimensional’ or ‘figurative’ mark.⁶⁵⁹

These examples reflect the issue of strategic filing. In cases of product appearance, applicants tend to choose the more convenient classifications of figurative, two-dimensional (composite) signs, also supported by appropriate graphic representation, in order to increase their chances of registration. When dealing with the EUIPO, the aim is to avoid the direct categorization of ‘shape’ (or ‘another product characteristic’) which automatically raises functionality objections (5.3). Furthermore, even if functionality pleas are not raised, or remain unexamined according to the procedural leeway given by EUTMIR, assessment of the distinctiveness of shapes or signs related to product characteristics has been more onerous than in case of traditional signs (word, figurative).

654 EUIPO Guidelines 9.3.11. However, registration of olfactory, taste or tactile marks is still unavailable, cf. *Geiregat* (n 650), 230–232.

655 EUIPO Guidelines 9.1.

656 T44/16 *Novartis v. SK Chemicals*, EU:T:2018:48.

657 BoA R-2096/2018-1, *Salmex*.

658 T447/16 *Pirelli v. Yokohama Rubber*, EU:T:2018:709; C-818/18, EU:C:2021:431.

659 T – 293/10 *Seven Towns v. OHIM*, EU:T:2012:302.

5.3. Categorization of shapes for functionality (versus distinctiveness) purposes

Over time the CJEU's functionality assessment has evolved to capture the real nature of shapes, irrespective of the filing strategy of applicants. This part begins by retracing what was included, and also what was excluded from, within the initial scope of the functional signs (5.3.1. and 5.3.2.). These findings will serve to analogically map in 5.4. the spectrum of 'another' characteristic' of goods. Despite clear rules for identifying and assessing the eligibility of shapes and other product features, EUTM practice shows a pendulum swinging between applying distinctiveness instead of, or together with, functionality. Another part of this part explores possible reasons why this situation occurs (5.3.3.). It discusses the difficulties of applying distinctiveness standards, and therefore advocates for priority to be given to a self-sufficient, autonomous functionality examination, which would work to prevent the wastes of time and resources.

5.3.1. What was a 'shape' under the old EUTM functionality provisions?

The following part discusses how functional shapes have been examined in the EUTM's practice. A set of landmark CJEU judgments have brought guidance not only for the interpretation of the notion of 'shape', but also for the methodology of assessing functionality.

5.3.1.1. Philips, going beyond the dimensional distinction of signs

The *Philips* judgment concerned a two-dimensional UK trade mark (No. 208) depicting a rotary shaver with three heads arranged within an equilateral triangle.⁶⁶⁰ Lord Jacob noticed the artificiality of differentiating between three-dimensional shapes and two-dimensional representations of shapes.⁶⁶¹ The CJEU confirmed that just as there was no discrimination between the different categories of signs eligible for trade mark registration, so functional provisions should also apply to signs consisting exclusively of product shapes or of graphic representations of shapes.⁶⁶² This ruling triggered the invalidation of another *Philips* registration (No. 452) showing a 'clover leaf' arrangement of shaver heads.⁶⁶³

5.3.1.2. Lego, focusing on 'essential' features within the 'exclusively' criterion

*Lego*⁶⁶⁴ was the first CJEU judgment to introduce an 'algorithm' to assess technical and, analogically, aesthetic functionality,⁶⁶⁵ an algorithm still in force.

660 *Philips Electronics v. Remington Consumer Products*, [1998] RPC 283; CA [1999] RPC 809.

661 [1998] *ibidem*, 290.

662 C-299/99 *Philips* ECLI:EU:C:2002:377, paras 40, 76.

663 [2004] EWHC 2327; [2006] EWCA Civ 16.

664 C-48/09 *Lego* EU:C:2010:516.

665 Analogically, C205/13 *Hauck*, para 21; C-237/19 *Gömböc*, para 44.

The first step consists of identifying the ‘essential’ characteristics of a sign, defined as its ‘most important elements’ (69).⁶⁶⁶ This is an ‘objective’ assessment conducted on a ‘case-by-case’ basis, upon the registration documentation (graphic representation and/or description) and independently from consumers’ perception, who may erroneously find features to be essential that are functionally unimportant.⁶⁶⁷ There is ‘no hierarchy’ between the types of elements that may constitute a sign (70). CJEU explained how such essential characteristics should be identified. Depending on the difficulty level, the examination could represent a ‘simple visual analysis’ or a ‘detailed’ one (71), directly addressing the ‘overall impression’ of the sign or relying on prior examination of individual components. The CJEU referred to the latter in the context of its practice concerning the distinctiveness of composite signs (70).⁶⁶⁸ If detailed examination is needed, various criteria may apply: consumer surveys, expert opinions, information about previous IPRs related to the goods concerned (71). However, the CJEU conceded that whilst the consumer vantage point could be helpful in order to identify the essential characteristics of the sign, it cannot be ‘decisive’ when ruling on the applicability of the technical functionality bar (76).

The second step of the assessment inquires whether each ‘essential’ feature of a sign fulfils a functional purpose, that is, resulting from the nature of goods; necessarily obtaining a technical function; giving substantial value to goods – see Chapters 6 to 8. It follows therefore the key principle of the examination: if *all* essential features perform functional purposes, then the sign at issue consists ‘exclusively’ (LB) of functional features and the interdiction applies to the whole sign (51). If a sign contains a ‘non-functional element, such as decorative or imaginative’, playing ‘an important role’, then functionality does not apply (72). As to the *Lego* brick, the essential feature consisted of ‘the two rows of studs’ on the upper surface, necessary for assembling toy bricks. The red colour of the bricks, although held to be non-functional, was considered too minor to dismiss the functionality exclusion (73–74).⁶⁶⁹

The *Lego* judgment has often been read as emphasizing the importance of the criteria-filter embedded in the terms ‘exclusively’ (referring to all kinds of functionality) and ‘necessary’ (confined to technical functionality). Their effective purpose amidst signs incorporating functional aspects has been to single out only those that truly endanger market competition.⁶⁷⁰

666 The numbers and quotations refer to specific paragraphs of the judgment.

667 C-48/09 *Lego*, para 25, referring T270/06 *Lego*, EU:T:2008:483, para 70.

668 Referring C-468-472/01 *Procter&Gamble* (dishwasher tablet) EU:C:2004:259, para 45 and C-286/04P *Eurocermex* (Corona bottle) para 23.

669 Referring BoA R-856/2004-G, paras 54–55, 62.

670 T-396/14 *Best-Lock v. Lego*, EU:T:2015:379, para 22, refusing the invalidation of *Lego* manikin toy, confirmed by C-452/15, EU:C:2016:270.

5.3.1.3. Pi-Design, Simba and Gömböc, *going beyond registration files*

An important addition to the *Lego* guidance involves the extent of proofs stretching beyond the documentation filed for registration, which examiners may rely on in order to establish the functionality of product features. This issue ties into the relevance of (graphic) representation for the purpose of correctly identifying the nature of a sign.

The first answer was brought by *Pi-Design*, where a two-dimensional figurative mark with an outlined arrangement of black dots was filed without description and registered for knives (class 8) and kitchen utensils (class 21).⁶⁷¹ GC annulled the BoA decision which had invalidated the trade mark as technically functional due to concave dots, or dents, conferring a non-skid structure to the knife's handle.⁶⁷² The BoA erroneously inferred the real nature of the dots/dents via 'reverse engineering' using documents other than the application. The CJEU reversed the GC ruling and stated that although the requirement of self-contained graphic representation was relevant for testing trade mark eligibility, examining functionality could not be similarly restricted as that would undermine its purpose.⁶⁷³ CJEU applied the *Lego* guidance on conducting a 'detailed examination' in such a way as to take into account proofs submitted after the filing of application, but referring to a situation existing at the date of application.⁶⁷⁴ Such evidence concerned the actual use of the trade mark applied for registration in relation to marketed goods which showed that the sign was not a mere ornament of the knife handle. Later on, separate proceedings dealt with the importance of the ornamentality of black dots within a 'hybrid mark' – CJEU did not find these features to have a major non-functional element capable of overpassing functionality.⁶⁷⁵

A high-profile confirmation of the *Pi-Design* (and *Lego*) guidance emerged during the invalidity proceedings for the three-dimensional trade mark of *Rubik's* cube, registered in class 28 for 'three-dimensional puzzles' and filed without description, with a white-and-black drawing showing front and side views. Again, the GC denied any possibility of speculative deduction about the real meaning of the black-and-white 'cubic grid structure' with respect to the inner-rotation capability of the vertical/horizontal lattices which could have revealed technical functionality.⁶⁷⁶ The GC called the appearance of the structure a 'black cage', due to the intersection of lines separating each of the 3x3x3 parts and found it to be original enough to confer inherent distinctiveness.⁶⁷⁷ The CJEU redefined the playing field. The Court stepped beyond

671 C337/12 P to C340/12P *Pi-Design v. Yoshida*, EU:C:2014:129.

672 T-331/10, EU:T:2012:220; BoA R-1235/2008-1.

673 C337/12 to C340/12 *Pi-Design*, paras 54–58.

674 *Ibidem*, para 59.

675 C421/15, *Yoshida* EU:C:2017:360; T-331/10RENV T-416/10RENV, EU:T:2015:302.

676 T-450/09 *Simba Toys v. Seven Towns*, EU:T:2014:983, paras 50–61.

677 *Ibidem*, paras 101–113.

the graphical representation whilst still articulating *Lego's* guidance: for the shape of goods, the essential characteristics must be assessed in the light of the technical function of the actual goods, and for this reason any 'additional information' concerning their function should be considered, as required by the duty of undertaking a detailed examination.⁶⁷⁸ Such information consisted of general knowledge of how the *Rubik's* cube worked.

After case reassignment, the BoA invalidated the registration, yet the GC heard another appeal.⁶⁷⁹ This was allowed because the BoA had identified the essential features using the graphical representation and actual product. These features were: the overall cube shape, the black lines with little squares of each face, the differences in colours of the cube faces. The latter feature was deducted a contrario: without any colours, *Rubik's* cube would not properly serve as a puzzle.⁶⁸⁰ In the GC's view, the identification of essential features ought to be a 'simple visual analysis of the graphical representation', conducted from the perspective of a 'reasonably discerning observer', who could not assume that the vertical/diagonal hatching visible from the drawing meant different colours.⁶⁸¹ However, this error did not affect the legality of the BoA's decision, that is, the remaining 'essential features' sufficed to demonstrate their technical functionality and, ultimately, the nullity of the trade mark.

Further clarification on the interplay of the different criteria for assessing both technical and aesthetic functionality was brought in the CJEU's *Gömböc* case – a referral from the Hungarian Supreme Court.⁶⁸² The trade mark at question was filed as three-dimensional with a photograph showing a homogenous object with two symmetry planes perpendicular to one another and consisting of seven smooth sides and edges. The specificity of the object was its capability of always returning to its point of balance due to having one point of stable equilibrium and only one point of unstable equilibrium. For this to happen the convex design and homogenous material played an essential role – the shape embodied a mathematical problem solved in 2006 by Gábor Domokos and Péter Várkonyi, and became famous in Hungary.⁶⁸³

The Court acknowledged that for the first stage of the examination, that is, identifying the essential characteristics of a sign, the graphic representation constituted a good starting point. Additionally, 'other useful information', such as that originating from 'the presumed perception' of 'the relevant public' may be included.⁶⁸⁴ This finding seems consistent with *Lego*, which did not completely exclude consumer perception from the overall examination, yet, it

678 C-30/15 *Simba Toys v. Seven Towns*, EU:C:2016:849, paras 46–54.

679 T-601/17 *Rubik's Brand v. Simba Toys*, EU:T:2019:765.

680 Ibidem, paras 24–29.

681 Ibidem, paras 66–67. No description or colour claims were filed.

682 C-237/19 *Gömböc*, EU:C:2020:296.

683 <https://en.wikipedia.org/wiki/G%C3%B6mb%C3%B6c>

684 C-237/19, paras 30–31.

did not clarify how to use it.⁶⁸⁵ This is the point where the CJEU's explanations in *Gömböc* became material. The knowledge of the relevant public – due to subjectivity, uncertainty, and lack of technical expertise – should not be factored in at the second stage of establishing the technical functionality of each essential characteristic.⁶⁸⁶ The CJEU added that 'graphic representation should depict that part of the shape that was 'necessary to obtain the technical result sought by that product, even if it [wa]s not sufficient, on its own, to obtain that result'. In other words, if the representation does not show all essential characteristics of a sign/product, at least 'one of the essential characteristics required to obtain that technical result' must be apparent from the graphic representation.⁶⁸⁷

As to aesthetic functionality, CJEU similarly indicated that both the perceptions or knowledge of the relevant public may help to identify the essential characteristics. However, in order to apply the refusal ground of a shape giving substantial value to goods, 'objective and reliable evidence' was needed to demonstrate that consumer purchase decisions were 'to a large extent' determined by that characteristic.⁶⁸⁸ Those elements which impact purchasing decisions do not necessarily result from the aesthetic/ornamental value of a shape. Various factors were suggested: the story of creating the shape; the designer's identity; methods of production; materials for manufacturing.⁶⁸⁹ This list supplements the criteria offered earlier by *Hauck* judgment (see 8.1.2.3.).⁶⁹⁰

This line of judgments has shown that trade mark categorization could not camouflage and restrict in-depth assessment of functionality, which remains the duty of examiners. The GC's hesitations in *Pi-Design* and *Simba* as to where to look seemed ultimately to be clarified by *Gömböc*. Registration documentation cannot always suffice. It must be completed with external sources of information, either for identifying the essential characteristics of a sign, or establishing their functional purpose.

5.3.2. *What fell outside the boundaries of a 'shape' under the old EUTM functionality law?*

After the amendment of the EUTM, a query arose over whether certain registrations granted upon the old EUTM, which did not exactly fit the term of 'shape', should nevertheless be caught by the new functionality prohibitions, especially with regard to the meaning of 'another characteristic' of a product. Following referrals for preliminary rulings, CJEU has twice answered this negatively.

685 Verena von Bomhard, '*Gömböc* – Stand Upright! – CJEU on the Functionality of Shapes' (2020) (15)8 JIPLP 580, 581.

686 C-237/19, paras 35–36.

687 *Ibidem*, para 32.

688 *Ibidem*, paras 45–47.

689 *Ibidem*, para 60.

690 C205/13 *Hauck v. Stokke*, EU:C:2014:2233, paras 32–35.

The *Louboutin* case⁶⁹¹ dealt with a position mark consisting of a red colour applied to the soles of high-heeled shoes. The AG considered colours to be an ‘essential characteristic of certain goods’ the monopolisation of which via trade mark registration could hinder the choice of competitors for goods ‘with the same functionality’.⁶⁹² The AG found a similar axiology to apply to trade marks consisting both of colour per se and of the positioning of colour(s) on product part(s).⁶⁹³ However, the Court dissented from the AG’s opinions and focused on the ‘usual meaning’ of a shape, within a given context – where ‘shape’ meant a ‘set of lines or contours that outlined the product concerned’.⁶⁹⁴ What had significance was what the applicant sought to register, namely a colour applied to a part of a product, thus not a shape, which was supported by the description disclaiming the shoe’s contours. As the colour represented the main element of the sign, it could not consist ‘exclusively of a shape’ and be caught by the functionality exclusion under old EUTM.⁶⁹⁵

The judgment in the *Textilis* case concerned a two-dimensional figurative mark displaying a stylised map of Manhattan to be affixed on different goods (furnishing fabric, paper etc.).⁶⁹⁶ The Swedish court hearing an invalidity counterclaim based on aesthetic functionality made a referral to the CJEU over whether the notion of shape covered the representation of two-dimensional goods, such as pattern on fabrics or reproductions of paintings. The CJEU followed the definition of shape adopted in *Louboutin* and noted that the sign contained, apart from the stylised shapes given by the outlines of geographical maps, decorative elements, and words ‘situated both inside and outside those outlines’.⁶⁹⁷ Additionally, the two-dimensional decorative motifs were not indissociable from the goods to which they applied, so the sign at issue could not qualify as ‘exclusively of a shape’.⁶⁹⁸

Another important aspect of *Textilis* was ruling against the retroactivity of Regulation No. 2015/2424 – so, implicitly, also the later Regulation 2017/1001 – in relation to any trade marks registered before 23 March 2016, that is, the date of entry into force of the new EUTMR.⁶⁹⁹ This puts an end to attempts to apply the new definition of functionality to trade marks registered under old EUTM, be they via regulations or national legislation implementing earlier trade mark directives.⁷⁰⁰ In this context, pattern and figurative

691 C-163/16 *Christian Louboutin v. Van Haren Schoenen*, EU:C:2018:423.

692 C-163/16 *Louboutin*, Opinion of AG Spunar, EU:C:2017:495, para 54.

693 *Ibidem*, paras 45–47; second AG Opinion, EU:C:2018:64, paras 59–64.

694 C-163/16 *Louboutin*, EU:C:2018:423, para 20–21.

695 *Ibidem*, paras 24–26.

696 C-21/18 *Textilis ... v. Svenskt Tenn*, EU:C:2019:199.

697 *Ibidem*, paras 40–41.

698 *Ibidem*, paras 42–45.

699 *Ibidem*, paras 31–33.

700 Non-retroactivity confirmed in T-324/18 *Vi.To v. Bottega* EU:T:2019:297, para 16, and C-456/19, *Aktiebolaget*, EU:C:2020:813, para 29, as to registration during the transition between Directives. For an opinion about the importance of transitional provisions in the

signs were consequently examined solely on grounds of distinctiveness and/or descriptiveness.⁷⁰¹

5.3.3. *Navigating between examining functionality and distinctiveness of signs related to product appearance*

From a legal standpoint, functionality and lack of distinctive character are two autonomous, absolute refusal grounds. As functionality cannot be overcome by acquired distinctiveness, the choice of the examination track is essential, as it may entirely foreclose, or safeguard, the chances of registration for undistinctive signs. Although functionality should precede distinctiveness, in practice, though, distinctiveness and functionality may become intertwined. This raises legal uncertainties about the criteria of assessment, which, again, stimulates strategic filing of trade marks through advantageous indication and representation. This part starts with an exploration of the procedural framework which enables the EUIPO to engage with functionality objections versus other refusal grounds, whilst next focusing on the specificities of the assessment of distinctiveness as related to signs consisting of product properties. Another part discusses the change of perspective entangled in a transition from examining distinctiveness to functionality, and some reasons why the EUTM practice still swings indecisively between these two legal grounds.

5.3.3.1. *Some procedural details*

The EUIPO Guidelines indicate that any refusal ground listed under Art. 7(1) EUTMR is sufficient to deny registration, and should be independently examined under clear and distinct reasoning. For ‘sound administration and economy of proceedings’ an examiner is encouraged to simultaneously raise all possible objections to registration, especially in order to avoid unnecessary delving into the issue of the acquired distinctiveness of a functional sign.⁷⁰² However, sometimes it is only during the communication of the Office with the interested party(ies) and following the submission of appropriate documents/arguments that the Office may notice the adequacy of another refusal ground. A straightforward example involves raising the functionality refusal ground after an initial objection of lack of distinctiveness, descriptiveness or customariness.⁷⁰³

UK legislation as compared to EUTM, Richard Arnold, ‘Transitional provisions in Intellectual Property Legislations’ in Bruun et al., *Transition and Coherence* (eds.) (n 38) 17–18.

701 T-359/12 *Louis Vuitton*, EU:T:2015:215; T-50/11 *V.Fraas v. OHIM*, EU:T:2012:442; C307/11 P *Deichmann v. OHIM*, EU:C:2012:254.

702 Guidelines Part B Section 4.1. For a prior examination of functionality see T-508/08 *Bang & Olufsen v. OHIM*, EU:T:2011:575, para 44.

703 Guidelines Part B Section 4.6. If the refusal of registration is appealed, the BoA places itself in the position of the examiner and may add other refusal grounds, see Philipp von Kapff, ‘Art. 7’ in Verena von Bomhard, Alexander von Mühlendahl (eds.) *Concise European Trade Mark Law* (Wolters Kluwer 2018) 40.

How much room for manoeuvre the EUIPO has in choosing the appropriate legal argumentation depends on the procedural framework. As indicated above, at the registration stage, functionality objections may be raised *ex officio*. EUIPO can act on this during the proceedings with the applicant.⁷⁰⁴ Furthermore, following the publication of a trade mark application – and until the end of the opposition period or before a final decision on opposition is taken – there is a separate possibility for third parties to submit written observations to the Office based on Art. 5 and 7 EUTMR.⁷⁰⁵ Such observations can also refer to functionality. Independently from third party observations – yet, somehow triggered by them – the Office may re-open the examination of absolute grounds at any time before the registration.⁷⁰⁶ As to opposition – which has to be filed within three months from the publication of an EUTM application⁷⁰⁷ – it can only be based on relative grounds. This means that functionality cannot apply directly. In rare cases, if during an opposition there are doubts over whether an absolute refusal ground nevertheless applies, opposition proceedings may be stayed until the department dealing with absolute refusal grounds re-examines the issue.

Once an EUTM trade mark is registered, it enjoys the presumption of validity. In invalidity proceedings the EUIPO has significantly limited freedom for raising functionality *ex officio*. According to Art. 95 EUTMR, the Office is bound to the grounds and arguments submitted by the parties.⁷⁰⁸ This means that the Office may interpret the ‘statement of grounds’ as comprising functionality – even if the party did not explicitly mention this ground in the application form – only if the application contains arguments related to functionality. Belated arguments, to the extent that they broaden the initial application, are unacceptable. Nevertheless, a party may separately submit another motion for invalidation, which may pertain solely to functionality.

5.3.3.2. *Specific aspects of assessing distinctiveness of signs consisting of product appearance*

Assessing the distinctive character of a sign is a complex exercise, thoroughly investigated in the legal doctrine with abundant case-law.⁷⁰⁹ The discus-

704 Andrea Lensing-Kramer, Frank Dittschar, ‘Article 42’ in Hasselblatt (n 633) 669–470.

705 Art. 45 EUTMR; Art. 40 Regulation 207/2009 – an observer does not gain the status of a party and does not have appeal standing. More Verena vom Bomhard, ‘Proceedings relating to EUTMS’ in Kur, Senftleben (n 24) 586.

706 Art. 45,3 EUTMR. Such a rule was not mentioned by Art. 40 Regulation 207/2009. Lensing-Kramer, Dittschar, (n 704) 674–675; von Kapff (n 703) 41.

707 Art. 46 EUTMR, Art. 41 Regulation 207/2009. Daniel Marschollek, Sven Jacobs, ‘Article 46’ in Hasselblatt (n 633) 695–697; Fabriio Jacobacci, in Charles Gielen, Verena von Bomhard (eds.) *Concise European Trade Mark and Design Law* (Wolters Kluwer 2016) 228–230.

708 von Bomhard, in Kur, Senftleben (n 24) 603–604. The previous Art. 76 of Regulation 207/2009 did not indicate absolute grounds, although the EUIPO tended to refrain from acting on its own initiative in relation to them.

709 Instead of many, César Ramirez-Montes, ‘The Elusive Distinctiveness of Trade Dress in EU Trademark Law’ (2020) 34 *Emory Int L. Rev.*, 277.

sion below focuses on issues that are relevant for the intersection with the functionality refusal ground.

The examination of distinctiveness is confined to the subject-matter depicted in the registration documentation and the designated goods/services. When verifying inherent distinctiveness, reference to an actual or plausible way of using the sign in trade is generally not requested. The reason for this move is that the EUTM does not require that a mark is put to use prior to registration, unlike in US law. Any trade mark owner has five years after registration to commence use of the sign, upon subsequent risk of cancellation.⁷¹⁰ However, the actual or likely types of use become relevant in cases of weak signs whose registration depends on proofs of acquired distinctiveness.⁷¹¹ This especially concerns shapes, colours, descriptive words akin to slogans, sound marks, other non-traditional signs.

As to shapes, the EUTM judiciary has treated three-dimensional marks in a very specific way. Although distinctiveness standards are said to be the same for all kinds of trade marks, in case of three-dimensional signs the nature and level of perception of the relevant public is arguably different, because consumers are not accustomed, without prior education, to see a product's appearance as functioning as badge of origin.⁷¹² For this to happen, the sign at issue must 'significantly depart' from those customarily used on the market – a standard extensively used by the EUTM jurisprudence to assess the distinctiveness of plain shapes and other signs relating to product features.⁷¹³ The CJEU has often emphasized that applying such a standard was not a consequence of trade mark categorization but arose from the fact that the sign was 'indissociable' vis-à-vis designated goods.⁷¹⁴ Incidentally, it may be stated that introducing the 'indissociable' criterion leads to another conceptual classification of items. The CJEU has applied the 'indissociable' criterion to various signs linked to product appearance, such as: two-dimensional figurative or real-life representations of products, including packaging;⁷¹⁵ two-dimensional representations of the layout of the physical space for the provision of services (*Apple* or *Rewe* sales outlets);⁷¹⁶ patterns/designs covering the surface of goods;⁷¹⁷ position

710 Art. 18 EUTMR, Art. 16 EUTMD.

711 Łukas Żelechowski, 'How Unitary is the EU Trade Mark? Territorial Aspects of Acquired Distinctiveness' (2020) 51(4) IIC 468, 476–483.

712 C-218/01 *Henkel* (three-dimensional coloured detergent container) ECLI:EU:C:2004:88; C-136/02 *Mag Instrument* (torches) EU:C:2004:592; C173/04 *Deutsche SiSi-Werke* (pouches for packaging drinks) EU:C:2006:20.

713 Żelechowski (n 711) 487; Ramirez-Montes (n 709) 279.

714 C-26/17 *Birkenstock v. EUIPO*, EU:C:2018:714, para 36; C521/13, *Think Schuhwerk v. EUIPO*, EU:C:2014:2222, para 46; T20/16 *M/S Indentsch v. Crafts*, EU:T:2017:410, para 38.

715 C25/05 *Storck* (gold-coloured sweets wrapper) EU:C:2006:422; C-286/04 *Eurocermex v. OHIM* (bottle of Corona beer with slice of lemon) EU:C:2005:422.

716 C421/13 *Apple*, EU:C:2014:2070, para 20; BoA R-2225/2015-1 *Rewe*.

717 T-359/12 *Louis Vuitton v. Nanu-Nana* (chequerboard pattern) EU:T:2015:215; C-445/02 *Glaverbel v. OHIM*, EU:C:2004:393.

marks;⁷¹⁸ marks indicated as ‘other’ and denoting the surface of the packaging of a liquid product.⁷¹⁹

In response to preliminary questions, in 2020 the CJEU ruled on the case of the Swedish position sign filed for transportation services, consisting of graphic elements (lines and colours) applied on buses/trains.⁷²⁰ The CJEU indicated the dispositive character of the distinctiveness standard of ‘significant departure’, however, it did so because of the character of that sign, which was identified as colour motifs affixed ‘systematically and spatially limited’ on goods (vehicles), used as the ‘exclusive medium’ to provide the designated services. The CJEU thought average consumers would more easily perceive such a spatially pre-determined sign as an indicator of origin than in the case of the layout of *Apple’s* store (i.e. an area for provision of services drawn by lines and contours without fixed sizes and proportions) or in the case of signs ‘indissociable’ from the shape or packaging of goods.⁷²¹ This ruling seemed to herald the opportunity to renounce the ‘significant departure’ standard, however, over the following years it has been still applied to three-dimensional signs. The boat-hull-like shape of the *Guerlain* lipstick container was found striking and unusual as compared to the market norms, so that registration was accepted.⁷²² In most cases, though, registrations failed, such as for ‘Moon boots’ (an invalidated trade mark for apres-ski shoes⁷²³), an egg-shaped packaging for lip balms (registration denied),⁷²⁴ or a cup with a heart-shaped base (registration denied with respect to drinks).⁷²⁵ The peculiarity of the latter resides in that the GC even extended the ‘significant departure’ standard – beyond shapes or packaging for liquids and non-shaped goods – to also include the shape of drinkware for consuming products.⁷²⁶

Trying to flexibly adapt to the filing of non-traditional trade marks, the EUIPO has introduced guidance concerning the methodology of examination for sound, motion, multi-media, and holograms.⁷²⁷ It has acknowledged that consumers are familiar with branding strategies that enable them to perceive new types of marks as a badge of origin.⁷²⁸ The perception of distinctiveness is considered dependent on the ‘link’ between the mark and designated goods/

718 BoA R-1170/2018-5, *Red aglets*, T-208/12 EU:T:2013:376.

719 C-344-345/10 *Freixenet*, EU:C:2011:680 (matt appearance implying a ‘frosted’ bottle).

720 C-456/19 *Aktiebolaget Östgötatrafiken v. Patent-och registreringsverket*, EU:C:2020:813, para 44 and operational part.

721 *Ibidem*, paras 41–43.

722 T-488/20 *Guerlain v. EUIPO*, EU:T:2021:443.

723 T-483/20 *Tecnica Group v. EUIPO*, EU:T:2022:11.

724 C672/21 *EOS Products v. EUIPO*, EU:C:2022:81; T-489/20, EU:T:2021:547.

725 T-658/20 *Philip Jakober v. EUIPO*, EU:T:2021:795.

726 *Humphreys, Malovic, Martin* (n 638) 352.

727 CP 11 (2021).

728 For certain types of sounds, the EUIPO has introduced a so-called ‘resonance’ (fr. ‘*pregnance*’) requirement, saying that consumers may perceive them as indicating the origin only if such sounds engender ‘a certain form of attention to be identifiable as a trade mark’, cf.

services. For example, and significantly for functionality issues, if a sound or motion is ‘produced by or connected to goods’, it will ‘often correspond to the nature of function of those goods’ with the effect of not being capable of indicating the origin.⁷²⁹ In the case of multimedia, the combination of non-distinctive/descriptive/generic image(s) with non-distinctive sound(s) and motion(s) will also imply a lack of distinctiveness.⁷³⁰ These examples reveal how new types of marks are vulnerable to the intersection of distinctiveness and functionality issues, raising the need to follow the proper sequence when assessing their trade mark eligibility.

From another angle, examination of distinctiveness also depends on the strategic formulation of the category of goods/services applied for. Registration may be accepted in relation to certain goods, and refused for other.⁷³¹ In addition, the use of the ‘indissociable’ nature (of a sign) criterion in relation to the ‘significant departure standard’ also depends on the type of product to which the sign is affixed. Generally speaking, if the category of goods is determined at a higher level of generality without suggesting any descriptive/natural/standardized connotation between the sign and the goods, the applicant may have higher chances of directing the examination towards distinctiveness, without stepping into functionality issues. The example of the *Rubik’s* cube indication of goods as ‘three-dimensional puzzles’ was an intelligent attempt to avoid any second thoughts about the functional necessity implied by the inner rotation of pieces.

The previous remarks show the reasons for which applicants of three-dimensional and other types of signs related to product appearance have tactically filed them for registration in such a way as to disguise their real purpose and facilitate examination solely upon distinctiveness. Even so, bearing in mind that the ‘significant departure’ standard is laborious, applicants have attempted to benefit from the ambivalent meaning of two-dimensional graphical representation, which could imply ‘flattened’ shapes within composite figurative signs. Currently, EUIPO has also adjusted the guidelines on the distinctiveness of combinations of undistinctive shapes with verbal/figurative elements,⁷³² which also does not make the registration of such signs easier.

T-668/19, *Ardagh v. EUIPO*, paras 24–27; EU:T:2021:420 T 408/15 *Globo v. EUIPO*, EU:T:2016:468, para 45.

729 CP 11, 23, 29.

730 CP 11, 33.

731 T-629/14 *Jaguar v. OHIM*, EU:T:2015:878, paras 25–26, 45. The three-dimensional shape of Land Rover was ‘significantly different’, thus distinctive, *only* for ‘vehicles for locomotion by air and water’ (class 12), whilst it was a ‘mere variation of the typical shape of a car’, and non-distinctive, for ‘vehicles, apparatus for locomotion by land’ (class 12) or ‘toys’ (class 28) which were of interests for the applicant.

732 https://euiipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/News/cp9/CP9_en.pdf

5.3.3.3. The transition from assessing distinctiveness to functionality

Switching from distinctiveness to functionality changes the way the sign is looked at. Essentially, it means leaving behind the formalistic approach to what is shown by the registration documentation and literal categorization of goods, and moving towards what the subject matter of the trade mark actually represents, and how it is used on the market. Parts of the distinctiveness assessment related to consumer perception, and especially the evidence gathered for proving acquired distinctiveness, may constitute an important source of information about the real nature of the sign. Such evidence can be also relevant for establishing the category of the ‘essential’ features/elements (of a sign) for functionality purposes.

The assessment of functionality gives consumer perception a different position than in the examination of distinctiveness. This criterion simply serves different purposes. In light of the *Gömböc* guidance, consumer perception should not be used for testing the technical functionality of elements found essential, but remains *one* of the criteria for testing aesthetic functionality. In practice, the criterion of consumer perception remains difficult to manage if the examination does not clearly separate the identification of the essential characteristics from the evaluation of the functional input of each characteristic, especially with regard to aesthetic functionality. For this reason, technical functionality seems more amenable to fitting *Lego* and *Gömböc*’s clear-cut methodology than aesthetic functionality. However, the picture gets blurred if consumers are aware of, and appreciate certain product aspects because of their functionality. Numerous items involve intertwining functional and aesthetic aspects, so consumer perception could be variously (and perhaps erroneously) factored, without keeping clear boundaries between the different stages of examination.

Aesthetic functionality brings more difficulties. If the assessment focuses on what constitutes a source of value for consumers, this value may result from aesthetic considerations (e.g. nice ornamental vase) or from mixing appealing design and technical parameters (e.g. an efficient loudspeaker, an ergonomic chair),⁷³³ but also from other psychological or sociological factors (see 8.3.1.). By focusing on what determined the purchase of given goods, aesthetic functionality operates with a consumer vantage point embedded across the whole assessment, and in a different manner than used for distinctiveness purposes. Nevertheless, in practice it would be difficult to disconnect those attributes that may be in essence closely linked: features enabling source identification; features being the most important/essential parts; and features conferring additional value to the designated goods. Even *Gömböc* revealed a tricky interdependence: it was the public perception and knowledge (about the shape being a ‘tangible symbol of mathematic discovery’) that made the shape ‘special and striking’,⁷³⁴ an attribute qualified next as an ‘essential characteristic’, and due

733 Compare C205/13 *Hauck*, para 36.

734 C-237/19 *Gömböc*, para 45.

to this feature the public continued to purchase the item, ultimately ensuring that the shape gave ‘substantial value to goods’.

Although the EUTM procedural rules and EUIPO Guidelines provide sufficient framework for ensuring the raising of functionality objections whenever the application for registration justifies, in practice, it is not always clear whether the shift from distinctiveness to functionality takes place and with what results. One reason for this may reside in the way the registration documentation is used. Some friction persists between the willingness of BoA to assess facts beyond what is embedded in the registration documentation, and the formalistic approach of the GC. This contrast was visible during the functionality examination of *Rubik’s* cube and *Pi-Design’s* knife. In addition, even when assessing distinctiveness, the GC has tempered EUIPO reading between the lines of filed documentation so as to capture the real nature of the subject-matter. The GC’s objections were that the BoA ‘altered’ the characteristics of the sign. One case concerned a figurative sign showing a repeated geometric design – considered by the GC to be an ‘abstract shape’ – filed for knitting needles and crochet hooks, which the BoA identified as a ‘chevron pattern’ applied to the surface of knitting devices, thus as being part of the appearance of goods without inherent distinctiveness.⁷³⁵ Similarly, in the *Pirelli* case, the GC reversed the BoA’s identification of the sign as appearance of ‘a tyre tread’, whereas the GC viewed the sign as ‘at most ... an individual groove of a tyre tread’, which, nevertheless, was multiplied on the surface of tyres.⁷³⁶ However, the GC’s interpretation also led to reversing the objection of technical functionality. The CJEU rejected the appeal, although mainly for procedural reasons, because the appeal tried to call into question the GC’s assessment of facts.⁷³⁷

Another potential influence on the choice of examination between distinctiveness and functionality is the classification of goods. The way goods are described may imply a certain kind of use for the sign, which corresponds to a given type of functionality. The *Gömböc* shape was filed for ‘toys’, but also for ‘decorative items’, and ‘decorative crystalware and chinaware’ in class 14 and 21, which raised the examiner’s concerns over aesthetic functionality. In cases of hidden technical functionality of signs, for instance when they are filed as figurative, it is only through the indication of goods that an examiner may apprehend the real nature of the sign. A good example is represented by a ‘figurative’ mark depicting a black square with seven concentric circles (filed in blue or orange and indicated as ‘essential features’) which actually depicted the surface of a sealing module in which removable concentric sealing layers (marked by colours) had to be stripped away while stitching a cable/wire into the module for a secure fit.⁷³⁸

735 T-20/16 *M/S Indeutsch International v. OHIM & Crafts Americana Group*, EU:T:2017:410, paras 45–47.

736 T-447/16 *Pirelli v. Yokohama*, EU:T:2018:709, paras 47–58.

737 Joined cases C818/18P and C6/19P *Yokohama v. Pirelli*, EU:C:2021:431, paras 49–66.

738 T261/18 *Roxtec v. EUIPO – Wallmax*, EU:T:2019:674; BoA: R-940/2017-2 (blue) and R-2385/2018-2 (orange).

Furthermore, the functionality ground pertaining to signs resulting from the nature of goods is highly dependent on the formulation of designated goods. A narrow indication of goods with an obvious correlation to the inherent properties of a sign may easily slide from descriptiveness to functionality, depending on how broadly the concept of the ‘nature’ of goods is understood. Whether the latter should remain confined to clearly natural/real-life determinations (e.g. a banana shape for bananas) or extend to generic or standardized features, is analysed in Chapter 7.

Summing up, although there are legal grounds to separate the assessment of distinctiveness from functionality and to provide predictable outcomes, looking at EUIPO’s and GC’s recent practice on product appearance demonstrates a persistent ambiguity. There are cases in which functionality constituted the only legal ground for refusal of trade mark protection.⁷³⁹ This is the proper way of doing things. However, most of the cases have been unpredictably split between functionality and distinctiveness. Some decisions focused on the lack of distinctive character, whilst explicitly refusing to engage in further functionality inquiry.⁷⁴⁰ In the author’s opinion this is the wrong way to approach the problem: due to the possibility of acquiring distinctiveness through use, it is functionality that anticipates and definitively precludes distinctiveness, and not the opposite way round. Other decisions touched upon both grounds, with distinctiveness performing the leading role.⁷⁴¹ The lion’s share of the rulings pertain solely to distinctiveness, although most of the items revealed functional features to an extent that could have justified simultaneous objections based on functionality provisions.⁷⁴²

The author concurs with Ramirez-Montes’s conclusion that ‘choosing distinctiveness over the preliminary functionality obstacle is a legacy issue that leads to unnecessary litigation and waste of judicial resources’.⁷⁴³ If the procedural framework enables the EUIPO to engage directly in a functionality

739 T-752/18 *Tecnodidattica* EU:T:2020:130 (lamp stand); T-44/16 *Novartis* EU:T:2018:48 (transdermic patch); T261/18 *ibidem* (sealing module); BoA R-757/2019-5 (hanging tape for hanging a jacket) – functionality became an autonomous ground during the appeal; R-582/2017-5 (spoon-shaped packaging) – secondary significance of distinctiveness; R-1363/2014-4 (ground anchor); EUIPO Invalidity Division decisions No. 14388C of 09/01/2019 (device); No. 12442C of 25/11/2016 (cardboard fastening system).

740 R-2146/2015-4 (knotter – machine device); R-2380/2011-1 (baby-food container); R2705/2017-5 (chair).

741 T-324/18 *Vi.To v. Bottega* EU:T:2019:297 (golden sparkling wine bottle); BoA: R-2450/2011-6G (Lindt gold bunny); R590/2015-4 (ice-cream on a stick).

742 C-417/16 *Storck* EU:C:2017:340 (white and blue square-shaped packaging); T-691/17 *hoechstmass Baler* EU:T:2018:394 (tape measure case); T-7/09 *Schunk* EU:T:2010:153 (chuck with three roves); BoA: R-2630/2019-4 (microphone); R-2096/2018-1 (inhalator); R-13/2017-5 (bicycle helmet); R-1422/2016-4 (padlock); R-723/2016-4 (conical concave shape); Invalidity Division decisions: No. 19621C 26/02/2019 & No. 11911C 21/07/2017 & No. 9908C 21/12/2016 (Gibson guitar); No. 10435C 3/3/2016 (billiard ball); No. 5356C 28/11/2012 (omega-shaped device).

743 Ramirez-Montes (n 709) 324.

examination at the start, then this is the optimal sequence of steps to follow, especially bearing in mind the complex nature and difficulties posed by the new categories of non-traditional signs.

5.4. The land of ‘another characteristic’ of goods

The current EUTM functionality provisions speak about ‘shape *or* another characteristic’ (of goods, LB). This juxtaposition of terms should not be read exclusively, that is, as applying the prohibition to signs consisting of either shape or another product feature. Instead, it should result in an option which allows functionality to address composite signs of various structures, including different types of product features (shape, sound, colours, texture, etc.).⁷⁴⁴ This part focuses on the interpretation of ‘another characteristic’ of goods, a legal term that intuitively brings to mind product properties. What may confer precision to this notion is the nature of the link between product features and designated goods. The following parts explore the specificity of this relationship, especially with regard to combinations of features, and whether the criteria used by the CJEU to date are suitable for trade marks emerging from new avenues of sensory experience.

5.4.1. *Learning from the past, whilst moving beyond visual perception ...*

The methodology for shapes developed in *Lego* has been – primarily – characterised by a visual approach. The examination was supposed to be based on a simple visual analysis, but even when a detailed analysis is carried out, the inputs (e.g. concerning the actual use and real purpose of features) supplement the visual information, but do not replace it. By moving from eye-perception to visibility – understood as embodying visually perceived features in a certain medium – the conclusion from *Gömböc* was that at least one feature functionally essential should be visible from the graphic representation. The emphasis on visibility and visibility matched the initial definition of eligible signs which required graphical representation.

However, *Lego*’s methodology contains several neutral key points which may be applied *mutatis mutandis* to any kind of trade marks, including those labelled as non-traditional. As the essential characteristics (of a product) are defined upon the importance of a given element/component within the overall combination constituting the sign, *Lego* does not explicitly exclude non-visual features. The suggestion to rely on a ‘prior examination of individually taken components’ also appears neutral. Similarly, the reference to the ‘overall impression’ does not necessarily mean a visual impression. Finally, *Lego*’s principle of ‘no-hierarchy’ between different characteristics of a sign to be found essential, enables the mixing of elements captured by different senses.

744 Lavinia Brancusi, ‘Trade Marks’ Functionality in EU Law: Expected New Trends after the Louboutin Case’ (2019) 2(41) EIPR 98, 101.

A question arises here whether the *Hauck* judgment – which ruled that aesthetic functionality may apply ‘to a sign consisting exclusively of the shape of a product [child chair] with several characteristics each of which may give that product substantial value’⁷⁴⁵ – envisaged product characteristics of various nature.⁷⁴⁶ It may be stated that the CJEU employed the term ‘characteristics’ within a different meaning. The CJEU analysed the ‘shape’ and distinguished between its aesthetic value and ‘other’ possible values, conferred by ‘other characteristics (safety, comfort and reliability)’.⁷⁴⁷ Arguably, the latter category only denoted the positive, personal experience of consumers when using the chair. In this context, ‘characteristics’ denoted a set of subjective feelings, which represented ‘values’ in the eyes of consumers and determined their choice of the product. Yet, all these characteristics stemmed from the shape of the chair alone.

By contrast, the interpretation of ‘another characteristic’, as currently embedded by the EUTM, should refer to product features which are semiotically autonomous from the plain shape of a product. Features on ‘their own’, so to speak, and capable of being objectively identified. Certainly, the *Hauck* judgment brings guidance on what features may give significant value to goods, but it does not help to clarify the substance of ‘another characteristic’ of goods in the current context.

5.4.2 ... towards a broad spectrum of sensory experience

Just as the transition from linguistic to visual communication has been impactful for the registration of signs consisting of a product’s appearance, so is the leap from visual to sensorics for establishing the framework of non-traditional trade marks, which carries further consequences for functionality issues.

Looking at the current trade mark definition, product features may be perceived by various senses (aural, taste, olfactory etc.). The yardstick for what may legally mean a relevant sensory experience to test functionality should be symmetrically related to the capacity of constituting a ‘clear and precise’ subject-matter. The identification of relevant ‘characteristics’ should be an objective assessment conducted upon objective means.

To give an example a contrario, the impossibility of objective determination renders tactile signs currently unregistrable as EUTMs.⁷⁴⁸ The EUIPO refused to register the ‘tactile feeling constituted by the imprinted embossed pattern on the smooth bottle surface’ filed with a graphic representation showing prominent patterns⁷⁴⁹ or the feeling created by a handle adjusting a car seat,

745 C-205/13 *Hauck*, para 36.

746 For an argument see Rosati (n 624) 20.

747 C-205/13, para 29.

748 EUIPO Guidelines Part B Section 4, 2.9.2–2.9.4.

749 R-2588/2014-2, 19–20 The sign was understood literally, because the graphic representation did not reveal any tactile sensation, whilst the verbal description was unclear.

filed with images, description, and samples.⁷⁵⁰ The EUIPO suggested that the applicant needed to show how the embossments produced the sensation and how people discerned that feeling upon the representation.⁷⁵¹ By contrast, the German Federal Supreme Court accepted that a haptic mark may be represented upon description of the object generating the perception, yet not of the sensation itself – however, the German Federal Patent Office has not registered tactile signs.⁷⁵² In the US, tactile marks are accepted for registration, such as a velvet or leather texture applied to the surface of wine bottles.⁷⁵³ Once technologies evolve to overcome the doubts around subjective/ephemeral/unclear perceptions of sensory experiences, such signs may also be found to be capable of distinguishing goods/services in abstracto in the EU, which will make them subject to further examination on the absolute grounds concerning distinctiveness and/or functionality.⁷⁵⁴ As an example, currently an EUTM functionality investigation of a chocolate figure or a satin-looked bottle must be restricted to the visual appearance of the items, without considering taste or touch.

The key issue for functionality purposes is what kind of link should be required between the product at issue and its characteristic(s) perceived by various senses. Intuitively, the very notion of ‘characteristics’ may point to natural, intrinsic properties of products or parts of them, such as shape, weight, transparency/opacity⁷⁵⁵ (the latter is actually a property of a material used). However, the scope of relevant features may be broader. It may encompass artificially created features, regardless of the technique (e.g. patterns or colours affixed on textiles). It may also capture features resulting from the product’s reaction to external factors (e.g. colouring from sun/heat interaction). For distinctiveness purposes, the EUIPO considers as functional sound ‘produced by or connected to the goods’ or motion ‘perceived as an ‘intrinsically functional element of the goods’ or ‘used to control those goods’.⁷⁵⁶ This reasoning may analogically apply if sound or motion were to be tested under functionality grounds.

Requiring a close link with the product does not mean that the category of relevant ‘characteristics’ should be confined to permanent or continuously

750 Hasselblatt, ‘Article 7’ in Hasselblatt (n 633) para 328 discussing DaimlerChrysler application.

751 BoA R-2588/2014-2, 24.

752 BGH, 05.10.2006, I B 73/05, see Geiregat (n 650) 229; cautiously by Kur in Kur, Senftleben (n 22) 103.

753 US Reg. No. 3155702 and No. 3896100 indicated by Anne Gilson LaLonde, Jerome Gilson, ‘Getting Real with Nontraditional Trademarks: What’s Next After Red Oven Knobs, the Sound of Burning Methamphetamine and Goats on a Grass Roof?’ (2011) vol. 101(1) TMR 186, 208.

754 In R-479/2012-5, BoA found the public unaware that the feel of a toothbrush handle grip could indicate the commercial origin of goods.

755 Analogically C-445/02 *Glaverbel* (opaque glass) EU:C:2004:393; C-321/03 *Dyson* (transparent bin) EU:C:2007:51.

756 EUIPO CP 11, 23, 28.

active sensorial effects. Such effects may, or not, be noticeable at the time of purchase, instead appearing later during the use/exploitation/consumption of the product (e.g. the mixture of humidity and a specific fragrance released by an air purifier). What seems important is that the given characteristic should be experienced by means of direct interaction with the goods. The EUIPO offers such examples as a motorbike's sound, a sound-insect-repellent device, a perfumed insect repellent,⁷⁵⁷ or the swivelling movement of vehicle doors (Lamborghini).⁷⁵⁸ US jurisprudence contains cases of functional medicine flavours for reasons of increasing patients' compliance with medical treatment.⁷⁵⁹

The spectrum of functionally examined features may be extended if it were to encompass features resulting from technical processes (6.2.3.). This would, anyway, require a change in the current legal interpretation – until now the EUTM's conception of technical functionality has been purposively orientated towards features serving to achieve technical effects. If another approach aims to also cover the results from specific manufacturing processes, then functionality would cover more properties of materials (e.g. structure, texture) or movement, sounds, and holograms.

Certainly, extending functionality objections depends on the designated category of goods – if it comprised of products with such functionally questionable features. However, as the EUIPO guidance clearly stipulates, functional features may also raise objections of descriptiveness, genericness and lack of distinctive character. It has been suggested that the functionality exclusion should take precedence over any refusal ground linked to distinctiveness.⁷⁶⁰

5.4.3. *The challenges of combining different kinds of features*

Today any thoughtfully designed product incorporates a mix of aesthetics and multiple functional effects. The diversity of product characteristics experienced sensorially may pose difficulties when assessing their functionality.

The first challenging issue represents the weighting between the characteristics perceived by different senses in case of composite signs, for the purpose of identifying the essential characteristics. *Lego's* principle of 'no-hierarchy' should speak against privileging visual features over characteristics of other types. Already in the case of shapes, *Gömböc* acknowledged factoring in consumer perception together with the information included in the registration documentation. Analogically, in cases of other product characteristics, the consumer sensory experience may point towards giving more weight to non-visual features than visual ones. This depends on how public awareness was raised and built concerning the nature of that sign and its contextual use (e.g.

757 EUIPO Guidelines Part B Section 4 chapter 6.4.2-3.

758 BoA, R-772/2001-1. This movement was successfully registered in US, No. 2793439.

759 Cunha, *Randakeviciute-Alpman* (n 647) 384.

760 *Ramirez-Montes* (n 709) 309, 312.

with branding strategies that educate consumers to focus on particular types of features). However, even in relation to the visually perceived elements of composite shapes, *Lego's* no-hierarchy principle should not favour contours (of shape) against colour(s) or graphics.

Another interesting issue emerged in the *Pirelli* judgment concerning tyre tread, which dismissed technical functionality because the sign also allegedly represented a quantitatively and qualitatively insignificant part of the designated goods.⁷⁶¹ It must be stated, that for such a sign representing part of a product, the GC erroneously conflated two distinct issues: the ratio/relationship between the sign and the whole product, and the evaluation of the 'essential' characteristics of that sign for functionality purposes. When it comes to the latter, relevance relates to the status of each part/component of the sign, as compared to the whole sign, thus not the size of the entire sign, as compared to the overall product (the designated goods).

Any quantitative/qualitative consideration should address the set of features constituting the sign and their mutual interdependence. If a sign, *as a whole*, turns out to be entirely functional (technically or aesthetically) – that is, all essential features of that sign perform a functional effect according to the corresponding legal provision – then trade mark protection should be denied, even if the sign, as such, is a smaller part of goods (LB). For instance, if the sign consists of a rounded aperture on gardening tools enabling hanging (such as employed by *Fiskars*), it would likely be functional, although the aperture may hardly amount to a 'quantitatively and qualitatively significant part' of the tool.

Perhaps the interesting question is whether a quantitatively negligible part of a product would be still 'qualitatively significant', due to the very fact it performs a technical or aesthetic function? Neither the GC or CJEU in *Pirelli* reached this point in their deliberations. An affirmative answer should, nevertheless, comply with the legal definitions of EUTM provisions. Aesthetic functionality speaks about a sign giving substantial value to goods. It links the sign – which may be part of a product – to the goods (the whole product). This enables weighing a part against the whole. Technical functionality speaks about a sign being 'necessary to obtain a technical result'. The significance of a functional feature depends on whether it brings technical input to the entire product or to a small part corresponding to the sign. If measured against the latter, a small part may fully serve to achieve technical results, although it may only contribute to a small degree to the function of the entire product. There is an issue of proportionality. Another issue concerns a product with several functionalities (i.e. main v. secondary technical functions), whereas the sign covers only one type of functionality. It may be stated that if the features constituting the sign perform the technical effect(s) within the meaning of the technical functionality, then the legal prohibition should apply, no matter how

761 C-818/18 *Pirelli*, EU:C:2021:431, paras 67–72; T-447/16, paras 67–71.

small those effects are, as compared to the entire product. Future case-law may bring such queries into the spotlight.

In this context, the *Hauck* judgment brought important guidance when ruling that the three EUTM functionality prohibitions should operate independently of one another.⁷⁶² Trade mark protection is denied if one refusal ground fully applies to the sign. This judgment is also important when considering a mix of distinct product characteristics of varied functionality. Although in *Hauck* the CJEU clearly rebuffed the possibility of a sui generis hybrid legal ground, one school of thought has reflected on the possibility of ‘internally’ combining two refusal grounds.⁷⁶³ This approach reads *Hauck* in a manner that broadens the scope of aesthetic functionality so as to encompass features performing other functions, irrespective of their technical level.⁷⁶⁴ It has to be stated that this interpretation is problematic. If a sign has essential features necessary to obtain a technical result, but there are other essential features escaping this legal definition, then technical functionality does not fully operate and trade mark protection is still possible. It would be quite debatable whether it is appropriate to consider those technically essential features as giving substantial value to goods – for reasons based on their functionality, allegedly attractive to consumers – and combine them with other essential features, allegedly aesthetic – so as to ultimately deny trade mark protection. Similar examples may address any other mix of features, although *Hauck*’s interpretation also renders it difficult to delineate between features ‘resulting from the nature of goods’ and those aesthetically/technically functional features.⁷⁶⁵

In the new EUTM, the previous remarks may analogically apply to any kind of product ‘characteristics’. Even if certain features (e.g. sound) can be found to result from the nature of goods or necessary to achieve a technical result, while other features of colour or shape may be tested upon aesthetic functionality, it is imperative that each functional exclusion operates autonomously and fully, one at a time. Some internal legal coherence is required to avoid invoking functionality objections when the very identification of what features are may not be so straightforward.

5.4.4. *What about the ‘indissociable’ criterion?*

What about using the ‘indissociable’ criterion from the distinctiveness area (5.3.3.2.) in order to examine the link between goods and their characteristics for functionality purposes? It should be stated that this criterion may only partially work, as it would erroneously shield important product characteristics

762 C-205/13 *Hauck*, paras 39–43.

763 *Quaedvlieg* (n 25) 114.

764 *Ibidem*, 112–114.

765 C-205/13, paras 25–27; cautiously as to the overlap with technical functionality *Quaedvlieg*, *ibidem* 115.

from the scope of functionality.⁷⁶⁶ The EUTM judiciary has applied the ‘indissociable’ test in relation to signs consisting of the appearance of goods by using it together with a specific public perception. Perception was considered simplistic, inadvertent – such as situations where a consumer ‘will immediately and without further thought perceive’ a sign as ‘a representation of a detail or an aspect of the product in question’.⁷⁶⁷ Under the old EUTM rules, the fact that a sign was not ‘indissociable’ from the goods helped two-dimensional decorative motifs, surface patterns, and position marks to escape functionality concerns.

This situation may change under the current EUTM rules. First, identification of the type of product characteristics falling foul of functionality cannot be always reduced to ‘immediate and without further thought’ perception by consumers. By contrast, it may require expertise and an in-depth analysis of multiple factors, as was stipulated by *Lego* and reiterated in subsequent rulings (5.3.1.). Second, the examination of functionality should be – theoretically – indifferent to any classification of trade marks, including any pre-determined dimensional characterization of features.

Using here an example from US law, a camouflage pattern (such as used by an army) may imply utilitarian effects, although it is two-dimensional.⁷⁶⁸ This sign would match the description of being non-indissociable from goods – as long as it can be applied on a number of products of various contours: uniforms, tents, backpacks – while the pattern would retain its functional advantages for all of them. Similarly, AG Spunar in *Louboutin* gave examples of functional colours, such as applied on a safety jacket, fire extinguisher or thermo-reflective goods, independent from how the sign was filed for registration, that is, as a colour mark, three-dimensional mark comprising colours, or position mark.⁷⁶⁹ This means that even colours delimited non-spatially can be fully subject to a functionality inquiry, depending on how the goods were designated. Any EUTM judiciary guidance previously developed for assessing the distinctiveness of colours per se, which could have insulated against the notion of functional ‘shapes’, cannot be automatically relied on under the new EUTM functional provisions. In this respect, the EUTM functionality practice on colour marks, standing alone or in combination, must move closer to that of the US law (see Chapters 3, 6–8).

By contrast with two-dimensional pattern/texture marks, it should be stated that words/logos should remain untouched by the EUTM functionality exclusions. The reason lies not necessarily in their non-indissociable nature

766 Some initial arguments linking other (than shape) product ‘characteristics’ to their ‘independent’ nature vis-à-vis designated goods, were presented by *Brancusi* (n 744) 101; *Rosati* (n 624) 23.

767 C-26/17 *Birkenstock* (wavy crisscrossing lines pattern); T-20/16 *Crafts* (chevron pattern); T-50/11 *Fraas* (tartan pattern).

768 This example is offered by Buccafusco, Fromer, ‘Forgetting ...’ (n 316) (2017) 125.

769 Opinion C-163/16, EU:C:2017:495, para 51.

regarding the relevant goods but rather in the difficulty of assessing any functional meaning, especially with regard to aesthetic functionality.⁷⁷⁰ Word marks have the highest capability of source identification, and consumers would value the goods just because they bear such trade marks. If this were the sole reason to find aesthetic functionality, it would undermine the core objective of trade mark law (Chapter 8). Certainly, US case-law has found words – mostly within composite pictorial designs – to be aesthetically functional due to messages conveyed vis-à-vis specific customers' expectations/needs.⁷⁷¹ However, for reasons explained also in 8.3.3.1. this piece of US jurisprudence is not exactly the best suited for implementation in the EUTM domain. Any transposition of legal norms from one legal system to another should generally be considered 'with the benefit of inventory', which means that US functionality rules cannot be simply duplicated in all circumstances for subsequent EUTM practice.

Summing up, there are product characteristics which certainly reveal both functional and indissociable natures (shape, colour). Yet, there are also characteristics more loosely linked to goods that do not exactly fit the indissociable criterion (patterns, movement or sounds from operating a product), which should nevertheless be scrutinied on functionality grounds. Establishing the 'indissociable' nature of certain features with regards to goods can be a starting point for analysing functionality, yet it is not an end in itself. As a general principle, transposing any criteria on functionality grounds – especially criteria unexpressed by legal provisions which were previously used for distinctiveness purposes – brings more difficulties than benefits, as it would require continuous verification and adaptation to avoid undermining the rationales that underpin functionality law. It is therefore safer to develop autonomous paths of examination. More importantly, as eminent scholars have indicated, functionality should not be about 'semiotics' or implementing formalistic approaches.⁷⁷² Functionality focuses on the negative impact resulting from granting trade mark protection to product features which are essential for effective market competition. It is with regard to this objective that the relevant category of product 'characteristics' should be defined in an open manner, and then tested upon any functionality provisions.

770 This does not refer to descriptive/customary indications.

771 *American Greetings Corporation v. Dan-Dee Imports*, 807 F.2d 1136, concerning the functionality of traditional symbols used on teddy bears, in Mitchell M. Wong, 'Aesthetic Functionality Doctrine and the Law of Trade-Dress Protection' (1998) 83, *Cornell L. Rev.* 1116, 1147; the use of the name of 'Betty Boop' character as a functional decorative element, in: *Fleischer Studios Inc. v. A.V.E.L.A. Inc.*, 636 F.3d 1115 (9th Cir. 2011) and *Fleischer Studios, Inc. v. A.V.E.L.A., Inc.*, 654 F.3d 958 (9th Cir. 2011), discussed by Irene Calboli, 'Betty Boop and the Return of Aesthetic Functionality: A Bitter Medicine Against "Mutant Copyrights"?' (2014) 36 *EIPR*, 80–87.

772 Bently et al. (n 24) 957.

5.5. Functionality of service marks

The following remarks discuss the given reasons for refraining from applying EUTM functionality rules to service marks, and whether a change is needed in this respect.

5.5.1. *The framework de lege lata*

EUTM functionality law, both old and new, has never referred to services. The employed definition of ‘signs consisting of shapes (or another characteristic) of goods’ presumably links the nature of the sign exclusively to the goods filed for registration. This is how the law is understood literally.

In a seminal case concerning the trade mark eligibility of the (layout) design of *Apple’s* store, applied for retail store services (class 35), the CJEU confirmed that a functionality objection was ‘irrelevant’ for the sign at issue.⁷⁷³ The Court focused on the layout being a sign, its graphical representation, and the registration for services. This argumentation dismissed the suggestion advanced by AG Spunar in *Hauck* to jointly apply several functionality grounds in relation to signs ‘perceived by consumers as a collection of different shapes’.⁷⁷⁴ The latter definition aimed to cover signs representing ‘the physical reflection of the circumstances in which a service is provided’⁷⁷⁵ (e.g. the layout of a petrol station or a retail outlet).

Two years after *Apple*, the EUIPO was still somehow hesitant about the appearance of *Rewe* sales outlet, which was twice submitted for registration, as a three-dimensional and figurative sign, showing different views of the shopping area.⁷⁷⁶ In both cases the BoA ruled based on a lack of distinctiveness, as the signs failed to depart significantly from the sector norms/customs. The reasoning given was that the provision of sales services and the objects used for that provision were determined by functional and/or aesthetic considerations – re: the look and arrangement of sales equipment (counters, refrigerators) and the utilitarian colour scheme (hard-wearing black and grey and eco-friendly green) – which did not serve the source identification of goods/services.⁷⁷⁷ However, the EUIPO envisaged the possibility of applying functionality, by arguing that ‘there [wa]s a close connection between the illustrated essential, purely functional, forms, such as refrigerator chests, tables, shelves, and the sales services applied for, ... because the functional form represented firstly enable[d] the provision of the services’.⁷⁷⁸ In other cases concerning the ap-

773 C-421/13 *Apple v. DPMA* EU:C:2014:2070, para 24; José Tizón Mirza, ‘CJEU Expands Trade Mark Law to Include the Design of a Store Layout’ (2014) 36(12) EIPR 813.

774 C-205/13, Opinion, EU:C:2014:322, para 107.

775 Ibidem.

776 R-2224/2015-1 and R-2225/2015-1.

777 BoA, ibidem, 14, 21–25.

778 BoA, ibidem, 27 and 29, accordingly.

pearance of the presentation of services EUIPO did not engage in consideration of the functionality refusal ground.⁷⁷⁹ Similarly, applications for colour or position marks for services were tested for distinctive character, even if some arguments examined the functionality of colour schemes set by standards/industry trends.⁷⁸⁰

The enlargement of the scope of functionality prohibitions to encompass service marks fell outside the amendments to the EUTM. It is now difficult to infer whether the omission occurred deliberately. Perhaps the right question to raise here is whether there are any economic or societal reasons for such an extension, so as to reconsider it in the future, and how it could work legally. Significantly, the US functionality rules address both registered and unregistered trade dress, without distinction as to the type of subject-matter or the category of goods or services for which it is used⁷⁸¹ (Chapter 3).

5.5.2. *The possibility of applying functionality to service marks*

As in the case of products, business entities target consumers with carefully tailored offers of services, wrapped up in attractive forms. Various kinds of trade marks serve to distinguish offers and build long-lasting business-client relationships. Catchy symbols or devices, carefully crafted to communicate ‘core brand values’,⁷⁸² including important service information,⁷⁸³ grow as essential competitive tools. The presentational layer of services stretches beyond words, shape, or colours, to encompass what the US law calls ‘the total image of a business’, namely the overall appearance of the place and ways of reaching clients and providing services. This is not about featuring interesting interior or external décors, but about promoting a unique ‘customer experience’, insofar as ‘atmosphere may become the chief form of competition’.⁷⁸⁴ A classic

779 BoA’s decisions: R-2249/2014-5 (three-dimensional for Orlen petrol station); R-1135/2015-1 (figurative, and subsequently changed to three-dimensional, for the décor of Kiko shop); R-2160/2015-1 (three-dimensional for the Vodafone store).

780 T-404/09 & T-405/09, *Deutsche Bahn v. OHIM*, EU:T:2010:466, appeal C-45/11P, EU:C:2011:808; C-217/13& C-218/13 *Oberbank v. Deutscher Sparkassen*, EU:C:2014:2012.

781 Amanda Harmon Cooley, ‘Trade Dress Protection of Business Décor: What is this *Tertium Quid?*’ (2008) 18 Southern Law Journal 19; Caesar Ramirez-Montes, ‘Trademarking the Look and Feel of Business Environments in Europe’ (2019) 25 Columbia Journal of European Law 1.

782 I agree with Ramirez-Montes (n 781, 5, 28–34), that conferring brand values does not necessarily mean conveying source-identification in terms of trade mark law.

783 Typical examples include the colour green for indicating an eco-friendly environment; red for warnings; lilac (as in Kiko stores) for youth or femininity.

784 Cheuk Fai James Kwong, ‘Should the Registration of Trade Marks for Store Layouts Be Welcomed in the European Union’ (2018) 13 JIPL&P 3, 212 with further references; Cooley (n 781) referring at 27 Justice Scalia’s evaluation of *Two Pesos* restaurant layout: ‘You’re selling atmosphere and food, the two of them’, *Two Pesos v. Taco Cabana*, 505 U.S. 763, 23 U.S.P.Q.2d 1081 (1992) (underl. LB).

example: ‘feel the coffee’ – the increased success of Starbucks shops is owed to the persistent smell of freshly roasted coffee and enhanced chit-chat between baristas and clients.⁷⁸⁵ It is easy to imagine how conferring trade mark exclusivity on behalf of one party, especially over a flexible, purposively unclear/broad subject-matter, may pose competition threats similar to those of functional product features. The author contends that there is no logical justification, apart from the current wording of the EUTM, to insulate service marks from the functionality inquiry. A brief discussion of some concerns that could arise follows below.

The first objection against applying functionality to service marks concerns their intangibility. This seems, though, to be a false obstacle. The intangible nature of services does not mean that provision of services to customers ignores tangible resources. Quite to the contrary, any communication with clients – aiming at informing, advertising, inducing the choice of, providing the services – involves tangible means, that is, objects or at least some medium (including here the space) that enable customers to sensorially experience the content of the services. Apart from some straightforward examples, such as vehicles used for transportation services where the sign constituted the positioning of a colour scheme on vehicles,⁷⁸⁶ or an orange colour filed for telecommunication goods and services,⁷⁸⁷ even for an app icon filed as figurative for telecommunication and scientific/technological services, the EUIPO examined how consumers interacted with the sign through their mobile devices and embodied applications.⁷⁸⁸ Earlier examples of store/business décor designs were, certainly, perceived as signs of a less precise structure, comprising lines, contours, shapes, colour schemes, yet, applied to tangible objects of various size, proportion, and permutation capabilities. Together these elements created the ‘physical look’ of the presentation and provision of services. The point is that it is always possible to establish a link between the designated services and material/tangible items which may comprise functional features used for the provision of services.

A second, more substantial, issue, relates to the wording of the law. If the EUTM functionality rules must be interpreted literally, as pertaining to features of designated ‘goods’, then even colours, shapes, or position, filed solely for services, could not be challenged upon this legal ground. Such an attempt looks like a *contra legem* act. By contrast, if the notion of ‘goods’ is understood more broadly, as covering the means (physical objects) used for

785 Giles Lury, ‘Wake Up and (Don’t) Smell the Coffee’ in Giles Lury, *How Coca-Cola Took Over the World* (LID Publishing Limited 2017) 182–184.

786 C-456/19 *Aktiebolaget*.

787 C-104/01 *Libertel*.

788 BoA R-0489/2016-2 refused the registration of Google’s figurative sign (a ‘play-button’ icon) due to lack of inherent distinctiveness, while remanding the case for examination of acquired distinctiveness. Similarly, R-2985/2014-5, registration was refused for Apple’s green/white icon (a stylised old video camera) for video computer software and services.

providing services, then the scope of functionality may be extended de lege lata. This would effectively represent re-conveying the meaning of the concepts laid down by the law by way of ‘creative’ interpretation, which may fall within the CJEU’s competence.⁷⁸⁹ However, a far better solution is to undertake direct legislative intervention.

The essential query is what type of functionality may apply to service marks. One commentator to *Apple*’s judgment suggested that technical exclusion may relate to complementary services (e.g. repair) connected to technically determined shapes, whilst aesthetic functionality and the refusal of signs resulting from the nature of goods (alias services) were rather irrelevant.⁷⁹⁰ Another opinion read the CJEU’s hesitation about registering the environment for retail services⁷⁹¹ as an indirect suggestion that such a sign was technically and aesthetically functional because it induced consumers to purchase.⁷⁹² The latter view seems too broad to work efficiently for functionality matters. Certain objects – taken individually or jointly – cannot be legally functional just because they enable provision of services.⁷⁹³ Even if business décor may increase consumer shopping experience, by conferring bundles of positive feelings which determine their transactional decisions – arguably, as trademarked goods do so simply because of carrying trade marks – it would be too simplistic to see such facts conclusive of functionality. For aesthetic functionality some additional criteria are needed, to reflect an impairment of competition or other societal higher goals – perhaps standardized consumer expectations/culturally pre-defined patterns⁷⁹⁴ (8.3.1. and 8.4.). The US *Two Pesos* judgment, which found the layout of a Mexican restaurant inherently distinctive, examined the ‘need to copy’ if the sign were ‘one of a limited number of equally efficient options available to competitors’.⁷⁹⁵ A similar reasoning may be carried in relation to ‘generic’ signs resulting from the nature of services (Chapter 7).

789 This is a real possibility, considering the amount of ‘autonomous’ notions of EU law that the CJEU has produced in EU copyright law.

790 Alexander von Mülhendal, ‘European Trade Mark Law: Registrable Signs, Service Marks’ (2014) 9 *JIP&P* 2, 160, 162.

791 In *Apple*, the doubts concerned whether the CJEU envisaged the registration of a sign for retail services only if the services involved third-party goods, besides the sale of own goods, or if the services were of a different kind (such as demonstration of, or seminars about, products), C-421/13, 25–27 and the operational part. Mülhendal (n 790) 163–164 argues that restrictions on the notion of ‘services’ are not really effective any more, especially in the light of C-420/13 *Netto ... v. DPMA*, EU:C:2014:2069. For an autonomous definition of ‘services’ under the old EUTM, see C-418/02 *Praktiker Bau-und Heimwerkermärkte*, EU:C:2005:425.

792 Tristan Sherliker, ‘The Registered Layout: A New Type of Mark for Apple’ (2014) 9 *JIP&P* 12, 961, 963.

793 Contrarily to BoA’s in *Rewe*, R-2224/2015-1, 27 and R-2225/2015-1, 29.

794 Justin Hughes, ‘Non-Traditional Trademarks and the Dilemma of Aesthetic Functionality’ in Calboli, *Senfteleben* (n 22) 107, 121.

795 *Two Pesos v. Taco Cabana*, 775 referring *Sicilia & Co. v. Cox*, 732 F. 2d 417, 426 (1984).

In order to apply technical functionality to services a direct link would be needed between: the sign; the material features of the objects which serve to perform the services at issue; and the identified technical function. Another doubt exists over which product's function is being tested: material objects or, analogically, services. As it mostly applies to composite signs, the mere occurrence of certain elements, used as a market standard or industry trend, should not imply technical functionality. This kind of uncertainty renders use of technical functionality difficult in relation to service marks. By way of example, a US case concerned the interior design of a wine store, in which wines were presented by taste category (a marketing strategy). The court clearly distinguished between two kinds (and meanings) of 'functionality'. Certain elements, underpinned by an 'ergonomic or marketing logic' were 'well-designed and thus "functional" for the purpose of retail wine sales' – the posting point of sales cards, storing wines in a low-positioned cabinet, presenting one display bottle – however, these elements were not legally 'functional', understood as 'essential to effective competition in a particular market'.⁷⁹⁶ The overall combination of elements that customers 'would perceive upon entering the store', constituted protectable trade dress, yet, the mere concept of categorizing wines by taste was not held protectable, either as part of the marketing scheme or of the interior design.⁷⁹⁷

To conclude this point, business practices will certainly continue to promote more service marks, and competition issues will always be on the radar. It therefore seems wise to adapt or develop functionality provisions to serve as a filter against the monopolization of product features used in the provision of services. The current option of relying on the distinctiveness requirement, overloaded as it is, does not really solve the issue, given it stimulates branding activities in a quest to prove acquired distinctiveness. Absent legislative amendments to the EUTM, perhaps conducting legal interpretation per analogiam may suffice as a temporary tool.

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⁷⁹⁶ *Best Cellars v. Wine Made Simple*, 320 F. Supp. 2d 60 (S.D.N.Y. 2003), 66, 71. For earlier litigation between the parties, Cooley (n 781) 33–34.

⁷⁹⁷ *Best Cellars*, *ibidem*, 72.

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6 Technical functionality

This chapter deals with signs consisting exclusively of shapes or other characteristics of goods necessary to obtain a technical result. It starts by exploring the meaning of a ‘technical’ result/function, as explained by European patent law, developed by US trade dress functionality, and applied under EUTM (6.1.). The next part focuses on the meaning of ‘necessity’, that is, the relationship between features and function (6.2.). It aims to show the insufficiencies of the EUTM approach, which, on one hand, broadly understands the technical features closed to usefulness, whilst, on the other hand, superficially assesses their technical contribution and rebuffs the alternative products factor. One discrete element discusses the difficulties of applying manufacturing functionality under the current EUTM. Part 6.3. touches upon the crucial topic of identifying ‘non-functional’ features and weighing them against functional ones. If non-functional features are important, then the sign as a whole does not comprise of ‘exclusively’ technically functional features (Chapter 5) and trade mark protection is available. Evaluating the impact of non-functional features means evaluating the similarity between various technical results incorporated by various combinations of features –this means product equivalence. The author follows some neglected guidance from the *Lego* ruling, to place the equivalence of products at the centre of the technical functionality test. The last part (6.4.) ties the category of equivalent products into the competition law perspective of product substitutability, with a focus on how the US uses product definition to determine the range of alternative products. This part advocates for applying a market-oriented test under the EUTM system, safeguarding the goal of enabling effective competition by substitution, and which allows situations of overlapped IPRs generated by hybrid combinations of functional/non-functional features to be dealt with.

6.1. What does a ‘technical result’ mean, and how can it be assessed?

Philips read the rationale of technical functionality as impairing competitors when supplying goods incorporating ‘*such a* function’ and limiting the freedom

to choose ‘the technical solution’ (78⁷⁹⁸). *Lego* built upon *Philips*. While *Philips* concerned ‘shapes incorporating *the same* technical solution’, *Lego* dealt with a ‘technically *preferable* solution’ for a given category of goods; competitors were interested in trading both similar and dissimilar shapes which consumers would perceive as a ‘real *alternative*’ (56–60)⁷⁹⁹. Functionality would, thus, encompass other shapes – with ‘*the same or another* technical solution’ (50) – achieving the ‘*same* technical result’ (54). However, the terms ‘exclusively’ and ‘necessary’ mean that technical functionality should prohibit signs which ‘only incorporate a technical solution’, impeding ‘the use of *that* technical solution’ by competitors (48 and 59) (LB).

The *Philips* and *Lego* judgments show how loosely the CJEU has employed the terms ‘technical solution’, ‘technical function’, and ‘technical result’. In the author’s opinion, proper application of technical functionality requires some delineation. Is a ‘technical result’ synonymous with a ‘technical function’? What does a technical result refer to: the entire product or its individual features? Further queries thus emerge. Is the patent documentation the prevailing source to prove technicality, or should functionality be broadly understood? The following parts address these issues in a slightly modified order.

6.1.1. *How can patent law inform trade mark lawyers about a trade mark’s technical character?*

There is an inclination to clarify the scope of ‘technical’ function/result in relation to excluded subject-matter of trade marks – sometimes also designs or copyright – using the meaning of ‘invention’ embedded in patent law. This approach is based on the assumption that patents ontologically capture technical subject-matter with clear-cut borders. In reality, there are many ‘mixes’ merging technical and non-technical features. The following part explores how European patent law employs the criterion of technical function, especially with regard to items with aesthetic features, and whether this helps to clarify issues of trade mark functionality.

For members of the European Patent Convention (EPC),⁸⁰⁰ patents are granted for inventions upon the basic requirements of novelty, inventive step, and industrial applicability. Neither the EPC nor the national legislations define the notion of ‘invention’. Its meaning is negatively inferred from what the EPC has excluded from being considered inventions, itself an issue of

798 C-299/99 *Philips*, all references correspond to paragraphs of the judgments.

799 C-48/09 *Lego*.

800 www.epo.org/law-practice/legal-texts/html/epc/2020/e/ma1.html. The EPC is an international convention signed by all EU countries, plus Turkey, Norway, and Switzerland. It grants, through one application, a patent that ‘disintegrates’ into a bundle of national patents (corresponding to the chosen countries) after subsequent validation (save for Belgium, France, Germany, UK, Ireland, Luxemburg, Monaco).

legal debate.⁸⁰¹ Pursuant to Art. 52(2) EPC a non-exhaustive list of excluded subject-matter comprises discoveries, scientific theories, mathematical methods, aesthetic creations, computer programs, and presentation of information. Essentially, this exemplification targets abstract and/or non-technical subject-matter. Framing it positively, an invention must be concrete, useful, and belong to any field of technology.⁸⁰² The subject-matter of an invention is a solution to a technical problem. The solution is defined by the technical features provided in the claims, and the claims are interpreted via description and drawings.⁸⁰³ Patenting subject-matter without technical effects or means is not possible.⁸⁰⁴

One possible classification of patents distinguishes between a ‘product patent’, ‘process patent’, and a ‘product-by-process patent’.⁸⁰⁵ Putting this into the functionality perspective, the author finds the following clarification essential. *If certain product features embody a technical function, this is a ‘patent for a product’ having the technical solution equivalent to the product. In other words, the product embodies the solution. However, different features of a product may perform distinct functions – let’s call them ‘partial’ functions – while their entire combination achieves the ‘technical result’ which solves the technical problem. The latter represents the product’s overall ‘technical function’.*

The criterion of ‘technical’ character also lacks a definition under the EPC, yet it is still applied twice during patent examination. First, as pre-requisite of protection, it scrutinizes/filters a subject-matter against the catalogue of Art. 52(2) EPC, a test conducted independently from the state of the art.⁸⁰⁶ Second, if the tested subject-matter is not excluded as a whole – that is, there is a claim with at least one technical feature – then technical character permeates the assessment of its inventive step. Non-technical features are disregarded, and each claim is evaluated to see how it contributes to the technical character of the subject-matter.⁸⁰⁷

801 Justine Pila, ‘Article 52(2) of the Convention on the Grant of European Patents: What Did the Framers Intend? A Study of the Travaux Préparatoires’ (2005) IIC 755; Gert Kollé, ‘The Patentable Invention in the European Patent Convention’ (1974) IIC 140.

802 EPO Guidelines (2019) G.II.1.

803 Art. 69, R.43(1) G-1, 2(ii).

804 Derk Visser, Laurence Lai, Peter de Lange, Kaisa Suominen, *Visser’s Annotated European Patent Convention* (Wolters 2021) 57.

805 Bently et al. (n 22) 425.

806 EPO Guidelines (2019) G.II.2 & G.VII.5.4. ‘What matters having regard to the concept of “invention” within the meaning of Article 52(1) EPC is the presence of technical character which may be implied by the physical features of an entity or the nature of an activity, or may be conferred to a non-technical activity by the use of technical means’ (T 0258/03, 4.5.). ‘The technical character of an invention is an inherent attribute independent of the actual contribution of the invention to the state of the art and consequently the potential of a claimed method to solve a problem of a technical nature should be discernible from the aspects of the method actually claimed’ (T 619/02, 2.6.1). All judgments indicated in this part under ‘T’(number) originate from the EPO, not the GC.

807 Visser (n 804) 58–60. Case-law indicates: ‘Features of an invention that do not have a technical effect or do not interact with the remaining features as to result in a technical functional

A query arises over whether the fact that aesthetic creations are not regarded as inventions in light of Art. 52(2) EPC may help interpret the technical functionality of trade marks by means of a *contrario* argumentation. Actually, Art. 52(3) EPC denies patent protection to aesthetic subject-matter as such, yet patenting ‘mixed’ (technical/non-technical) subject-matter remains possible.⁸⁰⁸ On the latter point, an earlier commentator – referring to German practice – noted that inventiveness may relate to aesthetic characteristics, result from aesthetic problems, and comprise a patentable advance in aesthetic arts.⁸⁰⁹ Indeed, the EPO has held the following creations as patentable: an absorbent article for feminine hygiene comprising an active region given by colour change material induced by external stimulus; an orthodontic bracket characterized by an element of monocrystalline alumina ensuring mechanical strength and aesthetically desired transparency; a multilayer satin finish automotive paint system comprising mica particles encapsulated by a titanium dioxide layer to improve aesthetic properties of the coating.⁸¹⁰

Patenting is possible if the technicality resides in the technical means for obtaining aesthetic effects (e.g. a method of cutting diamonds). Another case concerned a container for laundry/dishwasher tablets, wherein a visual improvement consisted of selected/coloured and arranged packaging portions resulting from the interacting coloration of separate elements with a specific light transmissivity/absorption – the effect was achieved by technical means and thus was patentable.⁸¹¹ EPO Guidelines give examples of aesthetic features serving a technical effect (a tyre pattern improving water channelling⁸¹²) or a substance/composition with technical features to accentuate scent.⁸¹³ However, features, the effects of which can only be appreciated by subjective senses (e.g. patterns, colours on a substrate),⁸¹⁴ cannot be patented because human perception of phenomena is not of a ‘technical nature’.⁸¹⁵

contribution cannot be considered to contribute to inventive step within the meaning of Article 56 EPC’ (T 1121/02; T 258/03; T 531/03; T 641/00; T 27/97; T 931/95; T 456/90). Equally, this applies to theoretically technical features which do not have any technical function for the claimed invention (T 72/95; T 157/97; T 158/97).

808 Much of the discussion on the technical/non-technical relationship concerned computer implemented inventions: Justine Pila, ‘Dispute over the Meaning of “Invention” in Art. 52(2) EPC – The Patentability of Computer-Implemented Inventions in Europe’ (2005) IIC 173.

809 Kolle (n 801) 149 citing BGH of 18.05.1967 *Garagentor* GRUR 1967; BGH of 07.10.1971 *Raubreifkerze* 1972 Mitt. 235.

810 T 1689/07; T 0252/91; T 442/90.

811 T 617/11 (unit dose packaging).

812 G.II.3.4. This example recalls the *Pirelli* trade mark issues of C-818/18.

813 G.II.3.4. This example would sustain the functionality of a perfume, if trade mark prohibition covered features ‘resulting’ from patentable methods.

814 T 119/88 (disk jacket made of a plastic sheet with a coloured surface of a certain minimum light intensity making fingerprints less visible); T 686/90 (stained glass).

815 T 619/02 (odour selection method).

The patentability of mixes of technical/aesthetic features demonstrates that the EPC's exclusion concerning aesthetic subject-matter does not lead to it being exclusively channelled to other IPRs. From another perspective, the EU trade mark and design legislation refrained from introducing a symmetric exclusion of 'patentable' features, as included in the French design law prior to harmonization.⁸¹⁶ Instead, EU functionality is formulated through the terms of being 'necessary to obtain a technical result' – in case of trade marks – and 'solely dictated by the technical function' – as to designs. This means that functional subject-matter may be protected – to a certain extent – by trade marks and designs. In the EU there is no all-or-nothing demarcation between patent law and trade marks/designs which would reflect the division between technical and aesthetic subject-matter. In consequence, for EUTM functionality purposes, the patentability of blended technical/non-technical inventions can only teach that any functional features relevant for trade marks still need to be carefully scrutinized on a case-by-case basis, for a possible contribution to achieving the patented technical effect indicated by patent documentation.

6.1.2. *Defining technical functionality in US practice*

This part draws upon the development of US functionality practice outlined in Chapter 3. The remarks below focus on how major US rulings have defined technical aspects, and how necessary the product features at issue were to achieve those technical results. These criteria are next discussed in parts 6.1.3.2., 6.2.2.3., 6.2.3., and 6.4. to draw parallels with the methodology of assessing technical functionality under the EUTM regime. These parts will demonstrate that there are several points of convergence between EUTM and US practice, however, there is still room for improvement for the EUTM.

In US law, the early functionality cases related to mechanical elements of products. The issue was whether features were essential to ensure proper product operation, economy or efficiency in production, also by reducing manufacturing costs.⁸¹⁷ The Restatement of Torts of 1938 confirmed a broad understanding of functionality based on whether the feature 'affected' that is, contributed to the purpose, action, performance of the product, or the

816 Suthersanen, Mimler (n 30) 567; Brancusi (n 136) 26. Art. L-511-3(2) of Code de la Propriété Industrielle stipulated that if the design features reflecting a design's novelty were inseparable from those of the patentable subject-matter, then patent protection was the only one available (*'Mais si le même objet peut être considéré à la fois comme un dessin ou modèle nouveau et comme une invention brevetable et si les éléments constitutifs de la nouveauté du dessin ou modèle sont inséparables de ceux de l'invention, ledit objet ne peut être protégé que conformément aux dispositions du livre VI'*).

817 *Marvel v. Pearl*, 133 F. 160, 161–162 (2nd Cir. 1904) (syringe mechanism of compressible rubber bulb essential for discharging); reaffirmed in *Luminous Unit. v. R. Williamson & Co.*, 241 F. 265 (N.D. Ill.), *aff'd per curiam*, 245 F. 988 (7th Cir. 1917) (elements of electric lamp essential to diffuse light), cf. 'The Public Interest and the Right to Copy Nonfunctional Product Features' (1977) 19 Wm. & Mary L. Rev. 317, 321.

facility or economy of processing, handling, or using it. As ‘mere possession of a function (utility) [wa]s not a sufficient reason to deny protection’, a well-known ‘truism’ formulated in the *Deister* ruling,⁸¹⁸ a finding of functionality required some additional qualification, for instance whether the features were primarily and essentially dictated by functional or utilitarian considerations.⁸¹⁹ Another criterion considered the relevance of alternative designs achieving the same/similar technical result(s) as an indicator of sufficient competition on the market.⁸²⁰ The definition of functionality laid down by the Restatement of Unfair Competition of 1995 combined the focus on functional benefits (in the manufacturing, marketing, use of goods/services) with the indication of substitutes (3.2.4.).

The scope of technical functionality developed along two main lines, generating a split between the different US courts (circuits). One school of thought established the relevance of features in connection with the technical information contained by earlier patents, the expiry of which supported the ‘right-to-copy’ what had fallen into the public domain. Another did not completely neglect the existence of earlier patents, but it weighed this factor against the evidence of alternative/substitutable products, in light of the ‘need-to-copy’ only what was important for effective competition in the market. The following remarks describe the criteria employed by significant US rulings to apply technical functionality in light of these two conflicting approaches, starting with the second one.

The *Morton-Norwich* judgment (conc. a spray container)⁸²¹ laid down a set of four factors to establish functionality *de jure*: previous patents disclosing the utilitarian advantages of the design; advertising materials touting the utilitarian advantages; the availability of alternative products; and a comparatively simple or cheap method of manufacturing the product. Although the Court acknowledged the existence of two patents on the configuration and mechanism used for the spray-top, and the advertising emphasizing the desirable functionality of the container, the key issue was ‘whether the design was the best or one of a few superior designs available’ – and the evidence supported a negative

818 *In re Deister Concentrator*, 289 F.2d 496 (C.C.P.A. 1961).

819 In *Deister*, registration was refused to a rhomboidally shaped shaking table (for ore/coal cleaning) because of the clear technical advantages.

820 *W.T. Rogers v. Keene*, 778 F.2d 334, 339 (7th Cir. 1985) – hexagonal office trays with holes enabling clamping together, <https://casetext.com/case/wt-rogers-co-inc-v-keene>; *Sicilia Di R. Biebow v. Cox*, 732 F.2d 417 (5th Cir. 1984) – a tear-shaped squeezable bottle for citrus juice against evidence of three similarly shaped plastic products which did not justify the copying of the exact appearance, <https://cite.case.law/f2d/732/417/>; *Pebble Beach v. Tour 18*, 155 F.3d 526, 538–9 (5th Cir. 1998) – appearance of golf-hole designs tested upon an ‘unlimited number of alternative designs’ and a degree of competition impairment that ‘must be great enough to significantly disadvantage competitors in ways other than consumer preference for a particular source’, <https://casetext.com/case/pebble-beach-co-v-tour-18-i-ltd>

821 *In re Morton-Norwich* 671 F.2d 1332 (C.C.P.A. 1982).

answer.⁸²² In this case numerous alternative products, performed the same function equally well, so registration would not have impaired competition⁸²³.

Following *TrafFix* (see below), a significant issue was whether the ‘competitive need’ factors of *Morton Norwich* still mattered, and in the coming years certain courts continued to apply this standard, albeit with modifications. The Federal Circuit, in *Valu Engineering* (refusing the registration of cross-sectional designs of conveyor guide rails), read *TrafFix* as merely prioritizing amongst the criteria of *Morton-Norwich*.⁸²⁴ In theory, the court accepted the possibility of determining functionality upon the criterion of alternative designs tested in a market sector negatively affected.⁸²⁵ Another approach was to mix criteria from different tests, such as the 9th Circuit did in the *Disc Golf* case,⁸²⁶ where earlier patents strongly evidenced utilitarian functionality, but were analysed together with the viability of alternative designs, the implicit/explicit touting of utilitarian advantages in advertising, and the manufacturing costs.⁸²⁷ *Disc Golf’s* factors echoed later in *Apple v. Samsung*,⁸²⁸ in which the elements of *Apple’s* claimed trade dress (the iPhone) were found to be functional, ‘improving usability’. Interestingly, the court downplayed the role of alternatives, because it looked for evidence of substitutes offering ‘exactly the same features’ – a requirement that is difficult to meet in practice, as rival products usually differ in appearance. Here *Apple* showed the ‘mere existence of other design possibilities’ which did not suffice to prove non-functionality.⁸²⁹

At the opposite extreme, rejection of the alternative designs criterion was consolidated by the *TrafFix* judgment,⁸³⁰ which represented the most influential ruling for setting the current US utility functionality standards. The trade dress at issue involved a dual-spring mechanism (i.e. four legs, a base, an upright, and a sign), used for keeping sign roads flexible and wind resistant, and the subject of lapsed utility patents. The Supreme Court found the spring mechanism to be essential for the operation of the device (i.e. to resist

822 Ibidem, 1332–1344.

823 Ibidem, 1342–1343, holding the evidence of various shapes of a moulded plastic bottle to hold liquid, of the spray-top to house the pump and spray mechanism, and of pump triggers.

824 *Valu Engineering v. Rexnord*, 278 F.3d 1268 (Fed. Cir. 2002) 1276, <https://h2o.law.harvard.edu/cases/4821>

825 However, functionality was established in relation to bottling and canning plant ‘wet areas’, because of the competitive advantages of conveyor lines as compared to other models, ibidem, 1278–1279.

826 *Disc Golf Assoc. v. Champion Discs*, 158 F.3d 1002, 1004, 1006 (9th Cir. 1998) – a disc entrapment device <https://casetext.com/case/disc-golf-assoc-inc-v-champion-discs>

827 The Court noted: ‘if ... were allowed to trademark the parabolic design, its market dominance undoubtedly would continue and would have the effect of resurrecting its expired utility patent’ (ibidem, 1009).

828 *Apple v. Samsung*, 786 F.3d 983, 994 (Fed. Cir. 2015) www.bitlaw.com/source/cases/patent/Apple_v_Samsung_Fed_Cir.html

829 Ibidem, 993.

830 *TrafFix Devices v. Marketing Displays*, 532 U.S. 23 (2001).

toppling in strong winds), whilst the dual configuration was not only useful when compared with one-spring configurations (i.e. enabling optimal fixation of the sign frame with other ground-engaging elements) but also a cheap solution, as compared with three-spring configurations.⁸³¹ This meant that the design was functional under both of the criteria laid down by the earlier *Inwood* ruling⁸³² (purpose/use or cost/quality), and led to the conclusion that ‘there [was] no need to proceed further to consider competitive necessity’ or inquire upon secondary meaning either.⁸³³ What was material in *TrafFix* was the strong evidentiary presumption of functionality based on the expired patents.⁸³⁴ Such a presumption could have been dismissed only by proofs that the features were ‘merely an ornamental, incidental or arbitrary aspect of the device’ – examples were given of arbitrary curves in legs or ornamental patterns on the spring – which the product at issue did not display.

After *TrafFix*, the landscape of functionality seemed to have been fully mapped to the direction of testing utility functionality according to the *Inwood* two-prong test, with strong evidence from prior patenting. Aesthetic functionality remained within the ambit of the *Qualitex* terms.⁸³⁵ The courts applied *TrafFix* without factoring in competitive need and substitutes. The focus became interpreting the meaning of ‘essential’ (for the use or purpose), either understood restrictively as being dictated by product function(s), or more broadly, as determined by any functional imperative, by usefulness.⁸³⁶ For instance, in a case involving a line of disposable pipette tips and dispenser syringes, the court ruled on functionality relying upon evidence that all eight components of the product line (e.g. fins, flanged plunger) were essential to the operation of the device, despite possible changes to their appearance.⁸³⁷ Another important query concerned the relationship between the two prongs of the *TrafFix/Inwood* test, namely whether functionality determined under cost or quality criteria renders superfluous a determination against the criteria of use or purpose. Influential scholarship has answered this affirmatively, and read certain functionality decisions accordingly.⁸³⁸

831 *Ibidem*, 30–32.

832 *Inwood Laboratories v. Ives Laboratories* 456 U.S. 844 (1982).

833 *Ibidem*, 24–26.

834 *Ibidem*, 29–30. The Court considered the springs to be covered by the claims of expired patents, even though they looked different from the embodiments disclosed therein.

835 *Qualitex v. Jacobson*, 514 US 159 (1995). Notably, the green colour of cleaning pads had no impact upon their use/purpose or cost/quality.

836 In *Groeneveld v. Lubecore* 730 F.3d 494, 508 (6th Cir. 2013) <https://casetext.com/case/groeneveld-transp-efficiency-inc-v-lubecore-intl-inc> the shape, volume, and materials of a grease pump used in an automated lubrication system were substantially influenced by the dictates of function.

837 *Eppendorf v. Ritter* 289 F.3d 351 (5th Cir. 2002) 356–358, at <https://casetext.com/case/eppendorf-netheler-hinz-gmbh-v-ritter-gmbh>

838 Buccafusco, Lemley (n 28) 1343–1344, referring *ARLINGTON SPECIALTIES, INC. v. URBAN AID*, 847 F.3d 415, (419) 420 (2017) conc. a small bag for personal care kit;

TrafFix also touched upon the issue of sequential cumulation of protection, in which trade dress/mark protection interfered with the free exercise of lapsed patents/utility models. Previously there had been a split among courts – some considered that patent protection did not foreclose trade dress protection,⁸³⁹ others denied protection to product configurations disclosed or claimed in (utility) patents.⁸⁴⁰ After *TrafFix*, *Fuji Kogyo*⁸⁴¹ represented an exemplary case, concerning elements of fishing lines (i.e. ring and frame) subject to multiple IPRs (utility patents, design patents, trade marks). The court found that utility patents disclosed the advantages of the design, the advertising materials touted its functions and the adopted design configuration lowered the cost of producing the line guide.⁸⁴² The court also analysed lapsed patent claims and found them to cover (although they did not literally claim) the features at issue, because ‘the design departure in this case [was] too slight not to be included by the claims of the utility patents ...’⁸⁴³ The *Fuji* judgment paved the way for the introduction of analytical elements typical of patent law into the assessment of functionality related to prior patents,⁸⁴⁴ namely the interpretation of design variants upon claims construction and doctrine of equivalents.⁸⁴⁵ Unfortunately, as will be argued below, the EUTM practice lacks an in-depth evaluation of patent disclosures, whilst too easily establishing functionality upon mere graphic representation or simple mention of features.

6.1.3. Defining technical functionality under EUTM

At the beginning of *Lego*’s invalidity proceedings, the EUIPO already held that the term ‘technical’ should be interpreted according to patent law terms,

Specialized Seating, Inc. v. Greenwich Industries, LP, 616 F.3d 722, 724 (7th Cir. 2010) conc. a folding chair; *Jay Franco v. Franek*, 615 F.3d 855, 858 (7th Cir. 2010) conc. a circular beach towel.

839 *Sunbeam Products v. West Bend*, 123 F.3d 246 (CA5 1997), *Thomas & Betts v. Panduit Corp.*, 138 F. 3d 277 (CA7 1998); *Midwest Industries v. Karavan Trailers, Inc.*, 175 F.3d 1356 (CA Fed 1999), all mentioned by *TrafFix*, 28.

840 *Vornado Air ... v. Duracraft*, 58 F.3d 1498, 1500 (10th Cir 1995) conc. the spiral structure of a fan that constituted ‘a significant inventive component of an invention ... so that without it the invention cannot fairly be said to be the same invention’, <https://cite.case.law/f3d/58/1498/>

841 *Fuji Kogyo v. Pacific Bay*, 461, F.3d 675, 678–679 (6th Circ. 2006), <https://casetext.com/case/fuji-kogyo-co-ltd-v-pacific-bay-intern>, discussed by Dinwoodie, Janis (n 36) 149–156, 158.

842 *Fuji*, 685–686.

843 *Ibidem*, 689–690.

844 *Georgia-Pacific v. Kimberly-Clark* 647 F.3d 723, 729 (7th Cir. 2011) conc. toilet paper, the court found that ‘the “central advance” claimed in the utility patents is embossing a quilt-like diamond lattice filled with signature designs that improves (perceived) softness and bulk, and reduces nesting and ridging. This is the same “essential feature” claimed in the trademarks’.

845 For a discussion of the significance of earlier design patents for trade dress functionality, Vuong Nguyen, ‘Opting for Flexibility: How the Existence of a Design Patent Should Shape Evidentiary Burdens in Litigation over Trade Dress Protection for the Same Features’ (2015) 82(4) *University of Chicago Law Review* 2249, 2269–2291.

a rule later introduced into the EUIPO Guidelines.⁸⁴⁶ The CJEU reaffirmed this in a wider context: ‘technical functionality may be assessed, *inter alia*’ upon ‘documents relating to previous patents describing the functional elements of the shape concerned’ (LB).⁸⁴⁷ This open-ended enumeration implies possible reference to other types of proof, beyond patent documentation, such as teaching related to utility models, design, or various materials discussing functional aspects. The EUIPO Guidelines have adopted a broader interpretation of technical functionality, by indicating examples of fitting between two articles, strengthening, using less material, and facilitating convenient storage/transportation.⁸⁴⁸

6.1.3.1. *A look at EUTM practice*

This part structures three groups of rulings, referring to the interpretation of the terms of technical function/results. As pointed out in 6.1.1., a distinction should operate between the technical result/function of the entire product and the partial functions performed by different features of the sign at issue. EUTM practice often addresses both under the term of ‘technical function’. The author finds this suboptimal, yet it does not compromise the final assessment, because the combination of features determined by distinct functions may collectively support the application of technical functionality (6.2.2.).

The first list involves major EUIPO and GC/CJEU cases which established functionality upon earlier technical rights (see footnotes). This enumeration first indicates the shape applied for registration, whilst next describing the product’s technical function/result, together with individual features if they perform (partial) functions.

- *Philips* three circular heads with rotating blades – shaving;⁸⁴⁹
- *Lego*’s brick – assembly of toy bricks – two rows of studs and internal projections enabling interlocking;⁸⁵⁰
- *Rubik*’s cube – rotating capability due to inner patented mechanism – determining the movement of vertical/horizontal lattices when solving the puzzle;⁸⁵¹
- knife – cutting floor coverings – various features perform functions: small angle between blade/shell grip for facilitating cutting; intermediate section (rounded cross-section broadening towards a tapered rear end) allowing greater pressure and precision for long cuts; knurled screw containing blades to be changed without using other tools;⁸⁵²

846 Guidelines Part B Section 4 ch. 6.3; dec. of 30/07/2004, 63 C 107 029/1, 62–64.

847 C-48/09 *Lego*, para 85.

848 Guidelines, *ibidem*.

849 C-299/99, paras 11–16.

850 C-48/09; T-270/06 EU:T:2008:483; R-856/2004-G (UK 866 557 US 3005282).

851 C-30/15 P *Simba Toys GmbH v. EUIPO*; T-450/09; R-1526/2008-2.

852 T-164/11 *Reddig v. Morleys* EU:T:2012:443; R -1072/20092 (US 4662070).

- knife handle with black dots – non-skid effect of concave dents;⁸⁵³
- medical occlusion implant – treating holes in an intraventricular septum – various features ensure collapsibility, shape-memory, avoiding perforations when introduced into target-site;⁸⁵⁴
- ground anchor – being fixed into the ground so as to ensure safe fixing of another object (mast/pole);⁸⁵⁵
- hula hoop device – tightening/strengthening user’s core, enabled by a circular hoop and wavy inner ridges/protrusions which allow better contact with human body;⁸⁵⁶
- IKEA pallet – facilitating loading;⁸⁵⁷
- spelling device linking concrete – joining and blocking concrete coffering elements;⁸⁵⁸
- air-freshener shaped like a fir-tree – refreshing air;⁸⁵⁹
- cylindrical lighter – ignition – structural elements perform different functions defined upon utility models (e.g. slots allow the entrance of air to feed the flame; a fin controls/protects the lever opening the gas valve);⁸⁶⁰
- *Novartis’s* ‘Exelon’ patch – administering a medicinal product via transdermal patch – four essential characteristics perform different functions: square shape of protective liner – facilitating packaging/storage; middle white stripe – facilitating application of the patch; circular, central area – ensuring skin fixation; peripheral arrangement of knobs – creating a space patch/protective liner to protect against loss of medical substance during transportation;⁸⁶¹
- cable-sealing module – enabling tight sealing regardless of dimensions of cables/pipes – removable concentric layers of the rubber module are peeled away until the intended diameter is achieved.⁸⁶²

853 C-337/12 to C-340/12, *Pi-Design v. Yoshida*; T-331/10; R-1235/2008-1 & R-1237/2008-1 (EP 1016507B1; US 6195899B1).

854 R-42/2013-1 – optimal circular, disc-shaped occlude to avoid obstructions and rosette-patterned wire braiding to create denser area for enhancing occluding (EP 1567929B1; EP 2263569A1; EP 228020B1).

855 R-1363/2014-4 – the tubular part of the anchor helps grounding the object, the bottom part enables its introduction into the ground, the cup flange with top holes integrates into the soil via plants and stabilizes the mast/pole (PCT WO 87/02734). Advertisements touted the functional configuration.

856 R-316/2014-2 (Int 11 826 21; US 399969).

857 R-353/2006-1 – two long-sided flanges perforated with square holes (for fixing lightly by straps materials) and with rounded edges (for safe transportation) (PCT Wo 02/38471).

858 T-656/14 *Peri v. OHIM*, EU:T:2016:367; R-1178/2013-1 (DE 103 31 359 B4).

859 R-1283/2013-4, (US 3 065 915). The earlier patent consisted of ‘a vapour dispensing package for releasing volatile substance to the atmosphere’ claiming a ‘conical’ body of the device; however, the fir-tree silhouette was not disclosed, which ultimately dismissed functionality.

860 T-580/15 *Flamagas v. OHIM*, EU:T:2017:433; R-924/2013-1 (Spanish U0170551; U0175088). A video clip touted the lighter’s functionality (e.g. safety aspects).

861 T-44/16 *Novartis v. SK Chemicals*, EU:T:2018:48; R-2342/2014-5 (EP 0405393; US 6 440 454 B1 and others).

862 T-261/18 *Roxtec v. Wallmax*, EU:T:2019:674; R-940/2017-2 and R-2385/2018-2; EP 429916 A2 and advertising materials.

The following groups of judgments show the broadened understanding of functionality, based on the usefulness of a product resulting from its intended use, in the absence of earlier patents or utility models. EUIPO has displayed unsound practice, as it easily shifts assessments from functionality to distinctiveness grounds (5.3.3.).

In some cases registration was denied for reasons of technical functionality:

- lamp/globe base with pivot – sustaining the lamp/globe, while eventually ensuring rotation;⁸⁶³
- elongated band with circles – hanging clothing on a hook;⁸⁶⁴
- spoon-shaped packaging – hold-on/stirring/emptying liquid content;⁸⁶⁵
- motorized rope winch – ensuring continuous cable winch and cooling system;⁸⁶⁶
- clips for sealing bags – maintaining food freshness;⁸⁶⁷
- ceramic cutter – ensuring linear cutting;⁸⁶⁸
- knife – cutting;⁸⁶⁹
- fastening system (rubber elastic) – assembling/interconnecting small items (e.g. card boxes).⁸⁷⁰

Most often, registration was refused due to lack of distinctiveness, or eventually maintained upon a restriction of the category of goods – the EUIPO's arguments in select cases are summarized below:

- fence post – insufficient substantiation of functions performed by the structural elements: a T-shaped element considered industry standard to ensure strength and rigidity, whilst the V-shaped ending and three flattened sections were held non-functional, against demonstrated ease when handled and inserted into the ground;⁸⁷¹
- dry-powder inhaler – applying design thinking: the degree of freedom to shape an inhaler is limited by the presence of a container with the inhaling substance and openings to load/inhale; compliance for generics does not necessitate copying the appearance of a competing product;⁸⁷²

863 T-752/18 *Tecnodidattica v. EUIPO*, EU:T:2020:130, R-76/2017-2.

864 R-757/2019-5.

865 R-582/2017-5 (standardized tear-off spout; ergonomic optimal size of packaging).

866 R-1658/2014-1 (functionally essential elements: motor, gears, cooling ribs, control, and traction sheave).

867 R-2048/2013-5 (two-interlocked parts creating an airtight seal).

868 R-1856/2010-1 (two levers for holding/cutting tiles; rectilinear cutter for linear cutting; flattened surface for placing the tile; longitudinal guides and movable separator for longitudinal cutting).

869 R-631/2011-1 (rounded handle for better grip; pointed and curved blade for easiness of initial cut; facilitating sawing/cutting; gradual taper for penetration).

870 Invalidity Dec. No. 12442C of 25.11.2006 (long cardboard nose facilitating adjustability of connected items).

871 R-2526/2013-5.

872 R-2096/2018-1.

- cable drawing chambers – examiner’s decision annulled on procedural grounds, yet, with possible indication of functionality;⁸⁷³
- ring-shaped brake drums – lack of distinctiveness sufficient to refuse registration, while leaving functionality open to discussion;⁸⁷⁴
- Danish chair – similar to drums;⁸⁷⁵
- three types of signs (measuring tapes; ductwork; packaging) – solely lack of distinctiveness without reference to functionality.⁸⁷⁶

6.1.3.2. Discussion – the difficulties of broadly understanding technical functionality

Identification of the ‘technical’ result/function of a product represents the first stage of a functionality assessment. This exercise does not suffice in itself, even in cases of earlier technical rights that would clearly correspond to the subject-matter of the sign at issue, a situation which rarely occurs in practice. The crucial step of the functionality examination consists in analysing whether the product features are ‘necessary’ to perform that technical result (6.2.). The selected EUTM jurisprudence demonstrates that the notion of a ‘technical’ result/function goes beyond the realm of strictly patentable solutions, and encompasses a large spectrum of utilitarian aspects, such as those pertaining to a product’s construction, operation, ergonomics. This raises several types of concern.

The broad interpretation of ‘technical function’ as covering a wide range of utilitarian effects should not lead to a situation where the functionality prohibition addresses any possible feature reflecting the mere purpose of a product. Every product accommodates some basic functionality (e.g. at least a partially flat bottom on a bottle or three support points on a chair), but not every product characteristic automatically falls foul of the functionality prohibition. Many signs are solely tested upon distinctiveness, descriptiveness, or genericness – this is nothing unusual. However, comparing the last two groups of EUIPO decisions (6.1.2.2.), it becomes clear how broadly understood utilitarian features may easily fall into different categories of refusal grounds. This means that signs lying ‘at the borderline of technicality’⁸⁷⁷ face a higher risk of the functionality bar being misapplied. To prevent this, the EUTM judiciary should implement an objective methodology of assessment to help avoid over-inclusive interpretations, whilst confining the scope of the prohibitions to cases which clearly hinder market competition.

The widened scope of technical functionality also renders it difficult to delineate between technically functional signs of Art. 7(1)(e)(ii) EUTMR and

873 R-181/2015-5.

874 R-659/2014-1.

875 R-2705/2017-5.

876 Accordingly: R-2331/2016-4; R-34/2013-5; R-1198/2009-2.

877 This term was used by Ilanah Fhima, ‘Functionality in Europe: When Do Trademarks Achieve a Technical Result’ (2020) 110(3) *The Trademark Reporter* 659, 682, noting the difficulty of defining its scope.

those ‘resulting from the nature of goods’ that fall under the prohibition of Art. 7(1)(e)(i) EUTMR. The latter refusal ground is currently linked to signs embodying a product’s generic functions (Chapter 7). Taking here the examples of the blade of a knife or the shape of a container, these items may ensure both generic functions (i.e. cutting and holding content), as well as achieving more specific technical results (i.e. linear cutting of thick substrates and preserving the freshness of content due to specific sealing or light-absorbent surface properties). Under the current EUIPO practice, it is unclear how a functional evaluation of these features would turn out, although the EUTM refusal grounds of technical v. generic functionality should have an autonomous sphere of application.

Another consequence of too broadly understanding technical/utilitarian functionality is evident in the difficulty of distinguishing between technical and non-technical (alias arbitrary) features. This distinction is vital to establish whether the sign consists ‘exclusively’ of functionally determined features (6.3.). If ‘technical’ means any utilitarian aspect, then the scope of non-technical/arbitrary features obviously shrinks. It would be confined to ornamentality/decoration and wording, which would discriminate against practical objects deprived of unnecessary decoration. It may even encourage products to incorporate ornamentality – in order to overpass the technical prohibition – stimulating unnatural, overloaded design, an excess of form over substance.

One important issue is represented in the evidence used to identify technical/utilitarian functionality. Searching for broad functionality effects may risk an over-simplified analysis of data. As a rule, the EUTM judiciary has been committed to ‘objective and reliable information’⁸⁷⁸ and, since *Lego*, has adopted an open-ended catalogue of proofs which prioritized pre-existing patent documentation. Characteristics claimed by earlier patents (either granted or applied for) appear to constitute ‘prima facie evidence’ of being functional features.⁸⁷⁹ This brings to mind the US’s *TrafFix* test that focused on what was *claimed* by the patent teachings: the dual-spring device constituted the ‘central advance claimed in the expired utility patents’⁸⁸⁰ (LB). However, in contrast to US practice (see *Fuji Kogyo*), EUTM case-law has not always conducted an in-depth analysis of how and where the product features at issue are disclosed by patent teachings, that is, whether features are detailed in the characterizing parts of claims or only in the preamble; whether they are known from prior art and thus cannot contribute to inventiveness; whether they constitute the best or a mere embodiment of the invention. Part 6.2.2.2. illustrates through several EUTM rulings how simplistic the CJEU/GC’s use of patent documentation to assess functional determination is. Generally, the courts consider mere

878 C-237/19 *Gömböc*, para 34.

879 Guidelines, sect. 4, 6.3.

880 *TrafFix*, 30.

depiction of product features in technical drawings as a strong indicator of their functional status. However, it must be stated that a thorough evaluation is often greatly needed, to determine how effectively such a priori identified ‘technical’ features contribute to achieving the technical results.

Incidentally, CJEU/GC has also detected functionality using the evidence of utility models granted in EU countries, even if they disclosed products with a different appearance, yet, incorporating similar solutions.⁸⁸¹ Utility models are not harmonized across the EU. Utility models have a lower inventive step when compared to patents, and can more easily offer protection for incremental/slightly modified technical solutions, with a narrower scope of protection.⁸⁸² Because of the possible co-existence of similar, albeit non-infringing products covered by different utility models, inferring the functionality of one product via data incorporated in similar utility models seems to be admissible evidence. It should be kept in mind that in certain jurisdictions (e.g. Germany)⁸⁸³ there is a lack of substantive control over the application of utility models. Protection may be conferred to a solution that is then subject to a subsequent cancellation. This means that not everything that is disclosed by an early utility model supports an accurate assessment of the technical significance of features depicted therein.

Apart from technical documentation, GC/EUIPO has increasingly accepted evidence from advertisements, user manuals, videos, or other on-line resources that highlight functional aspects of the features at issue. Such information frequently comes from the right-holder (e.g. marketing campaigns prior to product launch). These proofs may play a complementary role for assessing functionality in a way that brings to mind the US’s *Morton Norwich* and *Disc Golf* factors. A recent study also suggested using witness statements from customers or the applicant, general knowledge, or introducing the possibility of relying on expert evidence and third party technical literature.⁸⁸⁴

In conclusion, everything points to EUTM practice continuing to move in the direction of defining the technical character of product features upon a mix of evidence, centred, if possible, on earlier technical rights. Even in such cases, many caveats urge a scrutinized examination: the differences between the subject-matter at issue and that earlier disclosed; where and how patent documentation describes these features (or similar ones); the weaknesses of utility models. In the author’s opinion, the EUTM will continue to merge

881 T-580/15 *Flamagas*.

882 Robert Harrison, ‘Patents and Utility models’ in Neil Wilkof, Shamnad Basheer (eds.) *Overlapping Intellectual Property Rights* (OUP 2012) 106–117; Uma Suthersanen, Graham Duffield, ‘Utility Models and Other Alternatives’ in U. Suthersanen, G. Duffield, K. Boey Chow (eds.) *Innovation without Patents – Harnessing the Creative Spirit in a Diverse World* (Elgar 2007) 18.

883 www.dpma.de/english/utility_models/utility_model_protection/index.html

884 Fhima (n 877) 691–693.

‘technical’ with ‘utilitarian’ effects, with the evidence from repeated occurrences creating a solid foundation in practice. The only solution to the difficulties resulting therefrom is to develop more nuanced tests, adjusted to the different kinds of functionality (Chapters 6 to 8). It seems also important to refrain from hasty judgments, and to thoroughly question the technical relevance of the product features at hand (see below and 6.2.2.2.).

6.1.3.3. *Discussion – the irony of the Gömböc case*

An exemplary case of how technical function may be wrongly identified is represented by – in the author’s opinion – the famous *Gömböc* case. To briefly reiterate, this involved a mono-monostatic body with a single point of stable balance and a single unstable point of balance (5.3.1.3.). The CJEU considered the item as achieving the ‘technical purpose’ of ‘always righting itself’, whilst emphasizing that it incorporated ‘a mathematical discovery’ discussed in the history of science.⁸⁸⁵ This sounds surprising, because mathematical discoveries and natural laws are explicitly excluded from patent protection as being abstract, non-technical subject-matter. Thus, *Gömböc* incorporated a solution to a mathematical problem. Does *Gömböc* detail a technical solution? Is the self-righting of the body technical? It is worth noting that the well-known roly-poly toy,⁸⁸⁶ available for years, also returns to its equilibrium position due to a self-righting moment.

In the author’s opinion, *Gömböc*’s self-righting capability represents an inner property of its shape and structure which responded to the additional geometrical requirements: that of having a single unstable point, being homogenous, and convex. *Gömböc*’s self-righting is nothing more than an inherent property of the product, such as the transparency of glass. This is not technical per se, and the *Gömböc* body alone does not solve any technical problem. However, ‘*Gömböc* inspired’ bodies were seen to achieve technical purposes, such as used to design cages for drones exposed to mid-air collisions⁸⁸⁷ or capsules that release insulin in the stomach.⁸⁸⁸

In light of the above, technical functionality does not seem an adequate ground to deny *Gömböc*’s trade mark registration. Self-righting would likely fit the definition of a generic function of ‘goods’ – depending how closely linked to *Gömböc*-toy was to the category of goods designated for registration purposes. Even better, the rejection ground related to aesthetic functionality would be most likely to apply, if the focus was on the consumer interest in purchasing a symbolic/iconic shape.

885 C-237/19 *Gömböc*, paras 11–16.

886 https://en.wikipedia.org/wiki/Roly-poly_toy

887 Gábor Domokos, ‘*Gömböc* Pill’ (2019) 41 *The Mathematical Intelligencer*, 9–11.

888 Marjorie Senechal, ‘*Gömböc* Pill Continuing’ (2022) 44 *The Mathematical Intelligencer*, 119–122.

6.2. The features-function relationship – What does ‘necessary’ (to obtain technical results) mean?

This part deals with the relationship between the tested features and their technical outcome vis-à-vis that of the entire product. It critically examines the methods of interpretation and criteria used, or disregarded, by the EUTM jurisprudence, with subsidiary reference to the US practice.

6.2.1. Dismissing the criterion of alternatives

In *Philips* and *Lego*, the CJEU made it clear that the requirement of features ‘necessary’ to achieve a technical result did not mean that only a single feature would be capable of fulfilling that function, so evidence of alternative features could not be used to dismiss the functionality objection.⁸⁸⁹ Although the criterion of a ‘multiplicity of forms’/‘alternative designs’ has not been a conclusive factor under the EUTM, it has enjoyed some application with respect to the functionality prohibition of EU design law (1.4.). The AG’s Opinion in *Philips* compared the level of technical functionality accepted in design and trade mark law. Because in design law the level was considered to be ‘higher’ than in trade marks, design protection was denied if features were not only “‘*necessary*” but “‘*essential*” to achieve a particular result: form follows function’, understood according to the ‘multiplicity of forms’ criterion.⁸⁹⁰ By contrast, trade mark functionality is aimed broadly at ‘all shapes necessary’ (in the sense of “‘*ideally suited*”) to achieve a technical result’ (LB emphasis).⁸⁹¹

In parallel with design law, some early EUIPO trade mark decisions interpreted the ‘necessity’ test according to the following sine-qua-non argumentation:

- absent the feature at issue, the technical result is not obtained;
- ‘substantially altering’ the feature leads to altering the technical result.⁸⁹²

French readers might recognize this approach as reflecting the ‘*téorie de la suppression/substitution des formes*’, which inquired whether a form was separable/inseparable from the technical function.⁸⁹³ A form inseparable from the function meant that changing the form involved changing the function. Conversely, altering the form without modifying the function proved their

889 *Philips*, paras 81–83; *Lego*, para 83.

890 C-299/99 *Philips*, Opinion, EU:C:2001:52, para 34.

891 Opinion, *ibidem*, 35.

892 *Lego* cancellation dec. of 0/07/2004, 63C 107029/1; BoA R-1283/2013–4 (air-freshener), mentioned also by Bently et al. (n 24) 968, fn 81.

893 Initially advanced by Axel Casalonga, *Traité de la brevetabilité* (Paris 1939) 193, for patenting processes, its analogical application to designs was suggested by André Françon, Marie-Angèle Perot-Morel, *Les dessins et modèles en question, le droit et la pratique* (Paris 1986) 67–71; Pierre et François Greffe, *Traité des dessins et modèles* (Paris 1974) 60.

separability. This actually meant that multiple forms, that is, initial and changed ones were capable of achieving the same (unmodified) functional result, which represented the essence of the ‘multiplicity of forms’ theory! Indeed, an important part of French jurisprudence in design law applied the ‘multiplicity of forms’ criterion to examine the relationship between ornamental forms and inventions.⁸⁹⁴ The criterion proved inseparability when read negatively (i.e. no other forms for the same technical result), whilst providing a presumption of separability when read positively (i.e. there are different forms for the same result). In the latter situation, even a modified form (an alternative) could still be inseparable from the technical function. In response to this stalemate, the criterion of ‘contours’ was advanced by Paul Carteron, and focused on the contribution of the configuration/shape to achieving technical results and has almost totally replaced the ‘multiplicity of forms’.⁸⁹⁵

The EUIPO’s initial hesitations over denying, while actually applying the ‘multiplicity of forms’ criterion to interpret the notion of necessity, illustrate the practical difficulties of grasping the form-function correlation. The AG’s reference to design law in *Philips* was ultimately considered *passim* (irrelevant for trade marks) and the CJEU disregarded it. Afterwards, even in design law, the CJEU has definitively rebuffed any conclusive evidentiary role for alternative designs.⁸⁹⁶ Instead, a ‘causative’ test has been introduced, both with regard to trade marks and designs (see below).

6.2.2. *Choosing a ‘causative’ option*

The new criterion belongs to the so-called ‘causative’ school of thought, which looks into ‘*la raison d’être*’ of features: the extent to which features perform a technical function and their overall impact on a product’s technical result. Such features were defined by *Philips* as ‘attributable solely to the technical result’,⁸⁹⁷ whilst by *Lego* as being ‘technically causal of, and sufficient to obtain, the intended technical result’.⁸⁹⁸

6.2.2.1. *The centre of gravity of the causative test*

The terminology used in *Philips* and *Lego* appears to direct attention towards inquiries into the designer’s motivation when choosing certain features.⁸⁹⁹

894 Marie-Angèle Perot-Morel, *Les principes de protection des dessins et modèles dans les pays du marché commun*, (Paris, la Haye 1968) 204–206.

895 Paul Carteron, ‘Les confins du modèle et du brevet d’invention’ in *Mélanges offerts à Marcel Plaisant* (Paris 1960) 21–31; Pierre et François Greffe, *Traité des dessins et modèles. France. Union européenne. Suisse* (Paris 2003) 73–83.

896 C-395/16 *Doceram*, EU:C:2018:172; Schovsbo, Dinwoodie (n 130) 150–152.

897 C-299/99, para 83.

898 C-48/09, para 49.

899 Fhima (n 877) 669–670.

Were those features selected solely to achieve technical/utilitarian effects? Or were ornamental/arbitrary effects also intended? An answer following the binary ‘either ... or’ scheme is unrealistic, as practice deals mostly with mixed technical/non-technical items. Another deficiency of such questions lies in subjectivity – the designer’s intentions belong to their inner world, being difficult to establish. Sometimes the result of creative activity may diverge from the initial intention (e.g. the designer only had functional considerations in mind, yet consumers perceive the final product as having eye-appeal). For this reason, there were arguments in design law to instil more objectivity in the examination, by introducing the perspective of a fictional character (the observer/addressee).⁹⁰⁰ However, there is still room for misinterpretation. The legal doctrine warns that ‘whether the *tribunal* would think the *observer* would think the *designer* was functionally motivated, is a long way from the underlying question whether the design actually is functional’.⁹⁰¹

As a remedy to these shortcomings, both trade mark and design examination have shifted their attention to verifying the extent to which features actually perform a technical function. The interpretation is not purely causal – by asking why certain features are present in the product – yet it does include a purpose-oriented component – what do these features actually do? As *TrafFix* put it, the dual spring design was ‘the reason why the device worked’.⁹⁰² However, until now the EUTM judiciary has not taken into consideration features resulting from a specific technical manufacturing process, unless they serve a technical function (6.2.3.).

In *Philips*, the AG considered the minimalist appearance of the rotary head-shaver as being functional because it showed nothing more than a combination of technical features, present there ‘only’ to perform a function.⁹⁰³ The product had seemingly no other purpose than good functioning, although, for instance, the Australian *Philips* proceedings discussed the masculine ‘motor-ing’ look of the three-wheel arrangement of the rotary shaver as perceived by consumers.⁹⁰⁴ Professor Richardson used this example to argue that ‘the non-protection function policy trump[ed] the protection of form policy’.⁹⁰⁵

Subsequently, the EUTM’s algorithm of assessment has adapted to products and product features performing several functions. Examinations have acknowledged the existence of this other kind of purposes, under the terms of ‘non-functional’, ‘arbitrary’, and ‘ornamental’ element(s) (6.3.2.). The EUIPO currently instructs that the refusal ground applies if *all essential* characteristics

900 David Stone, *European Union Design Law. A Practitioners’ Guide* (OUP 2016) 96–97.

901 David Musker, ‘The Overlap between Patent and Design Protection’ in Wilkof, Basheer (eds.) *Overlapping Intellectual Property Rights* (OUP 2012) 50.

902 532 US 23 (2001) 34.

903 AG, *Philips*, 20.

904 Megan Richardson, ‘Australian Intellectual Property Law: The Form/Function Dilemma – A Case Study of Trade mark and Design Law’ (2000) EIPR 314, 317.

905 *Ibidem*, 316.

of the sign – determined according to criteria presented in Chapter 5 – are ‘technically necessary for obtaining the intended technical result of the goods’. This also includes characteristics which individually do not suffice to achieve the result, ‘but merely *contribute* to it’⁹⁰⁶ (LB emphasis). The following part examines how the CJEU/EUIPO have understood the technical necessity of features using evidence from earlier disclosed patent teachings, whilst part 6.3.2. is confined to their relationship with arbitrary/ornamental input.

6.2.2.2. *How does EUTM jurisprudence understand features-function interdependence?*

- *Lego* and the compatibility issue

Lego spoke about features ‘sufficient to obtain’ the technical result and the contributory role individual features had for achieving it – the focus was on the clamping capability of the two rows of studs on brick’s upper surface which enabled the assembling of toy-bricks.⁹⁰⁷ Interestingly, the prior art already contained well-known clamping solutions consisting of hollow building bricks with a rectangular base and primary projections (studs) set in two parallel rows and with internal secondary projections (located in the cavity), arranged co-axially with primary projections. The essence of the *Lego* invention consisted of the particular disposition of the secondary projections vis-à-vis upper studs, that is, arranged co-axially with *the centre of a square defined by four studs*.⁹⁰⁸ The latter studs were cylindrical, while the secondary projections could take different forms, provided that the contour of their cross-section was shaped to contact the circular cross-section of the four studs. This means that, in terms of necessity, the two rows with a minimum of four studs were *necessary* but *insufficient* to achieve the technical result of the invention (LB). The *Lego* invention needed at least one secondary projection in a spatially specific position vis-à-vis the upper surface, which allowed the clamping of different bricks, including in a sideways manner (i.e. laterally displaced relatively to one-another). Thanks to this invention, the potential to build limitless arrangements of bricks within a modular system emerged. Although in the *Lego* ruling the CJEU did not adequately interpret the sign’s technical contribution in the light of the patent documentation, the outcome made sound policy. Such a technically interesting solution, indeed, one optimal for the interconnection of toy bricks, should not enjoy perpetual exclusivity.

The issue of compatibility, which in *Lego* related to a self-contained modular system, can be extrapolated to interconnections between products of different origin.⁹⁰⁹ As a reminder, the must-fit exclusion of design law does not protect

906 Guidelines, Sect. 4, 6.3.

907 C-48/09, paras 73–74; T-270/06, paras 74–79.

908 US Patent 3005282.

909 Dutfield, Suthersanen (n 359) 259.

features essential in shape and dimension to enable mechanical interconnection of products (1.4.). De lege ferenda, a similar rule should apply for trade marks.⁹¹⁰ Such features may be interpreted as being necessary to obtain a technical result, whereas *the result represents the very interconnection* (LB). Recently, in another *Lego* case, the GC ruled that design ‘must-fit’ exclusion (Art. 8(2) RCD) includes features solely dictated by the technical function (Art. 8(1) RCD), yet, it additionally comprises features ‘for the appearance of which considerations other than technical considerations existed’.⁹¹¹ The exclusion did not apply to the design of a building block, because it fell within the safe-harbour clause of ‘modular systems’ of Art. 8(3) RCD (see 1.4.). Although there are some concerns about the mutual ambit of legal provisions of Art. 8(1) to (3) RCD, this GC ruling may imply that, analogically, that which technically enables close interconnection should not be protected as a trade mark. In the author’s opinion, any transposition of the must-fit exclusion on EUTM grounds requires separate discussions as to its intended scope and purpose. Even under EU design law, there are issues around whether the must-fit exclusion, which initially addressed industries relying on the control of aftermarkets (auto-moto, cartridges),⁹¹² should be extended to cover any kind of hard fittings. In the author’s view, must-fit should not cover the connections between components of the same product (i.e. male/female parts designed to be mated, such as a teapot and its lid, or the component parts of kitchen appliances). The must-fit exception should remain confined to products meant to originate from different producers.

Another interesting trade mark case concerns the three-dimensional shape of the Nespresso coffee capsule, which was recently invalidated by the Swiss Supreme Court.⁹¹³ The main issue was whether the shape, related to a lapsed patent on the capsule,⁹¹⁴ was technically necessary within the meaning of the Swiss functionality prohibitions.⁹¹⁵ Interestingly, the courts defined the technical effects of the shape not merely with respect to the functioning/use of the coffee machine, that is, the coffee extraction process (e.g. insertion into the capsule compartment, centering to enable perforation, injection of the hot water, enabling residual water to run into a drip tray), but also with respect to the purpose of being *compatible* with the Nespresso system⁹¹⁶ (LB). It was compatibility that underlined the competition-driven rationale for the functionality prohibition in this particular case – besides acknowledging

910 Derclaye (n 209) 641, advocating for convergence via transposing to EUTM the must-fit and must-match design exclusions.

911 T-515/19 *Lego v. EUIPO*, EU:T:2021:155, para 67.

912 Dutfield, Suthersanen, *ibidem*.

913 Decision of the Bundesgericht of 7 September 2021 – Case No. 4A_61/2021, English translated excerpts in (2022) 53 IIC 434.

914 First patent CH 605293.

915 Art. 2 of the Swiss Federal Act on the Protection on Trademarks and Indications of Source of 28 August 1992 (amended) at www.fedlex.admin.ch/eli/cc/1993/274_274_274/en (accessed 25 April 2023).

916 Decision, *ibidem*, 5.2.1. 440–441, 6.2.4. 443–444, 6.6. 445–446.

the well-known purpose that ‘shapes incorporating a technical solution must remain freely available to the public’, the court emphasized that ‘consumers ha[d] a clear interest in competition in the field of “Nespresso compatible” coffee capsules’.⁹¹⁷ The concept of compatibility also permeated the entire legal assessment. The Swiss court based its argumentation on the criterion of alternative (equivalent) products, yet still applied a nuanced understanding of the issue of equivalence. The legal assessment was aimed at identifying whether other market offers could fulfil both the pre-defined compatibility need, and a set of additional requirements that the Court selected in order to measure the level of effective competition – here the court only found alternatives acceptable where they could ensure that competitors were placed ‘on equal footing’, without bearing any additional costs.⁹¹⁸ In this case, no other form for capsules other than the Nespresso shape could fulfil these criteria, so the Nespresso capsule could not be the object of trade mark exclusivity. The issue of equivalent alternatives is discussed more in 6.3.1. below. Here it is also worth noting that variation in the appearance of capsules was possible, while still being compatible with the Nespresso machine – although, economically, these were not sufficiently good alternatives – a fact that means such capsules did not exactly correspond to the ambit of the ‘must fit’ exclusion of EU design law, which requires an identical shape and dimension. In other words, there were differences between the extent of compatibility required by the proper functioning of Nespresso system and the extent of fitting/close mechanical interconnection which would analogically be covered by the design provision. This again proves that, in practice, any analogical transposition of the ‘must fit’ design exclusion to trade marks requires careful analysis.

Going back to the advantages of *Leggo*’s modular system, these could be also read in a competition law context. Part 4.2.2.3. touched upon a situation when legal exclusivity hindered the emergence of a ‘new product’, important for consumers and competitors. Thinking about *Leggo*, the query arises of whether the possibility of interconnecting with *Leggo* system by unauthorized producers would be the goal sought by competition rationale. *Leggo* ultimately tried to avoid the deficiencies of trade marks, by defending the integrity of its system using the unfair competition law of various EU countries, whilst successfully lobbying over the EU design law, so that the must-fit exclusion specifically does not apply to modular systems.⁹¹⁹ Or alternatively, perhaps the capability of interconnection with *Leggo* remains a competition neutral situation, as long as competitors are not restricted in the ability to build their own modular systems. These issues require further research.

- Inconsistent reading of patent documentation

917 Ibidem, 6.5. 445, 6.6. 446.

918 Ibidem, 6.7.1. 446.

919 Art. 8(3) Regulation 6/2002.

Another important ruling for EUTM practice concerned the *Yoshida* knife handle.⁹²⁰ The patent documentation displayed two side-walls with a number of semi-spherical dents, whose array constituted a non-skid structure preventing the knife from slipping from a user's hand. However, because the invention did not reveal any specific arrangement (configuration) of dents, its input regarding inventiveness remained unknown, as well as whether a patent could have been granted solely upon such an arrangement. The extent to which the configuration of the dents manifested ornamentality was also unclear. The CJEU focused on the easy-to-grasp shape of the handle cooperating with the array of dents, both being considered as technically essential and sufficient. It is important to note that this finding was wholly inferred from the mere existence of the dents, rather than from the formulation of the patent teachings.

The CJEU performed a more appropriate evaluation of technical necessity in the case of *Rubik's* cube. The key issue was whether its individual small cubes were necessary to achieve a technical function discussed by earlier patents.⁹²¹ Although the claims on a logical spatial puzzle read that it was formed by elements, such as a cube or another regular body, semi-regular or amorphous,⁹²² the characterizing part of the claims explicitly indicated the shape of a 'cube'. Specifically, there was a small internal cube placed at the centre of a (larger) cube, which consisted of 27 solid cube-like elements arranged in two twistable directions at various angles – corresponding to the inherent rotational capability – whereas nine cube-like elements formed a lattice. The CJEU, thus, correctly interpreted that the functional determination of the individual cubes and their movement within the whole puzzle-cube were attributable to a technical function, and performed a function.⁹²³

- Summing up the contribution of features with different purposes

In the recent years, EUTM practice has dealt with items of a more complex structure, with different levels of functional effects.⁹²⁴ In cases of combinations of features with different functional purposes, the EUIPO and GC made technical determinations according to the following steps:

- each of the essential elements contributes to achieving a technical result;
- it is not necessary that each element – on a standalone basis – achieves the entirety of the result;

920 C-337/12 to C-340/12, US Patent 6195899B1.

921 C-30/15; HU 170062 filed 30.01.1975, published 31.12.1977; analysis conducted upon BE 887.875.

922 For an opinion emphasizing the variety of shapes of 3D rotatable puzzles: Sylvain Chatry, 'Rubik's Cube: An IP Allegory' (2017) *JIP&P* 12(9) 773–774.

923 Hasselblatt (n 633) paras 120–123, 129–131.

924 *Fhima* (n 877) 683–686 with further examples.

- it is possible that different features achieve different technical results (i.e. partial functions);
- the combination of all elements achieves product’s technical result (i.e. product’s function).

A good example is represented by the case of a ground anchor whose purpose/function was identified as being fixed into the ground so as to ensure the safe fixing of another object (a mast/pole).⁹²⁵ Different elements of the anchor fulfilled separate partial functions: the tubular part took up the object to be grounded; the bottom part enabled fixture into the ground; the cup flange with top holes integrated with plants into soil and stabilized the mast/pole. In addition to the patent documentation, advertisements also touted the functional configuration. The EUIPO considered the whole combination of features as technically functional.

6.2.2.3. *Discussion – a greater focus on assessing technical necessity under EUTM is needed*

The EUTM’s current assessment of technical functionality resembles the US *TrafFix* and *Inwood* guidance, but complemented with the part of *Morton Norwich* that considered advertisements a highlighting the functional effects of a product.⁹²⁶

There are clear advantages to centring the examination on a presumption of functionality upon patent documentation. This works effectively if all examined features are claimed and depicted by earlier disclosures. However, the wider the differences between the tested product and what is claimed/described by patent documentation, the higher the risk of applying an over-inclusive functionality prohibition. This prohibition may then be erroneously extended to items which are not set within the borderlines of the earlier disclosure. The EUTM judiciary should not confine their considerations to the mere graphical representation of the product at issue (or of a highly similar one) in an earlier disclosure. Instead, a thorough analysis of patent claims, especially of the characterizing part, should be conducted. The issue is not that certain features must be present because they perform a function. Significance is borne by how that particular appearance of features contributes to the inventiveness of the patent, and what the level of their necessity is.

In the author’s opinion, the EUTM judiciary has not yet clearly decided to which extent trade mark protection is foreclosed by earlier disclosures. This is because an important part of the assessment constitutes the relationship between the technical and non-technical content (6.3. below). If non-technical

925 BoA R-1363/2014-4, early patent PCT WO 87/02734.

926 Brancusi, ‘Alternative Products ...’ (n 241) 192–194.

features may suffice to escape the functionality bar, this means that there is space for evaluation. For instance, this could be an evaluation that interprets the notion of ‘necessity’ from a competition perspective with regard to similar products on the market (more below). At present, EUTM practice concentrates on the performance and the contribution to achieving technical results by the features of the tested product. The assessment has no time dimension and is restricted to a single object. In the author’s view, the key issue is not to dismiss functionality through the mere existence of alternatives, but to properly understand the real value of the technical input brought by the tested features. It may be that features are technically necessary only for one product, or type of product, but completely unnecessary for other conceivable or real alternatives. An old US case showed how the cylindrical shape of an electric shaver’s cutter was essential for the to-and-fro movement coupled with oscillation, however, it was not essential for the compared product, which operated differently through a reciprocating movement.⁹²⁷ A change in the technical status of features may also occur over time, as technology moves forward and features once functionally significant become non-functional. US case-law also gives the example of thermostat’s rounded protective cover, whose trade mark registration was initially refused for being ‘essential functional in character’ upon a utility patent, but was accepted at a later date, so that in subsequent infringement litigation the court noticed that ‘the passage of time diminishes a utility patent’s significance ... there [were] plenty of other ways to package the necessary controls’.⁹²⁸

The last two examples support the view that the examination of functional attributes is nuanced and depends on the meaning conferred to the term ‘necessity’. If such interpretation also couples with a variable meaning of the term ‘technical’, especially when downgraded to the realm of utilitarian aspects, then any assessment based on the ‘right-to-copy’ (i.e. trade mark protection foreclosed by earlier patents/utility models) may generate false positives. The EUTM is often confronted with ambivalent functionality. In such cases, a far better methodology is to embrace the guidance of the ‘need to copy’ approach, which factors the relevance of substitutable products in a market. Parts 6.3. and 6.4. demonstrate why alternatives cannot be disregarded *de lege lata* even when reading and applying the EUTM guidelines of *Philips*, *Lego*, and subsequent major rulings.

927 *Lektro-Shave v. General Shaver*, 19 F. Supp. 843, 843(D. Conn. 1937), at <https://casetext.com/case/lektro-shave-corporation-v-general-shaver-corp>, discussed by Thurmon (n 267) 268–269.

928 *Eco Manufacturing v. Honeywell International*, 357 F.3d 649, 653 (7th Cir. 2003), <https://casetext.com/case/eco-mfg-llc-v-honeywell-intern-inc>, discussed by Dinwoodie, Janis (n 36) 159, to compare with: *Application of Honeywell, Inc.*, 532 F.2d 180, 182 (C.C.P.A. 1976); *In re Honeywell Inc.*, 8 U.S.P.Q.2d 1600, 1988 WL 252417 (T.T.A.B. 1988).

6.2.3. *What criteria are disregarded? Manufacturing and cost efficiency*

This part discusses the reasons why EUTM jurisprudence has refrained from applying technical functionality to manufacturing processes, as opposed to US case-law. It explores the arguments advanced in the UK doctrine for manufacturing issues to be included within the current EUTM functionality assessment.

6.2.3.1. *A discordance between EUTM and US practice*

Under EUTM, the relevance of the manufacturing process to the technical functionality of a trade mark was denied by the CJEU after a referral from the UK, concerning the registration of the *KitKat* chocolate wafer.⁹²⁹ The UK examiner identified the following as its essential features: (i) a rectangular ‘slab’ shape (seen in proportions of length/width/depth); (ii) the presence, position/angle, and depth of breaking grooves; (iii) the number of grooves determining the number of ‘fingers’. Several features were held functional: the shape resulted from the nature of a moulded chocolate bar (due to optimal provision of moulded chocolate to ensure easy wrapping/transporting/stocking); the grooves were necessary to achieve the technical result of cleanly dividing the bar into detachable ‘fingers’ for consumption; the numbers resulted from the portion size.⁹³⁰ The UK Court accepted the argument of the slab-shape being determined by the nature of some of the designated goods, but held it unnecessary to obtaining a technical result. However, the grooves, obtained through a specific manufacturing process, enabled consumers to separate the wafer ‘fingers’, which looked like a desired technical result.⁹³¹ The referral to the CJEU asked about the possibility of a ‘hybrid’ application of two functional refusal grounds – that is, paras (e)(i) –(ii) which, taken individually, could not fully apply, and about extending the interpretation of technical functionality to also encompass manufacturing processes.⁹³² The CJEU partially followed the AG *Whatelet* opinion and agreed that at least one refusal ground should fully apply to deny registration, whilst a broadened interpretation of the refusal ground was discarded.⁹³³ A shape, or other product characteristics, necessary to achieve a technical result, refers only to the manner in which the goods work, and it does not apply to the manner of manufacturing goods.⁹³⁴ The main arguments related to consumer perception – how features were seen to perform a function – and the fact that if

929 *Nestlé v. Cadbury* [2014] EWCH 16 (Ch) [https://uk.practicallaw.thomsonreuters.com/D-024-2039?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/D-024-2039?transitionType=Default&contextData=(sc.Default)&firstPage=true)

930 *Ibidem*, paras 27–29.

931 *Ibidem*, paras 64–71.

932 *Ibidem*, paras 72–75.

933 C-215/14 *Nestlé v. Cadbury*, Opinion, EU:C:2015:395, paras 71–77.

934 C-215/14 *Nestlé v. Cadbury*, EU:C:2015:604, paras 55–57.

alternative shapes with the same technical result could not dismiss technical functionality, so obtaining the result by different manufacturing processes equally should not matter.⁹³⁵

Before discussing this issue on EUTM grounds, a brief US functionality reminder shows that manufacturing processes have been amongst the factors used to assess functionality, regardless of the chosen test, however, they have rarely sufficed as sole criterion. The definition of functionality adopted by the Restatement of 1938 referred, inter alia, to ‘affect[ing] facility or economy of processing’, while the Restatement of 1995 indicated ‘benefits in the manufacturing’ (3.2.4.). This translated into the multi-factor test introduced by *Morton Norwich*, which verified whether the sign resulted from a ‘simple or cheap method of manufacture’, and *Inwood*’s second prong, which spoke about ‘affect[ing] the cost or quality’ of an article (6.1.2.). However, manufacturing efficiency mostly supported a finding of functionality through stronger arguments that related to the impact on the product’s use and purpose (utility functionality) and/or a conflict with (prior) technical rights. For instance, *TrafFix* noted that the dual-spring design was cheaper than a device with three springs, and had operational advantages vis-à-vis a single spring connection (it prevented twisting/canting of the frame around a vertical axis), but the conclusive role was played by early disclosure of utility patents.⁹³⁶ Even when the relationship between features and manufacturing processes constituted the core issue of earlier technical rights, there were additional policy matters, that is, the right to copy, that ruled out trade mark protection. For instance, in the case *In Re Shakespeare*, registration was refused for spiral markings on fishing rods that were the ‘necessary result’ of lapsed patented methods for making rods, although the spirals were not directly useful for operating the rods – trade mark protection was denied because it would have restrained the ability to exercise patent teachings.⁹³⁷

6.2.3.2. *The pros and cons of applying manufacturing functionality de lege lata under EUTM*

Amongst the general scholarly acceptance of CJEU *KitKat* ruling,⁹³⁸ one critical voice has advocated for transposing the guidance of US functionality practice such that the interpretation of ‘technical result’ includes a sign that represents ‘the necessary result’ of a manufacturing process or is (closely)

935 This is a point over which the CJEU disagreed with the AG’s inferral of the relevance of manufacturing techniques from the *Philips* words: ‘[t]o speak of a technical solution adopted in order to incorporate a function into a product is clearly to paraphrase “manufacturing process”’, Opinion, para 77.

936 532 U.S. 23 (2001) 31–32.

937 *In re Shakespeare Co.*, 289 F.2d 506, 508, 48 CCPA 969 (1961), discussed by Thurmon (n 267) 277.

938 Derclaye (n 209) 642.

‘associated’ with specific manufacturing efficiencies.⁹³⁹ The approach would teleologically match ‘the textual limits’ of the EUTM functionality provision, because it is not clear whether EUTM was intended to encompass or preclude such cases. The author emphasizes the rationale of preventing the monopolization of a specific bundle of product characteristics via trade mark law, by considering the need of competitors to freely adopt a technical solution, here a particular manufacturing method.⁹⁴⁰

Literal interpretation of the EUTM terms of (being) ‘necessary to achieve a technical result’ may cover features determined by a manufacturing process, if these features per se also perform a function. For example, the strengthening capability of an element, essential for the operation of a product, may result from a specific manufacturing technology. However, if the tested features do not achieve a technical result, it would take an indirect line of reasoning to argue that features that constitute an ‘end/by-product’ of a manufacturing process or simply contribute to the execution of such processes are also ‘necessary’ to achieve a technical result, merely because they reveal parts of the technical teaching of the patented/unpatented manufacturing process. In the author’s opinion, several concerns speak against applying such a broadened interpretation *de lege lata*.

The critical issue is how ‘close’ the connection between the examined features and the manufacturing process should be. Chronopoulos advanced some criteria: the product design is ‘closely associated’ with the manufacturing process; the utilitarian purpose⁹⁴¹ of the shape may be ‘solely’ obtained through a specific manufacturing process; the feature is a ‘natural by-product’ of the manufacturing process; the superiority of the producing method over (a limited group of) alternatives.⁹⁴²

From a patent law perspective, a patent for a process covers products ‘directly obtained’ by this process.⁹⁴³ It is beyond the scope of this book to investigate how the hypothetical category of products closely associated/resulting from that process would fit the patent law requirement of being ‘directly obtained’ (by that process). However, even during the exclusivity period, a patent does not cover identical/similar products if there is proof (from the defendant’s side) that they were obtained by another process – in other words, by a different sequence of steps.⁹⁴⁴ This means that the existence of alternative

939 Apostolos Chronopoulos, ‘De Jure Functionality of Shapes Driven by Technical Considerations in Manufacturing Methods’ (2017) IPQ 286, 292–299.

940 *Ibidem*, 294–296.

941 However, this argument looks into how features alone perform a function.

942 Chronopoulos (n 939) 290, 294, 302 (fn 123) 296, accordingly.

943 See Art. 64(2) EPC.

944 Visser (n 804) 144 referring to reversal of the burden of proof set forth in art. 55(1) UPC ‘if the subject-matter of a patent is a process for obtaining a new product, the identical product ... shall, in the absence of proof to the contrary, be deemed to have been obtained by the patented process’.

processes matters for the avoidance of patent infringement. It would be reasonable to assume that alternative processes should analogically matter when assessing the functionality of a sign. The only argument to dismiss alternatives upfront is to refer to the principle of free access to anything that has fallen into the public domain (here by executing a lapsed patent on a production method).

A new concern emerges here. What should be the legal status of features, and how should they be assessed, when they result from a process protected by trade secrets, or an unpatented process? There is no way to clearly quantify how the addition of trade mark protection to a process covered by trade secrets would negatively impede competitors' capability to use that process through reverse-engineering or independent discovery.⁹⁴⁵ It is also difficult to foresee how much it would cost competitors to copy around the manufacturing process and the product features resulting from it. The argument that competitors should have free choice of unpatented technical solutions seems acceptable in relation to disclosed and lapsed patented processes and products directly resulting therefrom. As to processes that are unpatented or covered by trade secrets, some additional, measurable market proofs – in terms of economic advantages – are required to justify the competitive 'need to copy' the manufacturing process and resulting features. It is difficult to delineate between the situation of features that are closely connected with that process – considered functional and left without trade mark protection – and alternative features resulting from alternative processes, which could perhaps be trademarked.

Certainly, there are cases in which establishing how a manufacturing process conditions the appearance of the correlated product features is straightforward. The US exemplary case of 'Shredded Wheat' dealt with pillow-shaped cereals that resulted from a lapsed patented process with a patented machine designed to produce cereals uniquely in that form.⁹⁴⁶ Another well-known example concerned the attempt to register the Harley-Davidson engine 'pop-pop' sound, which resulted from the operation of an engine of a specific configuration (two V-Twin cylinders with a single crankpin).⁹⁴⁷ Most cases are less obvious and it seems difficult for the EUTM judiciary to implement a new set of criteria in order to deal with another specific type of functionality (i.e. manufacturing processes).

Another thorny issue concerns correct appreciation of manufacturing efficiencies. This issue ties into the superiority of one production method over the others. The US case of a circular beach towel, subject to both a utility and design patent, was found to provide 'the most rotational space without waste' and required less material, which made it cheaper to produce than

945 Bone (n 268) 226–227.

946 *Kellogg v. National Biscuit* 305 U.S. 111 (1938), discussed by Gambino, Bartow (n 248) 6–7.

947 Carvalho (n 80) paras 15.59–15.60.

alternatively-shaped towels – all these circumstances affected ‘the quality of the device’.⁹⁴⁸ However, the court did not engage in analysing the opposite argument that ‘cutting and hemming expenses ma[d]e [circular towels] costlier’, because the material saved from the cut-off corners was unusable, which one commentator viewed as clear ‘economic disadvantage’.⁹⁴⁹ The court ultimately focused on the functional advantages resulting from use and denied trade mark protection because of its ‘power’ to ‘permanently stifle product development’. In another case, *Schwinn Bicycle*, the sign represented a knurled marking on the inner part of the rim which was necessary to mask the welding of tubular rim parts together – this was the simplest and cheapest manufacturing process as compared to the more expensive grinding and polishing of the weld.⁹⁵⁰ The court argued that trade mark protection should not grant a ‘perpetual monopoly in an unpatented feature’ so that competitors and consumers could benefit from a technology that had reduced the costs of bicycles/bicycle rims. However, in another bicycle case concerning a ribbon-shaped rack, the court dismissed arguments, considering it to be the most economical size/weight of pipes and corresponding bends, and required additional examination of alternative products; the court identified the relevant product category as ‘bicycle rack constructions’, as compared to the narrower one of ‘one-piece undulating’ bicycle racks.⁹⁵¹

These examples show that the principle of enabling free access/choice over product features (un)covered by technical rights does not suffice to justify the technical functionality of a manufacturing process. An additional requirement should explore why a particular technology is superior to others. Similarly, proper evaluation of efficiencies/economy of manufacturing should not be an abstract task. It is an exercise of evaluating alternatives within a given category of manufacturing processes and products. However, the EUTM judiciary has persistently refrained from analysing substitutes for functionality purposes. Applying an ex cathedra evaluation of manufacturing efficiencies instead risks diverging from what has market significance and can lead to erroneous results.

The latter concern, an ‘over-inclusive’ interpretation⁹⁵² of the prohibition pertaining to manufacturing functionality, may be particularly accentuated in the case of product features at the borderline between utility and aesthetics, such as colours. An extreme approach would see any addition of colour as functional, because it triggers additional manufacturing costs for painting, which raises the price of the final products. Some moderation seems necessary. In case of eye-appealing features, unlike those performing utilitarian/technical purposes, it is difficult to discern the value of a manufacturing process,

948 *Jay Franco v. Franek*, 615 F.3d 855, 858 (7th Cir. 2010) 859.

949 Musker (n 901) 56.

950 *Schwinn Bicycle Co. v. Murray Ohio Manufacturing Co.*, 339 F. Supp. 973 (M.D. Tenn. 1971) 980–981, discussed by Dinwoodie, Janis (n 36) 120.

951 *Brandir Intern. v. Cascade Pac. Lumber*, 834 F.2d 1142, 1148 (2d Cir. 1987).

952 Chronopoulos (n 939) 299.

especially if measured through consumers' eyes, as the CJEU held in *KitKat*. Certainly, much depends on how consumers have previously been encouraged – by branding strategies – to connect with the product and understand its embedded functionality. It may be that new product features, such as sound, perfumes, tactile, and taste sensations result from manufacturing processes which ensure strong competitive advantages that consumers are aware of. However, this would still necessitate looking into alternatives in order to assess manufacturing efficiencies and the overall cost/quality ratio. Until a more flexible functionality assessment gains ground in the EUTM, these kinds of new product properties may become functionally relevant (5.4.) only because of their technical/utilitarian purpose, or because of their standardized status resulting from the 'nature of goods' or as bringing substantial value to goods.

For these reasons, it is the author's view that, ideally, introducing a manufacturing factor into the EUTM functionality assessment would require explicit legislative intervention.

6.3. Weighing among functional and non-functional product features

As indicated in Chapter 5.1., the final step of assessing that a sign consists 'exclusively' of features necessary to obtain a technical result represents the weighing of technically determined features against non-technical ones. *Lego* taught that a major non-functional element, 'such as decorative or imaginative' that 'plays an important role', could dismiss the functionality prohibition.⁹⁵³ Doubts have persisted over the meaning of a 'non-functional' element, and its relevance within the overall combination of features. This part deals with these issues.

One commentator on *Philips* considered that the very variation of appearance may prove arbitrariness.⁹⁵⁴ This view apparently discounts the possibility that several modified forms may also be entirely functional. An example is found in the EU design case *Doceram*, which dealt with 17 registered welding centring pins fitting a limited number of weld nuts.⁹⁵⁵ The requirement of non-functional content should, thus, translate into quantitatively and qualitatively relevant features. *Lego* seemingly interpreted the term 'playing an important role' in the context of 'essential' features (5.3.1.2.). The role of such features may primarily refer to their visual/sensory significance, and thus to consumer perception. It can also mean their purpose for how the product is handled/used, or for enhancing efficiencies. Such a view would link non-functional features with parts of the product embedding functionality. A fea-

953 C-48/09 *Lego*, para 72.

954 Natalie Schöber, 'The Function of a Shape as an Absolute Ground for Refusal' (2013) IIC 35, 45.

955 C-395/16 *Doceram* – see Tobias Endrich 'Pinning Down Functionality in EU Design Law' (2019) 14(2) JIPL&P, 156–167.

ture may first capture attention because of its functional purpose, and next because of its particular configuration (striking/unusual appearance, increased visibility, etc.). However, the EUTM judiciary has chosen an approach that requires clear separation between functional and non-functional layers, which has caused practical difficulties (6.3.3.).

Lego also read the importance of essential *non-functional* features as a proof that ‘competitor undertakings easily have access to *alternative shapes* with *equivalent functionality*, so that there is no risk that the availability of the technical solution will be impaired. That solution may, in that case, be incorporated without difficulty by the competitors of the mark’s proprietor in shapes which do not have the same non-functional element as that contained in the proprietor’s shape and which are therefore neither identical nor similar to that shape’ (LB).⁹⁵⁶

In the author’s opinion, this is a very important part of the *Lego* guidance, which has frequently gone unnoticed in practice. It lays down the rule that the refusal ground does not apply if there are alternatives, which *Lego* defined as products with a different appearance, but with identical (perhaps similar) functionality. Before going further into what ‘non-functional’ means, the issue of functional equivalence requires some clarification.

6.3.1. *A sui generis notion of equivalence for trade mark purposes*

For the sake of clarification, the discussion on equivalence in the context of functional trade marks does not follow the doctrine of equivalents of patent law. The most important reason for refraining from an analogical application is that equivalency in patent law – irrespective of the tests applied by national administrative/judiciary bodies – is measured through the knowledge of a person skilled in the art and upon the (purposive v. literal) interpretation of the claims.⁹⁵⁷ As to the EUTM, even upon earlier law, a description has never carried the same legal significance as patent claims do for defining the scope of protection. Additionally, the legal fiction of the ‘skilled person’ (Germ. ‘Fachmann’) has never been a part of the EUTM system. For trade mark functionality purposes, a different, *sui generis*, understanding of equivalence is needed – which the following remarks try to map.

Since *Philips*, EUTM jurisprudence has avoided delving into matters of equivalence. The AG Ruiz-Jarabo Colomer warned against a situation in which a court needed to rule upon ‘the equivalence of performance of different technical processes’ – inquiry into alternative shapes was rejected because it would

956 C-48/09 *Lego* para 72; Opinion *Simba*, C-30/15P, para 111.

957 Dutfield, Suthersanen (n 359) 179–186; Bently et al. (n 24) 582–586. As to claims interpretation for infringement purposes, Matthew Fisher, *Fundamentals of Patent Law: Interpretation and Scope of Protection* (Hart 2007).

generate the risk of a trade mark monopoly encroaching upon patents.⁹⁵⁸ Free choice over technical solutions that have fallen into the public domain has been frequently articulated.⁹⁵⁹ This public policy sounds clearly in case of trade marks entirely covered by earlier technical rights (patents or utility models). Issues arise when trade marks do not incorporate the exact pieces of technical information contained by earlier rights. If there is an area of ‘difference’ between prior technical art and the subject-matter of a trade mark, then the situation of products with alternative features and similar functionality, thus of equivalence, unavoidably emerges.

When *Philips* argued against limiting competitors in ‘supplying a product incorporating such a function’ and their freedom to choose the desired ‘technical solution’,⁹⁶⁰ it was unclear whether the argument referred to the product function (i.e. result) or to partial functions performed by individual features (i.e. solutions). Assuming that a product has one function (F) which it is possible to obtain through features A and B, as well as by features A/A’/A’’, B/B’/B’’ and C, then *Philips* could be read as follows:

- feature C is optional (not necessary), as long as A and B are sufficient to achieve the function F;
- functionally important (and necessary) are features A or modified A’/A’’ (elements of the set A), together with features B or modified B’/B’’ (elements of the set B);
- the ambit of relevant ‘technical solutions’ encompasses any combination of features from the sets A and B.

Similar to *Philips*, *Lego* acknowledged that ‘there may be alternative shapes, with other dimensions or another design, capable of achieving the same technical result’, which cannot dismiss the refusal ground.⁹⁶¹ Additionally, the prohibition applies if products with a different appearance do not belong to the sphere of ‘technically preferable solutions’/‘real alternatives’.⁹⁶² However, *Lego* also held that non-functional elements mattered. So, products incorporating non-functional features, obviously having a different appearance and embodying equivalent functionality, should see functionality dismissed. Summing up these arguments, in order to clearly delineate between what lies within and outside the scope of prohibition, *the relevant differences between products must relate to functional effects and not solely to appearance* (LB). The rule should be that alternative products that fall within the realm of technically preferable solutions, and that are functionally equivalent should prove non-functionality.

958 C-299/99 Opinion, EU:C:2001:52, paras 39–40.

959 Quaadvlieg (n 25) 104, 108.

960 C-299/99, para 79.

961 C-48/09, para 59.

962 Ibidem, 60.

Does the equivalence implied by *Lego* refer to the product's function or to solution(s), including partial functions performed by individual features?

Let's take the example of fixing two elements together. Some possible options include nailing, driving a screw, fixing a bolt with a nut, or even using a two-sided adhesive pad. At a general level, these are all solutions to the technical function of 'fixing'. However, different circumstances of use and properties of material render certain solutions feasible and others unsuitable. For instance, a vibration-resistant mounting in a motor boat can be achieved with a screw, but not with a nail. For joining/fixing two pieces of furniture, both nail and screw will do. For temporarily attaching items to the human body, only adhesive pads are suitable. The extent of equivalence between different solutions depends on the level of specification of the function (technical result). It is important to refrain from identifying the technical function at too general a level (e.g. a fixing). Ensuring permanent fixing for furniture differs from ensuring vibration-safe fixing in a motor-boat. Secondary functions may require specific product properties: a transdermal patch is fixed to skin to ensure medicine absorption. *The equivalence should be established amongst solutions to a given function. It is the solution that determines the specific appearance and defines the relevant product* (LB).

But even for a permanent furniture fixing, such as connecting a table leg to the table top, the essential element is providing the contact (between the leg to the top, and the leg to floor), whilst the kind of features, and the shape/configuration such contact requires, remain variable. Similarly, using the example of the ground anchor from 6.2.2.1., the stabilizing function of the cup flange – via integrating into the soil – needed an aperture to enable the plants to grow through it. However, what the aperture consists of, that is, a series of holes, a net/mesh, and what kind of shape/configuration it may take, these are all different possibilities. Functional equivalence depends on whether that partial function is broadly defined as 'stabilizing the cup flange' via various means, or is specified with a higher degree of precision as 'stabilizing the cup flange via a specific means of enabling the integration of the flange into the soil'.

An interesting example of how equivalents may be used to solve technical functionality cases is found in the recent Swiss *Nespresso* ruling, in which the court adopted a nuanced approach to the issue of alternative products.⁹⁶³ Equivalence was defined with respect to parameters of function and appearance, but also by considering additional economic parameters, such as the costs involved at all stages from manufacturing to sales. Different alternative shapes were conceivable for coffee capsules/pods as compared to the Nespresso capsule, and some of these alternatives were already on the market; however, all had clear disadvantages in terms of function, manufacturing costs,

963 For earlier Swiss practice, see Decision (n 913) 6.2 and 6.5.

and other ergonomic effects.⁹⁶⁴ From the functional side, the category of alternatives was confined to capsules ensuring compatibility with the Nespresso machine while being hermetically sealed. The court excluded upfront the group of ‘pre-perforated’ shapes, not only because they modified the sequence of stages of the extraction process, but because they less effectively preserved the coffee aroma, entailing additional costs (i.e. being individually packaged in a watertight bag, requiring a larger box to be displayed for sale).⁹⁶⁵ As to the category of hermetically sealed capsules, the court not only examined the contributions of the specific aspects of shape and dimensions (of different variants) to the way the extraction process operated, but also the advantages of using aluminium as compared to softer materials (such as plastic).⁹⁶⁶ Consideration of the cost parameter also tied into how the Swiss court understood the competitive necessity for the Nespresso capsule. As indicated in 6.2.2.2., the court focused on placing competitors ‘on equal footing’, which meant that alternatives constituting a ‘less efficient solution’, that entailed ‘any disadvantages to competitors’, could not dismiss the functionality prohibition. In addition, the court required that the appearance of alternatives be different (i.e. comprising ‘sufficiently distinctive features’) so that the consumer could clearly distinguish them from the Nespresso capsule (different surveys and expert opinions were submitted).⁹⁶⁷

It may be stated that applying the terms of ‘any’ (disadvantages), and ‘less’ efficient (solution), involves making a subjective judgment. The outcome for the coffee capsules was determined by how various market factors were balanced (e.g. costs of manufacturing, costs of packaging/displaying), but also by how the functional effects were initially described. The alternatives needed to be compatible with the Nespresso machine, to ensure the proper functioning of the coffee extraction process following the perforation step (they were hermetically sealed), but also to ensure/preserve the quality of the coffee aroma. The addition of the latter functional effect clearly restricted the category of relevant alternatives. Another point of subjective assessment was the evaluation of differences in appearance. In the author’s opinion, the requirement for a distinguishable appearance may erroneously link an examination against the functionality prohibition with that of distinctiveness. As argued in Chapter 5 and disused below in 6.3.2. for the purpose of technical functionality, the examination of ‘non-functional’ elements and the role they play in the overall appearance (compared to the functional elements) acts on a different basis than an assessment of distinctive character. The *Nespresso* ruling involves several points of argument that will require further clarification in practice.

964 Decision (n 913) *ibidem*, 447–455.

965 *Ibidem*, 6.7.3, 447.

966 Plastic material was found to be cheaper than aluminium (sic!) and facilitated the insertion of reliefs and other crenulations to differentiate the appearance of capsules, however, the plastic worse preserved the coffee aroma and protected it from air and humidity, *ibidem*, 6.7.4, 452.

967 Decision, *ibidem*, 6.7.4, 452–455.

The significance of the Swiss *Nespresso* case lies in the confirmation that the way alternative products may or may not affect the assessment of functionality is dependent on an assessment of equivalence. The key point is that equivalence, as pertaining to function/functional effects, should be defined amongst solutions, as boundaries around what is equivalent. It is also correlated to the *level of precision/specification of the function(s)* at issue (LB). Equivalent solutions mean products that embody these solutions but have a different appearance – that is, non-identical. It is against these solutions that functional prohibitions should be tested.

There is a group of similar products which cannot dismiss the application of the functionality prohibition. However, as *Lego* taught on the matter of ‘essential non-functional’ features, there is also a category of products with equivalent functionality – seemingly one that is also preferable technically – that can constitute conclusive proof for rejecting the functionality prohibition. So, there is a matter of degree between what is and what is not technically preferable or – to put it broadly – between what are defined as functional equivalents. In the author’s opinion, the outcome of the delineation should depend on whether the equivalent products at issue represent economic substitutes or not. In order to identify such economic substitutes, additional factors are required for the functionality assessment, in accordance with a market-competition approach (see 6.4.).

6.3.2. *What does EUTM jurisprudence understand by the term ‘non-functional’?*

Before delving into how non-functional, essential, features may tip the scales in favour of the registration of a trade mark that would otherwise be rejected as functional, it is instructive to explore the diverse understanding of the term ‘non-functional’ displayed to date by the EUIPO/GC.

The red colour of the *Lego* brick was held to be a minor non-functional element.⁹⁶⁸ Later on, the combination of black and blue/orange was considered unimportant aesthetically, and even functional, as it served to contrast between the concentric circles of layers of a sealing module.⁹⁶⁹ For a transdermal patch, the beige colour was a commonly used standard, and together with the circular configuration of knobs (corresponding to the patch’s round shape) did not amount to essential non-functional elements.⁹⁷⁰ Similarly, the grey shadow (on a CAD drawing), applied to the bottom and top of a lighter, was found to be unimportant, together with the word element ‘clipper’, due to the minuscule size and positioning (i.e. covering one-tenth of the front surface).⁹⁷¹ For

968 C-48/09, para 73.

969 T-261/18 *Roxtec*, para 71.

970 T-44/16 *Novartis*, paras 89, 100.

971 T-580/15 *Flamagas*, para 37.

a motorized rope-winch, it was suggested that the inscription of a name as a ‘major non-functional’ element would have sufficed.⁹⁷² However, the crocodile logo did matter for the three-dimensional representation of *Crocs* shoes.⁹⁷³ The specific arrangement of dents of *Yoshida* knife did not have ‘sufficiently significant ornamental character’.⁹⁷⁴ In the case of a French knife, the allegedly slender form of the rounded handle was neglected as raising subjective evaluations of secondary importance.⁹⁷⁵ Similarly, the fact that two holes of a coat hanger might look like ‘the eyes of robots’ was dismissed as being subjective and imaginative.⁹⁷⁶ By contrast, the fir-tree silhouette of an air-freshener had a ‘decorative, evocative character’.⁹⁷⁷ In cases of highly technical objects (e.g. a formwork coupler), when simple visual analysis could not indicate the type of product, the court merely noticed that it lacked a ‘fanciful or ornamental character’.⁹⁷⁸

Recently the jurisprudence has articulated a rule of so-called ‘autonomy’ of the aesthetic content. It should constitute a separate, additional, element that cannot perform a technical function – such an element was lacking from a lamp base with a pivot, held to be too simplistic.⁹⁷⁹ Similarly, the ground anchor, resulting from earlier patent documentation, displayed no elements without a technical function, such as colours or words.⁹⁸⁰

An important ruling concerned *Morleys* knife with its overall stylized ‘dolphin’ appearance, disclosed by an earlier patent for a floor covering cutter.⁹⁸¹ The GC invalidated the trade mark, stating that even when the *sum* of ‘exclusively functional elements’ may contribute to create an ‘ornamental image’, it cannot dismiss the functionality prohibition (LB). Apart from identifying the essential characteristics⁹⁸² the Court listed eight elements that were allegedly ornamental/arbitrary, yet concluded that only two (the convex tail fin and front aperture i.e. ‘dolphin’s eye’) fulfilled no technical function, being also non-essential.⁹⁸³ With a closer look into the patent documentation, the lateral recess on both sides was not described by the patent as improving grip, unless it could be stated that anything placed on a handle carries a grip function. The covered knurled screw (the ‘chin’) was partially covered by patent, but the

972 R-1658/2014-1, 33.

973 R-3021/2014-5 discussed by Gangjee (n 629) 86.

974 C421/15 P *Yoshida* (T331/10 RENV and T416/10 RENV) 24.

975 R 631/2011-1, 31.

976 R 757/2019-5, 27–28.

977 R 1283/2013-4, 46.

978 T-656/14 *Peri*, para 33.

979 T-752/18 *Tecnodidacttica*, paras 41–43.

980 R-1363/2014-4, 42.

981 T-164/11 *Reddig v. Morleys*, EU:T:2012:443; analysis upon US 4,662,070.

982 Curved handle with a small angle between blade and longitudinal axis of shell grip; middle section with a rounded outer cross-section incorporating a knurled screw; tapered rear end, T-164/11, para 28.

983 T-164/11 *Reddig*, paras 43–44.

characteristic of ensuring better grip via blocking the user's index finger did not stem from the patent teaching. As to the 'fish-mouth' cut at a certain angle corresponding to the mounting angle of the blade, the GC's assumptions were correct, but there was no specific analysis of that particular shape and function (such as whether that technical feature brought anything new as compared to known prior art solutions). Summing up, while several of the knife's features did not prove to have direct contribution to the technical solution covered by the patent, they were easily labelled as 'functional' in the GC's subjective assessment, and a query remains over whether combining these four/five non-strictly functional elements would have significantly to change the outcome.

6.3.3. *Critical discussion – an excess of subjectivity in the assessment*

The aforementioned examples reveal the arbitrary nature of identifying and assessing the significance of non-technical ('arbitrary') features under the EUTM. The judicial bodies have difficulty formulating consistent rules of thumb, therefore the outcomes are unpredictable.⁹⁸⁴ What prompts prudence is that the assessment of non-functional/functional content by the GC is considered a factual finding falling outside the regular frame of appeal to the CJEU. As the GC has exclusive jurisdiction to appraise relevant facts and assess evidence, only rare cases of distortion of evidence may constitute points of law subject to appeal.⁹⁸⁵ This did not occur in any of the rulings mentioned in 6.3.2., which stresses the need for clear and objective criteria of examination to foster uniform and sound line of jurisprudence.

The EUIPO/GC practice to date suggests that words, graphics, and colours are weighted more strongly than shape/configuration. The introduction of 'another' characteristic of goods raises queries of how different types of product properties should be tested. Under old functionality prohibitions it was assumed that words meant more than decorative elements, because they enhanced the registrability of composite signs – consumers would be guided first by a word, even one of trivial size and positioning.⁹⁸⁶ Under the new functionality prohibitions, there should be ontological equality between any features that may qualify as non-functional. Branding-educated consumers have a sensitized perception of various non-traditional signs. Some queries result therefrom: when may a non-functional feature be considered important/essential, and how many of such features are sufficient to dismiss the functionality prohibition?

984 Vlotina Liakatou, Spyros Maniatis, 'Lego-building a European concept of functionality' (2010) EIPR 32(12) 653, 656.

985 Cf. Art. 256(1) TFUE in rel. with Art. 58 of the Statute of the CJEU (https://curia.europa.eu/jcms/upload/docs/application/pdf/2016-08/tra-doc-en-div-c-0000-2016-201606984-05_00.pdf). See C482/15 P *Westermann Lernspielverlage v. EUIPO*, EU:C:2016:805, para 35; C281/10 P *PepsiCo v. Grupo Promer Mon Graphic*, EU:C:2011:679, paras 78–79.

986 Kur, in Kur, Senfleben (n 24) para 4.188.

The EUIPO and GC have usually considered products with technical features related to patent/utility models as lacking non-functional elements. Facing such a simplistic attitude, one may wonder whether the input of words, colours, other imaginative elements would have really mattered in those cases? The critical point involves features loosely related to patent documentation that are broadly understood as ‘functional’; as pointed out in 6.2.2.3. EUTM case-law has paid little attention to what earlier patent disclosures effectively covered and whether the features at issue meaningfully contributed vis-à-vis prior art. Things change over time, thus today’s functional features may tomorrow lose their value/attractiveness in the eyes of competitors, whilst possibly even becoming ‘arbitrary’. It may be stated that such features should be included in the overall appreciation of ‘non-functional’ content, especially if the collection/sum of features is seen to be ornamental/capricious/arbitrary. As shown in 6.1.3.2. and 6.1.3.3., the broad understanding of functional utility affects products with utilitarian advantages that are stripped of unnecessary ornamentality. Features serving basic purposes – for a knife: a handle to hold and a blade for cutting – when balanced against the remaining elements of a product may result in an ambiguous evaluation as to their functional/non-functional significance.

EUTM case-law has not yet clarified when modifying a basic shape vis-à-vis a regular/standard model – assuming that such one exists – becomes an important non-functional effect. Subjective assessments persist. In the eyes of the EUIPO/GC, such alterations sufficed for an air-freshener, but not in the cases of a knife, lamp-base, or spoon-shaped packaging. If additional categories of features come into play, such as wording, colour, texture, sound, and so on, there is no one-size-fits-all answer to the question of when ‘non-functional’ content becomes significant enough to overcome the functionality bar. The assessment of a combination of non-technical/functional features thus seems to be a matter of balance and degree.

Some voices have suggested that a feature matching the non-functionality requirement should be in itself distinctive.⁹⁸⁷ Such a view seemingly collides with the principle of assessing signs as a whole, which the EUIPO/GC have consistently applied, both with regards to functionality and distinctiveness. It would be also a double-edged condition. From one side, the combination of various – let’s say, more neutral elements – risks being discriminated against, although such elements may jointly gather non-functional significance (e.g. graphics and colour). On the other side, the dismissal of technical functionality may be facilitated by the mere presence of a logo/words which consumers are easily aware of. This would fuel branding strategies of boosting the value of weaker signs by means of simultaneous use of stronger trade marks from one’s portfolio. Using the example of the *Crocs* crocodile logo, does this mean that,

987 Hasselblatt (n 633) paras 130, 133 referring Günther Eisenführ, Detlef Schennen, *Unionsmarkenverordnung* (5th ed. 2017 Cologne) paras 227 ff.

analogically, adding words (and/or numbers) on a pill, a medical device, or a toy would enhance the chances of avoiding functionality? Or, is the use of valuable logotypes relevant only for certain type of goods (e.g. fashion, furniture, jewellery), towards which consumers are educated to appreciate branding? It could be also argued that meaningful logos interfere with aesthetic functionality with respect to characteristics giving substantial value to goods (Chapter 8). It is here that particular attention should be paid to guarding against the over-weighting of wording/logos in order to rebuff technical functionality.

The author raises similar concerns towards the EUIPO/GC's approach, where non-functional elements cannot relate in any way to parts of a product that perform functions. This view erroneously aims to demarcate non-functional layers from functional ones, which is unrealistic in current market realia, possibly even harmful. It neglects the modern design concept of making any kind of product attractive to consumers. It affects combinations of features, especially 'hybrid signs'.⁹⁸⁸ It misinterprets the value of mixing function and non-function, into creating elements with several purposes. It encourages adding to products' unnecessary ornamentation. Even *TrafFix*, the US's most restrictive judgment, envisaged hypothetical arbitrary additions directly related to those device components that precisely performed a technical function, that is, 'arbitrary curves in the legs or an ornamental pattern painted on the springs'.⁹⁸⁹ Another US school of thought is that dividing combinations of features into 'primarily functional' versus 'primarily non-functional' was flexible enough to accept trade mark protection for combined features, even if individual ones displayed utilitarian advantages.⁹⁹⁰

A fortiori, it is difficult to support the GC's judgment in *Reddig*⁹⁹¹ which neglected any non-functionality that may stem from the interplay of individual features. A look back at the *Philips* UK litigation retraces an interesting argument of the Court of Appeal: 'the court had to consider the mark as a whole. ... A trade mark was not treated by the public as a mere assembly of component parts'.⁹⁹² The overall appearance of a composite sign clearly matters for consumer perception and for the distinctiveness standard. However, even in a functionality examination, consumer perception is factored at the stage of establishing the 'essential' feature(s) (5.3.1. and 5.4.). If a sign's overall

988 Schöber (n 954) 39, 44–45.

989 532 US 23 (2001) 34. In the case of a thermostat's appearance, which had received varied functional assessments over the years, the court noticed that '[t]he hood ornament on a Mercedes, or the four linked rings on an Audi's grille, would exemplify "an ornamental, incidental, or arbitrary aspect of the device" that could survive as a trademark even if they once had been included within a patented part of the auto', cf. *Eco v. Honeywell*, 357 F.3d 649, 653 (7th Cir. 2003).

990 Horton (n 108) 315, referring to *Vaughan Manufacturing v. Brikam International* 814 F.2d 346 (7th Cir. 1987) – decorative features of a portable picnic table.

991 T-164/11.

992 Cornish et al. (n 24) 730 quoting at fn. 286 *Philips v. Remington*, 2006 FSR 537, 62.

appearance impacts consumers' perception, appearing 'capricious', 'striking', 'ornamental', or 'evocative' (e.g. the dolphin-look of the knife), it seems unreasonable to discard its value from the functionality assessment, especially if the individual features do not clearly contribute to the technical results upon a careful reading of earlier patent teachings. In the US practice, many combinations of functional elements have been protected as a whole.⁹⁹³

The bottom line of these remarks is that if some features are functionally determined, but others not, and/or their sum reveals arbitrary effects, then some additional criteria should decide for/against refusing trade mark protection. In the author's opinion the key issue is not the possibility of modifying the appearance, but the kind and extent of functionality that may be incorporated by products with variable appearance. For these reasons, looking into the equivalence and extent of alternative products would show whether the market needs that collection of product features to be freely available without trade mark protection. Or just the opposite, are there other products of different appearance with equivalent functionality that can ensure the necessary level of competition through substitution (more below)?

6.3.4. *Fixing an algorithm – Part I*

If the functionality assessment were to consider the significance of 'alternatives', this would require conducting a hypothetical analysis based on the comparison of the product at issue with a group of products of close appearance and functionality. Few caveats are needed at this point: this part of the examination analyses the set of features granularly, in a manner similar to patent or design methodology. It does not take into account external, economic factors related to branding, marketing, pricing strategies, and so on, that may affect product substitutability on the market, as discussed in Chapter 4. These factors will be included at a later stage of the assessment (6.4.3.). In addition, as the Swiss ruling concerning the Nespresso capsule showed (above 6.3.1.), establishing how similar or different the appearance of product alternatives is will always involve a judgment of degree, rendered on a case-by-case basis. This makes it impossible to pre-define as a general matter how much the appearance of a product must differ in order to include it in the group of alternatives.

993 *Tools USA & Equip. v. Champ Frame Straightening Equip.*, 87 F.3d 654, 658, 39 U.S.P.Q.2d (BNA) 1355, 1358 (4th Cir. 1996) ('functional elements that are separately unprotectable can be protected together as part of a trade dress'); *Hartford House v. Hallmark Cards*, 846 F.2d 1268, 1272, 6 U.S.P.Q.2d (BNA) 2038, 2041 (10th Cir.), cert. denied, 488 U.S. 908 (1988) ('[A] trade dress may be a composite of several features in a certain arrangement or combination which produces an overall distinctive appearance. In this context, the question is whether the combination of features comprising the trade dress is functional'); *AmBrit, v. Kraft*, 812 F.2d at 1538, 1 U.S.P.Q.2d (BNA) at 1166 ('that individual elements of packaging are functional does not, however, render the package as a whole unprotectable').

Establishing the group of relevant alternatives should begin with looking into the construction/structure of the product corresponding to the sign at issue. Let's assume it is defined by a set of A+B+C+D+E features, where features D and E are non-functional (understood as different from functional features or unconnected to functional parts). Modifications should be considered in relation to each feature, taken individually or jointly with other feature(s), which will result in a variety of permutations. Such alternatives may be grouped in three major categories, as follows:

- products with unchanged functional features A, B, C, and changed or omitted non-functional features D or E;
- products with modified or omitted functional features A or B or C, whilst keeping features D and E unchanged;
- products with modified or omitted functional features A or B or C, and changed or omitted non-functional features D or E.

The above classification solely focuses on changing the appearance of product features, without considering the impact on the product's functionality.

At the second stage, the interpretation of alternatives should take into account *Lego's* guidance on equivalence, as discussed in 6.3.1. In other words, apart from considering modification of the appearance of functional/non-functional features, variation in functionality should be equally assessed and quantified. Certainly, there is space for many permutations. Depending on the structural complexity of the product, some of them may be easily traceable by human resources. In the case of more complex products, algorithms based on AI may help with generating the results.

The above list of 'alternatives' should be grouped through functional parameters, according to the following scheme:

- Products with identical functionality and different appearance;
- Products with equivalent functionality, incorporating technically preferable solutions and different appearance;
- Products with equivalent functionality, but not incorporating technically preferable solutions (i.e. functionally 'less preferable') and different appearance.

During categorization, particular attention needs to be paid to products with 'different', non-equivalent functionality. A query emerges over whether such products should be added to the 'alternatives' list, in order to next be analysed within the functionality test, or be neglected vis-à-vis the product at issue. In the author's opinion, since the key issue is establishing product substitutability in economic terms (6.4.3.), the simple fact that some substitutes exist should not dismiss the functionality prohibition. It seems useful to go deeper

and extend the initial range of ‘alternatives’ to products with ‘non-equivalent’ functionality and different appearance. The previous grouping may then include the following additions:

- Products with non-equivalent functionality (i.e. with different functional features) but with some identical non-functional features = Check if these are alternatives functionally relevant & perhaps, problematic as to trade mark infringement;
- Products with non-equivalent functionality (i.e. with different functional features) and different non-functional features = Check if these are alternatives functionally relevant & beyond trade mark infringement.

Classifying products in this manner, drawing upon the parameters of ‘appearance’ and ‘functionality’ serves to identify the group of products orbiting around the product (corresponding to the sign) at issue. This will ultimately serve as a platform for conducting the assessment of product substitutability, by considering additional economic terms (below).

6.4. Towards a market-oriented technical functionality test

This part takes a competition-based perspective of the assessment of technical functionality of trade marks. It first summarizes how this legal prohibition fulfils the aims laid down by the EUTM legislator. Because of the practical impossibility of preventing IPR overlaps, the next element implements the market flexibility of the US practice, focused on alternatives within a need-to-copy approach. The final part suggests how considering the competition environment of the trade mark holder and the issue of product substitutability could become the conclusive factors for applying technical functionality.

6.4.1. The ambitious v. feasible goal of EUTM technical functionality

EUTM jurisprudence demonstrates that the goal of using technical functionality to prevent overlapping protection between trade marks and patents or utility models is rarely achieved.

A clear-cut boundary around subject-matter previously/simultaneously covered by technical IPRs seems workable if the sign at issue is entirely disclosed and claimed by patent/utility model teachings. However, most cases concern hybrid mixes of technical/non-technical features that only partially correspond to this, or that eventually incorporate earlier disclosed teachings. A fortiori, more difficulties arise if technical teachings are lacking. In the EUTM, the status of items unprotected by IPRs and the relationship between business entities remain governed by unfair competition or civil law liability rules, which are largely unharmonized areas of law, especially as regards matters of

substantive law.⁹⁹⁴ This means that the extent of what can be considered unprotected, and thus freely copyable by third parties, may vary between EU countries.⁹⁹⁵ In the light of such a patchwork legal framework and without express legal provisions, in the author's view the EUTM does not support a general 'right to copy' unpatented material, irrespective of lapsed IPRs.⁹⁹⁶ Notably, in the EU there is no doctrine of election, that is, no obligation to choose a specific regime of protection subject to the risk of losing the possibility of applying for a different one; benefitting from an IPR depends on individual terms of protection. It is worth recalling that the CJEU's recent answers about functionality in design, trade mark, and copyright law have clearly refrained from excluding the overlap between design and trade marks, or between technical rights and copyright.⁹⁹⁷ This means that the decision not to file for a technical IPR with regards to a subject-matter with functional features – which would subsequently become publicly available – does not determine that it instead falls into the public domain. The owner has the possibility of invoking protection upon unfair competition grounds, or filing later for design protection (within the grace period, if it has already been on the market) or for trade mark registration, provided that there are no refusal grounds. The consequence of these remarks is that using functionality as a channelling tool, aiming at redirecting items with technical features to the realm of patents or utility models, has failed to unequivocally fulfil this task under the EUTM.

Instead, the approach using functionality as a pro-competitive tool fares more promising.

EUTM jurisprudence has consequently affirmed the goal of enabling competitors to access product features needed for effective competition. Again, the path to achieve this would be easier if the outcomes were binary: denying protection in case of usefulness (sufficient for a device to achieve a technical result), and, thus, increasing the extent of copyable material, or, denying trade mark protection only in case of a competitive necessity for the given features. As reputed US scholar *Rudolf Callmann* imparted '[f]unctionality is often a matter of degree, rather than a binary yes-or-no matter'⁹⁹⁸ (LB). Although the EUTM's approach towards (features) 'necessary to achieve a technical result'

994 There is harmonization in certain fields, such as trade secrets, IPR enforcement, and the package of laws related to B2C commerce.

995 Annette Kur, 'What to Protect, and How? Unfair Competition, Intellectual Property, or Protection Sui Generis' in Nari Lee et al. (eds.) *Intellectual Property, Unfair Competition and Publicity: Convergences and Development* (Elgar 2014) 11–32, Max Planck Institute for Intellectual Property & Competition Law Research Paper No. 13-12, at: <https://ssrn.com/abstract=2268585>

996 Instead of many, for a 'right to copy' in US law, Katherine Strandburg, 'Rounding the Corner on Trade Dress' (2012) 29 Yale J on Reg 387, 394–400.

997 C237/19 *Gömböc*, paras 49, 52–53; C-833/18 *Brompton*, paras 30–36.

998 Callmann, *The Law of Unfair Competition, Trademarks and Monopolies* § 19.33 at 132 (L. Altman 4th ed. 1983) mentioned by *Stormy Clime Ltd. v. Progroup, Inc.*, 809 F.2d 971, 977 (2d Cir. 1987).

would appear to favour such clear-cut option, in practice the application of technical functionality reveals a wide spectrum of subjective, arbitrary points of argument. For a useful recapitulation, the EUIPO/GC has competence to freely assess facts, which frequently leads to unpredictable outcomes, especially in the following parts of the examination:

- identifying the ‘essential’/‘most important’ features of the sign at issue;
- deciding on the broad v. restrictive understanding of the ‘technical function’;
- identifying the ‘non-functional’/arbitrary features;
- deciding on the weight of non-functional features within the overall combination of features in order to interpret the term ‘exclusively’ (Chapter 5).

The consequence of this interpretative leeway is a substantial range of cases situated on the thin borderline between applying or rejecting the functional prohibition. As argued in Chapter 5, the procedural specifics pertaining to applications for registration, with regard to the objections raised ex officio or by interested parties, may already trigger an unstable swing between examination of distinctiveness and/or functionality refusal grounds. The overinclusive understanding of technical features, extended to enclose all usefulness, additionally enhances the variable character of the outcome.

Part 6.3. has previously argued that the relevance of non-functional features – according to the *Lego* guidance – meant nothing else than acknowledging the significance of alternative shapes/products of different appearance that (may) perform equivalent functionality and, because of it, prove that competition was not impaired.⁹⁹⁹ By this token, if the examination of technical functionality must engage in analysis of the existence of non-functional features and quantifying their input, this logically leads to comparing products of different appearance (i.e. the product with features at issue v. products without them), and also of different functionality. Apart from a limited number of ‘double identity’ cases – referring here to a sign covered by the subject-matter of a patent or utility model – most situations will involve issues of equivalence. This is because there is usually a group of variants (product features) that may, and can, have identical or similar technical results. For these reasons, functionality requires a nuanced approach.

This book advocates for enlarging the phase of identifying and weighting essential functional/non-functional features, adding an analysis of ‘equivalence’. Part 6.3.4. suggested establishing the group of equivalent products upon verbatim examination of features and their purpose in a patent-like manner. However, bearing in mind that the crux of functionality is ‘effective competition’, understood as ‘competition by substitution’, the assessment has to go deeper, into market details (Chapter 4). Part 6.4.3. below adds external factors – related to economical, societal interests – to clarify whether the

999 *Lego*, para 72.

alternatives identified in 6.3.4. work as ‘market substitutes’. This ties into the issue of product delineation – analogically to market definition (below 6.4.2. and 4.4.) – and the circumstances that may influence consumer choice by lessening the switch resistance between two equivalent products. Practically, it helps to scrutinize the category of functionally superior/preferable products on which *Lego* primarily focused. The assessment consists of integrating various data (market, economical, sociological etc.) to explore how trade mark protection adversely affects, or may affect, competition.

6.4.2. *Product delineation, alias market definition, in the US utilitarian functionality practice*

As the competition/antitrust law issue of product substitutability requires defining the market a priori, trade mark functionality would analogically require the delineation – upon various criteria (functional parameters, price, quality etc.) – of the group of alternative products which seem substitutable, because they match consumers’ preferences and are within competitors’ capabilities of manufacturing and trading on that market.

When US functionality embarked on a competitive-necessity approach, it focused on the evidence of ‘alternative products’ within the tests of *Morton-Norwich*, *Disc*, and *Qualitex*. Generally, the mere existence of similarity of function and appearance has never been enough to prove unhindered competition. Additional queries emerged about the number of alternatives that would suffice for ensuring an effective level of competition, whether it is ‘the sole configuration, or one of very few available’;¹⁰⁰⁰ the viability and feasibility of substitutes; the price/quality ratio; the superiority of one or several products over the rest. The jurisprudence has examined these issues on a case-by-case basis. The following examples are selected to show how the examination of alternatives is closely connected to a specific product market. In some cases, even elements of antitrust methodology have been used when referring to the capability of entering a market – see trade mark registration as enhancing barriers to entry – or referring to other indices of market power.

The seminal ruling *Rogers v. Keene* – which defined a functional feature as ‘one costly to do without’, that is, ‘which competitors would have to spend money not to copy but to design around’ – gave the example of a non-oval substitute for a football.¹⁰⁰¹ The case at hand was whether a hexagonal end panel represented a common feature, thus essential to compete, in the ‘entire’ product category of ‘molded plastic office stacking tray’ – or only a ‘mere incidental’ feature, chosen as an ‘individual distinction’ by a producer. Judge Posner considered competitors’ ease of entry into the market of stacking trays.

1000 J. Thomas McCarthy, *McCarthy on Trademarks and Unfair Competition*, § 23:1 (4th ed. 2007) § 7:65.

1001 *W.T. Rogers Co., Inc. v. Keene*, 778 F.2d 334, 339 (7th Cir. 1985).

The argument was that just as the manufacturer of the hexagonal shape successfully managed to trade a tray different to the common rectangular ones, other producers would analogically be able to compete with their own configurations. Competition was not hindered because the feature was not ‘the best or at least one, of a few superior designs for its de facto purpose’.¹⁰⁰² The same concern around preventing competitors from entering a market was central to the examination of a rain jacket – the court considered sensitive ‘whether a grant of trade dress protection would close all avenues to a market that is otherwise open in the absence of a valid patent’.¹⁰⁰³ The test focused on the feasibility of alternative arrangements of functional features that would not impair the utility of the product at issue, which was defined with regard to a specific characteristic, that is, ‘shingled rain jacket’.¹⁰⁰⁴ In *Sicilia v. Cox* the court relied on the availability of alternative designs equally capable of successfully satisfying the functions of a ‘squeezeable citrus juice bottle’ (i.e. all bottles resembled lemons/limes and were of soft plastic).¹⁰⁰⁵ The configuration attracted trade dress protection because it was neither superior nor optimal in terms of engineering, economy of manufacture, or performance; neither was it ‘the only one of a limited number of equally efficient options’ to dispensed the juice by squeezing.¹⁰⁰⁶ Similarly, in the ‘stand mixer market’, the proof of several manufacturers competing successfully without copying the product configuration of the ‘Sunbeam’ mixer supported its non-functionality.¹⁰⁰⁷

However, for the design of a composite steel floor deck profile with specific dovetail features, the small market share (2 per cent) of the plaintiff did not act as ‘indicator of competitiveness’ – one argument for the design’s non-functionality was that ‘no other competitors other than defendants have deemed it necessary to simulate plaintiff’s product in order to “compete effectively@’.¹⁰⁰⁸ The Court focused on the superiority of the dovetail design over other steel flooring used in composite deck systems due to enhanced strength of the interlocking joint with mortise and concrete. In another case, the fact that an innovative product (a stove) was successful on the market place and created demand, answered by another competitor via imitation of that product’s appearance, led the court to conclude that the defendant certainly ‘shared’ the market formerly captured by the plaintiff, but nevertheless, the

1002 *Ibidem*, 340, referring *In re Bose Corp.*, 772 F.2d 866, 872 (Fed. Cir. 1985).

1003 *Stormy Clime Ltd. v. Progroup, Inc.*, 809 F.2d 971, 977 (2d Cir. 1987).

1004 *Ibidem*, 978.

1005 *Sicilia Di R. Biebow & Co. v. Cox*, 732 F.2d 417, 428 (5th Cir. 1984).

1006 *Sicilia* 429–30 referring *In re Mogen David Wine Corp.*, 328 F.2d 925, 932–33 (C.C.P.A. 1964). Similarly, in *Metro Kane Imports, Ltd. v. Rowoco, Inc.*, 618 F.Supp. 273, 275–76 (S.D.N.Y. 1985), *aff’d mem.*, 800 F.2d 1128 (2d Cir. 1986) a high-tech design of orange juice squeezer was not dictated by the function because there was evidence that the design permitted juicers to be manufactured at a lower price or with altered performance.

1007 *Sunbeam Prods. v. West Bend*, 123 F.3d 246, 255–257 (5th Cir. 1997).

1008 *Epic Metals Corp. v. Souliere*, 99 F.3d 1034, 1040–1042 (11th Cir. 1996).

innovative functional features ought to remain copyable, because of the public interest ‘in free competition and in economic and technological progress’.¹⁰⁰⁹

Another functional consideration constituted compatibility. In *Rogers*, the court expressed a reserved view that just because an item may match with other products, it did not mean that any other item should have identical feature(s) so that ‘the two items would look alike, would be a matched pair’.¹⁰¹⁰ Producing a pleasing item should not encourage third parties to copy certain features simply to pair with it. However, in the case of architectural designs, compatibility mattered – there were a limited number of configurations for an outdoor luminaire capable of matching the building’s type of structure, and the range of 12 to 15 alternative products was considered insufficient to dismiss functionality objections.¹⁰¹¹ Thinking about these compatibility cases taking place on EUTM turf, they would be more likely to meet the terms of aesthetic functionality (Chapter 8).

As indicated in 4.3.4., the choice between a broad and narrow product category is directly correlated to the extent of alternative products that may be found sufficient for dismissing/applying the functionality prohibition. The wider the market, the easier it is to find substitutes, and conversely, as the market definition narrows, potential substitutes are excluded. In the case of a bicycle rack (with a shape resulting from a specific manufacturing process) the product category was established as ‘bicycle racks generally’, and not with regard to the specific feature related to the innovative process, that is, ‘one-piece undulating bicycle racks’.¹⁰¹² Similarly, in a couple of cases concerning aesthetic functionality of graphics displaying fictional characters – which served for manufacturing dolls and toy cars – the court examined functionality upon the product category of ‘dolls generally’ and ‘toy cars generally’, thus not upon a restricted class determined by the characters at issue (‘Superman dolls’ and ‘Dukes of Hazzard’ toy cars).¹⁰¹³ However, in another high-profile case, functionality was found for tummy graphics on teddy bears, because of a competitive need for the use of pastel colours in a ‘teddy bear market ... characterised by pastel coloration and a height between 6 and 24 inches’.¹⁰¹⁴ A commentator noted that finding a narrow product market, that is, a one-product market or a segment of a larger market in teddy bears, required evidence as to the percentage of consumers that would have been willing to pay a premium price for teddy bears with the graphics at issue, and it was the court’s task to decide what this percentage should be for such a ‘new market’ to exist.¹⁰¹⁵

1009 *Fisher Stoves, Inc. v. All Nighter Stove Works*, 626 F.2d 193, 195–196 (1st Cir. 1980).

1010 *W.T. Rogers*, 346–347.

1011 *Keene v. Paraflex* 653 F.2d 822, 211 U.S.P.Q. 201.

1012 *Brandir Intern., Inc. v. Cascade Pac. Lumber*, 834 F.2d 1142, 1148 (2d Cir. 1987).

1013 *In re DC Comics, Inc.*, 689 F.2d 1042, 1045 (C.C.P.A. 1982); *Warner Bros., Inc. v. Gay Toys, Inc.*, 724 F.2d 327, 330 (2d Cir. 1983).

1014 *American Greetings Corporation v. Dan-Dec Imports*, 807 F.2d 1136 (1986) 1149.

1015 Kellner (n 285) 945.

Technical functionality involves cases of a narrow product category, defined by specific features of the product. In *Leatherman*, the multifunction pocket tool (an improvement of the Swiss army knife) displayed an arrangement and combination of functional parts that showed superior performance over any other tool; the court specifically indicated that although there were many highly functional and useful alternatives ‘none of them offer exactly the same features as the PST’.¹⁰¹⁶ Recently, the *Leatherman* guidance served in the assessment of the functionality of *Apple* iPhones, as the court rejected the argument of the ‘mere existence of design possibilities’ and required that any alternative design should ‘offer exactly the same features’ as the product at issue; a ‘manufacturer does not have rights under trade dress law to compel its competitors to resort to alternative designs which have a different set of advantages and disadvantages’.¹⁰¹⁷

As to colours, the seminal *Qualitex* judgment that introduced the guidance of considering the competitive necessity of features in order to protect competitors against a disadvantage unrelated to recognition or reputation, analysed the green colour of cleaning pads, specifically from a utilitarian standpoint. The evidence showed that green was not better at hiding stains than other colours, so there was no risk of adverse effects from registering that particular colour.¹⁰¹⁸ The *Qualitex* guidance on alternatives has not always been followed. A recent example concerned a blue endoscopic surgical probe, which did not increase the visibility of the probes more than any other colours (with the exception of beige and red), however, the court held it functional, without verifying whether that particular colour would lead to anti-competitive effects.¹⁰¹⁹ Perhaps the problem lies in colours usually displaying intertwined aspects of aesthetics and utility, whilst the utilitarian layer may be sufficient to find the functionality of colours upon *TrafFix* and *Inwood* tests, without applying the competitive necessity criterion of *Qualitex*. The jurisprudence usually reads *Qualitex* as being strictly confined to aesthetic functionality.

The above examples teach two main things. Properly using the proof of alternatives depends on correctly identifying the product category. However, the factual definition of how narrowly the product category is confined to a particular combination of product features remains within the freedom of assessment of the court, on a case-by-case basis. The appropriate scale of assessment depends, on one hand, on how narrowly the product’s ‘technical’ function(s) may be specified – see 6.3.1. On the other hand, it will always depend on the public policy chosen to achieve certain purposes of the functionality rules – see

1016 *Leatherman Tool v. Cooper Industries*, 199 F.3d 1009, 1013–1014 (9th Cir. 1999). The Court focused on the group of customers looking for pocket tools, thus those who preferred the compactness of the device.

1017 *Apple v. Samsung*, 786 F.3d 983, 993 (Fed. Cir. 2015).

1018 *Qualitex v. Jacobson*, 514 US 159 (1995) 169–170.

1019 *Rierson* (n 316) 758–759, referring *Erbe Elektromedizin & ERBE USA v. Canady Technology LLC*, 629 F.3d 1278, 1289 (Fed. Cir. 2010).

the differing approaches between ‘the right to copy’ v. ‘the need to copy’. Summing up, flexibility is, and must remain, an inherent characteristic of any functionality assessment. EUTM functionality practice should get used to this truth and integrate such parameters into assessments in order to achieve more market-tailored solutions (see below).

6.4.3. *Fixing an algorithm – Part II – whilst hypothetically using AI*

Applying a multi-factor test that explores the availability and closeness of substitutes – understood both as of variable appearance and functionality, and as an indicator of sufficient market competition – seemingly requires heavy evidentiary efforts that may undermine the purposefulness of the examination. This may be true, unless taking into account the enormous possibilities of using AI within administrative/judicial proceedings related to registration, opposition/invalidity, and infringement of trade marks. A process that currently amounts to many laborious evidentiary tasks, may tomorrow become a routine sequence of steps facilitated by AI.

The legal doctrine has already noticed that patent offices worldwide are currently using AI for various tasks, such as assessing the visual/conceptual similarity of signs in correlation with the similarity of goods/services, or verifying the accuracy of the designated product category or goods/services with respect to the filed design or trade mark.¹⁰²⁰ Likewise, in online retail shopping, AI helps consumers to purchase desired goods/services by drawing up lists of recommended alternatives from different brands, which the system perceives as substitutes.¹⁰²¹ The growth of e-commerce has increased the importance of price comparison sites, which operate by listing alternative, differently priced products.

At a deeper level, machine learning has been present for a long time in online social media (like Facebook, Google), by learning from data originating from users’ activities and developing so-called ‘behavioural prediction engines’ that aim to influence and change users’ attitudes and behaviours.¹⁰²² AI supports a variety of goals, as Amazon’s Jeff Bezos acknowledged: ‘[m]achine learning drives our algorithms for demand forecasting, product search ranking, product and deals recommendations, merchandising placements, fraud detection, translations, and much more’.¹⁰²³

These examples demonstrate that AI is already operating upon a substantial collection of market data when searching for similar/substitutable products. The hypothesis of creating a complex algorithm for functionality purposes,

1020 Ganjee, ‘Eye ...’ (n 38) 178–185. Since May 2021, the EUIPO has been using AI to correct mismatched indications of product or to assign a subclass to a product indication for designs, cf. <https://euipo.europa.eu/ohimportal/en/news>

1021 Senftleben, ‘Trademark Law, AI-driven ...’ (n 620) 9–11.

1022 Michael Grynberg, ‘AI and the ‘Death of Trademark’ (2019) 108 Ky LJ 199, 233 names AI as ‘controlling avatars’.

1023 Ibidem, 225, fn 130.

building upon the capability to search for functional equivalents (cf. 6.4.3.) and additionally integrating data revealing the competition environment of a given product market, thus seems quite plausible. This part does not claim to define the details of such an algorithm, it rather outlines an array of factors that may be included for an examination of whether a grouping of functionally equivalent products also represents economic substitutes. The latter finding should be the indicator that competition in the product market is not hampered by the registration of the trade mark at issue.

A functionality assessment focused on substitutes determined by product/market definition is in line with the general view that functionality should be a ‘context dependent, rather than immutable’ finding,¹⁰²⁴ and that the interaction between conflicting IPRs should be generally analysed within the nearest product markets, determined, inter alia, by the substitutability of goods/services to consumers.¹⁰²⁵ It builds upon the holistic view that a competition rationale should prevail over the delineation rationale of functionality rules across EU trade marks, design and copyright law, so that ‘functionality should be gauged with reference to how the product and its shape functions vis-à-vis the market or consumer or public’.¹⁰²⁶ Professor Suthersanen concluded once that the core issue of functionality was ‘whether an object is so affected with essential characteristics that its protection will threaten the competitive practices within an identified product market’.¹⁰²⁷

Parts of Chapter 4 addressed various scenarios in which trade mark protection may negatively affect competition. It also discussed market definition. As functionality requires a market-contextual examination, various factors may contribute to an evaluation of product substitutability. The following checkpoint list may serve as a recapitulation of possible prudent inclusions in such a functionality algorithm:

- Strategic management of IP portfolio with a focus on trade marks ensuring leveraging of IP power and market competition advantages (considering additional specific subtypes):
 - IPR stacking;
 - Synergy between trade marks and patents/utility models/designs;
 - Use of trade marks as deterrent strategy:
 - history of bullying litigation
 - registration aiming at congestion/depletion of acceptable signs left for competitors’ use

1024 Dan L. Burk, ‘Cybermarks’ (2010) 94 Minn. L. Rev.1375, 1413.

1025 Fromer, Lemley (n 316) 1290.

1026 Suthersanen, Mimler (n 30) 576. This opinion should be extended to product characteristics, other than shape, that may be caught by functionality.

1027 Uma Suthersanen, ‘Excluding Design (and Shape Marks): Where Is the EU Court of Justice Going?’ (2019) IIC 157, 160.

- history of competition proceedings related to goods/services of the trade mark holder with possible impact on the present case
 - set of disadvantageous and disproportionate contractual relations (e.g. co-existence agreements or licensing with no-challenge clauses)
 - branding strategies diminishing consumers' willingness to switch to alternatives
- Product features covered by the trade mark as a competition necessary 'asset':
- Must-fit/must-match situations (e.g. spare parts)
 - Indispensable asset for 'follow-on' products or contributing to the emergence of a 'new product', important from a competition standpoint
 - Other situations of compatibility and standardisation
- Trade marks tied to branding, understood as a complex strategy purposively adopted to diminish consumers' willingness to switch to substitutes:
- Overall practices of developing and boasting a trade mark 'image' (the ensemble of brand 'benefits' and 'attitudes')
 - Overall practices of developing and enhancing consumers' loyalty
 - specificity of the goods/services concerned:
 - goods/services acquired for status
 - goods/services enhancing network effects
 - goods/services inviting consumers to participate and co-create the brand (image)
 - other categories
 - specific pricing policies (loyalty programs, discounts, free samples etc.)
 - Overall distribution/retail practices concerning preferential stocking, distribution channels, specific vendors, conditions of display/positioning, packaging, pricing, post-sale servicing
- Identifying the type and specificity of the product-market at issue:
- Is it an established branding-dependent sector (such as spirits, mineral waters, colas, beers, cigarettes etc.)? Using – also per analogy – information from competition proceedings in similar industry sectors
 - Assessing the cross-elasticity:
 - demand-side
 - supply-side
 - geographic dimension
 - Specific pricing conditions (and risk of 'cellophane fallacy')
 - Narrow v. broad product market
- Conclusion: assessing the quality of substitutes & the risks of trade mark registration

The aforementioned factors may be combined in order to achieve a nuanced, flexible functionality assessment focused on the viability and quality of substitutes. The test should explore the competition environment from the perspective of both consumers and competitors. It should not be perceived as a mistake that certain criteria, such as branding or distribution policies, may be repeatedly considered at different stages of assessment. Branding is a powerful instrument with still underestimated effects, which may ultimately determine whether the use of a trade mark promotes or, conversely, hampers competition. As discussed in Chapter 4, branding can function as a strategic IP portfolio tool to induce lowered responsiveness to price changes and stimulate an increase in price uncorrelated with changes to quality or other objective product features, which sometimes supports a finding of market power. In relation to specific product categories, branding may be used as barrier to entry, by creating a separate market for locked-in consumers. It is highly probable that the attempt to register a functional sign, which is frequently devoid of inherent distinctiveness, would be preceded by an intense marketing campaign and branding strategy to raise consumer awareness of the sign/product properties at issue. The end goal of the functionality test is, as much as is possible, to capture the possible competition risks – assessed within the competition environment of the trade mark holder and the product category (industry sector) – that may result from registering the functional sign at issue.

Applying a functionality test in EUTM law, based upon competitive necessity correlated with access to substitutable products, is in line with the US school of thought, especially as represented by Professor Dinwoodie in the late 1990s, who extensively elaborated upon *Qualitex* and *Inwood* to cultivate sensible solutions, tailored to the dynamic (economic, technological, societal etc.) changes of market realia.¹⁰²⁸ Notably, other US scholars have recently revisited the ‘need to copy’ approach, so as to accommodate both safeguarding of patent boundaries in line with the *TrafFix* judgment, and meeting the palpable competition needs of a market determined by the access to substitutes.¹⁰²⁹ It is the author’s view that, although a functionality test evaluating the economic feasibility of alternatives may at first appear difficult, both time- and money-consuming, the uncharted possibilities for developing complex algorithms supported by machine learning may help to capture a detailed picture of the competition environment. The indicators of effective competition have recently been summarized as ‘a large number of traders; output levels and product quality (including variants) which satisfy consumer demands; no waste of producers’ resources; and opportunities for introducing technically superior new products’.¹⁰³⁰ The time has come for the EUTM judiciary to raise the right queries and apply a market-oriented functionality test that only denies trade mark protection when competition is genuinely impaired.

1028 Dinwoodie (n 27) 611, 701–728.

1029 Rierson (n 316) 691, 746–748; Bone (n 268) 183, 228–241.

1030 Suthersanen, Mimler (n 30) 577 with further references.

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7 Generic functionality

Signs resulting from the nature of goods

Another EUTM functionality provision pertains to signs determined by the nature of goods. Despite modest beginnings, the practice has evolved over the years to encompass basic product features, considered to be generic for a certain type of product – here described by the term ‘generic functionality’. The first part of this chapter retraces early interpretation in EUIPO practice, in parallel with the development of German, Benelux, and UK case-law (7.1). The second part shows the momentum achieved by the CJEU’s *Hauck* judgment (7.2.1), which broadened the interpretation to such an extent that it became difficult to frame and delineate from other refusal grounds. This is critically discussed in Part 7.2.2. If *Hauck*’s key criterion involves consumer preferences for generic features for a given type of product, this cannot remain an abstract exercise, especially if functionality then expands to a variety of non-traditional product features. Part 7.3. looks for practical solutions. Part 7.3.1. looks into the US genericness doctrine, which evolved from word marks to trade dress and developed tests that examined the actual market environment, whilst balancing the interests of right-holders, consumers and competitors. Part 7.3.2. seeks to transpose some of these criteria into the EUTM area, and advocates for a flexible examination of generic functionality.

7.1. Early interpretation of the refusal ground

The initial practice of the EUIPO and several national courts restrictively applied the functionality of signs pertaining to the nature of goods. What mattered to the assessment was the definition of relevant goods, and the possibilities of varying the product appearance. The easy adaptation of the examination process between functionality and distinctiveness was also a noticeable trend.

7.1.1. *The EUIPO’s ‘natural’ approach*

Initially, the EUIPO confined the functionality of signs resulting from the nature of goods to cases of realistic representation of goods, that naturally existed or were manufactured, for example, the true-to-life shape of a banana

for bananas¹⁰³¹ or a football for footballs.¹⁰³² The latter fit the category of ‘regulated products’, explained by later versions of Guidelines as ‘prescribed by legal standards’,¹⁰³³ including conventional rules (e.g. football/rugby games). AG Ruiz-Jarabo Colomer in *Philips* and *Linde* named the prohibition ‘natural functionality’.¹⁰³⁴ Practice was scarce, as it only applied in rare cases of natural shapes without substitutes; the mere existence of other shapes without the features at issue dismissed the objection (e.g. the grooves and the bending inwards along the lengths of a ‘bone’ soap).¹⁰³⁵ Similarly, a vehicle grill with old-fashioned features beyond those commonly used was not tested functionally, whilst it displayed a minimum of distinctiveness,¹⁰³⁶ whereas a shoe angled strip with dotted lines was found solely undistinctive.¹⁰³⁷

Such a restrictive interpretation of the functionality ground interfered with the other absolute refusal grounds (conc. distinctiveness, descriptiveness or genericness) which ultimately took the lead. For instance, the EUIPO Guidelines indicated that a figurative sign considered ‘descriptive’ of a characteristic of goods/services would exclusively consist ‘of a basic natural form which [wa]s not significantly different from a true-to-life portrayal’ indicating ‘the kind or intended purpose’ of the goods/services.¹⁰³⁸ This definition clearly mirrors the EUIPO’s interpretation of a (functional) shape conditioned by the nature of goods, although theoretically these were two distinct legal grounds. Indeed, the early EUIPO practice showed that most of the basic, standard shapes, with features having practical purposes, were examined with regard to distinctiveness.¹⁰³⁹ The case-law lacked an in-depth analysis of what the ‘nature’ of goods and ‘standards’ of various kinds (legal, commercial, etc.) should mean.

1031 EUIPO Guidelines of 02/01/2014, Part. B, 2.5.2., 65, at <https://euipo.europa.eu/ohimportal/pl/web/guest/guidelines-repository>

1032 EUIPO Guidelines of 04/2008, Part. B, 7.6.2, 38, at https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/contentPdfs/law_and_practice/guidelines/ctm/examination_en.pdf

1033 EUIPO Guidelines of 01/02.2016, Part B, 2.5.2, 83, at https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/contentPdfs/law_and_practice/decisions_president/ex15-7_en.pdf

1034 AG Opinion in C-299/99 *Philips* EU:C:2001:52, paras 16–17 and AG Opinion in C-53/01 to C-55/01 (*Linde & others*), EU:C:2002:614, para 29.

1035 T-122/99 *Procter & Gamble v. OHIM*, EU:T:2000:39, paras 54–56.

1036 T-128/01 *DaimlerChrysler v. OHIM*, EU:T:2003:62.

1037 C-307/11 *Deichmann v. OHIM*, EU:C:2012:254.

1038 Guidelines of 02/01/2014, Part. B, 2.3.3, 53, referring to T-385/08 & T-386/08 *Nadine Trautwein v. OHIM* – EU:T:2010:295 & EU:T:2010:296 (representation of a dog/horse).

1039 Gordon Humphreys, ‘Non-conventional Trade Marks: An Overview of Some of the Leading Case-law of the Board of Appeal’ (2010) 32(9) EIPR 437, 442–445 discussing BoA decisions: R-756/2005-2 (undistinctive, sharp-edged, rectangular cigarette packet with hinging top); R-618/2005-4 (undistinctive, rectangular dental container with folding flat surface enhancing stackability); R-1156/2004-4 (undistinctive spectacle side as common variant); R-262/2004-2 (simple tray with acquired distinctiveness).

7.1.2. *A focus on German and Benelux practice, dealing with functional archetypes and variation of features*

German law embedded the functionality exclusion as a statutory exemplification of the principle of conceptual independence between the mark and the goods, reading that what represented the essence of a product should not be trademarked.¹⁰⁴⁰ The specific prohibition of a sign conditioned by the nature of goods referred to components of a product ('design elements') that constituted 'the archetype of the product', that is, basic/generic and indispensable characteristics, examined in the abstract (e.g. vehicle wheels or fork tines).¹⁰⁴¹ However, not all products required an archetype, for instance chocolate or sweets (e.g. the bear-shaped ones from Haribo) could take on various appearances to be protected as a trade mark upon general terms. Scholars opined that archetypal shapes could be either familiar to the user (a spherical ball), or newly created, and innovative; however, the exclusion would still rarely apply, for example, a pyramid supporting a chair without legs could be still trademarked.¹⁰⁴² A series of judgments from the Federal Court of Justice inquired whether variants of/in addition to an archetypal form were possible, or product features going beyond basic components that were technically determined or necessary.¹⁰⁴³ An important judgment concerning a milk-flavored sliced cake¹⁰⁴⁴ summarized the definition of a shape resulting from the nature of goods: it should consist exclusively of features essential for a type of goods in order to fulfill their purpose. Establishing the relevant 'type' of goods remained the key issue – the court defined it as a generic term from the list of goods (i.e. ready-made cakes), and not upon the product represented by the sign (i.e. a slice of cake with a cream filling). The court went further by narrowing the categories of cake slices, such as those with layers of cream or with dough, and noted that there was no standardized basic shape for any of these types. These findings dismissed the functional prohibition.

1040 See Art § 3 of Gesetz über den Schutz von Marken und sonstigen Kennzeichen (Markengesetz) of 1994 www.gesetze-im-internet.de/markeng/MarkenG.pdf, with commentaries of Georg Erbs, Max Kohlhaas, *Strafrechtliche Nebengesetze* (C.H. Beck 2021) § 3 para 3; Karl-Heinz Fezer, *Markenrecht* (4th ed. C.H. Beck 2009) paras 647–648.

1041 Fezer (n 1040) paras 650–653.

1042 Ibidem, paras 651–652.

1043 *Porsche Boxster* shape eligible for trademark protection (BGH GRUR 2006, 679, 689); similarly, the shape of a forklift truck (BGH GRUR 2001, 334, 335 – *Gabelstapler*), due to the pentagon round-shaped driver's cab frame, with rounded edge lines and rear; a wrist-watch displayed a characteristic unity between the watch case and the wristband and a glass covering the entire case (BGH WRP 2001, 269, 271 – *Radio-Uhr*); a flashlight featured additional design elements on the illuminating body and the battery compartment (BGH WRP 2001, 265, 267 – *Stabtaschenlampen* – and BGH GRUR 2004, 506 – *Stabtaschenlampen II*). However, in the case of a sign showing an eight-shaped 'filling material', all elements were determined by the nature of good and undistinctive, without any feature separated from the technical/practical purpose of the goods – (1998) (28) IIC 91.

1044 GRUR 2008, 510 – *Milchschnitte*.

The German practice represented an important background element for the CJEU's later development of the functionality exclusion (7.2.1.). The German approach supported the position of a Max Planck Study, which advised in sect. III para 2.37 that '[a]rticle 7 (1)(e)(i) CTMR and Article 3 (1)(e)(i) TMD should be reformulated so as to extend to all signs which exclusively result from the nature or the (technical) performance of the goods'.¹⁰⁴⁵

Similar issues concerning the nature of goods faced Benelux law, which, although it contained specific functionality provisions (1.1.2.2.), featured variable case-law¹⁰⁴⁶ due to unclear criteria of interpretation. Examples of shapes resulting from the nature of goods included: a perforated packaging for tomatoes; a drainage tile, due to features helping an excess of water drain off; non-transparent cardboard packaging for margarine, intended to reduce exposure to light/air; a gas cartridge, due to its cylindrical shape, hollow bottom, and rounded-off upper side.¹⁰⁴⁷ However, in the case of the *Lego* brick and an S-shaped filling material for packaging, any dependence on the nature of goods was dismissed, yet the technical issues remained relevant.¹⁰⁴⁸ Frequently, the existence of similar products with a different appearance (in construction/size/colour) was sufficient to prove independence from the nature of goods for: a lemon juice bottle; a salad oil bottle; packaging for Barbie dolls; packaging for adhesive tape; a bottle for cleaning products.¹⁰⁴⁹ Another notable case concerned an attempt to invalidate the triangular shape of Toblerone chocolate bars, raised by a competitor facing infringement claims – the court dismissed the arguments concerning the nature of goods, because the appearance was unnecessary for the manufacturing of chocolate products, as numerous shapes were available on the market.¹⁰⁵⁰

These examples demonstrate the difficulty of separating the effects pertaining to technical functionality from those determined by the nature of goods,

1045 Study (n 627) 74.

1046 The case-law originates from the Dutch 'Report Q148' (Berendschot, Ferment, van Kaam, Kooy, Merkus, van Assen, Visser, Vos) to AIPPI questionnaire on the subject of 'Three-dimensional Marks: The Borderline Between Trademarks and Industrial Designs' – personal archive of LB.

1047 District Court Rotterdam, 6.6.1996 (BIE 1997/35, tomatoes packaging); Court of Appeal's-Hertogenbosch, 13.9.1988 (BIE 1989/151, tile); District Court's-Gravenhage, 1.9.1971 (BIE 1972/39, margarine packaging); Court of Appeal Arnhem, 23.5.1973 (BIE 1973/40, cartridge).

1048 Court of Appeal of Luik, 30.6.1993 (BIE 1996/84, *Lego*); District Court's-Gravenhage, 19.6.1996 (IER 1996/32) and Court of Appeal's-Gravenhage on 2.10.1997 (BIE 1999/60, S-shaped material).

1049 Court of Appeal of Antwerp, 3.4.1980 (BIE 1983/90, lemon juice); District Court's-Gravenhage, 4.2.1992 (BIE 1995/74, salad oil); Court of Appeal's-Hertogenbosch, 28.02.1990 (IER 1990/24, Barbie doll); President of the District Court Maastricht, 7.08.1978 (BIE 1980/37, cello-tape); Court of Appeal's-Gravenhage, 6.6.1996 (BIE 1997/2, bleach bottle).

1050 Marie-Christine Janssens, 'The "Toblerone" Chocolate Bar Case in Belgium' (2004) 26(12) EIPR 554, 556.

as well as the ease of applying the criterion of alternative shapes/packaging in order to avoid functionality. It also showed that packaging could more easily overpass the functionality objection, as it usually contained additional features beyond those simply copying the shape of the product.¹⁰⁵¹

7.1.3. UK case-law, pivoting around the definition of ‘goods’

UK jurisprudence brought an interesting dimension to the interpretation of a sign, conditioned by the ‘nature’ of goods, by focusing on the categorization of ‘goods’, an issue that mirrored the German *Milchschnitte* case. In the *Philips* case before the UK Court of Appeal, Aldous L.J. held it to be relevant that the goods were designated by the registration documentation, that is, ‘electric shavers’, and not as depicted by the representation of the sign, that is, ‘rotary shavers having three equilateral heads and a face plate’.¹⁰⁵² In the lower court, Jacob J also chose the category of ‘electric shavers’, but argued differently. The answer was a matter ‘of degree’ – because of greater possibility of manoeuvring from a narrow to a broader category (rotary shavers/ electric shavers/ shavers) – thus, establishing the nature of goods should not be an academic query, but as a ‘practical business matter’, based upon how the goods were seen as ‘articles of commerce’.¹⁰⁵³ Simultaneously to *Philips*, another case concerned two three-dimensional marks for *Viennetta* ice cream (parallelepipeds of white/dark chocolate showing a wavy upper structure and several horizontal layers) which were filed for ‘ice cream dessert products’.¹⁰⁵⁴ Nestle opposed the registration, arguing that the categorization was ‘three-dimensional ice-cream with chocolate got up in a fancy way’, while the nature of the goods was ‘the shape’ alone.¹⁰⁵⁵ Jacob J declined the functionality claims, by referring to the UK *Philips* judgment and to the AG’s opinions in *Philips* and *Linde*.¹⁰⁵⁶ The functionality of Art. 3(1)(e)(i) TMD applied only to ‘naturally occurring shapes’, and thus not to ‘artificially created shapes’, such as *Viennetta* ice-creams.¹⁰⁵⁷ A scholar then questioned whether this distinction could properly work in practice, by offering the examples of pencils, scissors, and saucers as non-natural, that is, artificially created products, which nevertheless had a more standardized appearance than *Viennetta* ice-creams.¹⁰⁵⁸ This finding revealed the need for an in-depth clarification of the term ‘nature’ (of goods).

1051 William Cornish, Jeremy Phillips, ‘Industrial Design Protection after *Philips Electronics – The Shape of Things to Come*’ (1999) 3 *Journal of Business Law* 177.

1052 *Philips v. Remington* [1999] R.P.C. 809, 820, discussed by Firth, Gradley, Maniatis (n 85) 92. CJEU in *Philips* did not bring guidance on the functionality of Art. 3(1)(e)(i) TMD.

1053 *Philips v. Remington* [1998] R.P.C. 283.

1054 *Unilever v. Nestle* [2003], R.P.C. 651.

1055 *Ibidem*, 657.

1056 C-299/99; C-53/01 to C-55/01.

1057 *Unilever* (n 1054) 658.

1058 *Philips* (n 24) 145.

The issue of how strategically categorizing goods can circumvent the objections pertaining to natural functionality emerged later in the *Rubik* cube case. The EUIPO and GC referred to the specification of goods as ‘three-dimensional puzzles’. The GC noted that even if the examination was restricted to puzzles with a rotating capability, the multitude of different shapes (ranging from geometric to buildings, animals, etc.) would prove that the goods did not need to take the shape of a cube with a grid structure surface.¹⁰⁵⁹ AG Szpunar did not share the GC’s view, restricted to standardised, pre-determined shapes without alternatives, opting for a narrower category of ‘magic cubes’, for which *Rubik*’s cube would have been ‘undoubtedly a natural shape’.¹⁰⁶⁰ However, because of procedural restrictions – that is, establishing the appropriate category of the goods represented a factual matter belonging to the GC’s competence and could not be appealed, unless there was distortion of the facts or evidence¹⁰⁶¹ – the CJEU cancelled the registration for reasons of technical functionality alone.¹⁰⁶²

7.2. Moving from ‘natural functionality’ towards ‘generic functionality’

The *Hauck* judgment was the turning point for expanding the scope of the prohibition to generic/basic features of a shape determined by specific consumer preferences (7.2.1.). This raised, and will continue to raise, difficulties around interpretation and application, especially if more product characteristics fall within the ambit of the functionality prohibition. Part 7.2.2. looks into these issues in detail. As for a reasonable solution, the author will consider the benefits of a market-orientated test later in Part 7.3.

7.2.1. *The CJEU Hauck judgment*

The CJEU judgment that changed the interpretation of what was initially thought of ‘natural functionality’ concerned Stokke’s *TrippTrapp* children’s chair, the object of copyright and trade mark infringement proceedings in front of the Supreme Court of the Netherlands, with a counterclaim seeking invalidation of the Benelux trade mark.¹⁰⁶³ Leaving aside the successful copyright claims endorsed across many jurisdictions,¹⁰⁶⁴ the Dutch court asked the CJEU whether the shape of ‘a safe, comfortable, reliable children’s chair’

1059 T450/09, *Simba Toys*, para 82.

1060 AG Opinion to C-30/15P, EU:C:2016:350, para 45. These proceedings took place shortly after CJEU’s *Hauck*, which broadened the interpretation of ‘natural’ functionality (7.2. below).

1061 *Ibidem*, paras 46–51.

1062 C-30/15P, EU:C:2016:849, paras 47–54.

1063 C-205/13, *Hauck v. Stokke*, EU:C:2014:2233, paras 9–13.

1064 C-205/13, paras 8–9.

was determined by the nature of goods, and if it also gave substantial value to the goods (see Chapter 8). The following remarks address the query around whether a natural shape refers to ‘a shape indispensable to the function of the goods, or can it also refer to the presence of one or more substantial functional characteristics of goods which consumers may possibly look for in the goods of competitors’.¹⁰⁶⁵ The CJEU departed from the prevailing interpretation of natural/pre-determined shapes indispensable for the function of the goods, by arguing that it applied not only to such signs as would have been denied registration because of a lack of distinctive character, but would have also undermined the rationale underpinning all three functional provisions (Chapter 2), that is, preventing cumulation with other time-limited IPRs, while ‘leaving the producer of those goods no leeway to make a personal essential contribution’.¹⁰⁶⁶ Therefore, the interpretation should encompass shapes/signs with essential characteristics that are ‘inherent to the generic function(s) of goods’, that is, ‘essential to the [identical or similar] function of that product’, because competitors should not be hindered in choosing a shape ‘*suited to the use* for which the goods are intended’, and which consumers ‘*will be looking for* in the products of competitors’ (LB).¹⁰⁶⁷

The Court followed the opinion of AG Szpunar, who mentioned the German approach of inquiring into the typical features of a particular semantic category (of goods), considered generic because they resulted from the product’s function; however, ‘peculiar features of the product or resulting from a specific use of the product’ ought to be disregarded.¹⁰⁶⁸ The AG cited the examples of the ‘shape of an oblong in relation to a brick, the shape of a container with a spout, a lid and a handle in relation to a kettle, or fork-shaped prongs in relation to a fork’,¹⁰⁶⁹ and offered other examples of ‘legs with a horizontal level in relation to a chair, or an orthopaedic shaped sole with a V-shaped strap in relation to flip-flops’.¹⁰⁷⁰ The latter examples are part of the current EUIPO Guidelines.¹⁰⁷¹ However, the prohibition should not apply if, besides generic functional features, there are other essential features which ‘must be solely an expression of the specific application of that function’, such as ‘the body of a guitar shaped in a manner which differs from the *normal idea of the shape* of that instrument’ (LB).¹⁰⁷² The AG considered the proof of alternative shapes irrelevant,¹⁰⁷³ yet the Court did not elaborate on that in this respect.

1065 Ibidem, para 14.

1066 Ibidem, paras 19 and 23.

1067 Ibidem, paras 25–27.

1068 Opinion (n 1060) para 48.

1069 Ibidem, para 49.

1070 Ibidem, para 59.

1071 EUIPO Guidelines Part B Section 4 Chapter 6.2.

1072 Opinion (n 1060) 64.

1073 Ibidem, para 65.

7.2.2. *Discussion – The problem of interpreting and applying the Hauck guidance*

The main deficiency of the CJEU's approach to generic functionality stems from the lack of any precise criteria for establishing the scope of generic features for a given type of product. The following remarks address some debatable issues of interpretation.

7.2.2.1. *Flexibly defining the category of goods*

Whether generic functionality is applied or not is highly dependent on how flexible the definition of relevant goods is. In contrast to German and UK case-law, the CJEU did not elaborate on whether significance was found in the category indicated by the registration documentation, the commercial one, that corresponding to the depicted sign, or otherwise. The CJEU seemingly opted for a narrow category, defined by the object as represented – the appearance of *TrippTrapp* chair, linked with a set of objective and subjective values (functionality, ergonomics, safety, comfort and reliability). It is upon the definition of the category of goods that the expectations consumers have towards a product, and which prompt them to seek equivalents in the products of competitors, are further established. If this examination is conducted in the abstract, then the risk of arbitrariness is high. Taking the category of 'children's chairs': if consumers (e.g. parents) were asked to describe what a children's chair satisfying the expectations of safety/comfort/reliability should look like, it would be unlikely that they come up with the exact shape of the *TrippTrapp* chair. An Internet search shows numerous children's chairs, which by definition need to ensure safety and comfort, especially if the end-user is considered a child. Perhaps the Court's approach was motivated by specific attributes of the *TrippTrapp* chair (i.e. changeable positions, enabling use by breast-feeding women or older children; good value-for-money), which all derived from good design. Assuming that any new and innovative product raises consumer interest in purchasing it and creates a 'sub-genus' for its own product category, then denying it trade mark protection would discourage any design creativity.

For these reasons, a better option would be to follow the UK approach in *Philips*, and rely on the category of goods as used in trade. This would fit a test which links consumer preferences to market realia and the actual offer of goods (7.3).

7.2.2.2. *Freedom of creation through variable configuration and 'non-functional' features*

Creativity seemingly mattered to the AG and CJEU in *Hauck*, when they stated that signs consisting exclusively of generic features cannot reveal any 'freedom of creation' (7.2.1). Leaving aside the closeness of this term to the field of copyright and design – revealing the inevitable overlap between the subject-matter of a trade mark, design and copyright – this statement could

refer to ornamentality and/or aesthetic effects, or at least to arbitrary variation of appearance. Similarly, the AG's view that the expression of a specific application of a function could be trademarked implies that some degree of variation between differing ways of expressing/incorporating the same function may constitute proof that the appearance of the product at issue is not functional.

Products with practical purposes always have certain basic, necessary components, see the AG's example of a kettle consisting of a spout, lid and handle. With this in mind, the specific appearance of each element may easily vary. The extent of the variation of features going beyond the level of necessity clearly demonstrates that there are many products of different appearance for the same 'genus'. Indeed, in a later judgment concerning the *Lego* toy manikin, the CJEU confirmed the GC's findings that the basic elements of a shape mimicking human appearance constituted a head, body, arms, and legs, yet none of them resulted from the nature of goods.¹⁰⁷⁴ The reasoning for the CJEU's decision also depended on the designation of goods – the broad indication of 'games and playthings; decorations for Christmas trees' did not imply a close link with the appearance of a manikin.

Another important query is whether the possibility to change the appearance of a feature (e.g. the manikin's head) would constitute proof that it is 'non-functional'. It is worth emphasizing that the CJEU in *Hauck* referred – by analogy – to *Lego*'s guidance on identifying the essential characteristics of a sign (5.3.1.2.) and dismissing the application of generic functionality if 'another element, such as a decorative or imaginative element, which [wa]s not inherent to the generic function of the goods, play[ed] an important or essential role'.¹⁰⁷⁵ In such cases, the sign at issue would not consist of features resulting 'exclusively' from the nature of goods (see 5.1.). The CJEU did not elaborate on the relationship between 'another' non-functional feature and those tested as 'generic'. Applying analogically the CJEU's guidance on technical functionality, a non-functional element should not relate to product parts functionally tested. As argued in 6.3.3., this is not an optimal approach. Non-functionality may be revealed both by a product element that performs no functional/utilitarian/purpose and by one that simultaneously serves functional and non-functional purposes. What should bear significance is how meaningful the possible variation in appearance is. The author concurs with the opinion that 'the existence of alternative shapes is a *strong indication* that the shape does not result from the nature of goods'¹⁰⁷⁶ (LB). An addition is needed though. There should be some market parameters factored into the assessment in order to evaluate the relevance of the generic features at issue for competition (7.3. below).

1074 C-452/15P *Best-Lock v. EUIPO & Lego*, EU:C:2016:270, paras 17–24, appeal from T396/14, EU:T:2015:379, paras 30–34. The CJEU's argumentation mostly dealt with technical functionality. Critically, Kur in (Kur, Senfileben) (n 24) 164.

1075 C-205/13, paras 21–23.

1076 Philipp von Kapff (n 703) 81.

At this stage, it is important to stress that *Hauck* completely sidestepped the issue of alternative products. This makes it difficult to reconcile the AG's arguments, as sustained by the CJEU, with their recommendation to take into account the creativity embodied by the product configuration.

7.2.2.3. *Generic, utilitarian, arbitrary, or simply good design?*

Linking the notion of generic features to the purpose/usefulness of a product – the CJEU talked about ‘suited to the use’ – raises additional doubts, depending on how broadly the concept of ‘function’ is understood. Professor Kur once noted that an extensive overlap could emerge between the scope of features serving the use of a product and those necessary to achieve a technical function, with the risk of reducing the scope of the latter.¹⁰⁷⁷ Indeed, the EU-IPO/GC tendency of blending technical and utilitarian effects together has generated uncertainties around whether the proper refusal ground would be technical functionality, natural/generic functionality, or, perhaps, the lack of distinctiveness.¹⁰⁷⁸ A recent study of Italian and Australian trade mark practice related to fashion demonstrates that numerous signs consisting of common, standard features (e.g. basic geometric elements) faced refusal of registration principally due to a lack of distinctive character.¹⁰⁷⁹ The latter point would mean, however, that protection via acquired distinctiveness would be still possible.¹⁰⁸⁰

In a recent case concerning a three-dimensional composite sign representing a satin golden bottle with a letter ‘B’ and a graphic motif, the GC acknowledged that the ‘collio’ shape constituted a common/standardised appearance for champagne/prosecco/sparkling wines, however, it did not result from the nature of the goods – the GC looked into the category of goods as filed, which was alcoholic drinks of various nature, thus not bottles or any kind of packaging.¹⁰⁸¹ This judgment shows how the GC has reluctantly linked the issue of

1077 Annette Kur, ‘Too Common, Too Splendid, or “Just Right”: Trade Mark Protection for Product Shapes in the Light of CJEU Case Law’, Max Planck Institute for Innovation and Competition Research Paper No. 14–37 (2014) Vol. 6 (4) 1, 16, www.ip.mpg.de/en/publications/journals/research-paper-series-1.html

1078 Cesar Ramirez-Montes, ‘Louboutin Heels and the Competition Goals of EU Trade Mark Law’, (2019) 19 UIC REV. INTELL. PROP. L. 38, 50–51 considering Lego manikin ‘generic’ and the interplay with distinctiveness.

1079 Jacopo Ciani, Gustavo Ghidini, Violet Atkinson, William van Caenegem, ‘A Comparative Study of Fashion and IP: Non-traditional Trademarks in Italy and Australia’ (2019) 50(9) IIC 1101. Registration was refused in the case of *Fendi Dotcom*, *Longchamps Le Pliage*, *Bottega Veneta* intrecciato bags, due to their ‘standard’ appearance, without features to distinguish (at 1111), whilst the repetition of quadrilaterals of *Louis Vuitton* bag was considered the usual way of obtaining a quilted appearance on fabrics to ensure protection against cold (at 1115).

1080 Kur (n 1077) 17.

1081 T-324/18 *Vinicola Tombacco v. EUIPO & Sandro Bottega*, EU:T:2019:297, paras 42–48.

standardised features with generic functionality as encapsulated by the *Hauck* guidance, although, theoretically, an inquiry could have been conducted. It equally demonstrates the prime importance that is borne by the categorization of goods – here, treating ‘packaging’ preferentially vis-à-vis durable self-shaped goods – and how this may be strategically applied to avoid generic functionality.

Elements that appear to be outside the usual appearance, or to be ornamental, have more chances to overpass generic functionality, yet, depending on the circumstances, there is room for divergent understanding. An older Dutch case considered the ornamentality of triangular-shaped chocolate shavings (to decorate the appearance of cakes) as the only purpose/function of those goods.¹⁰⁸² Would ornamentality be an inherent characteristic for a specific type of goods? This depends on the meaning of ornamentality – if it means attractiveness of appearance, then modern design would argue that any product embodies it. Modern design would also argue that the absence of decoration does not solely suggest function, stripped of creativity. Examples of valuable modern design – such as belonging to the Geometric Minimal Movement which ‘sought to create powerful archetypal models’ through ‘spare and refined form’ where ‘decoration is inherent to the material and method of construction’¹⁰⁸³ – risk being misunderstood as not capable of generating aesthetic responses (in the psychological sense of beauty)¹⁰⁸⁴ and being challenged as generic functionality. Minimalist design may be viewed as expressing the idea, the essence of a given type/genus of product, which would, again, speak against trade mark protection.

Professor Quaedvlieg recently argued – with respect to all kinds of functionality – that ‘shape concepts are scarce’, competitors cannot easily find substitutes, therefore ‘the protection of such shape <concepts> would be permanently and intrinsically anti-competitive’.¹⁰⁸⁵ This view, still, does not facilitate the determination when a shape is, or becomes, a conceptual one. Assuming that a conceptual shape incorporates a design idea in a simple, essential way, it would be difficult to distinguish it from ordinary, common, and non-distinctive shapes that may, nevertheless, attract trade mark protection through acquired distinctiveness. In any case, minimalist design risks being discriminated against. By contrast, too much ornamentality would, perhaps,

1082 Philips (n 24) 149, fn 116 citing *Luijckx BV v. ECC* [2000] ETMR 530 (Hof den Bosch, 19 October, 1998).

1083 R. Craig Miller, Penny Sparke, Catherine McDermott, *European Design Since 1985: Shaping the New Century* (Merrell 2008) 108 (quotation) 141, discussing the seminal works of Jasper Morrison and Maarten Van Severen (chairs, sofas, tables, storage systems).

1084 Patrick Hogan, ‘The Idiosyncrasy of Beauty: Aesthetic Universals and the Diversity of Taste’ in Peer Bundgaard, Frederik Stjernfelt (eds.) *Investigations into the Phenomenology and the Ontology of the Work of Art* (Springer 2015) 112–120.

1085 Antoon Quaedvlieg, ‘Substantial Value and the Concept of Shapes’ in Bruun et al. (n 38) 379–380.

avoid generic functionality, but could raise the objection over the appearance giving substantial value to the goods, which is also excluded from protection (Chapter 8).

7.2.2.4. *Consumer preferences vis-à-vis (non-traditional) product features*

What raises the greatest doubts over interpretation is the requirement to rely on the consumer perception of a product archetype. In the author's opinion, when taking a realistic perspective of market offerings at any given moment in time, it seems impossible to predict the type of products (goods) for which consumers would, or not, have a ready-made picture of the 'idea'/archetype of that product. For instance, sweets (candies, chocolates) usually serve as the textbook example that no such archetype exists. However, consumer taste changes dynamically over time, and suddenly a specific 'demand' for a specific type of product may emerge. For example, in Japan there was a sudden marked rise in demand for the giant, rainbow-coloured *Totti Factory* cotton candy, which was denied registration upon lack of distinctive character,¹⁰⁸⁶ although functionality objections in the meaning of the EUTM could have been applied. Technological progress also bolsters changes in demand and determines the must-have parameters of a product's appearance. In the past, the smaller cellular phones were, the better; today, in turn, smartphones must have bigger screens for easy reading.

The assessment becomes even more difficult in the case of non-traditional signs, public awareness of which, influenced by trends (marketing strategies), may easily change from interest/attention to indifference. In consequence, market and societal needs for certain product features fluctuate. Additionally, 'the chicken or the egg' dilemma surfaces here: Which comes first? Marketing strategies, preceding a new product launch that raise a specific type of consumer need, and later product preferences? Or is it instead a reflection of consumer preferences, that have inherently emerged based on the current market offer? The answer depends on the timing.

Colours are said to perform 'communicative functionality' – a term used by professor Bartow to express colour's capacity to communicate social, conventional meanings through association with product properties (e.g. colours denoting product ingredients).¹⁰⁸⁷ For reasons of scarcity, the US practice has

1086 JP TM Application No. 2016-54840 refused upon Art. 3(1)(iii) of Japanese Trademark Law (www.jpo.go.jp/e/system/laws/rule/guideline/trademark/kijun/document/index/all.pdf).

1087 Ann Bartow, 'The True Colours of Trademark Law: Green-lighting a Red Tide of Anti Competition Blues' (2008) 97 Kentucky L.J. 263, 283–285, referring to a blue fertilizer containing nitrogen (*Nor-Am Chemical v. O.M. Scott & Sons*, 4 U.S.P.Q.2d (BNA) 1316, 1319–20 (E.D. Pa. 1987)) or the examples of the brown wrapper of a chocolate bar or green candies for mint flavours.

denied trade dress protection to popular colours and flavours of medicines.¹⁰⁸⁸ At the same time, colours may perform utilitarian purposes *sensu stricto*, which would fall under the technical functionality ground (e.g. the colour of a wound dressing, selected to blend with human skin¹⁰⁸⁹).

As to other types of product features resulting from the nature of goods, the EUIPO Guidelines offer the examples of a motorbike sound (filed for *motor-bikes*) or an olfactory mark (for *perfumes*).¹⁰⁹⁰ The EUIPO CP 11 convergence guidance includes examples of the sound and movement of a metronome (for metronomes) or the sound of a zipper (for zippers).¹⁰⁹¹ The general rule formulated thereupon is that the closer the link between the sound, motion (etc.) and the goods – as concerns the way such features impact on how a product works – the higher the assumption they are functional attributes of goods. However, the challenge is that the EUIPO also considers these aspects when proving undistinctive character (or descriptiveness).¹⁰⁹² This renders it unpredictable whether an assessment will follow the functionality or distinctiveness path.

Summing up the EUTM practice and guidance, there are high chances that basic product characteristics, common to a larger category of similar goods, and connected to the way such goods perform their basic function, would risk arbitrarily falling under one, or more, of the categories of functionally generic, functionally utilitarian, even aesthetic functionality in light of *Hauck*, as well as undistinctive, and/or, descriptive, and/or customary. If the notion that distinguishes generic functionality amongst the other refusal grounds relates to the ‘archetype’/‘idea’/‘concept’ for a given type of product from the vantage point of consumer preferences, then the key issue remains how such an archetype can be established. In the author’s opinion such an exercise cannot be performed in the abstract. Market realia, as evolving over time, should be essential factors of the assessment (see below).

7.3. Is a practical solution possible?

The following part looks into how market factors, which permeate the US genericness practice (7.3.1.), may serve the purpose of assessing the functionality

1088 Signe Naeve, ‘Heart Pills Are Red, Viagra is Blue – When Does Pill Colour Become Functional? An Analysis of Utilitarian and Aesthetic Functionality and Their Unintended Side Effects in the Pharmaceutical Industry’ (2010) 27 Santa Clara High. Tech. L.J. 299, 330–331, by referring at 313–314 to rulings that denied protection: *Warner & Co v. Eli Lilly*, 265 U.S. 526 (1924) – chocolate flavour and brown colour of a quinine drug, and *In re N.V. Organon*, 79 U.S.P.Q.2d 1639 (T.T.A.B. 2006) – orange flavour of an anti-depressant.

1089 Emilie Winckel, ‘Hardly a Black-and-White Matter: Analyzing the Validity and Protection of Single-Colour Trademarks within the Fashion Industry’ (2013) 66 Vand L Rev. 1015, discussing at 1028 *In re Ferris Corp.*, 59 USPQ.2d 1587, 1589 (TTAB 2001).

1090 EUIPO Guidelines Part B Section 4 Chapter 6.2.

1091 EUIPO CP 11, 41–42. By contrast, see the accepted US registration 5527388 for a *Zippo* lighter – ‘The sound mark consists of the sounds of a windproof lighter opening, igniting, and closing’.

1092 *Ibidem*, 23, 28–29.

of features resulting from the nature of goods under the EUTM (7.3.2.). The author advocates for incorporating more flexibility into the assessment of generic functionality. This seems a useful input for the process, irrespective of the possible overlap with other functionality grounds.

7.3.1. *A glimpse into the US genericness rules*

US genericness practice initially applied to word marks. The Lanham Act denies trade mark protection to a word or term that has become generic for the goods/services designated, even if at a certain point it was inherently distinctive or acquired secondary meaning.¹⁰⁹³ Genericness doctrine goes back in time to the common-law roots of unfair competition.¹⁰⁹⁴ Its aim has been to ensure free communication over terms that became the signifiers of a type/set (genus) of products related to that one incorporating the initial mark – classical examples include the terms ‘aspirin’, ‘cellophane’, ‘shredded wheat’, ‘thermos’, ‘linoleum’.¹⁰⁹⁵

Genericness has been also applied to trade dress, albeit less frequently. This was seen in the example of the ‘Murphy bed’ which folds down from the wall¹⁰⁹⁶ or a rectangular macadamia nut shortbread cookie diagonally dipped in chocolate.¹⁰⁹⁷ The scholarship has summarized the categories of generic trade dress as encompassing:¹⁰⁹⁸

- an ‘overbroad’/‘generalized’ design or ‘style of doing business’;
- a ‘basic’ or ‘necessary format that no one should have monopoly’ over (such as the regular shape of cardboard, as the most cost-effective way of packaging¹⁰⁹⁹);
- a ‘common’ design in an industry, incapable of source-identification.

1093 Genericness represents a cancellation ground and also an infringement defence, Lanham Act, § 14 (15 U.S.C. § 1064 (3)) of 2013.

1094 Deven Desai, Sandra Rierson, ‘Confronting the Genericism Conundrum’ (2007) 28 *Cardozo L. Rev.* 1789.

1095 Dreyfuss (n 170) 417.

1096 *Murphy Door Bed v. Interior Sleep*, 874 F.2d 95, 101 (2d Cir. 1989).

https://casetext.com/case/murphy-door-bed-co-v-interior-sleep-systems?__cf_chl_jschl_tk__=pmd_e9oCKp7yiD_vh0XJIea042cX4wDfNDFuwSYttkxzkd0-1631798705-0-gqNtZGzNAICjcnBszQi9

1097 *Big Island Candies v. The Cookie Corner*, 269 F. Supp.2d 1236, 1243–1244 (D Hawaii 2003), <https://casetext.com/case/big-island-candies-2>

1098 Naeve (n 1088) 308; Gambino, Bartow (n 248) 268–269 referring to Valentine’s Day cards depicting hearts and arrows or cards with tabby cats (*Jeffrey Milstein v. Greger, Lawlor*, 58 F.3d 27, 33 (2d Cir. 1995)) or to the interior design of a centrally located bar (*Landscape Forms v. Columbia Cascade*, 113 F.3d 373 (2d Cir. 1997)).

1099 Amir Khoury, ‘Three-dimensional Objects as Marks: Does a “Dark Shadow” Loom over Trademark Theory’ (2008) 26 *Cardozo Arts & Entertainment* 335, 351.

Comparing the above-defined generic trade dress elements with the scope of EUTM product features resulting from the nature of goods, some overlap is possible. The common area would include basic, standard, and common types of features. However, under the EUTM such features may switch to examination under distinctiveness grounds. As concerns generalized/imprecise subject-matter, trade mark eligibility would be excluded under the EUTM for reasons of an abstract incapacity of distinguishing, regardless of any goods/services, instead of applying functionality.

As concerns the assessment of US genericness, the traditional approach when examining word marks says that a valid trade mark should answer buyer's questions of 'Who are you?'/ 'Where do you come from?', while a generic name would answer the question of 'What are you?'¹¹⁰⁰ The Lanham Act indicates that the assessment should focus on the 'primary significance' of the mark to the public 'rather than purchase motivation'.¹¹⁰¹ In practice, there are difficulties when operating a binary test which enquires about the primary significance of a term: denoting a product or a particular source. Some of the marks performed both functions, or even matched all three indication situations: source, product, and type of product.¹¹⁰²

In response to these issues, influential US scholars suggested incorporating economic considerations into the genericness test, focused on the issue of what would best serve competition purposes; continuing trade mark protection by the right holder, or ensuring free access to a term that had become generic. For instance, an 'effects on competition' test was advanced,¹¹⁰³ based on the following criteria:

- determination of the relevant genus;
- the availability of words to designate products in that genus (established using consumer surveys);
- comparison of the proportion of consumers that use that term as source indicator versus the consumers that use it as the name of a given product;
- balancing the interests of trade mark holders, consumers, and competitors.

1100 Weber (n 170) 419.

1101 15 U.S.C. § 1064 (3). The guidance provided by USPTO – see the test for genericness included in TMEP § 1209.01(c)(i) at <https://tmep.uspto.gov/RDMS/TMEP/Jan2015#/Jan2015/TMEP-1200d1e7149.html> – clarified the following evidentiary standard: the examiner 'must establish a prima facie case that a term is generic by providing a reasonable predicate (or basis) that the relevant purchasing public would primarily use or understand the matter sought to be registered to refer to the genus of goods or services in question' at www.uspto.gov/sites/default/files/documents/TM-ExamGuide-1-22.pdf

1102 Samuel Oddi, 'Assessing Genericness: Another View' (1988) 78 Trademark Rep 560, 574. About trade marks' 'semantic ambiguity' see Timothy Green, 'Trademark Hybridity and Brand Protection' (2014) 46 Loy. U. Chi. L. J. 75.

1103 Coverdale (n 379) 882–890.

One example of the differentiated perception between different groups of users concerned Bayer's aspirin. This term was found to be generic at the retail level, for end consumers, yet it was not a generic term for wholesalers, who used the chemical term of 'acetyl salicylic acid'.¹¹⁰⁴

In an older study, Ralph Folsom and Larry Teply argued for a 'hybrid' character of generic trade marks and advanced a 'marketplace efficiency' test focused on the question: 'will market transactions proceed more efficiently if the trademark holder is permitted exclusive use of the mark, or will they proceed less efficiently?'¹¹⁰⁵ The latter situation will occur if the term is now used generically as product-category. This test required examining bodies to:

- determine the 'relevant consuming universe'
- verify, through surveys, the extent of the term's use by manufacturers and/or consumers, divided into different categories, according to their awareness of the source-significance of the term.¹¹⁰⁶

This kind of assessment focuses on market-orientated factors, economic analysis, and the conditions of effective competition, which found support in the legal doctrine of the time.¹¹⁰⁷ It has recently experienced a revival, leading towards the application of a more flexible common-law approach to both functionality and genericness.¹¹⁰⁸

7.3.2. *A flexible test of EUTM generic functionality?*

The critical remarks in 7.2. argue that the CJEU's *Hauck* guidance comprises several factors that are uncertain and/or offer unpredictable results. The main difficulties/deficiencies reside in needing to establish the extent of features linked to product use and the typical appearance (the genus) of a given type of product, whilst neglecting the extent of non-functional features, hence any possible variation of product appearance. To date, the CJEU/GC has intermixed usefulness/utility and patent technicality to such a degree that assessments have often arbitrarily switched from considering technical functionality to distinctive character, and back (Chapter 6). Generic functionality brings additional overlap, although in this respect GC prefers to conduct examinations upon distinctiveness grounds. In the

1104 *Bayer v. United Drug*, 272 F. 505 S.D.N.Y. 1921, indicated by Coverdale, *ibidem* 889, fn 100.

1105 Folsom, Teply (n 379) 1352.

1106 *Ibidem*, 1347–1358.

1107 Oddi (n 1102) 571–578; Jerre Swann, 'The Validity of Dual Functioning Trademarks: Genericism Tested by Consumer Understanding Rather Than by Consumer Use' (1979) 69 TMR 357.

1108 Rierson 'Toward ...' (n 316) 720–760.

author's opinion, this trend is likely to persist. At the same time, the CJEU/GC has firmly held that each refusal ground should have an autonomous status and be applied in its entirety. This leads to the need to find a practical way of identifying those natural/generic features that match the definition of the product 'archetype', yet these are dependent on consumer preferences.

Giving the assumption that any abstract reasoning about consumer preferences for goods would be misleading, the reasonable solution seems to be the introduction of a test anchored in market realia, to reveal the actual needs of consumers and competitors around a given (set of) product features for a given 'type' of product. First, product categorization is critical, and this point carries the greatest risk of arbitrary selection. Second, consumer preferences are essential, but not sufficient on their own. It also seems important to predict the costs incurred when conferring or denying trade mark protection. If the US genericness practice can serve analogically, then an EUTM test should consider the following parameters:

- the relevant 'product category' (e.g. items 'marketed' v. 'filed for registration', see 7.2.2.1.);
- the range of similar products for the common/closest 'genus' of products – this finding is instrumental to determine the possibility of incorporating the same function under various appearances, and evaluating the extent that such appearance reveals creativity;
- some specificities/breakthrough features of the product at issue;
- consumer demand for the features at issue versus similar ones (see below);
- comparing the proportion of consumers that rely on these features for the purpose of product use, as opposed to source indicator;
- consumer aversion or willingness to pay higher prices in case of these features being trademarked;
- competitors' demand for the features at issue versus similar ones;
- specific public interest in keeping free access to the features at issue.

If generic functionality under the EUTM depends on consumer preferences for a given product 'genus', then the test should be a flexible one. However, flexibility is not what the CJEU currently endorses with regard to functionality. Measuring consumer perception using the aforementioned algorithm will inevitably lead to operating with various *proportions* of consumers (e.g. those preferring a given combination of product features as compared to those preferring similar designs within the same product category; those willing to pay a higher price versus those refraining therefrom; those relying on the product features primarily as a badge of origin versus those perceiving them primarily as useful characteristics, etc.). This collides with the CJEU's reluctance towards accepting proofs related to any percentage of consumers, for instance

with regard to the acquired distinctiveness of a colour per se.¹¹⁰⁹ The type of proof may primarily consist of surveys, whilst other pieces of evidence may also be relevant, according to the considerations in 4.4.4.2.

Flexibility would also require consideration of the changing market landscape (i.e. competitors and consumer interests) over time. However, the CJEU has adopted a static examination of functionality, fixed at the moment of filing for registration of the sign. Under the current EUTM, such an approach has already demonstrated its deficiencies with respect to the functionality of signs giving substantial value to goods (see Chapter 8).

In practice, it may be that assessments of generic versus aesthetic functionality also share common points, as the *Hauck* case taught. Indeed, the author acknowledges that the functionality of signs resulting from the nature of goods and those giving substantial value to goods may – analogically – match the broad category of ‘aesthetic’ functionality in US law. Chapter 8 looks into some possible convergence between US tests and EUTM guidance, which may also apply indirectly to generic features. As the transposition of pieces of US case-law within any EUTM functionality grounds is, anyway, a matter de lege ferenda, it is difficult at this stage to decide whether US genericness case-law may serve better than US aesthetic functionality case-law with regard to the examination of signs resulting from the nature of goods under the EUTM. This requires more thought from future scholarship. What bears significance here is that, as long as the EUTM considers consumer perception, this requires testing in concreto, and for this reason a multi-factor market-orientated test should become the rule.

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1109 C-217/13 and C-218/13 *Oberbank*, EU:C:2014:2012, para 49, denying recognition of a trade mark without a degree of recognition reaching at least 70 per cent for the mark, via consumer survey.

- EUIPO Guidelines of 02/01/2014, Part. B, 2.5.2., 65, at: <https://euipo.europa.eu/ohimportal/pl/web/guest/guidelines-repository>
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8 The functionality of signs giving substantial value to goods

The third EUTM functionality prohibition and absolute refusal ground addresses signs that give substantial value to goods. For ease of reading and closest analogy with the US practice, this legal ground is referred to below as ‘aesthetic functionality’, although its scope extends beyond aesthetics and what may seem to be ‘eye-appealing’ features. Essentially, EUTM aesthetic functionality considers product features that determine consumer purchase decisions, where ‘monopolization’ via trade mark protection (would) impede competitors in trading alternatives which consumers would accept as substitutes. Rooted in a Benelux provision that existed prior to the EUTM’s harmonization, this refusal ground has generated many controversies, because of the multivalent notion of value, and the need to prioritize between different value-conferring sources. This chapter starts by examining the evolution of EUIPO/GC/CJEU jurisprudence, from modest beginnings following the Benelux school of thought, to a systematic expansion of the scope of application, thanks to the *Bang & Olufsen* and *Hauck* judgments (8.1.). Because of shared development, the US functionality doctrine is useful for understanding the reasons for denying protection to consumer appealing product features that are important for effective competition (8.2.). The core analysis of this chapter is a detailed interpretation of the concept of ‘giving substantial value’ to goods, which covers three topics (8.3.). First, considering the criteria (and the vantage point) of what moves a consumer to purchase a given product, a set of interdisciplinary remarks shed light on the complex meaning of aesthetics and product value (8.3.1.). The second issue critically examines the criteria of interpretation introduced by CJEU in *Hauck* (8.3.2.). Another important issue is to identify the conditions under which source-identification and reputation-related value(s) should not contribute to aesthetic functionality (8.3.3.). Because relying solely on the *Hauck* criteria may lead to inconclusive and unpredictable results, the final part looks into alternative methods of assessment advanced by US scholars that relate to socio-cultural or psychologically pre-determined consumer preferences (8.4.1.) or empirical surveys (8.4.2.). All these findings are gathered in a concluding part to advance a multi-factor test, similar to those used in the US practice, which incorporates the *Hauck* criteria while adapting them in such a way as to correctly capture

consumer preferences, yet with a conclusive focus on competitive need, as measured by the extent of substitutable products (8.4.3.).

As will be demonstrated throughout this chapter, EUTM aesthetic functionality cannot prevent the systemic overlap of trade marks and designs or copyright. Instead, the most sensible solution is to apply this provision while seeking solutions tailored to the conditions of market competition.

8.1. EUTM practice on signs giving substantial value to goods

The EUTM aesthetic functionality refusal ground, currently embedded in Art. 4 (1)(e)(iii) TMD and Art. 7(1)(e)(iii) EUTMR, was modelled upon the Benelux trade mark provision which referred to signs affecting the value of goods (see 1.1.2.2.). However, the Benelux jurisprudence lacked clear guidance. Intuitively, ceramics, vases, or jewellery all constituted the kind of products that consumers usually bought upon appearance. The essential value of miniature china houses was found to stem from the beauty of their shape,¹¹¹⁰ while in case of snacks, cookies, or chocolates, it was the comestible value that mattered, as derived from taste, freshness, and flavour¹¹¹¹ In the *Adidas* case, the court noted that examination depended on the type of product and whether the appearance ‘determined strongly its trade value’.¹¹¹² The judgments concerning the *Burberry* checked pattern clarified that the functional exclusion did not apply to two-dimensional textile patterns, but only to three-dimensional products; the issue was whether the beauty and originality of the appearance ‘largely’ determined the commercial value of goods, whilst the value attached to goodwill was disregarded.¹¹¹³

The problems of interpretation that became apparent then are still valid to this day. Paving the way for the EUTM reforms, Max Planck Study suggested removing the refusal ground of aesthetic functionality and replacing the associated examination with a test of acquired distinctiveness.¹¹¹⁴ This deletion suggestion has been recently reiterated by professor Kur.¹¹¹⁵ Ultimately though, the EUTM legislator chose differently, and so the prohibition is still in force, with its scope still requiring clarification.

1110 Strowel (n 107) 154, 160 fn 26 citing Pres. Trib. Rotterdam, 29.04.1982, BIE, 1984, 193.

1111 Gielen (n 208) 164, 166 fn 20 citing Supreme Court of the Netherlands, 11.11.1983, NJ 1984, 203 (*Wokkels*). Similarly, Dutch Supreme Court judgment of 21.04.1989 concerning twirled-shaped *Smith* crisps, IER, 1989, 58, (1989) EIPR 7, D-122.

1112 Strowel (n 107) citing at fn 30 Benelux Court of Justice, 23.12.1985, case 83/4, Rec. 1985, 38–86 (*Adidas*).

1113 Gielen (n 208) 165, citing fn 9 Benelux Court of Justice, 14.04.1989, NJ 1989, 834 (*Burberry I*), fragments in (1989) EIPR 7, D-122; Gielen, *ibidem*, fn 10 Benelux Court of Justice, 16.12.1991, NJ 1992, 596 (*Burberry II*).

1114 Study (n 627) paras 2.34 and 2.37.

1115 Annette Kur, ‘Aesthetic Functionality in EU Law – Should it Be Deleted?’ in Graeme Dinwoodie, Mark Janis, (eds.) *Research Handbook on Trademark Law Reform* (Elgar 2021) 168, 188–189.

8.1.1. *Setting the scene*

The aforementioned glimpse of the Benelux practice draws attention to the two interrelated difficulties which challenge any analysis of aesthetic functionality: the problem of defining the (commercial) value of a product as derived autonomously and exclusively from its appearance (shape and/or other characteristics), and the difficulty of comparing this to the other values embedded by the product. The Benelux courts relied on such quantifiers as ‘strongly’ and ‘largely’, while the EUTM legislator opted for the term of ‘substantial’ value to goods. The key issue is how factors with a possible influence on the value of goods are linked to the product features at issue. Because appearance matters to any product, as taught by the famous marketing slogan ‘ugliness doesn’t sell’,¹¹¹⁶ the functionality prohibition becomes relevant when the value of appearance reaches the level of being ‘substantial’. This means that a rigid all-or-nothing scenario does not work, and aesthetic functionality requires a flexible approach. The legal doctrine has increasingly noted that product design constitutes a complex signal to induce consumer purchases, not only because of attributes of the appearance, but through a bundle of communicative messages which express lifestyle, social position, and socio-cultural allegiance (e.g. eco-design).¹¹¹⁷ The consumer, no matter how specialised and/or narrow the market is, pays attention to the appearance of a product, even if only for reasons of telling it apart from other products. Designers base their work on the psychological principle that perception intertwined with the product’s appearance governs the recognition of any product: ‘all the design rules are based on human psychology: how people perceive, learn, reason, remember, and convert intentions into action’.¹¹¹⁸ Modern design expands the means of interacting with a product to all sensory experiences. If a design is truly a marketing tool, then the goal of this tool is for consumers to purchase a given product. Which factors contribute to this? The aim of this chapter is to search for viable answers.

8.1.2. *The winding road to aesthetic functionality: from acceptable decoration, via iconic shapes, towards multifunctional designs*

The following part retraces the scope of the EUTM aesthetic functionality, as settled by the EUIPO/GC/CJEU jurisprudence. There is a noticeable evolution from the initial lenient approach – which accepted that source identification may be co-related with ornamental capabilities – to an over-inclusive

1116 Jean Baudrillard, *The Consumer Society: Myths & Structures* (Sage 1998 reprint) 29.

1117 Ansgar Ohly, “Buy Me Because I’m Cool”: the “Marketing Approach” and the Overlap Between Design, Trade Mark and Unfair Competition Law’ in Kur, Levin, Schovsbo (n 130) 109, 117 (citation); Fhima, ‘Consumer Value ...’ (n 34) 661.

1118 Jeff Johnson, *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Guidelines* (3rd ed. Morgan Kaufmann Elsevier 2021) xiv.

scenario, based on the criterion of consumer appeal, which may result from aesthetic/non-aesthetic characteristics of a product. Certain flaws in the latter approach mean that it has been used with hesitance in the recent practice.

8.1.2.1. *Early years of jurisprudence*

The early versions of the EUIPO Guidelines restricted the refusal ground to cases in which a shape ‘exclusively’ achieved an aesthetic function (such as an object of art) and ‘ha[d] nothing to do with the commercial value of goods’.¹¹¹⁹ A shape being merely pleasing/attractive or contributing to the ornamentation of goods (e.g. Ferragamo’s single square-shaped buckle¹¹²⁰) did not fulfil the requirement of giving exclusive value to goods. Nor did a fancy jar of Nestle coffee with faceting reminiscent of a precious stone, differentiating it from the packaging traditionally used.¹¹²¹ Similarly, a crispy snack with a non-uniform flower-like shape did not fall within the ambit of aesthetic functionality.¹¹²² This line of cases accepted the situation in which a sign simultaneously fulfilled several purposes, that is, achieving aesthetic effects (via decoration) whilst indicating the commercial origin of goods/services, which jointly dismissed the functionality bar. Certainly, the more interestingly shaped a product’s appearance, the easier was the possibility of meeting the distinctiveness standard, as jurisprudence required that shapes ‘significantly’ departed from those customarily used on the market (5.3.3.2.). The refusal ground of aesthetic functionality rarely occurred. EUIPO’s lenient approach changed with the case of *Bang&Olufsen*’s loud-speaker.

8.1.2.2. *Focusing on ‘iconic’ design, yet inconsistently*

On 17 September 2003, *Bang&Olufsen* filed for EUTM registration of a three-dimensional sign showing a pencil-shaped loud-speaker: the BeoLab model. The EUIPO initially refused registration for reasons of lack of distinctiveness, both inherent or acquired.¹¹²³ In the appeal, the GC found the shape to be inherently distinctive due to its ‘truly specific’ shape, where ‘the whole create[d] a striking design’ to be ‘remembered easily’ by a restricted public with a higher level of attention to goods, belonging to the top-of-the-range

1119 EUIPO Guidelines, Part B Examination, Version of April 2008, para 7.6.2., 38.

https://eipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/contentPdfs/law_and_practice/guidelines/ctm/examination_en.pdf

1120 R-395/1999-3, 34. The BoA held that for fashion items, the consumer’s purchase decision was based on several factors: celebrity of the mark, manufacturer trade names, emblems displayed at the point of sale, and fashion trends.

1121 R-739/1999-1, 14–15.

1122 R-467/1999-1, 12.

1123 BoA’s decisions in R-497/2005-1 of 22/09/2005 and of 24/02/2006 (corrigendum).

electronics market.¹¹²⁴ Subsequently, the EUIPO annulled its first decision regarding distinctiveness, yet again ruled on the merits and refused registration upon the functionality ground of a shape giving substantial value to goods.¹¹²⁵ Another appeal heard by the GC resulted in the judgment of 6 October 2011¹¹²⁶. The Court upheld the EUIPO's refusal by referring to the manner of how the shape was advertised, sold, and publicly perceived as a 'kind of pure, slender, timeless sculpture for music reproduction', while the applicant emphasized that the design played an essential role in branding and increased the appeal, ergo the value of the product.¹¹²⁷ The GC agreed that other characteristics of that product (functional parameters, quality of materials) could also have given 'considerable' value to the goods, however, the design carried the leading role in consumer's choice.¹¹²⁸

The judgment revealed some contradictions that have plagued EUTM case-law ever since. First, the need to define the rationale of aesthetic functionality at the crossroads between avoiding the sequential cumulation of rights with regards to designs, copyright, and trade marks in light of *Philips* and *Lego* guidance,¹¹²⁹ and acknowledge the possibility of overlap between the subject-matter of designs/copyright and trade marks.¹¹³⁰ Part 2.2.2. argued that a sensible understanding of the purpose of aesthetic functionality post-*Gömböc*¹¹³¹ is to renounce formalistic delineation and hierarchy between different IPRs, whilst embracing the need to ensure effective competition on the market. Second, in *Bang&Olufsen* the EUIPO/GC focused on what determined a consumer's choice to purchase the product – that is, was it predominately the shape, or something else? However, no reference was made to market studies or any other evidence showing actual consumer behaviour. Even more, the GC tentatively followed the guidance from *Lego*, which downsized the role of consumer perception in examining functionality, even though *Lego* concerned technical functionality.¹¹³² Instead, the court preferred its own assessment ex cathedra, upon selected proofs interpreted in a way far from clear guidance. For instance, once the Court labelled the loudspeaker 'iconic', it led to the assumption that the design necessarily gave substantially 'more' value than any other parameters, such as technical performance or prestigious brand. Need-

1124 T460/05 of 10/10/2007 *Bang&Olufsen v. OHIM*, EU:T:2007:304, paras 40–41, 30.

1125 BoA's dec. of 10/09/2008, at https://euipo.europa.eu/eSearchCLW/#basic/*///number/497%2F2005-1

1126 T-508/08 *Bang&Olufsen v. OHIM*, EU:T:2011:575.

1127 T-508/08, paras 73–75. Proofs originated from the applicant's statements during proceedings and distributors' websites, on-line auction or second-hand websites that described the design as 'BeoLab 8000 Pure music icon'.

1128 Ibidem, paras 76–77.

1129 The EUIPO noted negatively that the shape had been previously protected as a Danish design no. MR 1992 00868 between 1991 and 2006,

1130 BoA dec. of 10/09/2008, 20–24; T-508/08, 64–66.

1131 C-237/19.

1132 T-508/08, paras 70–72.

less to say, if a ‘remarkable’ shape was aesthetically functional, whilst an ordinary one lacked distinctive character, then the kinds of product appearance that could still be trademarked remained ‘enigmatic’.¹¹³³

In the following years, the EUIPO focused mainly on the value stemming from an extraordinary shape, as opposed to other kinds of values and/or product parameters. A diamond-shaped bottle of vodka, labelled as a ‘kind of pure, slender, timeless sculpture’, was seen to confer the ‘notion of expense and exclusivity’ to beverages, also due to the high price and expensive craftsmanship – the mix of these luxury attributes rendered the shape unregistrable.¹¹³⁴ By contrast, the registration of the ‘AluChair’ shape, designed by Charles and ‘Ray’(Bernice) Eames, was upheld, because its appeal stemmed from the famous designers, and not from the shape alone, which over time had become banal and represented just one variant of aluminum swivel chairs.¹¹³⁵ Similarly, in the case of the ‘Eames Lounge Chair’ the cancellation division considered it an ‘ordinary piece of lounge furniture’, with its economic value resulting from a combination of factors (the designers’ fame, history, status as a luxury item for connoisseurs, reputation), and not the shape’s attractiveness. Registration was maintained in the first instance,¹¹³⁶ however four years later an appeal was heard after the *Hauck* judgment (more in 8.1.2.4.). Finally, in the case of the ‘Gibson’ guitar body, which might also have appealed to customers because of the brand reputation, its value was understood as ‘attractiveness’ ensured primarily by the shape, insofar as it determined the choice of one guitar over another.¹¹³⁷

8.1.2.3. *Hauck, more ambiguity than enlightenment*

As the *TrippTrapp* chair case involved a referral for a preliminary ruling, the CJEU’s binding interpretation stated that the prohibition of a sign giving substantial value to goods may apply to a sign consisting of a shape with several characteristics, each of which may give that product substantial value.¹¹³⁸ The aim of this judgment was to encompass products with ‘essential functional characteristics’, apart from those of artistic/ornamental value.¹¹³⁹ The CJEU referred to the chair’s ‘other characteristics (safety, comfort and reliability)’

1133 Annette Kur, ‘Too Pretty to Protect? Trade Mark Law and the Enigma of Aesthetic Functionality’ in Josef Drexler et al. (eds.) *Technology and Competition: Contributions in Honour of Hanns Ulrich* (Larcier 2009) 139, at <https://ssrn.com/abstract=1935289>, 17–18.

1134 R-1313/2012-1, 17–21.

1135 R-486/2010–2, 19–22 concerning CTM 2298420. The chair was exhibited in museums and advertised on art market websites as an icon (prototype) for tubular chairs.

1136 Canc. Dec. 3525 C of 31/01/2011 conc. CTM 182451.

at https://euipo.europa.eu/eSearchCLW/#basic/*///number/664%2F2011-5

1137 R-2520/2011–5, 19–22.

1138 C-205/13 *Hauck*, para 36 and the second operative part.

1139 C-205/13, para 32.

that gave essential functional value.¹¹⁴⁰ In the author's opinion, these characteristics did not represent objective features/properties of the chair, but only subjective sensations and judgments resulting from using that product. This is the weakest part of the CJEU's ruling, as it blurs the line between the objective characteristics of a product that may perform various purposes (technical/utilitarian, ornamental/decorative, or simply being an arbitrary detail) and the subjective perception of such characteristics by a user. What should matter here is the specific properties of the product and how they can contribute to conferring 'value' to the product/goods, yet this assessment is also dependent on the definition of 'value' (8.3.1.).

Hauck seemingly aimed to make utilitarian functionality a relevant source of value. An obvious difficulty emerges. Insofar as the refusal ground applies to a sign consisting *exclusively* of a shape or another product characteristic giving substantial value to goods, this would indicate that the addition of *extra* features without conferring such value should dismiss the prohibition (LB). This would be the case when adding words or graphics in order to ensure source-identification value, which could minimize the risk of triggering aesthetic functionality (8.3.3.). In the author's opinion, the initial interpretation of this prohibition also implied that features with utilitarian, technical effects, as opposed to aesthetic appeal, could dismiss the prohibition. In the light of *Hauck*, if utilitarian/technical functionality is also responsible for aesthetic functionality, then it is unclear what kind of product features are under consideration, and what kind of purposes such features should perform so as to avoid the application of the refusal ground.

The CJEU reiterated *Lego's* approach which reduced the role of consumer's perception to the identification of the essential characteristics of a sign (5.3.1.).¹¹⁴¹ However, the court followed the AG's suggestions¹¹⁴² that 'other' criteria of assessment may be considered, such as:¹¹⁴³

- the nature of the goods;
- the artistic value of the shape;
- its dissimilarity from other shapes commonly use on the market;
- a substantial price difference in relation to similar products;
- the development of a promotion strategy bolstering the aesthetic characteristics of the product.

The Court concluded that the public's perception may be one of the possible criteria to determine 'whether that ground for refusal is applicable'.¹¹⁴⁴

1140 C-205/13, para 29.

1141 C-205/13, para 34.

1142 Opinion of AG Szpunar to C-205/13, EU:C:2014:322, para 93.

1143 C-205/13, para 35.

1144 C-205/13, para 36.

The author reads the latter words, juxtaposed with *Lego* guidance, as meaning that the criterion of public perception may be used twice in the assessment of aesthetic functionality. First, it helps to establish the essential characteristics of the sign. Second, it helps to interpret whether the shape or other product characteristics bring ‘substantial value to goods’. The aforementioned criteria are analysed in 8.3.2. below.

8.1.2.4. *Living in a post-Hauck environment*

An interesting follow-up concerned the ‘Eames Lounge Chair’, the value of which, in the eyes of the EUIPO’s first instance, resulted from an ergonomic, sophisticated design that ‘became famous ... not primarily because of its aesthetic attractiveness’.¹¹⁴⁵ However, the BoA re-examined the evidence and changed its view under the *Hauck* guidance, finding that promotional strategies had touted the value of the shape, whilst its craftsmanship and art exhibitions demonstrated that it had substantial value at the date of filing for registration.¹¹⁴⁶ Subsequently, the parties reached an agreement to withdraw the appeal and maintained the registration,¹¹⁴⁷ which demonstrates that the financial strength of a company may ultimately decide the fate of functionality objections.

In another case, the EUIPO’s Grand Board of Appeal invalidated the registration of *Lindt’s* (chocolate) ‘Gold Bunny’. The EUIPO relied on evidence concerning the difference in the shape of a traditional Easter bunny as compared to other chocolate products and its higher price.¹¹⁴⁸ The golden foil wrapping, the red ribbon, and the gold bell of the bunny were also held to be ‘typical’ elements of Easter decoration. The EUIPO ruled that the shape and overall appearance played the decisive role in consumers’ purchase decision¹¹⁴⁹, although the need to keep Easter symbols free from monopolization was equally emphasized.¹¹⁵⁰

In other cases the EUIPO adopted a moderated, even restrained approach to aesthetic functionality, somehow still applying the pre-*Hauck* guidance. The value of an ice-cream was seen to mainly derive from its flavour and consistency and not from its shape, especially given that the manufacturer could not command a higher price because of the shape, whilst end consumers solely relied on the source-identification ‘value’ of the ice-cream at the point of sale.¹¹⁵¹

1145 For an analysis of the EUIPO’s hesitance towards the Eames designs, see Stefanie Voegl, ‘Two Eames Chairs, Two Contrary “Decisions”’ (2017) 48(4) IIC 452, 456–458.

1146 R-664–2011–5, 21–42.

1147 T-455/15 *Vitra v. Consorzio*, EU:T:2016:653.

1148 R 2450/2011-G, 35–43.

1149 ‘It is highly unlikely that consumers would buy Easter bunnies that do not have traditional features as a present for their children’ (ibidem, 38).

1150 Ibidem, 45–46.

1151 R-0590/2015-4, 30–35.

In the case of a sparkling wine bottle with a reflective golden/pink colour and a small letter/logo, the BoA identified the shape and colour as being two essential characteristics, however, neither was ‘striking’, nor ‘easily remembered’, and in combination did not confer substantial value to the goods.¹¹⁵²

Two recent decisions have addressed shapes with visible utilitarian/technical input. The first case concerned the attempt to invalidate the *Dualit* toaster under the EUTM, with objections of aesthetic functionality reminiscent of those raised in the UK proceedings.¹¹⁵³ The BoA noted that ‘[t]he success of the proprietor with the mark and the products it designates is not what is meant in Article 7(1)(e) EUTMR’ – the toaster’s high value stemmed from branding strategies, high volume sales, and enhanced distinctiveness.¹¹⁵⁴ The EUIPO held that consumer purchase decisions were influenced by a mix of factors: beauty, durability, practicability, speed, quality, and, apart from shape, none of them was disclosed by the graphic representation.¹¹⁵⁵ In consequence, the relevant ‘value’ was the commercial one, ‘of the product as marketed today’, as compared to similar toasters, without giving weight to the details of the historical development of the design.¹¹⁵⁶ A similar approach was adopted in the case of the *Vespa* scooter by the EUIPO’s Cancellation Division, which dismissed the objection of aesthetic functionality, mainly because of a lack of evidence, but also by admitting that consumers would also consider, apart from aesthetic characteristics of the shape, other types of characteristics, ‘such as, for example, reliability and technical performance’.¹¹⁵⁷

The most recent decisions show how difficult is to adopt a gradual approach to the notion and source of value, especially if there is an interplay of heterogeneous factors. The EUIPO’s recent assessments have cautiously departed from the *Hauck* guidance, as utility parameters were balanced against the sole (aesthetic) value of appearance, which ultimately led to the dismissal of the prohibition. As *Hauck*’s legacy is not easy to follow, there is a great need to examine the reasons under which a product may appeal to a consumer and determine a purchase decision. This would make it possible to advance working criteria for interpretation which could render the scope of aesthetic functionality more predictable. Before looking into the parameters of substantial value under the

1152 R-1037/2017-1, 53–59. The logotype was qualified as a ‘non-essential element’ because of the common typeface, and the way its colouring merged with the rest of the bottle, which diminished the visual impact. The GC upheld the decision and maintained the registration, T-325/18 *Vinicola*, paras 57–66.

1153 R-1034/2019-4 conc. EUTM 48728 and *Dualit Limited’s* Trade Mark Applications [1999] R.P.C. 304, discussed by Kerly in *Trade Marks and Trade Names* (Sweet&Maxwell 2016) paras 8–187.

1154 R-1034/2019-4, 59. Kerly, *ibidem*, argued that any good design could involve: ‘(1) more expensive design input, (2) better quality materials, and (3) a more exclusive product (i.e. not mass-produced, possibly with some control over retail distribution)’, paras 8–188.

1155 R-1034/2019-4, 61–62.

1156 R-1034/2019-4, 63.

1157 Canc. Dec. 9295 C of 21/12/2020 conc. EUTM 11686.

EUTM, the following part offers an insight into the US practice around aesthetic functionality as possible ground for analogical application.

8.2. The US approach to aesthetic functionality

Chapter 3.2. showed that the US functionality doctrine initially addressed product features performing mechanical/utilitarian effects. Aesthetic functionality only exceptionally intervened, and in the context of product features essential to ensure commercial success/appeal.¹¹⁵⁸ Because early cases concerned protection under competition grounds, attention was focused on the costs which a defendant needed to incur in order to differentiate from the products of the plaintiff (e.g. by choosing another colour scheme) and whether the ability to compete was reduced.¹¹⁵⁹ The introduction of a definition of aesthetic functionality in the Restatements provided an impetus for developing a jurisprudential line which focused on the risk of foreclosure of competition, set in the context of the availability of substitutes.

8.2.1. From mere commercial appeal to the ‘important ingredient’ test

The first definition of aesthetic functionality came with the First Restatement of Torts of 1938 (commentaries to §742) and referred to features contributing to the aesthetic value of goods, which aided the performance of the object for which the goods were intended.¹¹⁶⁰ It was soon illustrated by a case of a bib-pocket with rounded corners, found functional due to ‘commercial appeal’.¹¹⁶¹ This ruling prepared the ground for the landmark *Pagliero* judgment concerning floral motifs on hotel china.¹¹⁶² The court asserted the

1158 ‘the instrument sold is made as it is ... because of a supposed or established desire of the public for instruments created by the plaintiff. The defendant has the right to get the benefit of that desire ...’ conc. *zithers* in *Flagg v. Holway*, 178 Mass. 91, 59 N.E.667 (1901), see Dinwoodie, Janis (n 36) 42–43.

1159 ‘Unfair Competition ...’ (n 267) 556–557 referring *Champion Spark Plug v. A. R. Mosler*, 233 Fed. 112, 116 (S.D.N.Y. 1916) – inexpensive modification of colour scheme for spark plugs; *Shredded Wheat v. Humphrey Cornell*, 250 Fed. 960 (2d Cir. 1918) – alteration of pillow-shaped biscuit generating higher costs and lessened quality; *Diamond Match v. Saginaw Match*, 142 Fed. 727 (6th Cir.), *cert. denied*, 203 U.S. 589 (1906) – unprotected combination of red and blue on matches due to scarcity of primary colours for those goods.

1160 Bradford Duff, ‘Aesthetic Functionality’ (1983) 73 Trademark Rep 151, 174 quoting Restatement, §742 comment a.

1161 *J. C. Penney v. H. D. Lee Mercantile*, 120 F.2d 949, 954 (8th Cir. 1941), at: <https://law.justia.com/cases/federal/appellate-courts/F2/120/949/1490607/> – ‘A design, for example, may not be utilitarian in a technical sense, but it may nevertheless be functional in the sense that it will contribute materially to a general sale of the goods. ... In the absence of a patent or a controlling legislative regulation in the particular field, the public is entitled to free competitive production in every element of consumer’s value.’

1162 *Pagliero v. Wallace China*, 198 F.2d 339, 344 (9th Cir. 1952), <https://law.justia.com/cases/federal/appellate-courts/F2/198/339/202861/>; Barrett (n 337) 104.

principle that functionality meant ‘cannot[ing] other than a trade-mark purpose’¹¹⁶³ and found the decoration functional because it was ‘an important ingredient in the commercial success of the product’, an ‘essential selling’ feature. A contrario, non-functionality denoted a feature that is ‘a mere arbitrary embellishment, a form of dress for the goods primarily adopted for purposes of identification and individuality and, hence, unrelated to basic consumer demands in connection with the product.’¹¹⁶⁴

Pagliari’s ‘important ingredient’ became an influential standard for testing aesthetic functionality. However, it had certain shortcomings, such as discouraging the creation of attractive designs¹¹⁶⁵ or discriminating against designs with goodwill.¹¹⁶⁶ Although the *Pagliari* interpretation ran against the modern capability of symbols to convey multiple meanings and increase product saleability, some courts continued to apply it even as late as the 1990s. In the *Aromatique* case (conc. potpourri packaging, claimed as a combination of features), the pillow-shaped cellophane bag, tied at the top in a flower-shaped gathering of cellophane allowing the fragrance to escape, was found functional for its visual and olfactory appeal, because consumers wanted to see and smell the potpourri before its purchase.¹¹⁶⁷

Due to *Pagliari*’s obvious deficiencies regarding properly evaluating the commercial value of a product, several other criteria were introduced, and often mingled together for the purpose of defining aesthetic functionality. The ‘actual benefit’ test examined whether the feature created additional benefits (utilitarian or aesthetic) apart from merely source indicating, such as black colouring increasing the heat dispersion of woodburning stoves.¹¹⁶⁸ By contrast, the ‘consumer motivation’ test asked whether the feature affected consumers’ behaviour and determined the market demand for the product at issue.

1163 For this reason a study named it ‘identification theory’, see Wong (n 771) 1132.

1164 *Pagliari*, 343.

1165 *Keene Corp. v. Paraflex Industries*, 653 F.2d 822, 825 (3d Cir. 1981) <https://casetext.com/case/keene-corp-v-paraflex-industries-inc>, discussed by Deborah J. Krieger, ‘The Broad Sweep of Aesthetic Functionality: A Threat to Trademark Protection of Aesthetic Product Features’ (1982) 51 *Fordham L. Rev.* 345, 346–349; <https://ir.lawnet.fordham.edu/flr/vol51/iss2/5>

1166 *Vuitton Et Fils S.A. v. J. Young Enters*, 644 F.2d 769, 773–6 (9th Cir. 1981) <https://casetext.com/case/vuitton-et-fils-sa-v-j-young-enterprises-2>. ‘If the Vuitton mark increases consumer appeal only because of the quality associated with Vuitton goods, or because of the prestige associated with owning a genuine Vuitton product, then the design is serving the legitimate function of a trademark’.

1167 *Aromatique, v. Gold Seal*, 28 F.3d 863, 873–4 (8th Cir. 1994) <https://casetext.com/case/aromatique-inc-v-gold-seal-inc> with reference to *Prufrock, Ltd. v. Lasater*, 781 F.2d 129, 133–134 (8th Cir. 1986) <https://casetext.com/case/prufrock-ltd-inc-v-lasater>, which denied protection to the appearance of a restaurant with an exposed kitchen for entertaining customers, because of consumer appeal and demand for restaurant services showing food preparation.

1168 *Fisher Stoves v. All Nighter Stove*, 626 F.2d 193 (1st Cir. 1980) <https://casetext.com/case/fisher-stoves-inc-v-all-nighter-stove-works>, discussed by Wong (n 771) 1137.

This led to a more restrictive way of applying functionality. A court held the appearance of a carpet sample folder non-functional, because it only helped consumers choosing the product of interest, that is, the carpet.¹¹⁶⁹ Similarly, the colours of drug capsules sold on prescription were not functional, because the consumer purchase decision was mainly influenced by doctors and pharmacists, and not by the drug's appearance and its possible benefits.¹¹⁷⁰

8.2.2. *A focus on foreclosure of competition and alternative products*

The Restatement (Third) of Unfair Competition involved more developments to aesthetic functionality, as §17 used the general term of functional 'designs' and linked the issue of effective competition to the availability of substitutes.¹¹⁷¹ The official commentaries to rule §17 included examples falling within the ambit of aesthetic functionality. For instance, a china pattern – reminding of earlier *Pagliari* – would be non-functional if there were available alternatives, however a heart-shaped candy box would be considered functional for candy packaging, yet allowing possible substitutes for another kind of goods, such as motor oils.¹¹⁷²

A line of jurisprudence emerged to apply the 'need to copy' standard in a market defined by the existence of alternative products. Its most important confirmation was found in the *Qualitex* judgment,¹¹⁷³ which discussed the functionality of a colour standing alone. The Court noted that the functionality doctrine cannot sustain a blanket prohibition against the trade mark eligibility of colours per se,¹¹⁷⁴ nevertheless it should help to prevent the anticompetitive consequences of trademarking colours.¹¹⁷⁵ The Court defined functional features according to the *Inwood* terms, yet with a competitive need refinement. The Court explained that "[i]n general terms, a product feature is functional," and cannot serve as a trademark, "if it is essential to the use or purpose of the article or if it affects the cost or quality of the article," that is, if exclusive use of the feature would put competitors at a significant non-reputation-related

1169 *Fabrica v. El Dorado Corp.*, 697 F.2d 890, 895 (9th Cir. 1983) <https://casetext.com/case/fabrica-inc-v-el-dorado-corp>, mentioned by Wong, *ibidem*, 1138, fn 117. Although the instrumental purpose of a carpet sampler would suggest its functionality, the Court assimilated it with packaging and considered that *Pagliari* applied to product features, thus not to packaging (at 895).

1170 *Ives Laboratories v. Darby Drug*, 638 F.2d 538 (2nd Cir. 1981), discussed by Wong (n 771) 1139.

1171 Rule §17 read: 'if the design affords benefits in the manufacturing, marketing, or use of the goods or services with which the design is used, apart from any benefits attributable to the design's significance as an indication of source, that are important to effective competition by others and that are not practically available through the use of alternative designs'.

1172 Heald (n 303) 783, 796–797 referring the Reporters' note to illus. 8, commentary c of § 17.

1173 *Qualitex v. Jacobson Prods.*, 514 U.S. 159 (1995).

1174 The Court considered that the Lanham Act liberalized the law in permitting the protection of descriptive words upon secondary meaning, so colours should not be discriminated against (*Qualitex*, 171–173).

1175 *Ibidem*, 164, 169.

disadvantage. *Inwood Laboratories, Inc., supra*, at 850, n. 10.¹¹⁷⁶ The latter words reaffirmed the aim of functionality ‘to protect competitors against a disadvantage (unrelated to recognition or reputation) that trademark protection might otherwise impose, namely, their inability reasonably to replicate important non-reputation-related product features’.¹¹⁷⁷ In *Qualitex* the industry of cleaning devices was not reliant on a limited selection of colours, so there was no competitive need for the green-gold hue at issue.¹¹⁷⁸

Another notable case is *Wallace v. Godinger*,¹¹⁷⁹ which dealt with infringement claims against the appearance of baroque-style silver cutlery. The Court found certain design motifs (scrolls, curls, flowers) similar to ‘basic elements of a style that is part of the public domain’, and akin to generic names and basic colours; however, functionality was established because trade mark protection of the design would have significantly impaired competition ‘by limiting the range of adequate alternative designs’.¹¹⁸⁰ There were also cases in which courts refused to deny trade dress protection to commercially successful product (features), without examining the possible impairment of competitors.¹¹⁸¹ This fact has led certain scholars to suggest a greater focus on defining the relevant market in the light of an antitrust law approach.¹¹⁸²

Recent cases have experienced difficulties in separating the intertwined features of aesthetics and function,¹¹⁸³ and also in distinguishing between source-

1176 *Ibidem*, 165.

1177 *Ibidem*, 169.

1178 *Ibidem*, 170, 173. The Court acknowledged that a colour could make ‘a product more desirable, unrelated to source identification’, and referred to jurisprudence that had held a green colour functional for farm machinery (for reasons of matching parts of equipment) *Deere & Co. v. Farnhand, Inc.*, 560 F. Supp. 85, 98 (SD Iowa 1982), *affd*, 721 F.2d 253 (CA8 1983) or black for boat motors (for reasons of visually reducing motor’s size and compatibility with other boat colors) *Brunswick Corp. v. British Seagull Ltd.*, 35 F.3d 1527, 1532 (CA Fed. 1994); or blue for fertilizer, as usual indication of nitrogen, *Nor-Am Chemical v. O. M. Scott & Sons Co.*, 4 U. S. P. Q. 2d 1316, 1320 (ED Pa. 1987). In another case *In Re Owens-corning Fiberglas Corporation*, 774 F.2d 1116 (Fed. Cir. 1985), registration was accepted for a pink colour used for glass insulation because the colour ‘had no utilitarian purpose’ and did not ‘deprive competitors of any reasonable right or competitive need’.

1179 *Wallace Intern. Silversmith v. Godinger Silver* 916 F.2d 76 (2d Cir. 1990).

1180 *Ibidem*, 81–82. The Court referred to commentaries to the Third Restatement (1995) set in Ch. 3, § 17(c) which in Illustration 6 discussed the case of a floral design – this was a clear reference to *Pagliari*, but set in the context of the requirement to examine the ‘foreclosure of alternatives’.

1181 *Stormy Clime v. ProGroup*, 809 F.2d 971, 1 USPQ2d 2026 (CA 2 1987); *In Coach Leatherware v. Ann Taylor*, 933 F.2d 162, 18 USPQ2d 1907 (CA 2 1991), *affg in part, revg in part and remg* 751 F Supp 1104, 18 USPQ2d 1482 (SDNY 1990) discussed by Elzey Pinover (n 607) 578–579.

1182 Weinberg (n 311) 35–48; Cunningham (n 607) 582–589; Elzey Pinover (n 607) 575–576; 581–583; Krieger (n 1165) 380–382, 384–385.

1183 Apple’s iPhone ‘pursued both “beauty” and functionality’, *cf. Apple*, 995; the circular beach towel of *Jay Franco* 860, led to a tricky issue that ‘[f]ashion is a form of function ... Need to distinguishing between designs that are fashionable enough to be functional and those that are merely pleasing’.

identifying value and other co-related values that influence consumer purchase decisions.¹¹⁸⁴ These issues are also present in EUTM assessments of aesthetic functionality. The CJEU in *Hauck* advanced various criteria of interpretation, examined in detail in 8.3.2., yet, taken individually, they are not fully operative. Most of them cannot confer a clear and predictable answer to queries around whether the prohibition should apply or be rejected. For these reasons, the author will argue that the best lesson the EUTM can learn from US practice consists of applying the standard of foreclosure of competition measured by the availability of substitutes (8.4.).

8.3. Interpreting the meaning of ‘giving substantial value to goods’

The EUIPO Guidelines instruct that “value” should be interpreted not only in commercial (economic) terms, but also in terms of “attractiveness” that is to say, the likelihood that the goods will be purchased “primarily because of” their particular shape or another particular characteristic.¹¹⁸⁵ Although consumer perception of products is downplayed amongst other factors of assessment, it seems clear that aesthetic functionality deals with the alleged motivation of consumers when purchasing the product at hand. Indeed, in the *Gömböc* case the CJEU indicated that the refusal ground applies if it resulted ‘from objective and reliable evidence that the consumer’s decision to purchase the product ... [was] to a large extent determined by that characteristic’.¹¹⁸⁶ The central query is whether the product’s shape or other properties ensure (or largely contribute to) the purchase decision, or whether there are other distinct factors that give value to goods, external to the product.

As the Guidelines speak frequently of ‘aesthetic value’ and (product) ‘attractiveness’, an inquiry into why a consumer wants to own a product and to what extent aesthetic pursuits are part of the purchase decision seem legitimate. The complexity of the inquiry, however, necessitates drawing insights from various research areas. The following interdisciplinary remarks are not an attempt to clarify the issues raised therein, but to emphasize the need to take aesthetic functionality out of the legal box. The aim is to show how intricate the picture of consumer appeal of a product is, and how easily a court may reach the wrong answer if ex cathedra assessments take place without the support of interdisciplinary proofs.

8.3.1. *The many facets of aesthetics*

Aesthetic processing has an impact on all layers of human cognition, emotion, and motivation, being central to our everyday choices, such as those

1184 *Christian Louboutin v. YSL*, 696 F.3d 206, 211 (2d Cir. 2012).

1185 EUIPO Guidelines (2021) part B sect. 4 ch. 6.4.

1186 C-237/19 *Gömböc*, para 47 and second operative part.

concerning the way of living, dressing, life partner, work and leisure activities.¹¹⁸⁷ One such life decision is the desire to own/purchase a preferred object, which is of particular relevance to this book. Aesthetic experience and aesthetic behaviour mean more than experiencing and creating art, although, historically, the concept of aesthetic appreciation emerged in the 18th century based on the superiority of beaux arts versus crafts, under the influence of philosophical theories and socioeconomic models (i.e. the elevation of the bourgeoisie).¹¹⁸⁸ Modern approach urges to disentangle aesthetics from any art connotations and reframe it as the study of ‘sensory valuation’ of human perception, emotional process, experience of pleasure and displeasure (‘hedonics’), valuation of such states, and integration of hedonic values in decision-making and behavioural control.¹¹⁸⁹ For these reasons, nowadays aesthetics lies at the intersection of numerous disciplines: philosophy, arts/art-related disciplines (e.g. design), anthropology, ethnology, sociology, linguistics, marketing, psychology, and neuroscience.¹¹⁹⁰ The following parts explore several of these fields in order to understand what ‘appeal’ and ‘value’ may mean for a consumer in relation to a product.

8.3.1.1. Aesthetic experience viewed by philosophy and psychology

Initially, the field of aesthetics derived from philosophical inquiries. The concept of ‘aesthetics’ was introduced by the German philosopher Alexander Baumgarten in a section of his *Metaphysica* called *Psychologia empirica*, to describe the science of perception, that is, what soul knows indistinctly (confusedly) under ‘sensitive representation’, as opposed to how intellect knows things distinctly and conceptually as ‘things known’.¹¹⁹¹ The definition of aesthetics read as follows: ‘the science of sensitively knowing and proposing, the art of thinking beautifully [as opposed to logical thinking, LB], the art of the analogy of reason’ – the main aim of aesthetics was dealing with ‘the perfection of phenomenon as phenomena’ (i.e. the notion of ‘beauty’), while ‘the joy of the aesthetic experience derived from the perception of perfection’.¹¹⁹² Aesthetics evolved under the influences of Immanuel Kant and Georg Hegel to embed a component that engaged intellectual knowledge, linking beauty and sublime

1187 Eugen Wassiliwizky, Winfried Menninghaus, ‘Why and How Should Cognitive Science Care About Aesthetics?’ (2021) 25(6) Trends in Cognitive Sciences 437.

1188 Martin Scov, Marcos Nadal, ‘A Farwell to Art: Aesthetics as a Topic in Psychology and Neuroscience’ (2020) Perspectives on Psychological Sciences 1, 2–4 at: <https://doi.org/10.1177/17456916198979>

1189 Ibidem, 2, 10.

1190 Wassiliwizky, Menninghaus (n 1187) 445.

1191 Leonard Wessell Jr, ‘Alexander Baumgarten’s Contribution to the Development of Aesthetics’ (1972) 30(3) The Journal of Aesthetics and Art Criticism, 333, 336–337 with an English version of Baumgarten’s Latin text of *Metaphysica* (7th ed. Halle 1779, 1st ed. 1739).

1192 Wessell (1191) 338, referring to Baumgarten’s work *Aesthetica* from the years 1750–1758.

elegance to values transcending experience by the senses.¹¹⁹³ The major input of Kant addressed the concept of ‘judgement of taste’ (‘beauty’ v. ‘ugliness’) defined by the qualifiers of ‘subjective universality’ (being based on the feeling of pleasure/displeasure) and ‘universal validity’ (that of being ‘interpreted as a normative aspiration’¹¹⁹⁴). Modern philosophy integrates Kant’s perspective in order to ascertain an autonomous status to the aesthetic judgment.¹¹⁹⁵ A recent study taking a philosophical insight argues that aesthetic values, similar to moral ones, are essential for defining one’s self-identity.¹¹⁹⁶

The fact that aesthetics involves evaluative judgments about the phenomenal appearance of things, upon different qualitative parameters (e.g. ‘beauty’), whilst such judgments are inherently affective and contain a hedonic component (pleasure/displeasure) has attracted the interest of the field of psychology.

Psychology defines an aesthetic experience as emotionally and hedonically engaging in ‘a conscious experience of an aesthetic quality of a stimulus’, which entails awareness of: the stimulus’s aesthetic quality; the aesthetic emotion; the hedonic quality of the previous, whereas all together lead to an aesthetic judgment.¹¹⁹⁷ The general explanation of aesthetic judgment is that it results from the interaction of ‘bottom-up stimulus properties and top-down cognitive appraisals’,¹¹⁹⁸ in a continuous flux. The cognitive sphere comprises mental representations and schemas formed by the mind in the on-going process of experiencing the world and used in casu for an aesthetic experience (e.g. childhood behavioural patterns mark later life experiences).¹¹⁹⁹ Cognitive psychology emphasizes the attentional character of this activity, determined by the satisfaction/dissatisfaction it produces; however, the hedonic valence results primarily not from the object itself, but from the on-going attention, from the self-reinforcing activity, that is, ‘attention calls for further attention in an internal process of continuous feedback’, motivated by ‘hedonic reinforcement’.¹²⁰⁰

1193 Daniela Plewe, Carsten Röcker, ‘Aesthetic Intelligence for Effective and Pleasurable Design’, in W. Chung, C.S. Shin (eds.) *Advances in Affective and Pleasurable Design* (Springer Switzerland 2017) 386–387, arguing that Hegel understood elegance as ‘necessity’ or ‘simplicity’ what today designers would call ‘efficiencies’.

1194 Nick Zangwill, ‘Aesthetic Judgement’ in *The Stanford Encyclopedia of Philosophy* (Winter 2021 edition), Edward N. Zalta (ed.) <https://plato.stanford.edu/archives/win2021/entries/aesthetic-judgment/>, paras 1.1–1.2.

1195 Ibidem, para 4.

1196 Joerg Fingerhut, Javier Gomez-Lavin, Claudia Winklmayr, Jesse Prinz, ‘The Aesthetic Self: The Importance of Aesthetic Taste in Music and Art for our Perceived Identity’ (2021) 11(3) *Frontiers in Psychology* 1, 2–3.

1197 Wassiliwizky, Menninghaus (n 1187) 438.

1198 Stefano Mastandrea, Sabrina Fagioli, Valeria Biasi, ‘Art and Psychological Well-Being: Linking the Brain to the Aesthetic Emotion’ (2019) 10(4) *Frontiers in Psychology*, 1, 2.

1199 Margot Lasher, John Carroll, Thomas Bever, ‘The Cognitive Basis of Aesthetic Experience’ (1983) 16(3) *Leonardo*, Special Issue: Psychology and the Arts, 196, 197.

1200 Jean-Marie Schaeffer, ‘Aesthetic Relationship, Cognition, and the Pleasures of Art’ in P.F. Bundgaard, F. Stjernfelt (eds.) *Investigations into the Phenomenology and the Ontology of the Work of Art* (Springer 2015) 145, 156. Such attentional experience is often related to the

An aesthetic judgment may be considered rewarding and as generating an affectively positive experience, even if the perceived object is of poor quality or considered ugly according to common standards. Similarly, aesthetic pleasure is increased by the conceptual and contextual understanding of an object, going beyond its mere appearance. This explains, for instance, how abstract art is also able to generate a strong aesthetic experience.¹²⁰¹

Psychology has primarily associated aesthetics with the emotions of liking, pleasure, and preference. Recent studies argue that a positive aesthetic experience extends beyond ‘liking’ and the group of pleasure emotions, to encompass ‘knowledge emotions’ (i.e. interest, awe, beauty, confusion, surprise). Experiments have explored the relationship between certain traits from personality models, that is, ‘Openness and Intellect’, and the kind and intensity of emotions appraised by aesthetic experience.¹²⁰² For instance, both Openness/Intellect are associated with ‘reactivity to novelty’, which influences the emotion of ‘interest’.¹²⁰³ ‘Curiosity’ is also a trait of Openness/Intellect that has an impact on ‘interest’, as curious people can better understand new situations and, thus, experience greater ‘interest’.¹²⁰⁴ It is important to note here that the attribute of novelty and the emotions of ‘interest’ and ‘surprise’ are parameters used by design studies to express the creativity, and implicit value of a design (below 8.3.1.3.). Therefore, the value of a design doesn’t simply depend on it being liked or preferred when compared to others, but on it triggering the more complex knowledge emotions, which tie into the capacity to convey the layer of symbolic meaning, which is of essential interest for its addressee.

8.3.1.2. *Heading towards empiricism – Neuroscience, neuroaesthetics, neuromarketing*

The need to measure/quantify aesthetic experience led to the foundation of empirical aesthetics in the 19th century by Gustav Theodor Fechner. His experiments involved, amongst other breakthroughs, measuring sensations in relation to physical stimuli, and determining which shapes and dimensions were

concept of ‘flow’ – [d]uring this state of mind people are intensively immersed in what they are doing, with strong involvement in the process of the activity’, see Slobodan Marković, ‘Components of Aesthetic Experience: Aesthetic Fascination, Aesthetic Appraisal, and Aesthetic Emotion’ (2012) 3 *i-Perception* volume 1, 2.

1201 Helmut Leder, Benno Belke, Andries Oeberst, Dorothee Augustin, ‘A Model of Aesthetic Appreciation and Aesthetic Judgements’ (2004) 95 *British Journal of Psychology* 489, 491 (using modern art to prove ‘the importance of top-down influences for aesthetic experiences’) at 502.

1202 Kirill Fayn, Carolyn MacCann, Niko Tiliopoulos, Paul Silvia, ‘Aesthetic Emotions and Aesthetic People: Openness Predicts Sensitivity to Novelty in Experiences of Interest and Pleasure’ (2015) 6 *Frontiers in Psychology* 1, 2 with references.

1203 *Ibidem*, 9.

1204 *Ibidem*, 3.

the most aesthetically pleasing.¹²⁰⁵ However, years then passed with no clear progress, until the availability of brain imaging tools in the late 1990s brought about a breakthrough in understanding. ‘Neuroaesthetics’ emerged as a sub-field of neuroscience, examining how the interplay of neural, physiological, and behavioural mechanisms is involved in aesthetic perception.

Neuroaesthetics explains that hedonic value is flexibly processed in the mesocorticolimbic reward circuit, depending on the interplay of several factors. These are: the stimulus properties of the object; the contextual factors under which the stimuli occurs (such as feeding, sex, social interaction, economic transactions, art, environmental location); and ongoing regulatory processes of other parts of the brain.¹²⁰⁶ Although most studies have evaluated emotional responses in relation to artwork, one recent view posits that the neurobiological processes of pleasure/displeasure arising from works of art overlap with those resulting from non-art stimuli.¹²⁰⁷ Another study which reviewed several neuroscience experiments concerning artwork noted that experiencing art was self-rewarding per se, whatever was the emotional content of the piece (i.e. the pleasure of listening to sad music, with the beauty of it being appreciated and conveying a positive mood).¹²⁰⁸ It also concluded that ‘art-specific emotions and utilitarian emotions found a common neural substrate in [the] brain network involved in emotion processing and reward’.¹²⁰⁹

The latter findings are important for this chapter, as they support the view that consumers may emotionally experience pleasure/reward from being in contact with a product which is not necessarily a ‘work of art’. The hedonic experience is a complex phenomenon that combines sensory perception, circumstances in which the stimuli occur, and brain activity, including here the cognitive sphere. All these elements fuse together to generate aesthetic judgments, and lead to decision-making. If this bears significance in the consumer’s purchase decision, then this is the point where a new subdiscipline steps in, ‘neuromarketing’, which explores the influence of neuroscience on the consumer psychology of brands.¹²¹⁰ There are many experimental studies in this field, such as examining the emotions arising from touch, taste, and hearing, so the following recent experiments were chosen to support the discussion concerning the commercial relevance of non-traditional trade marks, used as significant cues in branding strategies.

1205 www.britannica.com/biography/Gustav-Fechner

1206 Scov, Nadal (n 1188) 7–8, with references. For an older paper referring to earlier studies discussing the reward effects based on the activity in the orbitofrontal cortex, Hilke Plassmann, Thomas Ramsøy, Milica Milosavljevic, ‘Branding the Brain: A Critical Review and Outlook’ (2012) 22 *Journal of Consumer Psychology* 18, 25–26.

1207 Scov, Nadal (n 1188) 7.

1208 Mastandrea et al. (n 1198) 3–4.

1209 *Ibidem*, 4.

1210 Plassmann et al. (n 1206) 18, 28.

The role of touch and aesthetic appeal for strengthening/building the emotional connection between customers and goods/services was explored in a series of experiments that provided tangible objects (badges, wristbands, mugs, pens) as advertisements for future services.¹²¹¹ One case demonstrated that merely touching a sample glass handed to customers prior to the opening of a café increased the psychological appeal of the café's services.¹²¹² Another case involved two kinds of wristband (i.e. made of thinner, uglier plastic, versus nicer, thicker plastic) handed out before the opening of a gym, which proved that more aesthetically appealing objects increased the effect of touch on the psychological connection.¹²¹³ These results support the advice that businesses should offer items with high aesthetic appeal.¹²¹⁴

A consumer's affective reaction towards a product increases the 'perceived' quality of the product, which, again, strengthens the purchase decision. One experiment measured the effect of autonomic emotions (i.e. those coming from the autonomic nervous system) upon the electrodermal response of consumers when tasting chocolates from various brands.¹²¹⁵ In blinded settings, the results showed similar emotions were felt towards well-known brands versus private labels, however nonblind settings increased the emotions felt and preference for national brands.¹²¹⁶ The study argued that consumer perception is influenced by autonomic emotions, which may be triggered both by a product's intrinsic attributes (taste, texture, shape) and extrinsic ones (brand components, price, packaging) – here proving the link between unconscious processes and the motivational effects of brands.¹²¹⁷

Another study explored the effects of sonic branding (advertising music) on consumer behaviour in the context of 'the exposure effect' (i.e. the rule that people can develop preferences for things by merely becoming familiar with them).¹²¹⁸ The experiments showed that the choice of a novel brand increased if paired with previously known/learnt music as compared to novel music, whereas an extremely negative perception of the music (dislike) completely suppressed the effect of familiarity.¹²¹⁹ The study argued that the most effective way to use music to influence consumer behaviour was to combine 'all

1211 Nora Nägele, Benjamin von Walter, Philipp Scharfenberger, Daniel Wentzel, "'Touching" Services: Tangible Objects Create an Emotional Connection to Services Even Before Their First Use' (2020) 13 *Business Research* 741.

1212 *Ibidem*, 751–755.

1213 *Ibidem*, 755–758.

1214 *Ibidem*, 762.

1215 Paolo Rita, João Guerreiro, Muhamad Omarji, 'Autonomic Emotional Response to Food: Private Label Brands v. National Brands' (2021) 20 *J Consumer Behav* 440, 443.

1216 *Ibidem*, 445–446.

1217 *Ibidem*, 441, 446.

1218 Manuel Anglada-Tort, Kerry Schofield, Tabitha Trahan, Daniel Müllensiefen, 'I've Heard That Brand Before: The Role of Music Recognition on Consumer Choice' (2022) *International Journal of Advertising* 1–3, DOI: 10.1080/02650487.2022.2060568.

1219 *Ibidem*, 9, 12–13.

available music cues (e.g., preferences, familiarity, fit, mood) according to their impact on the target consumers'.¹²²⁰

8.3.1.3. *At the core – the perspective of designers*

Psychology and neuroscience have shed light on the breadth of aesthetic experience encompassing pleasure and knowledge emotions, on the similar neuronal path hedonics appraises from art and non-art stimuli, and on the occurrence of aesthetic judgment as part of daily life and decision-making.

All these discoveries correspond to the perspective adopted by design studies when exploring consumer experience with products. It is common knowledge that designers are interested in launching successful products that sell. Products that catch customers attention, meet customers' needs. The following remarks refer to several design studies to demonstrate that products which are appealing to consumers integrate sensory-appealing, functional, and symbolic layers whose interplay generates a conglomerated, holistic value. These experimental studies are in line with the arguments recently expressed by professor Ilanah Fhima, encouraging consideration of 'consumer value as a single whole' whilst 'the characteristics of goods which add value form a wide ranging and integrated whole'.¹²²¹

Design engineering confers a double meaning to aesthetics: either when referring to a product's appearance, visual and ergonomic appeal, or as referring to the judgments a consumer makes about a product's appearance (i.e. cognitive reactions) – these aspects are often intertwined.¹²²² Scholarship to date has employed various classifications of consumer responses (with a particular focus on emotions).¹²²³ One study argued that cognitive responses may be divided into three categories:¹²²⁴

- aesthetic impression i.e. perception of attractiveness or unattractiveness;
- semantic interpretation i.e. response to product's function, modes of use, quality;
- symbolic association i.e. personal and social attached significance.

All of these cognitive categories, individually or combined, raise different affective responses, that is, emotions, moods, feelings (e.g. admiration, disappointment, amusement and disgust).¹²²⁵ Once a product fulfils their practical needs (utility, safety, comfort), consumers seek further emotions and symbolic

1220 Ibidem, 15.

1221 Fhima (n 34) 677–686, at 685 citation.

1222 Ji Han, Hannah Forbes, Dirk Schaefer, 'An Exploration of How Creativity, Functionality, and Aesthetics Are Related in Design' (2021) 32 *Research in Engineering Design* 289, 290.

1223 Fhima (n 34) 681–683 referring to works of D. Norman, P. Jordan, P. Desmet.

1224 Nathan Crilly, James Moultrie, P. John Clarkson, 'Seeing Things: Consumer Response to the Visual Domain in Product Design' (2004) *Design Studies* 25(6) 547, 552 with further references.

1225 Ibidem, 553.

attributes, mainly derived from prior experiences and the socio-cultural context – this means that consumers buy a product’s ‘value in the form of entertainment, experience and identity’.¹²²⁶ These arguments draw on Abraham Maslow’s ‘hierarchy of needs’ motivational theory, which sees human behaviour as based on five categories of needs – with physiological ones placed at the base and the most important, sociological ones, at the apex. A product capable of satisfying sociological needs must also fulfil some of the basics.¹²²⁷ The fact that a product must satisfy aesthetic/decorative, practical, and societal needs means that the ‘value’ of a product encompasses multiple components. It is not only about visual appearance and objective product properties, but about the product’s general ability to satisfy the emotional and socio-cultural needs of a customer, including their unarticulated expectations. For instance, even with highly functional products (e.g. smart technology devices), consumers look for more than just technological capabilities. Consumer preference requires that devices confer social and hedonic value, and that the product behaves intelligently and responds to users’ needs almost invisibly.¹²²⁸

These layers/elements of products, responsible for conveying sensory, functional, and symbolic meaning interact fluently to a varying extent, which designers deliberately exploit. For instance, an experiment showed that by manipulating the aesthetic product features usually associated with hedonics, here the colour, shape, and materials of a can opener, there was a perceived direct effect on its pragmatic attributes (its usability).¹²²⁹ This confirmed the assumption that the experiment’s participants would perceive a product’s general appeal and the pleasure of using it through a holistic evaluation of the hedonic and pragmatic attributes, referred to as ‘apparent product character’.¹²³⁰ The study also demonstrated that aesthetic values vary amongst age groups: young people preferred the most expensive and sophisticated models, whilst old people mostly appreciated the cheaper, less sophisticated, but most familiar models.¹²³¹

Aesthetic appeal, linked to a product’s appearance, and bolstered by emotional attachment, brings added value, especially when the product has to differentiate itself from alternatives of similar functionality.¹²³² One empirical study testing the perception of vases showed that there was a special relation-

1226 Ibidem, 548.

1227 Fhima (n 34) 685 with reference.

1228 Kai Kasugai, Carsten Röcker, Bert Bongers ‘Aesthetic Intelligence: Designing Smart and Beautiful Architectural Spaces’ in D. Keyson et al. (eds.) *AMI 2011*, LNCS 7040, 360–361.

1229 Andrew Monk, Kira Lelos, ‘Changing Only the Aesthetic Features of a Product Can Affect its Apparent Usability’, 221 in Alladi Venkatesh, Timothy Gonsalves, Andrew Monk, Kathy Buckner (eds.) *Home Informatics and Telematics: ICT for the Next Billion* (Springer 2007) 221, 225–230.

1230 Ibidem, 222–223 referring to the works of Marc Hassenzahl, a professor of ‘design experience’.

1231 Ibidem, 230.

1232 Marta Perez Mata, Saema Ahmed-Kristensen, Per Brunn Brockhoff, Hideyoshi Yanagisawa, ‘Investigating the Influence of Product Perception and Geometric Features’ (2017) 28 Res Eng Design 357.

ship between aesthetic features that raised various perceptions (e.g. beautiful, elegant, exciting, expensive) and the ‘desire to own’ a product, whilst beauty was experienced as a stable feeling transgressing cultures.¹²³³ This study belongs to the design school of ‘Kansei engineering’ which focuses on pre-determined aesthetic responses based on the relationship between product properties, and the consumer interaction and emotional response – this school aims to create products that intentionally raise certain emotions.¹²³⁴

Bearing in mind that aesthetics convey social and cultural values, one such intended emotion is ‘meaningfulness’, that is, ‘the ability to relate the product to a story in the consumer’s life’.¹²³⁵ An example of this process is a popular Polish shop called ‘Pewex.pl’. The shop sells apparel/accessories ironically reminiscent of street looks from communist times, appealing to consumers who link such items with their own positive childhood memories. This dimension of aesthetics, communicating symbolic values, ties into branding strategies and particularly into the sociological/anthropological reasons for why consumers use brands as a means of self-identification and social group belonging (more detail on this is found in Chapter 4).

Aesthetic appearance is also used as an indicator of creativity, an aspect of particular importance when thinking about the incentives behind conferring legal protection. Creativity is an indicator of a valuable design. Creativity is measured through various parameters, such as originality, novelty, usefulness, or surprise, which together correspond to the group of ‘knowledge emotions’ used by psychology to describe the intensity and breadth of aesthetic response. The following examples show how different aspects of design engineering may inspire knowledge emotions and confer value to the product.

A study examining vases, chairs, and lamps inquired about the positive correlation between aesthetics and creativity.¹²³⁶ Chairs were considered classical products with stable functionality, in which case a design with better aesthetic attributes was held to be more creative. In the case of vases, that is, essentially decorative objects perceived as highly aesthetic, greater aesthetic appeal ensured novelty and surprise, yet reduced perceived usefulness. Lamps were qualified as ‘smart products’ with numerous functionalities (e.g. intelligent control, speakers, wireless chargers), in which case there was a negative correlation between functionality and aesthetics, namely increasing the usefulness decreased the aesthetic perception.

Another study dealt with creativity and the surprise side of aesthetics. One strategy for raising consumer interest is the use of visual-tactile incongruity,

1233 Ibidem, 362–378.

1234 Theo Mahut, Carole Bouchard, Jean-Francois Omhover, Carole Favart, Daniel Esquivel, ‘Interdependency Between User Experience and Interaction: A Kansei Design Approach’ (2018) 12 Int J Interact Des Manuf 105. The study examined users’ experiences with Toyota cars, identified with notions of ‘trust, well-being, and living spaces’ (at 129).

1235 Perez Mata (n 1232) 378.

1236 Han (n 1222) 295–303.

that is, giving a new appearance to a familiar product, a new material faking a familiar one, or creating visual illusions.¹²³⁷ A good example is the series of Rosenthal vases – the ‘paper bag’ vase with the appearance of folded paper, the ‘Fabric’ vase imitating a fabric texture, or the ‘Fast’ vase, showing ‘digital acceleration’.¹²³⁸

Moving on from incongruity to deliberate imperfections, this element also positively influences product evaluation. The impression of the ‘human touch’, achieved via non-uniform shapes, colours, textures, or handwritten fonts, suggests an increased involvement of human care and attention in the product’s creation/manufacture.¹²³⁹ From the emotional side, the ‘human touch’ effect answers the basic need for human connection. Studies have shown that the ‘hand-made effect’ is particularly effective and valued in objects of art and furniture, but also for processed food, as opposed to machine-manufactured foods and unprocessed food.¹²⁴⁰ Generally speaking, consumer choices of food seem to be dominated by enhanced aesthetics – consumers prefer attractive packaging to the simply functional, whilst they negatively evaluate any imperfections in unprocessed food, attributing them to insect damage, disease, or reduced quality.¹²⁴¹

Designers are also aware that different product characteristics affect the consumer’s overall perception of a product in different ways. It is noteworthy that EU design law operates on the standard of (a design’s) ‘overall impression’ for defining both the basic requirement of protection (i.e. individual character) and the scope of protection conferred by a design, whereas ‘overall impression’ is assessed by examining the selective impact of product features produced on an informed user.¹²⁴² Neuroscience has reinforced the assumption that sound, touch, taste, and smell may have a stronger effect on consumer perception than mere visual interaction. Even when considering just visual perception, colours are known to attract attention quicker than shape or graphics. Such findings seem informative for lawyers, who sometimes underestimate the value that non-traditional signs represent in business strategies. There are many industry-specific design studies that explore which type of features influence the consumer purchase decision for a given type of product. The following two

1237 Santosh Jagtap, Sachin Jagtap ‘Aesthetic Design Process: Descriptive Design Research and Ways Forward’ in A. Chakrabarti (ed.) *ICoRD’15 – Research into Design Across Boundaries Volume 1* (Springer India 2015) 381.

1238 www.rosenthal.de/en/vases/

1239 Roland Schroll, Benedikt Schnurr, Dhruv Grewal, ‘Humanizing Products with Handwritten Typeface’ (2018) 45 *Journal of Consumer Research*, 648.

1240 Jacob Suher, Courtney Szocs, Koert van Ittersum ‘When Imperfect Is Preferred: The Differential Effect of Aesthetic Imperfections on Choice of Processed and Unprocessed Foods’ (2021) *Journal of the Academy of Marketing Science* 1–2 and 7–20, <https://doi.org/10.1007/s11747-021-00783-1>

1241 *Ibidem*, 3–4.

1242 Art. 6 Reg. No. 6/2002 or Art. 5 Directive 98/71 and Art. 10 Reg. No. 6/2002 or Art. 9 Directive 98/71.

examples support the argument that product/industry studies are useful for grasping the real ‘value’ of a product, as seen through the eyes of consumers.

In the world of apps and the ‘Internet of Things’, graphical user interfaces represent the primary tool for interaction between a user and the product’s functionalities. A study based on a dataset from one of the largest Chinese Android websites evaluated the behaviour of app users, measured specifically by the number of downloads.¹²⁴³ It demonstrated that good aesthetic design compensated for lower usability, inasmuch as icons helped users to understand device functionalities and influenced the number of downloads – users positively appreciate the appearance of icons, manifested as their colourfulness, brightness, proper complexity, and slight asymmetry.¹²⁴⁴ Taking another example from the automotive industry, designers found that the front emblem, head lamp, radiator grill, tail lamp, and rear bumper were significant components in the recognition of a car, while the general impression of a car was conferred by its three-quarter front view.¹²⁴⁵ Such findings are relevant for aesthetic functionality issues, as these parts of a car were usually important in the spare parts aftermarket, which involved the need to copy look and functionality to provide access to cheaper substitutes.

8.3.1.4. *Summary remarks*

For centuries, people have appreciated beauty, reacting positively to contact with aesthetically appealing objects. Exploring the reasons for this initially belonged to philosophical inquiries about perception of the world. The meaning of beauty has evolved over time, and so has the understanding of the mechanisms underlining hedonic experience and its behavioural consequences, alongside the input of new disciplines, such as psychology, neuroscience, design, and marketing. The issue of how a consumer perceives a given product, what kind of value it represents in her eyes, and what determines the motivation to make a purchase, all fall within the interdisciplinary scope of modern aesthetics.

Aesthetics means more than the common understanding of a pleasing appearance. Aesthetics means a combination of appearance experienced emotionally, perceived through sensory information, functionalities, and symbolic content, that as a whole meet a consumer’s specific needs. Aesthetics plays an important role in conferring novelty, creativity, and originality to a product – qualificatives that are responsible for stimulating the consumer mind. A consumer’s perception of the value of a product is strongly influenced by emotional involvement, imprinted cognitive patterns, and the socio-economic context in which consumer needs have been a priori defined. The author

1243 Mengyue Wang, Xin Li ‘Effects of the Aesthetic Design of Icons on App Downloads: Evidence from an Android Market’ (2017) *Electron Commer Res* 17, 83.

1244 *Ibidem*, 85–98.

1245 Jagtap (n 1237) 380.

agrees with the approach that consumers understand ‘product value’ in a holistic way. Consequently, when product value translates into commercial value, the decision to purchase a product depends on an assortment of interrelated factors. However, the way the sensory appearance, functional, and symbolic layers of a product mutually and flexibly interact, in order to confer in *casu* a particular value in the eye of a consumer, is an issue with variable answers. Appearance interacts variously with product usefulness – sometimes it simply compensates for poor functionality, and other times it synergistically bolsters the overall value. In addition, social-cultural benefits resulting from owning a product may convey such significant ‘meaning’ to a consumer’s well-being that this may constitute the primary reason for choosing that product.

In light of the above it may be stated that no theoretical, abstract assessment can properly decide which of a product’s intrinsic and extrinsic attributes mingle and confer distinct values in order to answer consumer needs by offering a rewarding aesthetic experience, nor how they do so. Transposing this thought for the purpose of answering the legal issue of what confers substantial value to a product and whether these are features of the appearance, the author sees the need for specific expertise stemming from extra-legal disciplines (e.g. design, marketing, psychology, and neuroscience). Depending on the specificities of the case at issue, each of the disciplines linked to ‘aesthetics’ may bring distinct elements of knowledge, which when considered as a whole may render a full picture of what the value of a product is in the eyes of a consumer, and what influences a consumer to purchase it. It seems unavoidable that legal assessment will be *casuistic*, industry-specific, and with variable answers. However, what initially appears to be a deficiency may ultimately prove to be beneficial. The complexity of the phenomenon of aesthetics requires flexible assessment, ensuring that the legal interpretation corresponds to market *realia*.

8.3.2. A critical evaluation of the criteria applied in EUTM jurisprudence

This part looks into the criteria advanced to assess aesthetic functionality by EUTM case-law. As 8.3.1. detailed, product value in the eye of consumers is the effect of many rewarding attributes that stem from various sources, thus a query arises over what kind of criteria may help discern such subjective aspects, in order to achieve a clear and predictable legal assessment.

8.3.2.1. The need of objectivity

It sounds reasonable that any legal assessment should be conducted by objective means, subject to further judicial control. Here the issue becomes whether it is possible to objectively determine when a shape or another product characteristic gives substantial value to goods, including *a priori* identification of the values linked to that product.

The CJEU has recently emphasized the need for objective criteria of interpretation. In an extensive discourse concerning the difficulty of applying

aesthetic functionality to cultural signs,¹²⁴⁶ professor Senftleben drew attention to a CJEU judgment concerning the descriptiveness of the word mark ‘Neuschwanstein’.¹²⁴⁷ The sign was filed for goods sold mostly as souvenir items, and its descriptiveness was linked to the fact that the name was ‘an indication of a quality or an essential characteristic’ of the designated goods/services, due to consumers’ fond memories of Neuschwanstein castle. The Court rejected the ‘souvenir function’ of goods, because it did not constitute ‘an objective characteristic inherent to the nature of that product’, being solely determined ‘by the free will of the buyer and ... buyer’s intentions’.¹²⁴⁸ Senftleben reads this judgment as confirming the requirement that product features caught by the functionality prohibition must relate to ‘objective properties’ of goods. Similarly, any form of cultural expression that reveals subjective content having impact on the value of goods through positive emotions, yet, without precise or objective contours, cannot be challenged under the functionality ground.¹²⁴⁹ In *Gömböc*, the CJEU also expressed the requirement for ‘an objective analysis, intended to demonstrate that the shape in question, on account of its characteristics, ha[d] such a great influence on the attractiveness of the product’.¹²⁵⁰

Putting this argumentation into the perspective of a product’s ‘holistic value’, based on emotions and symbolic meaning, as underlined by studies on aesthetics (8.3.1.), a tension emerges between such need for objective assessment and the complex, subjective nature of the subject-matter under investigation, that is, the product’s value in the eyes of a consumer. If CJEU guidance on aesthetic functionality (8.1.2.) requires looking into the consumer’s motivation for purchasing the product at issue, by exploring, as held above in *Gömböc*, the ‘great influence’ a given product characteristic produces on product’s ‘attractiveness’, it is obvious that the assessment must touch upon delicate, elusive issues. In these circumstances, the most suitable option is to try to use and combine any legal criteria that may help to achieve practical, predictable, and fair solutions (see below).

8.3.2.2. *Weighing values against each other*

A weakness of EUTM jurisprudence has been the inability to demarcate between several issues which, as such, should be conceptually distinct:

- the ‘source’, i.e. what gives specific value to the product (goods);
- the meaning and scope of ‘substantial value’, as compared to other parameters;
- the material link between the source of value and the product at issue.

1246 Senftleben, *The Copyright/Trademark* (n 125) 237, 243.

1247 C-488/16P *Bundesverband Souvenir v. Freistaat Bayern*, EU:C:2018:673, paras 41–46.

The name referred to Neuschwanstein Castle in the south of Bavaria.

1248 C-488/16P, para 44.

1249 Senftleben, *The Copyright/Trademark* (n 125) 243–244.

1250 C-237/19, para 40.

In theory, all these aspects should have their own independent boundaries, and be examined by means of objective criteria.

It is clear from the term ‘substantial’ that the examination is one of degree, which necessitates delving into discerning between different sources of value and extracting the parameter responsible for that (substantial) value.¹²⁵¹ Yet the very notion of ‘substantial’ raises the query of whether one value must be ‘predominant’ versus another – understood as the being dominant among other, less significant, values – or if it suffices when it merely contributes, along with other factors, to give autonomous value that may be qualified as ‘important’. The latter hypothesis would acknowledge that there may be other distinct and important sources of value that together contribute to the overall value of product. The EUIPO Guidelines seem to favour this option by indicating that ‘it is immaterial whether the *overall value* of the product is *also affected* by other factors, if *the value contributed* by the shape or other characteristic *itself is substantial*’ (LB).¹²⁵² Such weighing of different sources and values against one another has a significant negative effect on the purpose of clear and predictable outcomes.

The *Hauck* judgment (8.2.1.3.) advanced a set of criteria for assessing aesthetic functionality, including consumer perception and several others, of an allegedly objective nature. Before going through that list (8.3.2.3.), it is useful to first consider the different elements that may confer value to a product/goods, together with the type of value attached. The author assumes that *only some* of these elements will be relevant for the functional prohibition (LB). For instance, in *G-Star* and *Louboutin*, the CJEU has already taught that value from reputation should be disregarded. In *Gömböc*, the CJEU mentioned, rather *passim*, that the ‘technical qualities’ of the product were ‘irrelevant’.¹²⁵³

Certainly, the above table represents the selective choices of the author, and several items listed in both columns may interact reciprocally (e.g. branding strategies impact at various levels, on source-identification value, reputation, prestige aura, societal-symbolic values). The relevance of these elements for applying/dismissing the functional prohibition will be examined below. Another notable point is that the table indicates a set of individual values which may be reciprocally balanced or combined together to determine the product’s overall value.

EUTM jurisprudence seems to refer to the product’s overall value/attractiveness, understood in terms of a motivational factor leading an end consumer to buy that product. Until now, EUTM practice has considered value as stemming from the shape/product’s appearance, whilst measuring it through aesthetic and utilitarian benefits. Bearing in mind the extension of

1251 Voegl (n 1145) 462 notes that it is important ‘to dissect a product in its various value-conferring elements’.

1252 Part B sect. 4 ch. 6.4.

1253 C-237/19, para 42.

Table 8.1 Examples of various sources and attached values conferred to a product

<i>Different Sources of Value for a Product</i>	<i>Corresponding Conferred Value</i>
appearance (perceived sensorially)	aesthetic appeal of the appearance – simple view or hedonic value – complex view (8.3.1.)
functional/ergonomic parameters (noticeable from interaction with the product and resulting from construction/shape; material; weight)	various utilitarian or functional benefits/advantages, such as: ‘safety, comfort and reliability’ cf. <i>Hauk</i> ; ‘durability’ cf. <i>Dualiti</i> ; ‘compatibility’ of spare parts needed to restore the appearance
incorporated or attached trademarks, used as badge of origin	or hedonic value – complex view (8.3.1.) source-identification value, i.e. that of being a trade mark
branding strategies (advertisement/marketing; pricing; distribution policies)	aura of luxury; valuable, collectible item; value from reputation; symbolic (lifestyle) value, etc. or hedonic value – complex view (8.3.1.)
reputation	value resulting from reputation/goodwill (also linked to the badge of origin and branding) or hedonic value – complex view (8.3.1.)
large sales volume (related to the previous two factors)	value related to the previous two categories
history (of the design/identity of designer/both)	value of a collectible item (as piece of art/iconic design)
methods of production	utilitarian benefits (solid work, quality);
specific craftsmanship	aura of luxury value of a collectible item
specific materials	or hedonic value – complex view (8.3.1.)
embedded societal/cultural/symbolic layer (i.e. communicating specific meaning)	symbolic value (cultural, societal, etc.)
embedding a mathematical discovery (<i>Gömböc</i>)	or hedonic value – complex view (8.3.1.)

the functionality scope to other product characteristics (colour, sound, etc.), the table is not exhaustive, nor is it fixed regarding the place and value of individual parameter. Future case-law will certainly add new types and sources of value.

8.3.2.3. *Critically examining Hauck's factors*

It is worth reiterating *Hauck's* criteria of assessment:¹²⁵⁴ the nature of the goods; the artistic value of the shape; dissimilarity from other products commonly used in trade; price difference towards alternatives; promotion strategy touting aesthetic characteristics; and the consumer's perception. These factors are examined below.

- The nature of goods

Following the ubiquity of modern design, the appearance of products is carefully considered so as to capture consumer attention. Good design, as a helpful marketing tool, permeates the nature of any product. Design is not merely about achieving the proper look, but about developing the optimal product, according to given specifications (e.g. putting together appearance, functional parameters, materials, interaction with other components/environment, etc.). If the old aesthetic/functional dichotomy were still in effect, then perhaps the nature of goods would be indicative of those cases in which appearance would prevail, at least for products with decorative purposes (ceramics, jewellery, toys, see *Gömböc*) or collectibles (tableware, watches). These times are past. The EU design regime has abandoned the traditional demarcation between form and function, embracing a modern approach based upon the rationale of 'industrial' design.¹²⁵⁵ Transposing it to the ground of aesthetic functionality, the 'nature' of goods criterion is of little use when delineating what is 'in' from what lays 'out' of the scope of the prohibition.

As aesthetics studies have suggested, any kind of product must give consumers 'hedonic valence' by satisfying them aesthetically, emotionally and socially (e.g. self-affirmation, socialization).¹²⁵⁶ Extra-legal studies may help to verify the accuracy of EUIPO assumptions about consumer behaviour, for instance whether the purchase decision was based upon the shape of a cookie or the colour/shape of an ice-cream, or whether a vodka bottle is an item sought by connoisseurs. If the *Hauck* rule of mixing functional/eye-appeal

1254 C-205/13, para 35.

1255 Instead of many: Annette Kur, Marianne Levin, 'The Design Approach Revisited: Background and Meaning' in Kur, Levin, Schovsbo (n 130) 3–19; Stina Teilmann-Lock, 'The Design Approach in a Design Historical Perspective' in Kur, Levin, Schovsbo (n 130) 29–48.

1256 Professor Kur indicates furniture, lamps, and apparel as examples of possible exclusion from protection, in Kur, Senfleben (n 24) para 4.200, 170.

parameters to confer relevant value is to apply, then it must concern all kinds of goods. Thus the criterion of the ‘nature’ of goods will not be conclusive.

The category of two-dimensional signs may pose additional difficulties. Part 8.3.3. below elaborates upon the interaction between source-identification capabilities, branding, reputation, and the scope of aesthetic functionality.

- The artistic value of the shape

In the EU, the overlap between trade marks, designs, and copyright is acceptable under their distinct terms of protection, which renders it difficult to employ the ‘artistic value’ criterion to draw a clear-cut demarcation between these regimes, especially when the level of copyrightability is low.¹²⁵⁷ Already the *Gömböc* judgment has emphasized that simultaneous/prior design protection, measured on the requirement of individual character, did not imply a finding of aesthetic functionality under the EUTM.¹²⁵⁸ Similarly, the *Textilis* ruling, concerning a two-dimensional fabric pattern, held that simultaneous copyright protection is ‘without bearing’ for aesthetic functionality.¹²⁵⁹ Another notable case concerned the attempt to register two-dimensional representations of several artworks of the famous sculptor Gustav Vigeland, which had become freely available after the lapse of copyright. The EFTA Court denied trade mark registration upon a broadened interpretation of the public order and morality rules,¹²⁶⁰ whilst examining several other refusal grounds. The court acknowledged the possibility of applying aesthetic functionality to two-dimensional representations of three-dimensional objects (e.g. sculptures¹²⁶¹), especially if the designated goods were furniture or decorative items.¹²⁶² However, an important limitation of aesthetic functionality was that it did not apply to services, and goods ‘unrelated to [the] initial context’ of the cultural sign would also remain unaffected by the ‘substantial value’ test.¹²⁶³

Another difficulty of the ‘artistic value’ criterion is that it requires the court/administrative body to make judgments about the merit of a work – something which droit *d’auteur* has traditionally aspired to avoid, instituting the rule of protecting works, regardless of their merit – which necessarily leads to subjective appreciation, improper understanding of the values of modern design, and an increased risk of punishing the most creative works.¹²⁶⁴ There is also a

1257 Instead of many: *Derclaye* (n 125).

1258 C-237/19, paras 53–57.

1259 C-21/18 *Textilis* ... EU:C:2019:199, para 45.

1260 EFTA ruling of 6/04/2017, *Municipality of Oslo*, paras 88–102. The Court elaborated upon the ‘risk of misappropriation or desecration of a work’, extensively discussed by Martin Senftleben, ‘*Vigeland* ...’ (n 229) 696–716.

1261 E-5/16, para 115.

1262 Senftleben, *ibidem*, 712.

1263 E-5/16, para 81.

1264 *Kur in Kur*, Senftleben (n 24) 4.199, p. 169.

time problem, namely determining at which point the artistic value should be assessed – normally this is at the time of filing the sign – however, the status of a sign may transform/diminish over time. The Eames swivel chair, nowadays considered an ordinary office chair, was an example of such dynamism; however, the EUIPO's later hesitance regarding the Eames Lounge chair saw them move the examination period back to the date of application.¹²⁶⁵ Sometimes it is very difficult to adduce evidence of facts going many years back.

Finally, appraisal of 'artistic value' frequently ties into such elements as the designer's fame, the history of the design, rare/prestigious materials, and/or specific craftsmanship. The CJEU in *Gömböc* indicated that 'it is in no way inconceivable that the substantial value of this type of item may result from factors other than its shape, such as ... the story of its creation, its method of production, ... materials ..., or even the identity of its designer'.¹²⁶⁶ The exact meaning of this enumeration remains unclear. In the author's opinion, the CJEU wanted to exclude those factors from assessment of aesthetic functionality, precisely because they do not intrinsically result from the shape at issue.

The notion of artistic value may also reveal symbolic values, such as conveying an aura of prestige, prestigious life-style, and other cultural-societal attributes, usually bolstered by strategic branding. Notably, promotional activities emphasizing the appearance of a product, sometimes through use of the risky term 'iconic design', were seen to fuel a design's 'artistic value' and increase the chances of the functionality prohibition applying – see the case of the *London* taxi, promoted as a 'design classic'.¹²⁶⁷ However, if 'artistic value' appears connected with a bundle of 'other' conferring-value elements, extrinsic to the product/sign at issue and which EUTM jurisprudence tends to keep out of the assessment of aesthetic functionality, then this criterion will be less effective in practice. 'Artistic value' cannot at the same time prove substantial value, and disregard some of its own components which add up to that value.

- Dissimilarity from other products commonly used in trade

This criterion is entrapped by the conflict between proving distinctiveness and falling foul of aesthetic functionality. A sign consisting of a product property usually has to prove its 'significant difference' from similar products in trade, because the more a sign differs from market alternatives, the better the chances are to prove inherent distinctiveness or engage in acquiring distinctiveness through use (Chapter 5). However, if a sign stands out too much, it falls within the ambit of aesthetic functionality – a vicious cycle that has already been criticised.¹²⁶⁸ Interestingly, the *London* taxi was found to be dissimilar

1265 Voegl (n 1145) 461.

1266 C-237/19, para 60.

1267 *London Taxi. v. Frazer-Nash ...*, [2016] EWHC 52 (Ch) 213 iii).

1268 Kur (n 1133) 26.

from other cars and recognized by the public to an extent which implied added substantial value; yet, the shape was still held to be non-distinctive, and thus invalid, because consumers did not understand that there was a single manufacturer of taxis of that shape.¹²⁶⁹ In the appeal, the court even doubted whether consumer recognition of the shape was per se indicative of aesthetic functionality.¹²⁷⁰ Such hesitations reveal the uncertainties over how a judge would consider the proof of a different appearance.

Professor Gielen criticised the arbitrariness of judicial assumptions about a shape's attractiveness, considering it 'thin reasoning'.¹²⁷¹ Professor Kur also compared the functionality prohibition to a 'game of chance'.¹²⁷² Looking recently at the *Gömböc* ruling, the court inferred from the fact that the sign was a 'tangible symbol of a mathematic discovery' that it made the 'shape special and striking', which resulted next in it giving substantial value to goods.¹²⁷³ One may doubt here the implied logic of the causal relationship between the history of the shape (i.e. incorporating a mathematical solution) – which theoretically should be disregarded in the assessment – and the specificity of the appearance (read here as differences when compared to previous models) which then equals attractiveness. *Gömböc* demonstrates why dissimilarity of appearance vis-à-vis equivalent products is a sort of double-edged sword, which cannot be sufficient per se for assessing aesthetic functionality.

- Price difference

The *Hauck* judgment did not explain whether the criterion of 'price' described a difference 'below' or 'above' a certain level. EUTM jurisprudence has held the evidence of a higher/premium price (of a loudspeaker, and vodka bottle) as supporting the finding of luxury and attractiveness, and hence, ensuring substantial value. Sometimes a high price may simply reflect better quality of manufacture, materials, and performance, as in the UK case of the *Dualit* toaster, which cost seven times more than other domestic toasters, but offered increased robustness and longevity.¹²⁷⁴ However, *Dualit* was priced comparably to other toasters of similar enhanced quality, therefore the evidence of a high price, which resulted also from the brand value, did not prove aesthetic functionality.¹²⁷⁵

1269 In appeal *London Taxi v. Frazer-Nash* ..., [2017] EWCA Civ 1729, 66–69, commented by Katie Cameron, Janet Strath, 'Shape of Black Cab Fares Badly on Route to Registration' (2018) 40(3) EIPR 195.

1270 [2017] EWCA Civ 1729, 76.

1271 Gielen (n 208) 168.

1272 Kur (n 1115) 185.

1273 C-237/19, para 45.

1274 [1999] R.P.C. 549, at www.ipo.gov.uk/t-challenge-decision-results/t-challenge-decision-results-bl?BL_Number=O/186/98, 22–23.

1275 Affirmatively, Kerly (n 1153) 8–187.

A particularly notable case concerned the *Louboutin* US litigation, where the allegedly higher cost of production (from adding a red lacquered finish to the soles of shoes) was found ‘desirable’ by the district court, in the meaning of aesthetic functionality, increasing the aura of luxury/exclusivity typical for the sector of high-end fashion.¹²⁷⁶ To a certain extent it might be true that fashion indicates socio-economic status,¹²⁷⁷ so customers of luxury goods choose them precisely because they are expensive. However, the typical understanding of (utilitarian) functionality in US law has correlated cost effects with the situation of enabling manufacturing at a ‘lower cost’.¹²⁷⁸ Competitors were seen to be impaired or discriminated against if access to a cheaper feature was restrained, or, using the definition of Judge *Posner*,¹²⁷⁹ if it was a feature costly to do without, costly to design around. Such an approach clearly differs from a view focused on a higher/premium price, which US appeal court in *Louboutin* did not endorse, so functionality claims were ultimately dismissed.¹²⁸⁰

EUTM experiences suggest that consideration will be still given to high pricing as an attribute of luxury/exclusivity and consumers’ preferences for valuable designs. Pricing will also pair with the earlier criteria of the ‘nature’ of goods and ‘artistic value’. Some caution is needed, though. It is worth recalling that pricing usually belongs to larger and extremely complex branding strategies and distribution models, all of which affect the ‘value’ of a product in a multi-level manner, especially connected with the capacity of source-identification (Chapter 4). If consumers willingly pay to purchase a ‘trademarked’ product, that is, where the price reflects the value of the badge of origin, then theoretically this should remain outside the scope of functionality prohibitions. In any case, the examination should compare the product and price at issue with alternative offers on the market.¹²⁸¹ Complementarily, evidence of pricing may reveal consumer resistance to a price increase, or their willingness to switch to cheaper alternatives. This issue is essential for competitive need inquiries, which would link aesthetic functionality to non-reputation advantages. For these reasons, an approach focused on ‘lower cost’ – whether the features

1276 *Christian Louboutin v. YSL America*, 778 F. Supp. 2d 445, S.D.N.Y. 2011, approvingly Federica Grillo, ‘Aesthetic Functionality: Can a Single Colour on a Fashion Item Act as a Trademark?’ (2013) 3(2) QMJIP 155, 158.

1277 Shayna Ann Giles, ‘Trade Dress: An Unsuitable Fit for Product Design in the Fashion Industry’ (2016) 98 J Pat& Trademark Off Soc’y 223, 244, promoting the ‘piracy paradox’/ copying of fashion as encouraging innovation.

1278 Winckel (n 1089) 1040.

1279 *W.T. Rogers v. Keene*, 778 F.2d 334 (7th Cir. 1985).

1280 *Christian Louboutin v. YSL America*, 696 F.3d 206, 219 (2d. Cir. 2012) referring *LeSport-sac v. K Mart*, 754 F.2d 71, 76 (2d Cir. 1985).

1281 In the case of the ‘Magic Tree’ air-freshener *Julius Sämann v Tetrosyl* [2006] EWHC 529 (Ch) the UK court examined whether the shape had a ‘high value relative’ to other shapes, and disregarded the value stemming from the sign’s distinctiveness and the low price of that product versus ‘other carded automotive air fresheners’ (at 101–103).

at issue come at a cheaper/optimal price – seems to better serve the assessment of functionality than an approach relying on evidence of a high price.

- Advertisement touting aesthetic characteristics

The role of advertisements for promoting and prompting consumers to purchase any product is unquestionable. As argued in Chapter 4, advertising lies at the core of any branding strategy focused on building consumer loyalty and the repeated purchase experience. Especially in the case of signs, which the jurisprudence usually denies any inherent distinctive character, as with other product characteristics, the evidence of wide-scale persistent advertisement is essential for claiming later acquired distinctiveness. Obviously, advertisements draw attention to certain product characteristics in order to raise the appropriate consumer perception, that is, educating the consumer to see a trade mark, and thus not only a product feature. It seems, therefore, quite disconcerting that what amounts to a marketing imperative to pass the distinctiveness threshold may simultaneously be detrimental to trade mark protection, as the sign becomes vulnerable to functionality objections. Certainly, the issue is a matter of degree, that is, how much emphasis on different values/benefits of the appearance enjoying protection would be acceptable/harmless, and at which point the scale tips in favour of functionality.

Especially in light of the studies discussed in 8.3.1., it appears that any *ex cathedra* judgment about the input of advertising in cases of an allegedly functional sign would inadequately represent market realities. Courts/administrative bodies should require proofs and expertise from the marketing and branding areas. In addition, comparing the manner in which competitors have promoted alternative products serves to understand better the extent to which advertising has influenced consumer purchase decisions for a broader category of (similar) products.

- Consumer perception

Chapter 5 has discussed the difficulty of integrating consumer perception at the stage of identifying the essential characteristics of the sign. At this stage the query becomes how to use consumer perception as an indicator – among other factors – that a product's characteristics give substantial value to goods. The focal point consists of what lies behind a consumer's decision to choose and purchase the product.¹²⁸²

Earlier discussions about aesthetics (8.3.1.) argued that consumer perception offers various pieces of information, depending on the vantage point. First, consumer attention is guided by a product's appealing appearance, which means more than sensory attractiveness. Apart from it looking good,

1282 Similarly, Fhima (n 34) 694.

consumers appreciate a product's functionalities, seeking proper performance at the right price. Most often, the consumer interacts with the product symbolically, searching for communication benefits, meaningfulness, and the opportunity to show off socially. Exploring the actual mix of these factors requires specific evidence. Second, designers infuse products with content able to induce consumer deliberate behaviour. Studies revealing the design history behind a product would offer valuable information about what consumers seek from that product. From another angle, Chapter 4 discussed how branding strategies and a trade mark's reputation enhance the consumer's experience and personal ties with the product. The US criteria of 'important ingredient' and 'actual benefit' (8.2.1.) may also be analogically used when determining consumer motivation.

However, it seems reasonable to require that consumer perception and behaviour should be evaluated vis-à-vis the product at issue and alternative offers. In such case, this ties into product substitutability, which would balance consumer willingness to pay a higher price for trademarked product features against a cheaper alternative (see 4.4.). It looks also into the constraints competitors face to trade acceptable offers. A recent US study discusses the significance and accuracy of market (survey) studies for functionality purposes (8.4.2.).

Finally, the issue of which parts of a product – perceived visually or through other senses – contribute to conferring the overall impression of a product relates to whether evidence of actual consumer perception is acceptable. This inquiry seemingly shares similarities with the test of the informed user's perception in EU design law. However, establishing the 'overall impression' in design law – for testing individual character or the scope of protection – is considered to be a legal/normative test, conducted without proofs of actual perception.¹²⁸³ By contrast, because EUTM functionality does not contain a normative model of the informed user, proof related to consumer actual perception should be accepted.

The CJEU in *Gömböc* referred to 'the presumed perception of the sign at issue by the average consumer',¹²⁸⁴ while indicating that the refusal ground may apply 'if it is apparent from objective and reliable evidence that the consumer's decision to purchase the product in question is to a large extent determined by that characteristic'.¹²⁸⁵ Keeping in mind the competence of freely evaluating evidence by a court/administrative body, it is the author's opinion that operating with presumed perception without reference to actual consumer surveys and market studies would rarely achieve solutions that correspond to market realia. And it is such solutions that are needed, as CJEU in *Gömböc* reaffirmed

1283 Stone (n 900) 205; Oliver Ruhl, *Gemeinschaftsgeschmacksmuster. Kommentar*, Carl Heymanns 2010, 107, 250.

1284 C-273/19, para 44.

1285 Ibidem, para 47, and judgment's 2nd operative part.

the purpose of preventing situations when ‘a single undertaking would distort the conditions of competition on the market concerned’¹²⁸⁶ (see 8.4.).

- Time factor

Making a clear-cut distinction between value-conferring factors is important for a proper time-dimension of the assessment. What evidence is required at what point of time? The EUIPO has taken the position that examinations should be an ‘*ex ante* prognosis’, that is, relevance is borne by the circumstances/proofs presented at the time of filing for registration.¹²⁸⁷ However, if the sign was not previously used in trade, the registrar has to make assumptions about what may presumably determine consumer purchases of the goods. It may be that correlating several factors, that is, the nature of goods, artistic work, advertising campaigns may suffice for an a priori finding of ‘substantial value’ of goods that corresponds to market reality. However, when the sign has been put at trade and there is a history showing a dynamic change of circumstances affecting, that is, diminishing the value of, the sign/product as compared to alternative offers (e.g. the *Eames* chair or *Dualit* toaster), it is debatable why such changes should be neglected in the assessment, especially in later invalidity proceedings.

Consumer perception develops over time. The Max Planck Study drew attention to the variable public comprehension of a product’s attractiveness, translated into the variable advantage of having it covered by the legal exclusivity of a trade mark right.¹²⁸⁸ Market realia fluctuate: what amounted to a restriction of competition some time ago may become insignificant if there is currently sufficient competition through substitution. Many attempts to invalidate a trade mark under aesthetic functionality occur years after registration, as the result of a counterclaim submitted in infringement proceedings. Assuming that the key issue of a functionality inquiry is the extent of effective competition on the market, then it seems reasonable to consider market developments and how alternative offers have affected the value of the sign/product at hand.

8.3.3. *What should stay ‘out’ of the assessment*

It seems unquestionable that the value of a sign of properly performing trade mark functions or serving as an asset to build reputation should be disregarded in the assessment of aesthetic functionality. Their delineation from other value-conferring sources depends on the type of the sign at issue and its relation to other jointly used signs (product features). The author considers that if such delimitation cannot be in casu objectively achieved, the choice

1286 Ibidem, para 40.

1287 Rosati (n 624) 12, referring to *Bang & Olufsen*, 72. See EUIPO Canc. Dec. of 31/01/2011, 3525C, 18.

1288 Study (n 627) 2.33.

between conferring trade mark protection or denying it should be decided upon additional criteria, involving a balance of interests. One possible option is to consider the availability of substitutes (8.4.).

8.3.3.1. *Source-identification value*

Product features may be valuable to consumers precisely because they indicate the origin of goods and services.¹²⁸⁹ The value of being a badge of origin should not a priori imply aesthetic functionality, otherwise the main incentive of protecting trade marks is compromised. The author considers it useful to use the distinction between the subject-matter commonly affiliated with traditional marks (two-dimensional signs consisting of words, graphics, logos and combinations thereof), and the subject matter of non-traditional marks (three-dimensional shapes, with features of colours and/or graphics, sound, position etc.) to introduce additional specificity to the assessment.

- Two-dimensional word/figurative signs

There is significant US case-law on the use of two-dimensional logos/pattern marks, such as ‘Volkswagen’ and ‘Audi’ names and graphic logos¹²⁹⁰ or Louis Vuitton’s fabric pattern consisting of ‘LV’ initials and fleur-de-lys symbols,¹²⁹¹ which has left them untouched by aesthetic functionality. The reason that the public chose these goods was not because of the appeal/beauty of the signs, but because of the benefit of source-identification. In the pre-reform EUTM system, individual two-dimensional word and/or graphic signs did not meet the definition of a functional shape, either from a 3D or 2D perspective. Similarly, the combination of a shape with words/graphics fell outside the definition of a sign consisting ‘exclusively’ of a shape (see Chapter 5). Assessment of the latter depended on whether the words/graphics prevailed over the plain shape, and most cases were tested upon distinctiveness grounds.

Under the new EUTM, two-dimensional signs – *lege non distinguente* – may constitute ‘another’ product characteristic caught by the functionality prohibition. Professor Senfleben comprehensively analysed how two-dimensional signs incorporating cultural works (paintings, drawings, images of artists, literary works, titles of books/films) could be flexibly affixed for merchandising purposes to goods which, theoretically, should entail different legal effects.¹²⁹² A consumer chooses a T-shirt with a Barbie drawing either for the value conferred by the drawing, that is, a case of aesthetic functionality, or because of its use as a trade mark, that is, a case of protection, or for both reasons. Does

1289 Bone (n 268) 239.

1290 *Au-Tomotive Gold v. Volkswagen of America*, 457 F.3d 1062, 1072–1074 (9th Cir. 2006) with further references.

1291 *Vuitton et Fils v. J. Young Enterprises*, 644 F.2d 769, 774–775 (9th Cir. 1981).

1292 Senfleben, *The Copyright/Trademark* (n 125) 395–403.

the first situation depend on the drawing being affixed on the front of the T-shirt, while the second on it being on an inside label or on the rear part? CJEU guidance urges that all possible types of use are considered as a trade mark in the light of the customs of a given industry,¹²⁹³ which means that any placement of the Barbie drawing could be indicative of trade mark use. This seems to prioritize the conferring of trade mark protection over the risk of applying functionality. The incapacity of aesthetic functionality to prevent the trademarking of cultural symbols has determined Senftleben to advocate for a separate prohibition *de lege ferenda*.¹²⁹⁴

Following this line of reasoning, two-dimensional word/graphic signs, logos deprived of cultural content, thus, symbolic ambivalence, have much greater opportunities to incorporate source-identification value, especially after marketing and intensive use in trade. For these reasons the author considers it optimal to move this kind of two-dimensional sign out of the inquiries into aesthetic functionality (see 5.4.¹²⁹⁵). *A fortiori*, the same reasoning applies if the signs at issue additionally enjoy reputation (8.3.3.2.).

- Combinations of product features including word/figurative signs

Product features constitute the central object of the functionality prohibitions. It is because of this that the EUTM legislator decided that source identification should give way to enhancing market competition (Chapter 2). At present, functionality may cover any combination of product features (Chapter 5). For instance, even position marks, which represent *de facto* the placement of a base sign on a part of a product, may be tested against functionality, especially if the base sign constitutes a product feature (e.g. colour).¹²⁹⁶

Bearing in mind the CJEU's guidance that an essential non-functional feature may dismiss the application of the (aesthetic) functionality prohibition, identifying such characteristics that do not bring substantial value to goods is difficult, especially when the product presents holistic value stemming from various sources.¹²⁹⁷ The author considers that if the sign consists of a combination of product features with word/figurative signs – the latter being more capable of source-identification – then, weighing the features against each other will be necessary. The assessment must answer the following issues:

- Which kind of value is conferred by the individual components of the combination?
- Is there any reputational value, and how should it be factored in (see below)?

1293 C-541/18 *AS v. DPMA*, EU:C:2019:725.

1294 Senftleben, *ibidem*, 312.

1295 A different treatment is required by pattern and colour marks. Issues of standardization and competitive need may require that they are tested under functionality.

1296 Brancusi (n 634) 63–64.

1297 *Fhima* (n 34) 689.

- Do the individual contributions of value add up to giving ‘substantial value’ to the goods?
- From an overall perspective, does the sign – as a whole – consist ‘exclusively’ of product characteristics that give substantial value to goods?

In the author’s opinion, the simple addition of word/figurative signs does not insulate the overall combination from being tested against aesthetic functionality. The prohibition would apply if tested word/figurative elements have:

- modest size;
- poorly visible placement;
- little inherent distinctive capacity (such as being comprised of descriptive/generic content).

To date, the EUIPO has inconsistently considered the input of word/graphic – a lenient approach denied functionality in the case of a prosecco bottle or the *Dualit* toaster, whilst in the case of *Gibson’s* guitar the logo did not suffice to dismiss functionality (8.1.2.4.). Future practice calls for more clarity.

8.3.3.2. *Value from reputation*

One argument says that making a product ‘more memorable’ in the minds of consumers – through advertisement and other branding strategies – is a natural step towards a ‘reputation-related need’.¹²⁹⁸ Recognition and the familiarity of a product matter, as they trigger repeat purchases, and, assuming also stable quality, helps building reputation. If they are supported by source-identification capacity, trade mark protection emerges as legitimate interest. Reputation implies certain attractiveness of the product in the eye of a consumer. This leads to the key issue of whether it is possible to separate reputation-originated attractiveness from the other types and sources of attractiveness which should be caught by aesthetic functionality. Part 4.3. extensively argues why the author finds this to be a challenging task, particularly because of the intertwined relationship between reputation and other brand components, and the lack of suitable financial information to enable separate quantification of these values.

A more workable option is to conduct a binary assessment, as follows.

If reputation is linked to a two-dimensional word/graphic sign used as badge of origin and applied to a product, then it may be possible to exclude this value from a functionality assessment of the product. Such a discarding process is still dependent on the relationship between the reputed sign at issue

1298 In the pharma industry, David Fritch ‘Should “The Purple Pill” by Any Other Drug Company Still Be as Purple?’ (2006) 47 IDEA 171, 196 argued how patients’ strong associations between the pill and the producer/source – thus not between the pill and the active ingredient – might have determined their adherence to the medication scheme, which, nevertheless, was considered a functional therapeutic/utilitarian effect.

and other signs simultaneously affixed to the product being tested under aesthetic functionality (e.g. a logo on the front side of a purse).

However, if reputation is inherently linked to the product feature(s) at issue, then there are no clear and objective means of carving it out from the functionality assessment of the whole sign. Does a consumer purchase a *Louboutin* shoe because of the reputation of the red colour applied on the soles, something also indicative of the origin of the goods, or merely because of its attractive, fancy look? If *Rubik's* cube is seen as reputed, does the reputation relate to the six-coloured cube being traded, or to the black-and-white three-dimensional shape, which was the sign at issue?

In the author's opinion, all these doubts lead to a final query about priorities. Should the value from reputation ensure trade mark protection over the whole (product) sign? Or should the functionality competition rationale overtake the reputation-related interests of the trade mark's owner? The author favours a positive answer to the latter, provided that a proper, market-oriented test would apply (8.4.2. and 8.4.3.).

It is important to stress that the CJEU has not yet had occasion to explicitly discuss reputation in the context of aesthetic functionality. In the *G-Star* case,¹²⁹⁹ the CJEU avoided the query (2.2.2.). Other judgments have indicated *passim* that reputation should be excluded from the examination.¹³⁰⁰ However, to date no judgment has indicated any criteria or methodology for how to discard the reputation value from values that may also contribute to conferring (substantial) value to goods.

8.4. Empirically orientated tests

The following part begins by presenting several approaches that have been advanced in the US scholarship to test aesthetic functionality using values and consumer preferences resulting from acculturation, compatibility requirements, or the specificities of a product's market. One recent empirical study argued that consumer surveys are useful for aesthetic functionality purposes because they reveal market realities, and especially the balancing issue of whether consumers would be better off with, or without, trade mark protection. The latter findings represent the impulse to gather different criteria which can integrate with the *Hauck* guidance in order to outline a market-orientated test, setting EUTM aesthetic functionality within a competitive need perspective.

8.4.1. *Consumer preferences, as determined culturally, psychologically, or by compatibility needs*

Professor Ramsey expressed the view that trade mark protection should be refused to signs that contain 'inherently valuable expression' prior to their use as a trade mark, such as an element 'intrinsically ornamental, decorative,

1299 C-371/06 *Benetton v. G-Star*, ECLI:EU:C:2007:542.

1300 AG Opinion to C-163/16 *Louboutin*, ECLI:EU:C:2018:64, para 54.

informational, or which conveys other non-source identifying messages’, offering the examples of the human skull shape, a lion’s roar, chocolate flavour, or leather texture.¹³⁰¹ For instance, colours would fall within this category because of their inherent appeal and communicative value, regardless of the context of use. However, the exclusion should not apply to subject-matter that has gained value from use as source-identifier via branding/marketing efforts.¹³⁰² This view partially concurs with the approach of professor Bartow, who argues that because any colour has multiple ‘pre-existing’ social meanings and is always functional, from a utilitarian, aesthetic, or communicative perspective,¹³⁰³ trade mark protection should be denied by default.

Similarly transposing an upfront denial of trade mark protection for certain types of signs on the EUTM ground goes against the CJEU guidance.¹³⁰⁴ In addition, the need to identify an ‘intrinsic’ societal-cultural meaning – distinct from the issue of artistic value – would require proofs that do not fit easily within the *Hauck* criteria, unless the criterion of ‘consumer perception’ is used more flexibly. From another context, in the EUTM and design law there is a distinct absolute refusal ground pertaining to public policy and morality, which relates to subjective values/assets accepted by a given society. The application of this refusal ground has demonstrated the difficulty in finding and interpreting standardized values shared by all EU members.¹³⁰⁵ This difficulty of subjective, divergent appreciation casts a shadow on the usefulness of criteria referring to societal/cultural norms for the purpose of EU aesthetic functionality (more below).

Another noteworthy item of scholarship presented by professor Hughes read aesthetic functionality as addressing ‘product features that appeal to reasonably specific cognitive, psychological or aesthetic biases or preferences that are widespread among consumers and exist regardless of (and prior to) anything the trademark creator or owner has done’.¹³⁰⁶ Two further subclasses of functionality are identified: one determined by a compatibility/matching need, linked to ‘substantial capital investment’ in a complementary product (1) and one determined by consumer sensory response, due to ‘evolution or deeply rooted acculturation’ (2).¹³⁰⁷ Both issues require distinct remarks.

8.4.1.1. Compatibility standards – spare parts

Compatibility addresses accessories or complementary products/parts that relate to a bigger product/structure, with a variable extent of matching. Put generally, the appearance of a smaller product (x), being part of a bigger

1301 Ramsey (n 225) 358.

1302 Ibidem, 359.

1303 Bartow (n 1087) 265, 290.

1304 C-299/99 *Philips*, para 40.

1305 Carina Gommers, Eva de Pauw, Ine Letten, “‘Thou Shalt Not Pass’ – Trade Mark and Design Offices and Courts as Guardians of Public Policy and Morality’ (2021) 16(1) *JIP&P* 21, 26–27.

1306 Hughes (n 794) 121.

1307 Ibidem, 115–119.

product (y), depends on the appearance of the rest of the product (y-x) or of the overall combination (y). US functionality practice has offered the examples of the black Brunswick outboard motor, green parts of a Deere tractor, and ‘rust-type’ roof tile or roof vents.¹³⁰⁸ Compatibility draws attention to the legal protection of spare parts by means of various IPRs, and the extent of liberalization needed by the downstream aftermarket. In the automotive industry, spare parts usually copy the appearance of an original part of the complex product, although minor upgrades are customarily permitted (e.g. a modified steering wheel, lights, or wheel rims for a car). The issue of whether non-authorised producers may market quasi-identical parts and for which purposes – for example restoring the original appearance of a damaged product (e.g. a car), a product usually covered by IPRs on behalf of the original producer – engage several conflicting interests (manufacturers, insurance companies, and end consumers). Many other products require compatible parts for proper functioning, such as coffee pods (e.g. Nespresso capsules), or printer ink/toner cartridges. Chapter 6.2.2.2., using the example of *Leggo*, argued that the compatibility requirement to ‘fit’ around/in another product may mean performing a ‘technical result’ in the light of the EUTM technical functionality prohibition. Here the query is not whether a spare part fulfils a technical function – which may be true, depending on its relationship with the complex product – but whether it ‘gives substantial value’ to the goods.

It is noteworthy that EU design law contains a ‘repair clause’ that restricts the exercise of a design right against trading so-called ‘must match’ spare parts of different origins.¹³⁰⁹ This enables competitors to market non-authorized parts (e.g. a car bumper) under certain conditions, without risking infringement claims from the part of the original manufacturer. An original part is usually covered by design protection twice over: both individually by element (the bumper) and as part of the entirely protected car. The EUTM, though, does not contain a similar ‘must match’ exception. Assuming that the spare part, or the overall product, succeeds in acquiring trade mark registration, this may effectively prevent competitors from using the design exclusion. The option to invoke aesthetic functionality appears to be a reasonable solution. After all, what matters to the end consumer is that the spare has the same specific (here

1308 Ibidem, 116–117 with further references.

1309 See Art. 110(1) Regulation 6/2002: ‘Until such time as amendments to this Regulation enter into force on a proposal from the Commission on this subject, protection as a Community design shall not exist for a design which constitutes a component part of a complex product used within the meaning of Art. 19(1) for the purpose of the repair of that complex product so as to restore its original appearance’. Consult Dana Beldiman, Constantin Blanke-Roeser, *An International Perspective on Design Protection of Visible Spare Parts* (Springer 2017) 15–30 and 55–83. The recently proposed reforms of the Directive and Regulation in the EU design law introduce a compulsory repair clause, see Art. 20a of the Regulation (draft COM(2022) 666 final) or Art. 19 of the Directive (draft COM(2022) 667 final).

‘mimicked’) appearance as the original element – sales of mismatched spare parts would constitute an exceedingly small market.

So far, the jurisprudence has been unwilling to apply aesthetic functionality to spare parts. In the US scholars argue that trade dress litigation is shy on spare parts because of the risk of unfavourable precedential judgments.¹³¹⁰ One example of a design held to be functional concerned a *Chrysler* grille, because of Chrysler’s competitive advantage and lack of sufficient alternative ways to build grill screens for jeeps (only three). In the EU the *BMW* bonnet/hood was denied trade mark registration by the German Federal Patent Court for reasons of influencing the commercial value of the shape. The decision was annulled by the Supreme Court, which confined the notion of ‘substantial value’ uniquely to aesthetic appeal, thus discounting other economic factors.¹³¹¹ Professor Kur thoroughly criticized this judgment, for neglecting the main purpose aesthetic functionality should achieve, that of enhancing market competition.¹³¹²

In a post-*Hauck* landscape, assuming that the utilitarian aspects of a product may contribute to confer substantial value besides aesthetic considerations, there are even greater grounds for placing must-match parts within the ambit of trade mark functionality. The author is aware that this puts the legal debate onto the radar of economic-driven policies, therefore any functionality assessment would necessarily require a market-orientated test.

8.4.1.2. *Psychologically-determined standards*

Professor Hughes used the term ‘perceptual functionality’ to address consumer reactions/preferences, determined either by how the brain works (e.g. perceiving a size-minimizing effect from the colour black, or seeing reflective surfaces as brighter), or through evolution, acculturation, a shared ‘western’ psychology (e.g. orange colouring for safety jackets, green for eco/bio characteristics, blue for masculine and pink for feminine).¹³¹³ Certain limitations should temper the scope of perceptual functionality: the group of relevant consumers should be a ‘substantial composite’ (a quarter was suggested as sufficient), whilst the simple predisposition towards beauty should not trigger the prohibition – instead, a specific ‘pre-existing specific’ response amongst consumers is required.¹³¹⁴ Aesthetic functionality should also not apply when the rights holder was the one

1310 Dana Beldiman, Constantin Blanke-Roeser, Anna Tischner, ‘Spare Parts and Design Protection – Different Approaches to a Common Problem: Recent Developments from the EU and US Perspective’ (2020) *GRUR Int* 69(7) 673, 689, discussing *Chrysler v. Vanzant*, 44 F. Supp 1062 (C.D. Cal 1999) 1072–1073, <https://law.justia.com/cases/federal/district-courts/FSupp2/44/1062/2567958/>

1311 BPatG (2005) *GRUR* 333 *Kraftfahrzeugteile*; BGH (2008) *GRUR* 2008, 71 – *Fronthaube*.

1312 Kur (n 1133) 12–13.

1313 Justin Hughes, ‘Cognitive and Aesthetic Functionality in Trademark Law’ (2015) 36 *Cardozo L. Rev.* 1227, 1253–1255.

1314 *Ibidem*, 1255, 1278.

who first introduced the product features, or when the particular design is ‘one of many ways’ of fulfilling consumer preferences.¹³¹⁵

Under the EUTM, such an approach risks raising an over-inclusive automatic response. If a new/specific product feature is sought by consumers in the products of competitors – becoming a kind of market standard, must-have feature – then this may risk too easily including aesthetic functionality, despite the hypothesis that a consumer’s purchase decision was determined by the source-identification performed by the feature. Objective evidence is needed to analyse the context of use and prove pre-existing standards within a relevant target market. Sometimes there may be familiar situations of cultural/psychological meanings ascribed to a characteristic, for example the colour red, often associated with ‘gala spirit’, ‘performance’, ‘celebration’ (red ribbon cutting and red-carpet events).¹³¹⁶ However, most commonly, it is difficult to formulate such ready-made assumptions about consumer tastes. Taking the example of modern design, would floral patterns on china or baroque-style silverware decoration suit the taste of today’s consumers? Assuming that trends and design-awareness evolve over time, the assessment would apparently need evidence of the actual cognitive response of consumers – apart from other kinds of design, marketing and branding information. Is the EUTM judiciary ready for such a step? The author doubts it. The practice to date has troubles even with admitting the evidence of alternative products.

Hughes acknowledges that the issue of pre-existing consumer preferences can be used ‘in conjunction with a court’s market competition analysis’.¹³¹⁷ The author considers that inquiring into market realities is the right approach to test aesthetic functionality. Another scholar recently advocated for a ‘more contextualized market-orientated examination that considers “both” industry practices and competitive necessity’.¹³¹⁸ Such requirements are examined below.

8.4.2. *Consumer preferences via market surveys – a US study*

In the US law courts/trade mark examiners conduct the assessment of functionality, without reference to consumer surveys. A recent research paper critically argued that consumers are better placed than judges when it comes to balancing the benefits of protecting trade dress as a badge of origin against the costs of prohibiting competitors of copying trade dress features in order to offer cheaper alternatives.¹³¹⁹

1315 Ibidem, 1273–1275; also Hughes (n 794) 122.

1316 Olena Butriy, ‘Shaping a Colour’ (2017) *JIP&P* 12(12) 997, 1003 discussing *Louboutin’s* aura.

1317 Hughes (n 794) 124.

1318 Ramirez-Montes (n 1078) 62.

1319 Ian Ayres, Xiyin Tang, ‘Consumer Expropriation of Aesthetically Functional Trade Dress: Results from a Randomized Experiment’ (2020) 93 *S Cal L Rev* 1189, 1210.

A randomized study was conducted with 1000 Amazon Mechanical Turk participants, who were asked to decide whether they would be better off if trade mark/dress protection was maintained for several well-known products (displayed on photographs) which had been the objects of litigation upon functionality objections.¹³²⁰ These items were: Louboutin's red shoe sole, Gucci's criss-crossing 'Diamond motif' affixed on canvas,¹³²¹ the Maker's Mark 'red drip wax seal' on bourbon bottles,¹³²² the 'Bubble Genius' transparent packaging featuring elements of the periodic table on soaps,¹³²³ the Wallace baroque silverware pattern,¹³²⁴ the Emeco Navy chair,¹³²⁵ and Adidas tennis shoes with a 'raised mustache-shaped coloured heel patch'.¹³²⁶

Different sets of questions tested consumer preferences. In an all-or-nothing scenario of protection, only a small majority of 53 per cent and 55 per cent opted for non-protection of the Adidas and Louboutin shoes; however, a significant majority (ranging from 58 per cent to 71 per cent) preferred a lack of protection for soap packaging, silverware, and the chair. Interestingly, 70 per cent selected perpetual protection of the Gucci pattern, even if applied to highly unrelated products such as haemorrhoid creams and electric drills.¹³²⁷ Even in the case of offering more guided options (i.e. telling consumers about the potential benefits of protection, or including the possibility of a 14-year term of protection), this did not effectively modify the previous protection/no-protection options.¹³²⁸ However, when more ambivalent options were added ('unsure/don't care/no opinion'), this reduced the number of respondents choosing to permit no protection. Ultimately, when of limiting the scrutiny to the group of unforced consumers, a majority chose no protection for Wallace silverware, Bubble soap, and the Emeco chair, yet a significant majority still opted for trade mark protection for the Gucci and Louboutin signs.¹³²⁹ The latter finding was presumably linked to their status as luxury symbols with important social benefits.

1320 Ibidem, 1218–1219.

1321 *Gucci v. Guess?*, 868 F. Supp. 2d 207, 246, 257 (S.D.N.Y. 2012) – aesthetic functionality rejected, source-identification prevailed over ornamentality.

1322 *Maker's Mark Distillery v. Diageo*, 679 F.3d 410, 418–419 (6th Cir. 2012) – aesthetic functionality rejected.

1323 *Bubble Genius v. Smith*, 239 F. Supp. 3d 586, 594–596 (E.D.N.Y. 2017) – functionality asserted – pure ornamental features necessary for competition on the market.

1324 *Wallace v. Godinger*, 916 F.2d 76, 81–82 (2d Cir. 1990) – functionality of basic elements of a style essential for competing in the silverware market.

1325 *Emeco Indus v. Restoration Hardware*, C-12-5072 MMC 2012, 2012 U.S. Dist. at: <https://casetext.com/case/emeco-indus-inc-v-restoration-hardware-1> – functionality not established.

1326 *Adidas v. Skechers* 3:15-cv-01741-HZ, 2017 U.S. Dist. at: <https://casetext.com/case/adidas-am-inc-v-skechers-united-states-inc-3> – utilitarian functionality denied upon *Disc Golf* factors.

1327 Ayres, Tang (n 1319) 1230–1231.

1328 Ibidem, 1234.

1329 Ibidem, 1235–1239.

The study argued that ‘consumers preferences [we]re restrained and nuanced indicia of functionality. Rather than consumers “gone wild”, expropriating trade dress property at every opportunity, we often observed majority preference for continued protection.’¹³³⁰ The experiment demonstrated a significant heterogeneity of preferences, and a more nuanced response of consumers in case of more guided options. An important finding of the experiment consisted of the disagreement between the judiciary dismissing the functionality of Emeco chair, while the survey proved a clear consumer preference for its no protection.¹³³¹ Similarly to the methods of assessing genericness, the researchers argued that consumer preferences, as reflected by surveys, could be instrumental for functionality purposes, as a means to capture the real balance of interests between consumers, trademark holders, competitors.¹³³²

8.4.3. *Towards a market-orientated test of the EUTM signs giving substantial value to goods*

Assessing aesthetic functionality in the EUTM system requires the interplay of various criteria, weighing various sources of value in order to establish those giving substantial value to goods. The latter sources have to be objectively determined and closely linked to the product features constituting the sign at hand. None of the criteria advanced by the *Hauck* jurisprudence offer conclusive results (8.3.2.). The input of aesthetics research demonstrates that the reality behind consumer preferences for a product and its purchase is far more complex than can be determined in abstracto by courts (8.3.1.). For this reason, a more suitable method to reach a solution tailored to market realities is to apply a multi-factor test, which combines the *Hauck* guidance with the US approach that focused on competitive need, measured by the extent of alternative, substitutable products. In light of the US *Qualitex* test, aesthetic functionality should apply when trademarking product features at issue would put competitors at a non-reputation related disadvantage. However, information about what consumers actually prefer and seek should also be factored in.¹³³³ The following parts explore the stages of the proposed assessment when a sign gives substantial value to goods under EUTM.

8.4.3.1. *Market definition in US aesthetic functionality cases*

Similar to the case of technical functionality, any examination of alternative/substitutable products requires the definition of the relevant market (alias product category). This part supplements the examples laid down in 6.4.2. to

1330 Ibidem, 1239.

1331 Ibidem, 1237.

1332 Ibidem, 1240–1242.

1333 *Fhima* (n 34) 689.

show how the level of specificity chosen for a given product category determines the accuracy of the assessment of aesthetic functionality.

One case concerned the colour black, filed for floral packaging. Registration was denied because the market was broadly defined as the ‘floral industry’, including packaging, containers and flowers.¹³³⁴ The registrar found a strong competitive need to use black in that industry, due to symbolic messages of elegance, mourning, or Hallowing festivities. This case was in line with the approach towards the ‘perceptual’, ‘communicative’ functions of colours (8.4.1.), however, the assessment was criticized as being based more on presumptions about the competitive need to use black than on a properly defined product market including relevant stakeholders.¹³³⁵

Another notable case concerned the trade-dress of a specific type of ice cream, found functional in a market narrowly defined as the ‘flash frozen ice cream business’.¹³³⁶ If the market had been ‘ice creams’ or ‘soft-serve ice creams’, perhaps the court would have considered the ability to compete through a variety of product features, without the need to copy the specific features of colour, shape, and size of the ice beads.¹³³⁷ By contrast, in the case of a diamond-shaped candy, the relevant product was broadly identified as ‘lollipops’ – instead of the category of ‘diamond engagement shaped lollipops’ – so that the proof of alternative lollipop configurations dismissed aesthetic functionality.¹³³⁸ Putting those cases into the EUTM perspective, both involved a new and specific shape feature (bead or diamond), which attracted consumer interest. If the EUTM *Hauck* guidance had been applied without scrutiny, the very fact that the configuration was interesting/surprising for that type of product would have automatically meant the absence of trade mark protection. Functionality prevailed in the case of the ice creams because it involved the manufacturing functionality of the ice beads. However, when it comes to the lollipop case, a flexible approach seemed justified, as there were no market constraints that would force competitors to copy the diamond shape.

Perhaps the best example of aesthetic functionality anchored in a market-orientated test is provided by the case of a red dripping wax seal on bourbon bottles.¹³³⁹ The court narrowly defined the market as liquor bottles, without

1334 *In re Florists’ Transworld Delivery*, 106 U.S.P.Q.2d 1782, 1789 (T.T.A.B. 2013).

1335 Ashley Green, ‘Red Touches Black: The First Application of Maker’s Mark and Louboutin in the Context of Color Trademarks’ (2014) 4 *Journal of Gender, Social Policy & the Law* 981, 996–998.

1336 *Dippin’ Dots v. Frosty Bites* ... 369 F.3d 1197 (11th Cir.2004). The court also applied the *Inwood* test of utilitarian functionality, because the ice creams resulted from a patented manufacturing method (with the shape of the ice beads resulting from dripping the composition into the freezing chamber; colour indicative of flavour; size determined by the creamy taste).

1337 Discussed in terms of defining markets differently by McKenna, ‘Is Pepsi ...?’ (n 37) 2063–2064.

1338 *Topps v. Gerrit* ..., 1996 WL 719381 (S.D.N.Y. 13 Dec. 1996).

1339 *Maker’s Mark Distillery v. Diageo*, 679 F.3d 410, 414 (6th Cir. 2012).

considering other kinds of products that could be sealed by red wax, such as wines or cheese.¹³⁴⁰ The judge focused on competition effects, by applying two types of test, both of a factual nature.¹³⁴¹ One was named the ‘comparable alternatives test’ and answered the question of whether trade-dress protection of features at issue leaves to the use of competitors a variety of comparable alternative features to compete in the market. The court looked at various ways to appealingly seal a bottle with wax, which proved that it was not costly or difficult for competitors to design around and choose an alternative. The second ‘effective competition test’ answered the question: does trade dress protection hinder the ability to compete effectively in the product market? This time the court noticed that red wax was not the ‘only pleasing colour of wax’ in a way that its exclusive use by the right holder would put competitors at a ‘significant non-reputation disadvantage’. The latter test represented a reiteration of the *Qualitex* terms.

The author finds that looking at the competitive need from two angles, that is, inquiring first whether there are alternatives at a similar cost, and next, whether their use ensures effective competition in the product market, may analogically serve EUTM aesthetic functionality purposes. The inherent subjectivity linked to the choice of the product category by the judge/examiner may be tempered by allowing the body of extra-legal evidence to reflect market realia, and especially to inform the examiner/court about consumer preferences and product choice. Such diversification of proofs, although time-and-money consuming, seems, in total, a better option than solely relying on arbitrary choices by judges/examiners, which, if they are erroneous, also come with high societal costs.

8.4.3.2. *Gathering all the elements for an EUTM aesthetic functionality test*

The first phase of the assessment should consist of discarding those values stemming from source identification and/or reputation (8.3.3.). This exercise is feasible, as long as such values are linked to parts/features of a product that can be autonomously separated from other components of the sign. As argued in 8.3.3.1., in certain conditions this would apply to two-dimensional words/logos/figurative signs. If the discarding operation cannot be conducted objectively, then the task remains to assess the ‘amalgam’ of values that are conferred by the product features at issue (8.3.3.2.), including here the value(s) of source-identification/reputation. *Gömböc* recently taught that values unconnected to the product features at issue should not be factored into the aesthetic functionality test. The CJEU has not offered additional guidance as to how to achieve it, yet assuming there is a combination of relevant values, weighing one against another seems an unavoidable step when deciding whether such value is ‘substantial’.

The CJEU has also left unexplained how close the connection between a source of value (e.g. the history of the designer, technical innovation, etc.) and the product features at issue should be, in order to include or exclude it

1340 Green (n 1335) 997, comparing the case with the floral black packaging.

1341 *Maker’s Mark*, 418–419.

from the assessment. Part 8.3.2.3. argued why using only the *Hauck* criteria, taken either individually or combined, may lead to inconclusive, arbitrary outcomes. Similarly to other types of functionality, testing aesthetic functionality will mostly be a ‘matter of degree’. For this reason, the author considers that the optimal solution is to rely on a market-orientated test based upon evidence of substitutable products and consumer preferences.

Such a test does not necessarily reject all *Hauck* criteria. On the contrary, it uses them flexibly in order to capture the competitive need for the product features at issue. The table below shows the manner in which the *Hauck* criteria may be incorporated as parts of the inquiries typical for a market-orientated test. The left column contains the different aspects which sum up to a test capturing the interests of competitors and consumers vis-à-vis conferring trade mark protection to the product features at hand. The right column contains the corresponding *Hauck* criteria, which may be variously used and at different stages of such a market-orientated test.

The author concurs with the view of professor Fhima, holding that consumer perception represents the neglected criterion of the assessment. Inquiring into consumer preferences and motivational behaviour represents an

Table 8.2 Integrating *Hauck* criteria into a market-orientated assessment

<i>Criteria of a market-orientated test</i>	<i>Hauck criteria</i>
Defining the product market	Nature of goods
Defining the range of substitutable/similar products	Similarity/dissimilarity from other products
Capturing the extent of variation, implicit embedded creativity	Artistic value
Specificities/breakthrough features of the product	Similarity/dissimilarity from other products
Appeal/Value from Ornamental/Aesthetic/ Arbitrary Features Appeal/Value from Utilitarian Features ‘Holistic Value’	Promotion strategy Nature of goods Consumer perception
Consumers’ willingness/ aversion to higher prices resulting from trademarking the features at issue	Price differences Nature of goods Consumer perception
Consumers’ demand for the features at issue/ closely similar	Consumer perception
Competitors’ demand for the features at issue/ closely similar	Price differences Similarity/Dissimilarity from other products
Specific market/public interest of keeping free access to product features	Nature of goods Artistic value

important part of the examination. It sheds light on the complexity of the aesthetic, functional, and symbolic layers of a product that bring value to consumers, influencing the purchase decision (8.3.1.). Interdisciplinary proofs from the field of aesthetics may help to develop a proper understanding of the nature and value of a given product. However, dealing with consumer preferences is subjective, whilst legal interpretations need clarity. Examining and weighing any criteria from the tables above against another involves a lot of attention. For this reason, the author considers that the conclusive role in the assessment should be played by a criterion measured upon more objective parameters, namely product substitutability in economic/competition terms.

The consumer's choice of substitutable products lays at the core of an inquiry focused on the conditions of effective competition in a product market. The factors used to capture the competition environment for the purpose of technical functionality in 6.4.3. may be analogically transposed for the needs of aesthetic functionality. It cannot be ruled out that, due to specific market circumstances, the trade mark holder already enjoys competitive advantages, which although unrelated to the mark at issue, may constitute a leverage position fuelling further 'significant non-reputation disadvantages', once trade mark protection is granted, maintained, and exploited. The query around whether there is a specific public interest in keeping certain product features unprotected should be considered from a competition perspective (see Chapter 4).

It may be argued that the algorithm for assessing signs giving substantial value to goods – as disclosed by the above table – may also serve to identify generic features which consumers look for in products of competitors (see also Part 5.4.3.). As discussed in Chapter 7, the *Hauck* judgment also required that generic features be determined by consumer preferences. This clearly has a possible overlap with the area of signs giving substantial value to goods. Another possible overlap would emerge if features performing technical results are seen as conferring substantial value to goods. By the same token, the current EUTM prohibition of a sign giving substantial value to goods would expand across and replace all the three previously defined types of functionality, that is, generic, technical, and aesthetic *sensu stricto*. The author does not support such a view. This was not what the legislator intended during the recent EUTM amendments, nor is it the direction in which the development of EUTM jurisprudence is likely heading.

Although such overlaps are possible, and product features may fit one or several functionality prohibitions, the CJEU has preferred autonomous legal interpretation for each of them, and tests based on different sets of criteria. For this reason, the author has opted for the practical option of laying down tests that use the existing CJEU guidance as a starting point, yet which are refined by the use of additional criteria, including the benchmark of product substitutability.

The purpose of aesthetic functionality, as recently developed by CJEU, does not reside in providing a rigid delineation between alternative forms of protection (designs and/or copyright). Instead, it may only be a tool fostering

market competition. For this to make sense, a flexible assessment tailored to market realities is required, an assessment that reads market developments in the proper time dimension. In the author's opinion, the courts should distance themselves from rigidly requiring evidence only at the time of filing the sign at issue. Instead, significance should be given to proofs showing the evolution of the market competition environment, including trends and consumer preferences towards a given type/category of product. There are good reasons to hope that this is the direction EUTM functionality practice will take.

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9 Conclusions

9.1. Why is being ‘practical’ the optimal choice of a ‘second best’ solution to EUTM functionality rules?

The purpose of this book was to find practical solutions relating to the application of the functionality absolute grounds for a refusal of trade mark registration under the EUTM. The emphasis on the term ‘practical’ is crucial for several reasons.

Businesses have increasingly become interested in registering product features that establish a consumer’s purchase decision via a broad sensory experience. In line with modern product research on consumer product experience that integrates utilitarian and aesthetic benefits, business has often used trade mark rights complementarily with other IPRs (designs, patents, copyright) to protect important market assets. The issue of overlapping rights is prevalent in today’s practice and cannot be rigidly denied or redressed by rules that easily separate on paper what is so complexly intertwined in reality. Many cases analysed in this book do not fit the black-and-white scenario of subject-matter associated with only one type of legal regime, instead they present complicated rights scenarios with many shades of grey. For example: a product has characteristics that relate to earlier patentable subject-matter, yet these do not form the exact object of the ‘claims’, it has a trademarked reputed logo, it comprises additional features that together confer an overall unique appearance that also may be protected as a design, trade mark, or even by copyright. Most of the product features covered by overlaps are *de facto* ‘part(s)’ of different combinations of features, each individually protected by different IPRs. Such practice benefits from the fact that in EU law there is no requirement to choose a specific form of protection, with no loss of the possibility to apply for a different form, whilst the CJEU acknowledges the principle of cumulation of rights under the autonomous terms of protection of individual legal regimes. The complicated query of whether a legal regime should replace – or have priority over – another one, and which should be primary, cannot prompt straightforward answers.

If trade mark functionality were to be chosen as the legal tool for preventing overlaps and establishing order within the IP system, then the results could

not be fully satisfactory, as the limited concept of functionality would inevitably fail to achieve such an ambitious goal. Instead, a far better approach is to settle for ‘second best’ – that is, using functionality judiciously, as a pro-competitive tool. Bearing in mind that an important concern around overlaps results from how additional and complementary layers of legal exclusivity mingle together to suppress competition by substitution,¹ then applying functionality to assess the competitive need for certain product features, measured by the extent of substitutes, could bring tangible, beneficial effects for the practice. For these reasons, this book has explored how trade mark functionality may solve the grey-zone scenarios of product features that fell within the ambit of several IPRs and pose a threat to effective competition.

As the core of the book consists of interpreting the EUTM functionality provisions, another practical aspect pursued was the decision to develop a legal assessment that integrates the criteria developed to date by the CJEU with new criteria resulting from a pro-competitive market approach. The author wished the book to be an immediately useful tool for examiners, judges, and practitioners in their work. Consideration was given to the fact that it is always easier to adapt, and improve, pieces of guidance being applied currently, instead of replacing them with a brand new set of criteria that discard all previous *acquis*. The author was aware of the suggestions expressed in the legal doctrine with regard to the possible deletion of some legal prohibitions and their replacement by extending the ambits of others.² However, such revolutionary modification of the scope of EUTM functionality is unlikely to take place in the near future. Quite the opposite, recent EUTM amendments have preserved the independent status of each of the three functionality provisions. The CJEU has also often articulated the requirement of carrying out a distinct examination of each absolute refusal ground, including functionality, as well as the interdiction against mixing parts of the different functionality legal provisions in order to apply a hybrid refusal ground.

Certainly, many signs consisting of product features would likely be examined upon several refusal grounds, including functionality alongside issues of distinctiveness. As discussed in Chapters 1 and 2, this practice is a legacy of the pre-harmonized national legislations, when the status of functional trade marks was mostly examined upon the incapacity of being a source-identifier, descriptiveness, or absence of distinctive character. Practitioners have also tended to simultaneously raise objections under different refusal grounds, because of the uncertain course of the substantive examination and the risk

1 There are other types of concerns resulting from overlaps (e.g. the improper use of cultural heritage works, the preservation of the public domain as a value in itself) that do not form the object of this book.

2 Professor Kur suggested the deletion of the prohibition of signs giving substantial value to goods, whilst Professors Quaedvlieg and Fhima argued, conversely, that the prohibition of signs giving substantial value to goods may be interpreted in an over-inclusive manner that would render the other two functionality prohibitions redundant.

of having disregarded arguments and evidence filed at a later stage of the proceedings. Chapter 5 looked into the details of how product features are registered, and explained the filing strategies of disguising functional subject-matter under two-dimensional signs in order to facilitate registration upon the distinctiveness requirement.

Theoretically, the EUTM provides a sufficient framework for ensuring the examination of functionality independently and before the refusal grounds pertaining to distinctiveness. However, in practice, shifts have occurred – from distinctiveness to functionality and back again, bringing variable outcomes. It is important to stress here that precisely how functionality prohibitions are applied in practice depends on the specifics of the procedural framework, and especially on the competence of the examiners/courts to examine evidence and ascertain facts. The source of what may be negatively termed ‘speculative action’ is found in the freedom to interpret the registration documentation, classification of goods, and the link between the sign and the designated goods. The examination of other than shape product characteristics will certainly raise additional difficulties. For instance, EUTM guidance concerning the distinctiveness of new types of non-traditional signs (e.g. sound, motion, multi-media) employs criteria of assessment that refer to the nature or function of the goods, and this blurs the line between the examination of descriptiveness, distinctive character, or functionality prohibitions (see Chapter 5). Today’s reality, with product features being inconsistently scrutinized – either upon functionality, effectively blocking trade mark protection, or upon legal grounds that keep open the potential for trade mark protection – is a situation that cannot be changed overnight. Despite these shortcomings, the author considered that investigation of the particulars of each of the functionality legal grounds was useful, as seeking clarity of interpretation would further develop the evidentiary support needed in a given case to ensure more predictable outcomes.

9.2. Why should the EUTM functionality assessment use comparative inputs?

The fact that this book has mostly drawn on the practice of the CJEU and its main framework of assessment did not prevent critical insight into the details of the examination, followed by suggestions for improvement. Indeed, the main deficiency of the current EUTM functionality practice lays in its rigid, *ex cathedra* approach to whether the functional sign at issue adversely impacts market competition. The way the CJEU has applied the criteria of assessment and handled the adduced evidence has failed to give sufficient consideration to market circumstances, that is, the environment developed around the product at issue and linked to the business strategy of the right holder, the needs of competitors and their capabilities to trade substitutable products, consumer preferences and switching capabilities, and other meaningful societal interests. By contrast, the leitmotif of this book is the belief that functionality assessments

ought to be anchored in market realia, which requires the use of criteria suitable to reflect market competition and subject to flexible application. Taking a flexible decision as to whether to confer, or not, trade mark protection to a functional sign is not a weakness of the legal interpretation. It appears to be the reasonable way to achieve optimal solutions in situations where there is always a need to exercise a judgment of ‘degree’, centred on balancing the interests of the right holder vis-à-vis those of competitors and consumers. For this reason, the book has shown that it could be useful to introduce to EUTM practice a new dimension originating in the ‘law and economics’ approach – previously acknowledged in US law – addressing the role trade marks play in market competition, which may also be relevant to functional signs. These issues were the subject of detailed discussion in Chapter 4.

Chapter 4’s arguments start from the assumption that competition goals permeate the entire IP system, including the trade mark regime, and that the exercise of trade mark rights was subject to external challenge under the EU’s competition rules. In the legal doctrine there is abundant discussion over the pro-competitive role of trade marks, especially via the reduction of consumer search costs, the trade-off involved by offering trademarked products of consistent quality at higher prices than non-trademarked ones, and the societal benefits resulting from product differentiation. The book acknowledged the value of these aspects, yet aimed to examine some lingering queries – to what extent trade mark exclusivity may cause competition distortions, and taking it one step further, what was the relevance of this for functional signs.

One aspect of discussion involved the lessened capacity of functional signs to stand as a badge of origin, and the difficulty of evaluating the costs of approaching the stage when the sign may acquire distinctiveness which enables consumers to gain from economising search-costs. Consumer perception and response to new types of signs is still difficult to gauge and foresee, therefore undertakings almost always choose to affix signs consisting of product features in combination with traditional word and graphic marks. Furthermore, if a functional sign belongs to the portfolio of a financially strong entity, it is probable that the company will engage in some sort of intimidation strategy (e.g. by filing oppositions/invalidation/infringement claims against competitors). Such actions can not only disturb the business activity of rival companies, but can also have a positive influence on the valuation of the company’s portfolio (i.e. the value of a trade mark is measured inter alia upon the number of oppositions filed/received). Another way of strengthening market position consists of imposing licence agreements on weak business partners that condition their business activities on no-challenge clauses (i.e. the licensee commits to refrain from challenging the validity of the trade mark at issue), even if the sign falls foul of functionality and would thus be invalid from the start. EU practice has taught that this kind of contractual obligation may constitute a restriction of competition and be prohibited from a competition (antitrust) law standpoint,

but there are still many active examples of such clauses. Perhaps the most crucial issue in trademarking of functional product features concerns the costs and barriers generated for follow-on innovation, especially the difficulties for competitors who wish to trade substitutes, and what price consumers would have to pay. The author made reference to research that considers the capacity of trade marks to be an indicator of innovation, yet also identified how trade marks used in conjunction with other IPRs confer and maintain competitive advantages. Two different settings were discussed in view of their possible application to functional signs: the complementary use of trade marks as means of reinforcing patent strategies, and the use of indispensable assets to block access to interrelated products, for example, product features ensuring connectivity or standardization. A distinct part of Chapter 4 touched upon the complex notion of the value of a trade mark, especially in relation to the legal concept of reputation and the commercial concept of brand image, with the aim of using these findings for the purpose of solving cases of aesthetic functionality (more details on this below). At this point it is important to stress that a brand, being a complex organisation system, represents a different concept/entity from the trade mark it developed from. Any growth strategy pursued by a company makes use of branding in order to shape its own market position whilst hindering the entry or market expansion of competitors. Another part of Chapter 4 argued, with the help of examples taken from EU competition practice, that brands can trigger anticompetitive effects, that is, brands undermine consumers' choice of alternatives (due to locked-in behavioural patterns and insensitiveness to price increase), and affect the capabilities of producers to launch alternative products that could fulfil the branding-orientated preferences of consumers.

The range of areas analysed in Chapter 4 were used to build up a detailed representation of the viewpoint in which the ultimate goal of sufficient market competition is determined by consumer access to a range of competitive alternatives. In competition law, the extent of product substitutability and consumer switching capabilities is captured by the concept of market definition. This chapter explained the competition approach to market definition, setting out the groundwork for an analogical application to functional trade marks. The final part of Chapter 4 underlined the reasons why the functionality assessment should be centred on evaluating substitutes.

It seems important here to remind the reader that US jurisprudence has extensively employed the criterion of alternative products, within a competitive necessity test, to resolve both utility and aesthetic functionality cases. For these reasons, Chapter 3 discussed the development of the US functionality practice, its goals as established by the current legal doctrine, and similarities shared with EUTM practice, plus the differences between the two. Furthermore, Chapters 6 to 8 addressed specific US functionality cases to explore alternative criteria of interpretation that could infuse more flexibility into functionality assessments under the EUTM system.

Chapter 4 also contended that doubts regarding the practical difficulties of proving product substitutability may be overcome if analogical use is made of evidentiary elements known from competition law cases. The closeness of market positions and product offerings between two competitors may be investigated using a company's own industry studies evaluating their status vis-à-vis rival firms, advertising and promotion activities, official industry reports, consumer interviews and surveys, and retail tracking information about consumer purchasing patterns. One tool that is still underestimated and underused, but with huge potential in the future, is the use of AI algorithms, developed to gather information about consumer preferences and product selection, and which may be instrumental for capturing the extent of substitutable products for the EUTM functionality purposes.

The ultimate purpose of Chapter 4 was to identify the different aspects in which trade marks may generate anti-competitive effects, in order to incorporate these findings into the dedicated tests for assessing technical, generic, and aesthetic functionality in Chapters 6 to 8. The author considered that interdisciplinary input, such as from the field of economics, marketing, branding, and design engineering, may be instrumental in providing an enhanced understanding of whether and how the functional trade marks at issue affect market competition. Once again, this requires that EU examiners and courts step back from taking decisions about functional trade marks without reaching out to involve extra-legal expertise.

9.3. Introducing more flexibility into the EUTM functionality tests

At this point there is the need to briefly present the author's approach to how the EUTM functionality assessment process could be applied. The following section does not repeat all the details of examination as discussed in Chapters 5 to 8, as it focuses on presenting the outline of the chosen argumentation and the reasons for its adoption.

9.3.1. Technical functionality

The main challenge faced when assessing technical functionality in trade mark law stems from the theoretical assumption that patents can capture technical subject-matter within clearly-defined boundaries, where the notion of 'technical' is interpreted according to patent law terms.

In practice, the difficulties start from the fact that patent law in force across the EU countries does not define – in a positive way – either the notion of a technical field or technical subject-matter, whilst many patentable inventions consist of a mixture of technical and non-technical features. In addition, the traditional exclusion of aesthetic subject-matter from patentability fails to determine whether and how a mix of technical/aesthetic features should be channelled towards another IPR. The patentability of blended technical/

non-technical inventions can only teach that any functional features relevant for trade mark law need to be carefully scrutinized on a case-by-case basis, for their possible contribution to achieving the patented technical effect indicated by the patent documentation. More confusion arises from the fact that the EUTM practice has adopted a broader interpretation of the scope of technical functionality, going beyond the realm of strictly patentable solutions to include utilitarian effects, such as those pertaining to a product's construction, operation, and ergonomics. These latter aspects may also fall within the ambit of EU design rights, which generally accept subject-matter with combined aesthetic and functional features. Utilitarian effects may also be covered by domestic utility models with requirements for protection that are less stringent when compared to patents. With the above in mind, it is clear that products with a low degree of technicality (i.e. usefulness), or products that combine technical and non-technical features, can be associated with different IPRs simultaneously and to variable extents. If the criterion of technical versus non-technical subject-matter were to be the yardstick for applying EUTM functionality rules, the only certain outcome would be frequent misapplication, with endless challenges to rulings.

Further issues appear at the next stage of the assessment of EUTM technical functionality, when establishing whether the product features at issue are 'necessary' to perform technical results. First of all, a distinction should operate between the technical result/function of the entire product and the partial functions performed by different features of the sign at issue, whereas in practice the EUIPO and CJEU have loosely and inconsistently employed the terms 'technical solution', 'technical function', and 'technical result'. Furthermore, there is a need for thorough analysis of how and where the product features at issue are disclosed by patent teachings, in order to determine how effectively these features contribute to achieving the technical results. The EUTM judiciary should not confine their considerations merely to the graphical representation of the product at issue (or a highly similar one) in an earlier disclosure. Failure to extend the information considered may otherwise result in the prohibition erroneously covering product features which were not claimed by the earlier disclosure. In other words, features that are disclosed, but not claimed, do not contribute to the inventive step and may well be part of prior art, or even purely aesthetic features. Practice has demonstrated that the subject-matter of the sign at issue often differs from the subject-matter claimed by an earlier technical right. More false positives appear in cases of products with ambivalent utilitarian functionality. The fact that the EUTM practice to date has a record of superficially examining earlier technical disclosures is a strong argument for the view that examination of functional attributes requires 'nuanced' exercise. The various ways in which 'necessity' may be interpreted have an impact on how the contribution of the tested features to the technical/utilitarian results could be established.

Perhaps the most delicate point of the assessment is found at the stage of determining the category of 'non-functional' features and deciding on their

weight within the overall combination of features. This exercise serves to generate conclusions on whether the sign at issue is constituted ‘exclusively’ of technically determined features. Chapter 6 offered many examples of subjective assessment being akin to arbitrariness, with one of the causes residing in the EUIPO/GC’s competence to freely assess facts. However, the input of non-functional features is crucial to the assessment of technical functionality, as the *Lego* judgment emphasized, proving that competitors had access to alternative shapes with equivalent functionality and different appearance.

The author chose to focus on the issue of equivalent products, because in practice there are only a limited number of ‘double identity’ cases, that is, a sign entirely covered by the subject-matter of a patent or utility model, whilst most situations will involve a ‘group of variants’ (product features) that may, and can, have identical or similar technical results. In addition, following on from the previous remarks emphasising the significant leeway when assessing technical functionality, there is a substantial range of cases that are situated on the thin boundary between applying or rejecting the functional prohibition. Chapter 6 argued that equivalence pertaining to function/functional effects should be defined within technical solutions, and also correlated to the level of precision/specification of the function(s) at issue. Equivalent solutions means products that embody such solutions and have a non-identical appearance. It is against this group of solutions that functional prohibition should be tested.

For this reason a final part of Chapter 6 suggested implementing a two-part test. At the first stage, a group of equivalent products drawn upon the parameters of ‘appearance’ and ‘functionality’ should be established, using a verbatim examination of features and their purpose in a patent-like manner. This serves to identify the group of products orbiting around the product corresponding to the sign at issue. The approach comes close to the US functionality practice, placing alternatives at the core of the functionality test. In the second stage, a market-contextual assessment should be implemented in order to examine this group of alternative products in terms of product substitutability against additional economic factors. In correlation with Chapter 4, this step should include a checkpoint list with some of the anti-competitive effects of trade marks that are relevant for the given sign/product. Such a functionality algorithm explores the competitive environment from the perspective of both consumers and competitors, ultimately leading to flexible solutions focused on the viability and quality of substitutes.

9.3.2. Aesthetic functionality

The EUTM prohibition on a sign ‘giving substantial value to goods’ targets product features that determine consumer purchase decisions when the monopolization of such features would restrict competitors from trading alternative products. The EUIPO Guidelines instruct that the notion of ‘value’ should be interpreted chiefly in terms of ‘attractiveness’, with the understanding that consumers would likely purchase goods ‘primarily’ because of their

particular shape or another related product characteristic. Such an approach raises several difficulties. The central issue is the problem of defining the value of a product, as derived autonomously and exclusively from shape and/or other product characteristics, which additionally ties into the difficulty of comparing this value to the other possible values embedded by a product. Another difficulty lies in the fact that the EUTM legal provision contains the quantifier ‘substantial’ (value), which means that the functionality covered by this prohibition is always a matter of degree. Aesthetic functionality only becomes relevant when the value of appearance reaches the level of substantially determining the purchase decision. As the assessment touches upon delicate, elusive issues, it will clearly involve a large dose of subjective judgment. Is it possible to find a way to assess it against objective criteria, as the CJEU has consequently required? Chapter 8 looked into all these issues to put up a test that may help achieving predictable and fair solutions. In order to convincingly argue that this kind of test is a sensible, practical option, the analysis requires adopting a specific sequence of steps.

EUTM practice has evolved, moving from a view accepting that source identification may be combined with ornamental capabilities, to *Hauck’s* over-inclusive approach, which considered consumer appeal to stem from both the aesthetic/non-aesthetic characteristics of a product. The range of unpredictable rulings to date proves how difficult has been to apply a gradual approach to the notion and source of value, especially if there is an interplay of heterogeneous factors. For ease of reading, the author presented a tabulated set of individual values, which may be reciprocally balanced or combined to determine the product’s overall value. Theoretically speaking, any source of value accountable for application of the functionality prohibition has to be objectively determined and closely linked to the product features constituting the sign at hand. The relevance of these different types of value was examined in connection with the criteria advanced by the *Hauck* judgment. It was shown how none of these criteria may offer conclusive results (i.e. the nature of the goods; the artistic value of the shape; dissimilarity from other products commonly used in trade; price difference towards alternatives; promotion strategy touting aesthetic characteristics; consumer’s perception). This gave rise to the assumption that conducting a theoretical, abstract assessment would be unable to reach a clear decision about what kind of value associated with a product’s intrinsic and extrinsic attributes may have influenced a consumer to the point of determining their purchase decision.

Seeking a way out of this impasse, the author thought it useful to look further into the issue of why a consumer wants to own/use a product – tied into how consumers perceive a given product and what kind of value it represents in their eyes – which enlarges the scope to include interdisciplinary remarks from the field of modern aesthetics. A separate element of Chapter 8 explained the reasons why EUIPO’s approach in terms of the ‘attractiveness’ of a product was simplistic, and how a complex inquiry linking aesthetic pursuits to judgments and decision making required the input of numerous disciplines, such

as design engineering, psychology, sociology, neuroscience, and marketing. It was argued that a modern approach understands ‘aesthetics’ as being more than just the simple art connotations, instead viewing it as the study of sensory valuation of human perception and emotional process, of the experience of pleasure and displeasure (i.e. hedonics) and the way of integrating hedonic values in decision-making. Studies from psychology and neuroscience have demonstrated that hedonic responses from art and non-art stimuli may be appraised, and that aesthetic experience is so emotionally rewarding that aesthetic judgment has a continuous presence in daily life and decision-making. The value of a product does not depend on it being liked or preferred when compared to others, but on it triggering the more complex knowledge emotions, which tie into its capacity to convey a layer of symbolic meaning (cultural, societal values). The chapter referred to several empirical studies which showed how products integrate various layers conveying sensory, functional, and symbolic meaning, that interact fluently in order to attract a consumer’s attention and translate into the purchase decision, an aspect that designers and marketing specialists have deliberately exploited. These remarks connect to some parts of Chapter 4 that referred to branding strategies focused on capturing consumer loyalty and ensuring repeated brand choice/product purchases. It may be contended that such kinds of interdisciplinary studies bring useful expertise about real product value. However, this remains an industry-specific issue with variable answers, which seems to be an insurmountable feature for any case dealing with aesthetic functionality. Because of this variability, legal assessments need further criteria for interpretation so that the scope of aesthetic functionality can be rendered more predictable.

Before looking into other possibilities for testing aesthetic functionality, it is important to emphasize another difficulty that affects the assessment of a sign giving substantial value to goods. In the EUTM practice it has been suggested that the value of reputation be disregarded in the assessment, in other words separating reputation-related value from the other types and sources of attractiveness conferred by a product. Is this a feasible exercise? To date, no CJEU judgment has indicated any criteria or methods for achieving this goal. Parts of Chapter 4 extensively argued why this would be a challenging task, particularly because of the conceptual gaps between trade marks and brands, which renders it difficult to clearly delineate between reputation and other sources of positive information (e.g. brand image). More difficulties result from the fact that consumers participate in the creation of brands and, therefore, their perception is instrumental when defining the value of a brand. However, there is a lack of a harmonized means of measuring the value derived from reputation, distinct from the other economically valuable components of a trade mark/brand. Facing these challenges, the author chose a binary approach, found to be the only viable option at present, although with the caveat that any all-or-nothing option will of necessity involve a lot of false positives and negatives. Chapter 8 suggested that if reputation was linked to a two-dimensional word/graphic sign used as badge of origin and applied to a product, then it could be

possible to exclude this value from the functionality assessment of the product, yet still depending on how the reputed sign at issue interacted with other signs affixed to the product that were also tested under aesthetic functionality. However, if reputation is inherently linked to the product feature(s) at issue, then there are no clear and objective means for carving it out from the functionality assessment of the whole sign. This led to a query around priorities, that is, should the value from reputation ensure trade mark protection over the whole (product) sign, or, should the functionality competition rationale overtake the reputation-related interests of the trade mark's owner? This means, again, casting a judgment of 'degree'. The author favoured a positive answer to the last query, provided that market-oriented criteria would apply.

For these reasons, Chapter 8 looked into US practice, which relies on tests based on the criteria of commercial appeal, the 'important ingredient' assessment, the actual benefit, and the standard of foreclosure of competition, as measured by the availability of substitutes in a specifically defined market. The latter criterion seems to be a useful addition to the EUTM's aesthetic functionality assessment. The chapter also referred to some recent discussions within the US legal doctrine concerning testing aesthetic functionality upon such factors as pre-existing social meaning, inherently valuable expression, consumer preferences resulting from acculturation, compatibility requirements, or psychological determination. Distinct attention was given to a recent empirical study that asked participants to decide whether they would be better off if trade mark/dress protection was maintained or denied for several well-known products which had been the objects of functionality litigation. This study emphasized the value of consumer surveys for the purposes of testing aesthetic functionality, as it accurately revealed specific consumer preferences, sometimes in opposition to the decisions that had been previously reached by courts.

These US findings characterised the desire to gather different criteria which can integrate with *Hauck's* guidance in order to outline a market-orientated test, based upon evidence of substitutable products and consumer preferences, the results of which were laid down in the final part of Chapter 8. Another table was produced to accommodate the *Hauck* criteria and suggest how they may be combined to create a set of inquiries used for capturing competitive need for the product features at issue. This test is based on the assumption that the functionality assessment should consider market developments. The checkpoint list of competition factors discussed in Chapter 4 and presented in the final part of the assessment of technical functionality in Chapter 6 may analogically serve to take into account the anti-competitive effects resulting from trademarking aesthetically functional features. The issue of whether alternative offers have affected the (market) value of the sign/product at hand is significant – what the dynamic of consumer preferences is – as established according to the extra-legal sources of evidence (e.g. aesthetics, marketing, economy etc.) – and whether there is currently sufficient competition through substitution.

To sum up all these elements, Chapter 8 essentially and consistently argued for the adoption of a flexible assessment in cases of signs that give ‘substantial value to goods’.

9.3.3. *Generic functionality*

Conferring a legal interpretation on the refusal ground pertaining to a sign resulting from the nature of goods raises the most frustration, for several reasons. Early EUTM case-law is negligible, restricted to those rare cases of realistic representations of goods or where the appearance was imposed by legal standards. Most of the signs displaying basic, standard features were examined under the refusal grounds of descriptiveness or absence of distinctive character. This interference between examinations based on functionality and/or distinctiveness terms still persists. The *Hauck* judgment expanded the functionality prohibition to encompass features inherent to the generic function(s) of goods and determined by consumer preferences – therefrom introducing the term ‘generic functionality’. Attention was drawn to features constituting the ‘archetype’ of a product, the idea/concept of a product, however the CJEU guidance did not lay down any precise criteria for establishing them.

Another difficult issue involves the possibility of overlap between generic functionality and technical or aesthetic functionality. On one hand, as Chapter 6 demonstrated, broadening the understanding of technical functionality to cover useful/utilitarian effects has blurred the borderline of where to place product features with a practical purpose. On the other hand, if consumer preferences represent the vantage point used for determining those generic features which consumers would seek in the products of competitors, there is then an argument that such features are important to consumers and may determine their purchase decision. By this token, generic features may also confer substantial value to goods according to the standards discussed in Chapter 8. This outcome depends on the complex interplay between the value generated by generic features and other sources of value, and on the query over whether the level of ‘substantial’ has been in casu reached. Indeed, the author was aware of the interference between these three kinds of functionality, which may even lead to the consideration that the category of signs resulting from the nature of goods could be split between technical and aesthetic functionality. However, bearing in mind that the CJEU’s strong position is that each functionality refusal ground should have an autonomous status and be applied in its entirety, the author looked for a practical way to identify the category of natural/generic features that depend on consumer preferences, yet are also important from a competition standpoint.

Furthermore, application of the prohibition of signs resulting from the nature of goods is also vulnerable to strategic filing, because establishing the relevant ‘type’ of goods remains a crucial issue in the examination. There is

always the possibility of manoeuvring from a narrow to a broader category, depending on the criteria selected (i.e. the goods as filed, as depicted by the registration documentation, or as marketed). In addition, the CJEU has not yet delivered any guidance on the relevance of ‘non-functional’ features when incorporated into the products at issue, as balanced against those features that are tested as ‘generic’. It should be kept in mind that the requirement to apply the filter of the ‘exclusively’ criterion (i.e. the sign must consist exclusively of ... generic features in order to be denied trade mark protection) is compulsory to all types of functionality (see Chapter 5). Combining the latter findings with the need to specify the ‘genus’ of a product in relation to a given set of product features (read as the product configuration) leads to the conclusion that the interpretation of generic functionality will again be a ‘matter of degree’.

The author favours the view that the presence of alternative product configurations on the market would strongly indicate that the product features at issue did not result from the nature of the goods. However, as the aim of ensuring effective competition is at stake, the assessment needs additional market-orientated parameters. A reasonable assumption is that market and societal needs of certain product features fluctuate over time, which also impacts the level of consumer preference for a certain type of product. The query of when a certain grouping of features would become ‘generic’, so as to deserve particular societal interest and face a denial of trade mark protection, should not be assessed and answered in the abstract.

For these reasons the final part of Chapter 7 looked into US genericness practice, initially developed around word marks and later also including product features (trade dress). For EUTM purposes, an interesting input may be found in the schools of thought that suggested incorporating economic considerations into the genericness tests, focused on the effects on competition. The author suggested one way in which such market-orientated criteria may be used to apply the EUTM’s generic functionality element. An analogical EUTM test should evaluate the following aspects: the range of similar products for the common/closest category of products; some specificities of the product features at issue; consumer preferences established upon comparing various proportions of consumers (e.g. those preferring the combination of product features at issue as compared to those preferring similar designs within the same product category; those willing to pay a higher price versus those refraining therefrom; those relying on the product features primarily as a badge of origin versus those perceiving them primarily as useful characteristics); competitors’ possibilities to supply alternative products; and balance the interests of trade mark holders, consumers, and competitors with regard to public interest in keeping free access to the features at issue. Such a test would have the advantage of closely following market realia and would reduce the risk of the prohibition being applied unnecessarily.

Some final thoughts.

Some readers may feel disappointed that the book did not suggest revolutionary changes to the law. Nor has it adopted the strict position that functionality is a manifest solution to channelling so-called ‘technical’ and ‘aesthetic’ subject-matter to dedicated IPRs. The book gave detailed consideration to the fact that the complexity and variety of current trade mark registration practice requires workable tools right now, not perfect solutions at an undefined future point. Thus, the option of using and adapting the existing pieces of law, jurisprudence, and legal doctrine in order to find equitable solutions that reveal a proper balancing of interests between right holders, competitors, and consumers. If functionality purposes are centred on the rationale of effective competition, then any legal assessment should be centred on market realia, consider the dynamics of the environment, and incorporate the flexibility needed to restrict the law’s correction of market situations only to the extent necessary for achieving a balance between consumer and business needs. Product features become and remain – essential or unnecessary to competitors – appreciated or ignored by consumers – responding faster, and existing for longer or shorter periods than new rules or jurisprudential guidance can be added or removed from the legal system. If such legal tools were to be rigidly applied, then most often the results will not reflect reality or meet the needs of the situation.

Thinking about the status of functional product features and the level of effective competition, the author reached the conclusion that there is always a good range of moderate options in-between the two extremes: ‘free to all’ versus ‘belonging for ever and exclusively to one (entity)’. The purpose of this book was to explore the extent that a practical and flexible option focused on product substitution may serve to support the EUTM functionality absolute refusal grounds. This aim was achieved and the author hopes that readers would find the suggested solutions useful in their everyday practice.

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