

Technical Standards, Intellectual Property, and Competition—A Holistic View

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I. INTRODUCTION: THE TENSION BETWEEN INTELLECTUAL PROPERTY AND TECHNICAL STANDARDS¹

Much has been written lately about the interaction of intellectual property with technical standards. Commentators often look at the interaction from the perspective of one particular field of intellectual property, generally patents. However, the same standard that includes patented technologies may also be copyrighted and trademarked. Therefore, only a holistic approach that examines the various

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1. This Article relies on the definitions of technical standards provided by the World Trade Organization (WTO) Agreement on Technical Barriers to Trade (TBT). The TBT distinguishes between mandatory standards (which it designates as “technical regulations”) and voluntary ones (which it names simply as “standards”). Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 117, *available at* <http://www.wto.org> [hereinafter TBT]. Paragraph I of Annex I of the TBT defines technical regulations as follows:

Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling [sic] requirements as they apply to a product, process or production method.

Voluntary standards are defined by Paragraph 2 as follows:

Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling [sic] requirements as they apply to a product, process or production method.

Id.

In this Article, the terms technical standards and standards, without further qualification, refer to both categories.

problems and solutions concerning the acquisition and use of different standard-related intellectual property can comparatively explain how that interaction works.²

In general, the tension that exists between intellectual property and standards arises from irreconcilable objectives. The main purpose of intellectual property is to differentiate products and services, as well as the businesses that produce and sell them.³ Conversely, the

2. On the interface between intellectual property and standards, see, e.g., Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CALIF. L. REV. 1889 (2002), and Renata Hesse, *The Antitrust Division and SSOs: Continuing the Dialogue* ANSI Intellectual Prop. Rights Policy Comm. Meeting (Nov. 8 2012), available at <http://www.justice.gov/atr/public/speeches/288580.pdf>. It should be noted that the titles of many books, articles and studies that address this topic mention intellectual property, but in reality then tend to focus on patents exclusively. That is unfortunate, because such a selective approach to the interaction of intellectual property with standards may lead to the misguided idea that patents are the only field of intellectual property where that interaction occurs. That is not true. Copyrights and trademarks are also greatly affected by the operation of technical standards, as will be described in this Article. There are, however, a few exceptions to that reductionist analysis. On the interface between patents and copyrights—but not trademarks—with standards, see, e.g., Daniel J. Gifford, *Developing Models for a Coherent Treatment of Standard-setting Issues under the Patent, Copyright and Antitrust Laws*, 45 IDEA 331 (2003). On the interface between patents and standards—but with a very brief reference to trademarks—see, e.g., Knut Blind et al., *Study on the Interplay between Standards and Intellectual Property Rights (IPRs)*, Final Report (2011), available at ec.europa.eu/enterprise/policies/european-standards/files/standards_policy/ipr-workshop/ipr_study_final_report_en.pdf. On the interface between standards and copyrights, see, e.g., Pamela Samuelson, *Questioning Copyright in Standards*, 48 B.C. L. REV. 193 (2007).

3. All the many fields of intellectual property, from copyrights to trade secrets, from patents to geographical indications, from designs to traditional knowledge, have a common element that operates as an agglutination factor: their differentiating function. That function is grounded on well-established economic theory. Edward Chamberlin has proposed the theory of *monopolistic competition* as a more realistic alternative to the opposing situations of perfect (or pure) competition, at one pole, and pure monopoly, at the other. In a situation of perfect competition, the products sold by various sellers on the relevant market are entirely homogenous. Therefore, sellers do not have the power to set the price, because consumers feel free (and are capable) to shift from one product to the other when they see a price increase. However, this is an extremely rare situation, if it ever happens. For example, if ten products were absolutely identical and interchangeable, the respective manufacturers and merchants would still struggle to beat rivals: they would differentiate products by pricing, timing, location, or building consumer loyalty (by means of advertisement). Chamberlin proposed that by introducing differences in products, competitors would be able to acquire a certain amount of power to set prices—up to a certain level, beyond which consumers would feel motivated to seek a substitute. EDWARD CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* 56–70 (1933).

The existence of differences eliminates the homogeneity of products: they cease to be completely substitutable. A Blackberry and an iPhone are substitutable to the extent they are both third-generation cell phones, but they are not complete substitutes because they perform

objective of standards is to harmonize products, services, and processes. Intellectual property ensures exclusivity and alternativeness⁴—so that each entrepreneur introduces his or her own

different functions. To the extent consumers are willing to pay a premium price to continue loyalty to either of the devices, sellers are able to set prices without concern for the potential reaction by competitors. The extent of this willingness will be larger or smaller depending on the amount of differentiating features between cell phones. Therefore, when a new Blackberry or iPhone model comes to the market, consumers will be price insensitive to a certain extent. They will be locked-in to their personal preferences. This limited capacity to set prices based on differentiation was characterized by Chamberlin as monopolistic competition. *Id.* at 68–70.

The virtue of the theory of monopolistic competition is that it emphasizes the positive effects of differentiation. But one has to take into consideration two caveats. In legal terms, *monopolistic competition* is an oxymoron. Otherwise, every time a manufacturer introduced a differentiating feature in a given product, with the effect of locking consumers in (or with the intent of doing it), he would be guilty of violating the Sherman Act. *See* Sherman Act, 15 U.S.C. § 2 (2014). However, monopolistic competition is not a situation of monopoly, because entry is free and substitutes are available. Second, product differentiation should be understood in a much broader sense than proposed by the theory. Differentiation does not necessarily concern a product in a direct way, but rather the whole business that lies in the background of the product or service. Under this broader approach, even commodities are differentiated—this explains why intellectual property is also important for commodities. “There is no such a thing as a commodity. All goods and services are differentiable.” Theodore Levitt, *Marketing Success through Differentiation—Of Anything*, HARV. BUS. REV. 83 (Jan. 1980).

In a groundbreaking article, Theodore Levitt has persuasively demonstrated that there are two possible ways of introducing differentiation in all sorts of products: by *augmenting* the product or by lowering prices. *Id.* at 84, 87. Product augmentation can come in many different ways, from modifications in technical features and design to external services that accompany the product. *Id.* at 87. As an example of external services, Levitt mentions warehousing management advice and training programs for the employees of the distributors of health and beauty aids. Commodities such as “primary metals, grains, chemicals, plastics, and money” are also subject to differentiation. *Id.* at 83. Commodity suppliers are differentiated by trade names and delivery methods. Products, services, and businesses can be differentiated by means of internal differences (new technical features, designs, quality, origin, reputation) and external differences (prices, location, courtesy treatment, technical assistance, loyalty programs). Each of those differences constitutes, directly or indirectly, intellectual property subject matter. *Id.* at 87–88.

4. Alternativeness is a direct consequence of intellectual property’s differentiating function. Every intellectual property asset is susceptible of being alternated. This means that, once a business creates or acquires an intellectual property right, and it covers an asset of interest to competitors, the latter should be able to create or acquire their own intellectual property or use assets in the public domain. In this manner, ownership of an intellectual property right should not be a barrier to competition. The principle of alternativeness was noted by the United States Supreme Court in the context of patents in *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852) (“A patent is not good for an effect, or the result of a certain process, as that would prohibit all other persons from making the same thing by any means whatsoever.”). Alternativeness has been reasserted several times since then. *See, e.g.,* *O’Reilly v. Morse*, 56 U.S. 62, 113, 119 (1853); *Corning v. Burden*, 56 U.S. 252, 267 (1853) (distinguishing between patenting a process and a machine). Alternativeness has also been affirmed in the context of copyright. *See,*

differentiating features in products and services—whereas standards imply generalized and uniform obedience. It follows that standardization may inhibit the free operation of intellectual property and vice-versa. Products and processes covered by patents, utility models, or designs may not be available to all potential users of those standards that incorporate them. The exclusivity produced by those rights may give rise to essential facilities.⁵ Copyrighted standards demand the payment of fees to those who want to obtain a copy. Trademarks also constrain third-party use of standards.

The undeniable tension between intellectual property and standards can be explained by a more general and basic notion that stems from the economic organization of society. Standards are the result of regulation, be it government regulation or industry self-regulation. Standards impinge on the operation of the free market, because they reduce the various possible ways of manufacturing and/or producing services, and therefore they reduce consumer choices. Standards may be justified by economic efficiency, cost reduction, and quality improvement—even in the context of innovation when they concern new products and services—but they nevertheless impose constraints on the ability of businesses and consumers to choose. Intellectual property is the opposite. It requires a regulatory framework, in the sense that exclusive rights are granted or acknowledged by the intervention of governments and/or courts.⁶

e.g., *Data Gen. Corp. v. Grumman Sys. Support Corp.* (*Data Gen. I*), 761 F. Supp. 185, 192 (D. Mass. 1991), *aff'd* (*Data Gen. II*), 36 F.3d 1147 (1st Cir. 1994). And in the context of trade dress and designs, see *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1129–30 (Fed. Cir. 1993).

5. See discussion on essential facilities, *infra* note 10 and accompanying text.

6. However, because of the differentiating role intellectual property plays in free markets, expressions of intellectual property throughout history have arisen spontaneously, meaning that intellectual property assets have been created and used as tools of differentiation even before lawmakers stepped up to regulate them. See NUNO PIRES DE CARVALHO, *A ESTRUTURA DOS SISTEMAS DE PATENTES E DE MARCAS—PASSADO, PRESENTE E FUTURO* 63 (2009). Perhaps the most notorious examples of spontaneous appropriation of intangible differentiating assets are trade secrets, which correspond to an informal mechanism of private appropriation of knowledge, and trademarks, which appeared as symbolic means of replacing the physical presence of the merchant in long distance deals. *Id.* at 126–28, 472. For example, private merchants in ancient Sumer used distinctive signs, in the form of seals, to trademark their work. *Id.* at 472–78. The first written statute that currently remains in almost its entirety—the Code of Hammurabi, 1,750 BCE—had provisions that reflected long standing practices of

But intellectual property is a fundamental foundation of free markets, in which rivals struggle to lure clients and clients have consequently a right of choice. Paradoxically, intellectual property is the product of market regulation—in the sense that the acquisition, use, and loss of rights are established by law—for the sake of market freedom, whereas, by a vivid contrast, standardization is the product of market regulation that to a large extent curtails rivalry in invention and in offering competing products and services to consumers.

However, if there is a natural tension between intellectual property and standards, avenues exist that can prevent the tension from becoming an unsurpassable barrier. In Part II, this Article will examine how numerous nations' legislative bodies and courts have addressed this tension. Part II will discuss patents and standards. Part III considers copyright and standards. In Part IV, trademarks and standards are considered, particularly through the lens of public health. Part V will provide an eagle-eye overview of the tension between intellectual property and standards.

For the purposes of this Article, there is a distinction between mandatory standards and voluntary standards (sometimes designated as “voluntary consensus standards”). Mandatory standards are established by a statute, regulation, directive, or any other written norm emanated from a law-making public body, such as a parliament, a government, or a governmental agency with the authority to require certain behavior. In other words, mandatory standards are those with which citizens and firms must comply, under penalties for non-compliance.⁷ Voluntary standards are established by the industry directly (through arrangements between businesses) or indirectly (when elaborated by standard setting organizations (“SSOs”) or standard developing organization (“SDOs”). Many voluntary standards are elaborated per the initiative of SSOs, which subsequently persuade businesses to adopt them. Companies may also collaborate to develop voluntary standards that harmonize

trade secret appropriation. *Id.* at 43–46. *See* The Code of Hammurabi, § 188 (L. W. King Trans., 1910).

7. *See, e.g.,* *Veeck v. S. Bldg. Code Cong. Int'l, Inc.*, 293 F.3d 791 (5th Cir. 2002) (discussing whether copyrights can be claimed in mandatory standards, i.e., standards that have become “the law”).

patterns of production so as to reduce costs and facilitate the creation of interoperable products and services.⁸ As far as the interaction of standards with intellectual property is concerned, the most important distinction is the one that separates mandatory from voluntary standards. As we shall see, the mandatory nature of standards may transform the subject matter of intellectual property, which is per se susceptible to being alternated by competitors willing to make and sell substitute products and services, into essential facilities. On the other hand, voluntary standards may generate different competition-related issues, depending on the time the intellectual property is acquired and enforced. As we shall see, the impact of intellectual property rights—particularly, patents—may vary depending on whether they are exercised during the elaboration of the standard or afterwards, when participants prepare for their implementation.

II. PATENTS AND STANDARDS⁹

When standards are mandatory, their utilization may be impacted by the exclusive rights arising from standard essential patents (i.e., patents covering inventions whose exploitation is necessary for the operation of the standard). Because of the mandatory nature of those standards, competitors of the patent holder have no way to find technical solutions around the claimed matter. The exercise of the exclusive rights by the holder, albeit in perfect conformity with the letter and the spirit of patent laws, would contradict the public policy that is behind the setting of a mandatory standard. According to that public policy—which seeks to meet the goals of collective interest

8. See, e.g., Korea Fair Trade Commission, Model Operating Guidelines for Standard Setting Organizations for Voluntary Compliance with the Monopoly Regulation and Fair Trade Act (2012), at II.1.A, *available at* eng.ftc.go.kr.

9. Reference is made here to patents, but the discussion that follows also applies to other areas of intellectual property that may generate exclusive rights in ideas that are part of a standard. In general, those ideas are of a technical nature, so reference is also made to utility models and layout-designs of integrated circuits and plant varieties. Where the standards incorporate esthetical elements, industrial designs may also be relevant. However, industrial property rights do not generate identical prerogatives and burdens. Therefore, even if the interaction of patents with standards may have an impact very similar to the one it has on other titles in technical ideas, there may also be significant disparities. Such disparities, however, are beyond the scope of this Article.

such as environmental standards, public health requirements, etc.—it is in the public interest that all manufacturers of the products that are covered by the standard precisely obey its instructions. Actually, it is the existence of public interest in compliance with such standards that make them appropriate to be set by governmental bodies as mandatory, thereby acquiring the nature of binding laws. To the extent that manufacturers are required to use a patented invention to meet mandatory standards imposed upon it, the use of that invention becomes critical for competitors to be able to compete with the patent owner in the relevant market. Such a patent becomes, therefore, an *essential facility* to the patent holder's competitors.¹⁰

Inventions that are the subject of mandatory standards generally exhibit four characteristics that cumulatively give rise to an essential facility situation, as discussed by the Seventh Circuit Court of Appeals in *MCI Communications Corp. v. AT&T Co.*¹¹:

- (1) control of the essential facility by a monopolist;
- (2) a competitor's inability practically or reasonably to duplicate the essential facility;
- (3) the denial of the use of the facility to a competitor;
- and (4) the feasibility of providing the facility.¹²

The inclusion of a given manufacturer's patents in a mandatory standard gives that manufacturer a competitive advantage, which cannot be justified by technical efficiency or other business merit, but rather results from governmental intervention. Therefore, in those

10. The notion of essential facility was established by the Supreme Court in *United States v. Terminal Ry. Ass'n*, 224 U.S. 383 (1912) as follows:

If, as we have already said, the combination of two or more mere terminal companies into a single system does not violate the prohibition of the statute against contracts and combinations in restraint of interstate commerce, it is because such a combination may be of the greatest public utility. But when, as here, the inherent conditions are such as to prohibit any other reasonable means of entering the city, the combination of every such facility under the exclusive ownership and control of less than all of the companies under compulsion to use them violates both the first and second sections of the act, in that it constitutes a contract or combination in restraint of commerce among the states and an attempt to monopolize commerce among the states which must pass through the gateway at St. Louis.

Id. at 409.

11. *MCI Commc'ns Corp. v. AT&T Co.*, 708 F.2d 1081 (7th Cir. 1983).

12. *Id.* at 1132–33.

countries that, as the United States, admit the granting of compulsory licenses to remedy anticompetitive refusals to license patent rights, if the patent holder refuses to license the standard's essential patents on reasonable commercial terms to any competitor who must apply the standard, a compulsory license ensues. This solution is found, for example, in Section 308 of the Clean Air Act:

Whenever the Attorney General determines upon application of the Administrator—

(1) that—

(A) in the implementation of the requirements of section 111, 112, or 202 of this Act, a right under any United States letters patent, which is being used or intended for public or commercial use and not otherwise reasonably available, is necessary to enable any person required to comply with such limitation to so comply, and

(B) there are no reasonable alternative methods to accomplish such purpose, and

(2) that the unavailability of such right may result in a substantial lessening of competition or tendency to create a monopoly in any line of commerce in any section of the country, the Attorney General may so certify to a district court of the United States, which may issue an order requiring the person who owns such patent to license it on such reasonable terms and conditions as the court, after hearing, may determine. Such certification may be made to the district court for the district in which the person owning the patent resides, does business, or is found.¹³

Section 308 does not mention the requirement of a prior attempt to obtain a voluntary license (on reasonable commercial terms) by the license grantee, as required by Article 31(b) of the TRIPS

13. Sections 111 and 112 of the Clean Air Act refer to standards of performance for stationary sources. Clean Air Act §§ 111, 112; 42 U.S.C. §§ 7411, 7412 (2012). Section 202 refers to motor vehicle emission and fuel standards. Clean Air Act § 202; 42 U.S.C. § 7521 (1990).

Agreement, that the United States, as a WTO member, is bound.¹⁴ Such an attempt, however, seems to be implied in the language “not otherwise reasonably available.” When the patent owner agrees to license a mandatory standard essential patent (MSEP) on commercial reasonable terms, one can expect that the Attorney General would determine that the patent right is reasonably available for the purposes of that section, and therefore there would be no reason to certify the need for a mandatory license.¹⁵ Moreover, except “in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use,” the need for a prior attempt of a voluntary license is a requirement imposed by Article 31(b) of the TRIPS Agreement.

Even though it seems that Section 308 has no parallel in the statutes of other WTO or World Intellectual Property Organization (WIPO) Members, almost every other major jurisdiction has in their patent statutes provisions that provide for the same solution, however, on a more general, public interest basis.¹⁶

During the elaboration of mandatory standards, the patent holder does not have a duty to inform the SSO of the patent. The reason is that a mandatory standard is imposed with the coercive authority of law, and thus it does not matter whether the SSO was aware or

14. The Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 31(b), Apr. 15, 1994, 1869 U.N.T.S. 299 [hereinafter TRIPS Agreement]. The TRIPS Agreement constitutes Annex 1C to the Agreement that Established the WTO. See *supra* note 1.

15. The “reasonable availability” of the patent right would stem from the patentee’s offer to license it. However, such an offer should be made under reasonable, fair, and non-discriminatory terms (FRAND), otherwise, the Attorney General would need to intervene. For a discussion of FRAND terms, see *infra* note 17 and accompanying text.

16. There is a parallel situation in the European Union, but not in the context of MSEPs, that causes an intellectual property intangible asset to become an essential facility. This relates to safety-related tests concerning the placing of plant protection products on the market. In 2009, the European Parliament and Council passed a regulation requiring junior market entrants to avoid duplicative testing and studying on vertebrate animals. Commission Regulation 1107/2009, art. 61, 2009 O.J. (L 309) 31 (EC). When the junior entrant needs access to the data owned and controlled by the senior entrant, both companies “shall make every effort to ensure that they share tests and studies involving vertebrate animals.” *Id.* art. 61 ¶ 3. And in the event the data owner does not agree to license the data to the junior entrant, “[t]he failure to reach agreement . . . shall not prevent the competent authority of that Member State from using the test and study reports involving vertebrate animals for the purpose of the application of the prospective applicant.” *Id.* ¶ 5. For the full text of the Directive as well as of all European Union statutes, see eur-lex.europa.eu.

unaware of the existence of one or more standard-essential patent(s). In the case of voluntary standards, it is important that the SSO must be aware of the existence of the patent so that it can exercise a choice (when available) of technologies and avoid (when possible) the eventual blockage caused by one or more standard-essential patent(s). In other words, the disclosure of patents during the elaboration of voluntary standards permits that choices be made by the SSO.

In the case of mandatory standards, choices are not important because patent owners are not allowed to refuse to license. In the absence of a duty to disclose, the SSO that elaborates a voluntary standard has no authority to oblige the patentee to license his/her standard-essential patent. This is not, of course, the case for mandatory standards where it does not matter whether the patent holder acted in good faith or not because he is powerless to oppose his or her private rights to the enforcement of a “law.” The fact that the patentee has no duty to inform the SSO about the existence of a patent (or of a patent application) on some essential part of the mandatory standard during the elaboration phase has no impact on the industry’s use of the standard. If he or she attempts to slow the elaboration of the standard, or to sue potential users after its elaboration, the patent holder will be sanctioned by a compulsory license. The terms of such a license will be primarily defined by a governmental authority, and, eventually by a court.¹⁷

17. A commentator has invoked this same understanding to overcome the ambiguity of certain provisions of the Regulations of National Standards Involving Patents recently adopted by China’s State Intellectual Property Office and National Standardization Administration. See Dan Prud’homme, *FRAND and Other requirements in China’s Announcement on Releasing (Provisional) Administration Regulations of National Standards Involving Patents*, 9 J. INTELL. PROP. L. & PRACT. 346 (2014). Analyzing the absence of a solution in the case where a mandatory standard essential patent holder (or applicant) refuses to license his or her rights either to the SSO or third parties, the commentator wrote:

However, the present Regulations mandate that a patentee or applicant must effectively license their patents for inclusion in compulsory national standards, whereas they must negotiate with the relevant authorities if negotiations with other parties fail and there is no provision for a lack of agreement with the authorities (for reference, the 2009 draft of the regulations from SAC also included the alternative of granting a compulsory licence [sic] when another resolution could not be reached). This raises the question as to what form such negotiations with the authorities will take, and appears to mean that the patentee/patent applicant absolutely must ultimately license their patents for inclusion in compulsory national standards, though it is not explicitly required that this is done on FRAND terms.

The situation of patent rights in voluntary standards is different. Because they are voluntary, any company not interested in using the standard may resort to competing techniques to make substitute products. Such companies may also create other standards. It is not uncommon for several standards to compete in the same industry and concern the same product.¹⁸

This means that, in the case of voluntary standards, the essential facility doctrine does not necessarily justify compulsory licenses. The solutions to problems created by voluntary standards may vary depending on whether rights are acquired and enforced (actually or potentially) during the elaboration phase or afterwards. A factor that also counts is whether the voluntary standard essential patent (VSEP) holder or applicant is a member of the SSO or not.

There is a presiding principle that rules over VSEPs: good faith. Here, good faith means not withholding information on the actual or potential existence of conflicting patent rights; not artificially or unduly acquiring rights in VSEPs; and full and unreserved compliance with the FRAND terms established by the relevant

Id. at 348. FRAND stands for “fair, reasonable, and non-discriminatory” terms. It refers to the conditions under which voluntary standard essential patent holders must conclude licensing agreements with third parties. FRANDs are systematically included in the regulations of SSOs that precede the elaboration of a new standard and apply to all companies that accept to join the elaboration work. *See, e.g., Statement of the Department of Justice’s Antitrust Division on Its Decision to Close Its Investigations of Google Inc.’s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp.*, Feb. 13, 2012, available at <http://www.justice.gov/opa/pr/statement-department-justice-s-antitrust-division-its-decision-close-its-investigations>.

18. Two of the most remarkable examples of competing voluntary standards were the VHS and Betamax formats for video cassette recording. A commentator has suggested an intermediate class of standards between mandatory and permissive standards. Those would be “quasi-mandatory standards,” i.e., those standards that, being of voluntary adherence, are nevertheless so ubiquitous that a new entrant has no solution other than adhering to them. *See* Raymond T. Nimmer, *Technical Standards Setting Organizations & Competition: A Case for Deference to Markets 9–10* (Jan., 2008), available at <http://www.wlf.org/upload/Nimmer%20Final.pdf>. However, the term that is mostly accepted to designate voluntary standards (consensually set by SSOs or individually) that gain wide acceptance on the market is “*de facto* standards.” *See* Dept. of Justice and FTC, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*, at 34 (Apr. 2007), available at <http://www.ftc.org> [hereinafter DoJ/FTC Report].

SSO.¹⁹ The first element of good faith translates into a duty of transparency. Failure to inform the SSO could potentially give rise to hold up, to the extent that the existence of VSEPs to which the holder denies access may frustrate the standard developing efforts or may create a barrier to its implementation. The second element is a variation of the first. It may happen that a member of an SSO amends patent claims or files new patent applications after the standard development has started, with the purpose of expanding the scope of enforceable rights to cover parts of the standard that would be otherwise non-proprietary.²⁰ The third element manifests itself after

19. See DoJ/FTC Report, *supra* note 18, at 36:

[S]ome SSOs require participants to disclose the existence of IP rights that may be infringed by the potential users of a standard in development. SSOs also may require SSO members to commit to license any of their IP that is essential to an SSO standard on “reasonable and nondiscriminatory” (“RAND”) terms. [note omitted] Some SSOs and SSO members would like to further mitigate hold up by requiring IP holders to commit to specific licensing terms before selecting a particular technology as part of a standard.

Id.

20. This particular issue was the subject of analysis by the Court of Appeals for the District of Columbia in *Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008). The court dismissed a Federal Trade Commission (FTC) order against Rambus on two grounds: first, the FTC failed to give evidence that Rambus’ concealed intent to file for patent applications was an act of monopolization for purposes of the Sherman Act:

Here, the Commission expressly left open the likelihood that JEDEC would have standardized Rambus’s technologies *even if Rambus had disclosed* its intellectual property. Under this hypothesis, JEDEC lost only an opportunity to secure a RAND commitment from Rambus. But loss of such a commitment is not a harm to competition from alternative technologies in the relevant markets. [] Indeed, had JEDEC limited Rambus to reasonable royalties and required it to provide licenses on a nondiscriminatory basis, we would expect *less* competition from alternative technologies, not more; high prices and constrained output tend to attract competitors, not to repel them. . . . Thus, if JEDEC, in the world that would have existed but for Rambus’s deception, would have standardized the very same technologies, Rambus’s alleged deception cannot be said to have had an effect on competition in violation of the antitrust laws; JEDEC’s loss of an opportunity to seek favorable licensing terms is not as such an antitrust harm. Yet the Commission did not reject this as being a possible—perhaps even the more probable—effect of Rambus’s conduct. We hold, therefore, that the Commission failed to demonstrate that Rambus’s conduct was exclusionary, and thus to establish its claim that Rambus unlawfully monopolized the relevant markets.

Id. at 466–67 (citations omitted). Second, the court dismissed the order because Rambus had committed to disclose patent rights already obtained and applications already filed, but not

the standard is approved. An opportunistic VSEP-holder participant may take standard users by surprise and sue or threaten to sue on grounds of infringement. When asked for an authorization to use, the patent holder will charge royalties above the levels determined to be reasonable under FRAND terms. This is a practice generally known as *patent ambush*.²¹

Of course, the observations above concern patent holders or applicants that participate in the elaboration of a standard. However, it is not uncommon that the elaboration of a standard requires the

future patent applications for subject matter that constituted trade secrets before the applications were filed:

The most disclosure-friendly of those policies is JEDEC Manual No. 21-I, published in October 1993, which refers to “the obligation of all participants to inform the meeting of any knowledge they may have of any patents, or pending patents, that might be involved in the work they are undertaking” (“For the purpose of this policy, the word ‘patented’ also includes items and processes for which a patent has been applied and may be pending.”) (referring to “technical information covered by [a] patent or pending patent”). [note omitted] This language speaks fairly clearly of disclosure obligations related to patents and pending patent applications, but says nothing of unfiled work in progress on potential amendments to patent applications.

Id. at 468.

Even assuming that any evidence of unwritten disclosure expectations would survive a possible narrowing effect based upon the written directive of Manual 21-I, the vagueness of any such expectations would nonetheless remain an obstacle. One would expect that disclosure expectations ostensibly requiring competitors to share information that they would otherwise vigorously protect as trade secrets would provide “clear guidance” and “define clearly what, when, how, and to whom the members must disclose.” This need for clarity seems especially acute where disclosure of those trade secrets itself implicates antitrust concerns; JEDEC involved, after all, collaboration by *competitors*. . . . For reasons similar to those that make vague but broad disclosure obligations among competitors unlikely, it seems to us unlikely that JEDEC participants placed themselves under such a sweeping and early duty to disclose, triggered by the mere chance that a technology might someday (in this case, more than two years later) be formally proposed for standardization.

Id. at 468–69 (citations omitted).

21. Patent ambush has been explained in the following terms:

[Patent ambush] deals with a member of an SSO that omits to transfer the information to the SSO of an SEP, and when the standard has been adopted, and the members and other firms have invested in it, the patentee emerges and, knowing the exit cost will be large, charges a royalty rate that reflects both the exit costs and the value of the standard as such, while the patent may only cover a small part of the standardized technology.

adoption of one of several equivalent technologies.²² Sometimes it is the very existence of several competing technologies that encourages the elaboration of the standard, so as to facilitate the invention of new interoperable products. The standardization of a small number of interfaces focuses the manufacturers of interoperable products on a limited scope of technology. Such a focus increases the chances of success in inventing interoperable products and ensures a larger market.²³

The situation changes if the VSEP holder is not a member of the SSO team elaborating the standard. In this case, the patentee has no duty to inform the elaborating party about the existence of patents. After all, the patentee in this case has no commitment, contractual or moral, with the SSO. It may also happen that the VSEP holder does not know about the elaboration of a voluntary standard by the industry or a private SSO.

When a VSEP holder breaches the duty of good faith, generally the solution is the denial of the breacher's request for an injunction against patent infringement and the compulsory application of FRAND terms.²⁴ The imposition of this solution, however, depends on a judicial finding of a breach of the duty to inform as well on the

22. In fact, as the Court of Appeals for the District of Columbia acknowledged in *Rambus Inc.*, "Before an SSO adopts a standard, there is often vigorous competition among different technologies for incorporation into that standard." *Rambus Inc.*, 522 F.3d at 459.

23. "Standards that facilitate interoperability are critical in high tech industries and increasingly raise antitrust issues, whether set through a standard setting organization, by ad hoc groups of competitors, or by a single dominant firm." See Intellectual Property Committee, ABA Section of Antitrust Law, Resources Relating to Antitrust and Standards Setting (Revised July 21, 2003), available at apps.americanbar.org/antitrust/at-committees/at-ip/pdf/ssr.pdf. But interoperability is likewise of the essence in certain more traditional industries, such as the railroad industry. Without interoperability, trains would not be allowed to travel from one country to another. Standardization, therefore, is crucial for not only for the technological development of the industry but also for its very operation. On the importance of interoperability for the railroad industry and the role of standards in ensuring it, see, e.g., *Technical specifications for interoperability*, Eur. Ry. Agency, www.era.europa.eu/Core-Activities/Interoperability/Pages/TechnicalSpecifications.aspx (last visited Feb. 28, 2015).

24. For an overview of the availability of injunctions under FRAND terms in various jurisdictions, see AIPPI, Special Committee on Patents and Standards (Q222), *Availability of Injunctive Relief for FRAND-Committed Standard Essential Patents, Incl. FRAND-Committed Standard Essential Patents, Incl. FRAND-Defence in Patent Infringement Proceedings* (Mar. 2014), available at <http://www.aippi.org/download/committees/222/Report222AIPPI-report-on-the-availability-of-injunctive-relief-for-FRAND-committed-standard-essential-patents-English.pdf>.

anticompetitive consequences of that breach. In principle, a SSO participant must disclose possible patent interests in technology that are essential to the standard so that the SSO may make an informed decision about the use of the claimed technology. In view of such information, the SSO may decide to use a different, unclaimed technology. But it may also require the patent holder or applicant to commit to FRAND licensing terms once the standard is elaborated. Under this second approach, the SSO would avoid overcharging royalties for users locked into the standard; i.e., whose costs of exiting the standard would be higher than those of remaining in it.

Another aspect discussed by the Court of Appeals for the District of Columbia in *Rambus Inc. v. Federal Trade Commission* was the eventual impact of new patent applications filed after the SSO started elaborating a new standard.²⁵ In the absence of a clear commitment by the VSEP holder—or in the face of less than clear SSO regulations—no company should be held liable for failing to disclose trade secrets. After all, patentable subject matter constitutes trade secrets until it is disclosed by publication of the patent application.²⁶ As the court in *Rambus Inc.* reminded, agreements among competitors to set standards are, despite their positive aspects, agreements among competitors and, as such, should be examined with circumspection.²⁷ Where patent rights are involved, the situation may be less worrisome because of the inherent disclosure of the technology involved.²⁸ In other words, communication of patented technology among competitors amounts to communication of

25. *Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008); see also *supra* note 21 and accompanying text.

26. Before the publication of the patent application, the applicant may abandon the application so as to avoid the publication and therefore keep the invention secret. See 37 C.F.R. § 1.138 (2013).

27. “JEDEC involved, after all, collaboration by *competitors*” *Rambus Inc.*, 522 F.3d at 468.

28. See 35 U.S.C. § 112 (a):

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

publicly available information. But the sharing of trade secrets among those same competitors may, in view of the inherent inaccessibility of that information, raise suspicions of anticompetitive collusion.

In the European Union, the European Commission treats breaches of the duty of good faith as antitrust violations under Article 102 of the Treaty on the Functioning of the European Union (TFEU).²⁹ Article 102 of the TFEU provides “[a]ny abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States.”³⁰ As Article 102 requires a finding of a dominant position, in prior cases the European Commission has understood that “an essential patent under a standard is a market in itself and the proprietor is that market’s sole supplier, thus a monopolist.”³¹ In antitrust investigations against Motorola and Samsung, the Commission concluded that the refusal by an SEP holder to abide by previous FRAND commitments, and his or her attempt to enforce an injunction against a standard user willing to enter a voluntary license under FRAND terms was an abuse of a dominant position.³²

In the United States, the Federal Trade Commission (FTC) understands that the breach of FRAND terms, either in the form of a hold up or of a patent ambush, does not need to constitute an antitrust violation to be deemed unlawful.³³ In other words, there is no need to

29. Consolidated Version of the Treaty on the Functioning of the European Union, art. 102, Oct. 12, 2012, 2012 O.J. (C 326) 89.

30. *Id.*

31. LUNDQVIST, *supra* note 21, at 320.

32. See Janeth Strath, *Smartphone Patent Wars: European Commission Adopts Antitrust Decisions on Enforcement by Motorola and Samsung of Standard Essential Patents*, 20 COMPUTER & TELECOMMS. L. REV. 127 (2014). In a press conference, the Commission’s vice-president in charge of competition policy said that, under FRAND, no licensee should be prevented from challenging “the validity and infringement of the SEP.” *Id.* at 128.

33. The FTC itself has acknowledged that the existence of a clear distinction between practices under section 5 of the FTC Act and section 2 of the Sherman Act is a matter of controversy, but it stands for that position and assumes its attendant risks (namely, that section 5 violations cannot be privately pursued). See FTC, IN THE MATTER OF NEGOTIATED DATA SOLUTIONS LLC, Statement, File No. 0510094, available at <http://www.ftc.gov/sites/default/files/documents/cases/2008/01/080122statement.pdf>; see also Sean P. Gates, *Standard-Essential Patents and Antitrust: Of Fighting Ships and Frankenstein Monsters*, 10(1) COMPETITION POL’Y INT’L 1 (Oct. 2013): “And the Commission has been careful to distinguish

find a dominant position in the relevant market in order to determine the unlawfulness of the enforcement of a VSEP. This understanding results from the particular language of section 5(a)(1) of the Federal Trade Commission Act, which declares unlawful “[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce.”³⁴ This text has two prongs. The first prong goes beyond considerations that are moralist in nature, such as honesty and loyalty in trade, and extends the prohibition to any acts that are unlawful and that generate an anticompetitive advantage.³⁵ The second prong corresponds to the traditional concept of unfair competition, as set forth in Article 10*bis* of the Paris Convention³⁶ and footnote 10 of the TRIPS Agreement,³⁷ which corresponds to the notion that the unlawfulness of the act

between Section 5, which only the FTC can enforce, and Section 2 of the Sherman Act, which the Department of Justice and private litigants may enforce.” *Id.* at 2.

34. 15 U.S.C. § 45(a)(1) (2012).

35. The breadth of the scope of section 5 of the FTC Act was noted by the Supreme Court in *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233 (1972):

In reality, the question is a double one: First, does § 5 empower the Commission to define and proscribe an unfair competitive practice, even though the practice does not infringe either the letter or the spirit of the antitrust laws? Second, does § 5 empower the Commission to proscribe practices as unfair or deceptive in their effect upon consumers regardless of their nature or quality as competitive practices or their effect on competition? We think the statute, its legislative history, and prior cases compel an affirmative answer to both questions.

Id. at 239.

36. Article 10*bis*(2) of the Paris Convention reads: “Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition.” Paris Convention for the Protection of Industrial Property art. 10*bis*(2), Mar. 20, 1883, *last revised on* July 14, 1967, *last amended on* Sept. 28, 1979, *available at* http://www.wipo.int/treaties/en/text.jsp?file_id=288514.

37. Article 39.2 of the TRIPS Agreement reads in part:

“Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices¹⁰ . . .”

TRIPS Agreement, *supra* note 14, art. 39.2. Note 10 of the TRIPS Agreement gave three examples of manners contrary to honest practices (but only for the purposes of protection of trade secrets): breach of contract, breach of confidence, and inducement to breach. *Id.* art. 39.2 n.10.

results from its dishonest nature.³⁸ The difference between the two prongs predominantly lies in the presence or absence of deception. The first prong does not require courts to morally blame entities for their conduct. The second prong does. The first prong demands that enforcement authorities find an effective competitive advantage—which, should have some significance, but without necessarily reaching the level of a position of dominance. The second prong may be concerned with competitive advantages, as a matter of course, because it concerns practices in commerce that will inherently impact rivals. The second prong, however, is not about *competition*, but rather about *competitors*—any advantage that one merchant gains vis-à-vis another that may have an adverse impact on consumers, and which does not result from efficiency, is unfair when practiced with dishonesty.³⁹ Eventually, the broad notion of unfair competition

38. The difficulty in finding a precise and encompassing definition of unfair competition has been noted since the beginnings of the Paris Union. A note explaining that difficulty was issued by the Bureau International de l'Union ([Paris] Union's International Office) in 1923, in preparation for the Diplomatic Conference of 1925, at The Hague, which introduced the examples of unfair competition that constitute paragraph 3 of Article 10*bis* of the Paris Convention. In conclusion, after proposing four different possible definitions, the note says:

It is easy to verify that a definition that does not imply a certain tautology is not available. However, one will understand that this is about prohibiting any act that fraudulently or simply unlawfully impairs the free interplay of commercial and individual efforts, i.e., any act contrary to honest practices in commercial or industrial matters.

See Bureau International de l'Union, *La Lutte contre la Concurrence Déloyale—Postulats de Révision de la Convention* [The Fight against Unfair Competition—Premises for the Review of the Convention], 39 *LA PROPRIÉTÉ INDUSTRIELLE* 12, 192 (1923) (Fr.).

39. Dishonesty was acknowledged as a necessary component of unfair competition in early court opinions, before section 5 of the FTC Act expanded its scope and gave it a more objective tone. See, e.g., *Weinstock, Lubin & Co. v. H. Marks*, 109 Cal. 529 (1895):

In the leading case of *Lee v. Haley*, the whole question is condensed by the final conclusion of the court into the principle of law “that it is a fraud on the part of a defendant to set up a business under such a designation as is calculated to lead, and does lead, other people to suppose that his business is the business of another person.” If the same evil results are accomplished by the acts practiced by this defendant which would be accomplished by an adoption of plaintiff's name, why should equity smile upon the one practice and frown upon the other? Upon what principle of law can a court of equity say, if you cheat and defraud your competitor in business by taking his name, the court will give relief against you, but if you cheat and defraud him by assuming a disguise of a different character your acts are beyond the law? Equity will not concern itself about the means by which fraud is done. It is the results arising from the means, it is the fraud itself, with which it deals. The foregoing principles of law do

adopted by Section 5 of the FTC Act facilitates the task of competition authorities in repressing abusive practices of SSO participants. To the extent that, by contrast with the enforcement of antitrust law, intervention does not require the finding of dominant market power. However, it is still necessary for courts to find the anticompetitive effects of the unfair practice, and in this regard courts may be strict, as the Court of Appeals was in *Rambus Inc.*, when it held that royalty overcharging is, in principle, pro-competitive.⁴⁰

However, as noted above, this discussion applies to FRAND commitments and their breach by SSO participants. The solution in this scenario does not apply to VSEP holders that did not participate in the standard setting and, thus, have not committed themselves to disclose patent applications to the SSO and are not bound by the obligation of good faith. In this case, if the implementation of the standard requires the use of a patent owned by an outsider and the latter refuses to license, any user of that standard shall be deemed a patent infringer and the SSO might be deemed a contributory infringer.⁴¹

Lock in, meaning that SSO participants may find it more costly to exit the standard and adopt a different technology to avoid infringement than to submit to the conditions imposed by the VSEP holder, may also appear in these circumstances.⁴² It may also happen

not apply alone to the protection of parties having trade-marks and trade names. They reach away beyond that, and apply to all cases where fraud is practiced by one in securing the trade of a rival dealer; and these ways are as many and as various as the ingenuity of the dishonest schemer can invent.

Id. at 540–41 (citations omitted).

40. See *Rambus*, 522 F.3d at 466: “Indeed, had JEDEC limited Rambus to reasonable royalties and required it to provide licenses on a nondiscriminatory basis, we would expect *less* competition from alternative technologies, not more; high prices and constrained output tend to attract competitors, not to repel them.”

41. On contributory infringement, see 35 U.S.C. § 271 (2010).

42. Daryl Lim notes:

It can be extremely costly, or even impossible as a practical matter, to redesign a product standard to avoid infringing a patented technology once the industry has been locked in. If manufacturers have begun selling products that comply with the initial standard, switching to a non-infringing design can be extremely costly and commercially unfeasible. With very high redesign costs, the threat of an injunction can lead to large royalty overcharges, especially for weak patents.

that after being implemented, the standard in question becomes dominant in the market. So, the enforcement of the VSEP by a third party might disrupt the entire market or a large part of it.⁴³

SSOs should consider these possible outcomes and act with great care in searching for possible third-party patents that might be infringed by the standard. Given the voluntary nature of the standard, participants may switch to another technique in the event a third party who holds a VSEP refuses to license or charges a high price, but that switch may be too costly. However, Denying the VSEP holder the right to enforce the patent's exclusivity would be the same as denying the very nature of patent law. In other words, as a district court in Massachusetts held in *Data General Corp. v. Grumman Systems Support Corp.*, third parties' patent rights, as essential as they may be to the operation of a standard, are not essential facilities in the context of voluntary standards.⁴⁴

Moreover, several jurisdictions have held that a monopolist is not obliged to share his or her dominance with competitors if the dominance was not acquired in an illegal manner.⁴⁵ To oblige holders

Daryl Lim, *Misconduct in Standard Setting: The Case for Patent Misuse* (2009) (draft), available at www.atrip.org/Content/Essays/Daryl%20Lim.pdf (subsequently published as Daryl Lim, *Misconduct in Standard Setting: The Case for Patent Misuse* 51(4) IDEA: J.L. & Tech. 557 (2011), available at papers.ssrn.com/abstract=1871449).

43. On how standards setting and market power interrelate, see Anne Layne-Farrar & A. Jorge Padilla, *Assessing the Link between Standard Setting and Market Power* (Mar. 2010) available at papers.ssrn.com/sol3/papers.cfm?abstract_id=1567026.

44. See a description of this landmark opinion in note 51, *infra*, and accompanying text.

45. An explanation of this understanding can be found in WIPO, REFUSALS TO LICENSE IP RIGHTS—A COMPARATIVE NOTE ON POSSIBLE APPROACHES 7 (Aug. 2013), available at http://www.wipo.int/export/sites/www/ip-competition/en/studies/refusals_license_IPRs.pdf [hereinafter REFUSALS TO LICENSE]:

“Monopolists needn't acquiesce to every demand placed upon them by competitors or customers; a monopolist's duties are negative—to refrain from anticompetitive conduct—rather than affirmative—to promote competition. Just as the monopolist has no duty to deter the sale of its own equipment by promoting that of a competitor, . . . so too it has no duty to incur contractual liability itself by excusing its customers from their contractual obligations. We recognized the sufficiency of exactly that type of 'self-serving' business justification in *Olympia Equipment*, where we observed that 'consumers would be worse off if a firm with monopoly power had a duty to extend positive assistance to new entrants, or having extended it voluntarily a duty to continue it indefinitely. The imposition of such a duty would make firms that possessed or might be thought to possess monopoly power, however laudably obtained, timid about . . . competing with new entrants.' By the same token, consumers would be worse off

of lawfully acquired dominant positions to assist competitors would actually be a disservice to free competition, because such an obligation would provide no incentive for potential entrants to create their own competitive advantages.

It is worth emphasizing, however, that this discussion concerns only those uses of standards that comprise patented technology. This, in general, does not concern standards that are relevant for the making of interoperable products. The reason is that, in general, manufacturers of interoperable products do not need to use the standard—they only need to know it, so that they can adapt interoperable products to the instructions of the standard.

if a firm had a duty under the antitrust laws to release customers from their contractual obligations; it is anything but efficient for a firm to abandon its contractual rights at the behest of customers who are no longer happy with their bargain, even when consumers might be better off (at least in the short run) if they did so. Imposing that type of affirmative obligation on a monopolist—whether explicitly or by refusing to acknowledge the legitimacy of such refusals—would penalize the monopolist for refusing to surrender a lawfully obtained monopoly, a result courts have long foresworn.” *State of Illinois v. Panhandle Eastern Pipe Line Co.*, 935 F.2d 1469 (7th Cir. 1991). This doctrine is known as the “Colgate doctrine” because it was first established by the Supreme Court in *United States v. Colgate & Co.*, 250 U.S. 300 (1919). Later the Colgate doctrine was qualified: the monopolist is not obliged to justify his/her refusal to deal “where there had been no prior dealing between the parties.” See Ian Eagles and Louise Longdin, *Refusals to License Intellectual Property—Testing the Limits of Law and Economics*, at 134 (Hart Publ., Oxford and Portland, 2011), commenting on *Verizon Commc’n Inc. v. Law Offices of Curtis v. Trinko*, 540 U.S. 398 (2004).

Id.; see also *Verizon Commc’n, Inc. v. Law Officers of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004). However, it should be noted that in *Verizon*, the Supreme Court did not give Verizon *carte blanche* to refuse facilitating access to other communication companies. The Supreme Court said that, the communication market being heavily regulated, Verizon could be obliged by the regulator to share its monopoly:

It suffices for present purposes to note that the indispensable requirement for invoking the doctrine is the unavailability of access to the “essential facilities”; where access exists, the doctrine serves no purpose. Thus, it is said that “essential facility claims should . . . be denied where a state or federal agency has effective power to compel sharing and to regulate its scope and terms.” Respondent believes that the existence of sharing duties under the 1996 Act supports its case. We think the opposite: The 1996 Act’s extensive provision for access makes it unnecessary to impose a judicial doctrine of forced access. To the extent respondent’s “essential facilities” argument is distinct from its general § 2 argument, we reject it.

Verizon Commc’n, Inc., 540 U.S. at 411. In other words, access to Verizon’s lines was not exclusively in the hands of Verizon, but also in the hands of the regulators. Therefore, Verizon’s refusal could be circumvented.

However, when standards on interoperability require that manufacturers use the basic technology, and when that technology is covered by patent(s), there may be two different solutions: if manufacturers of interoperable products have also applied for patents (on the interoperable technology), and these patents cannot be used without the use of the first patent (i.e., those patent are dependent on the first patents), they may be entitled to a compulsory license as well as obliged to grant a cross-license to the patent holder if the second invention is technically and economically significant.⁴⁶ But if the manufacturers of interoperable products have not applied for patents and thus are not entitled to compulsory cross licenses under Article 31(l) of the TRIPS Agreement, courts may deem that the patent holder has no business justification to refuse a license for manufacturers who wish to make new products that are not substitutes of the patented products. This line of reasoning has been followed by the European Court of Justice.⁴⁷ It is also found in the

46. The mandatory availability of compulsory cross licenses for dependent patents is established by Article 31(l) of the TRIPS Agreement, as follows:

Where the law of a Member allows for other use of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government, the following provisions shall be respected:

(l) where such use is authorized to permit the exploitation of a patent ('the second patent') which cannot be exploited without infringing another patent ('the first patent'), the following additional conditions shall apply:

(i) the invention claimed in the second patent shall involve an important technical advance of considerable economic significance in relation to the invention claimed in the first patent;

(ii) the owner of the first patent shall be entitled to a cross-licence [sic] on reasonable terms to use the invention claimed in the second patent; and

(iii) the use authorized in respect of the first patent shall be non-assignable except with the assignment of the second patent.

TRIPS Agreement, *supra* note 14, art. 31(l).

47. The European Court of Justice (ECJ) stated this understanding in C-241/91 P and C-242/91 P, *Radio Telefis Eireann v. Commc'n*, 1995 E.C.R. I-808, and confirmed it in Case C-418/01, *IMS Health GmbH & Co. v. Commc'n*, 2004 E.C.R. I-5069. In *IMS Health GmbH & Co.*, the court articulated:

Therefore, the refusal by an undertaking in a dominant position to allow access to a product protected by an intellectual property right, where that product is *indispensable* for operating on a secondary market, may be regarded as abusive only where the undertaking which requested the licence [sic] does not intend to limit itself essentially

statutes of a few countries that impose compulsory licenses on patents when the patentees' refusal to license may block the establishment of an industry.⁴⁸

These solutions, however, are not available in the United States, where Article 31(1) of the TRIPS Agreement has not been transposed to national law. Cross licensing, however, permits the first inventor to have access to improved technology, and the second inventor to use its technology. Therefore, cross licensing is indeed a common solution. The US Department of Justice and the FTC tend to view such deals with favor, to the extent that they avoid expensive litigation. When these deals are done between horizontal competitors, however, further analysis of the effects on the market is required.⁴⁹

Absent mandatory standardization, the essential facility doctrine does not apply to patents because of the alternativeness condition. In *MCI Communications Corp. v. AT&T Co.*, the court defined the second element of the doctrine as "a competitor's inability practically or reasonably to duplicate the essential facility."⁵⁰ Thus, patents do not meet the doctrine's second element, because it cannot be logically met. A district court in Massachusetts adopted this reasoning in *Data*

to duplicating the goods or services already offered on the secondary market by the owner of the intellectual property right, but intends to produce new goods or services not offered by the owner of the right and for which there is a potential consumer demand.

Id. ¶ 49.

48. This is the case of the patent statutes of Australia, India, the United Kingdom, Argentina, and the Dominican Republic. See the WIPO study, *REFUSALS TO LICENSE*, *supra* note 45, at 10 and 14; *see also infra* note 64.

49. In this sense, the 1995 Antitrust Guidelines for the Licensing of Intellectual Property Issued by the U.S. Department of Justice and the Federal Trade Commission says:

Settlements involving the cross-licensing of intellectual property rights can be an efficient means to avoid litigation and, in general, courts favor such settlements. When such cross-licensing involves horizontal competitors, however, the Agencies will consider whether the effect of the settlement is to diminish competition among entities that would have been actual or likely potential competitors in a relevant market in the absence of the cross-license. In the absence of offsetting efficiencies, such settlements may be challenged as unlawful restraints of trade. *Cf. United States v. Singer Manufacturing Co.*, 374 U.S. 174 (1963) (cross-license agreement was part of broader combination to exclude competitors).

U.S. DOJ & FTC, *Antitrust Guidelines for the Licensing of Intellectual Property* 28 (Apr. 6, 1995), available at <http://www.justice.gov/atr/public/guidelines/0558.pdf>.

50. *See supra* note 12 and accompanying text.

*General Corp. v. Grumman Systems Support Corp.*⁵¹ Data General (DG) sold computer systems and provided services for their maintenance and repair. Grumman also provided services to maintain and repair several computer systems, including those manufactured by DG.⁵² DG brought an action for damages and injunctive relief against Grumman's use of a diagnostic program (MV/ADEX) developed by DG.⁵³ The program is used both to design DG's computer systems and to repair systems in use.⁵⁴ Grumman counterclaimed against DG, alleging, among other claims, a violation of Section 2 of the Sherman Antitrust Act.⁵⁵

Grumman argued that DG violated the Sherman Antitrust Act on the basis of turning the diagnostic program into an essential facility. Grumman's reliance on the essential facility doctrine was grounded on the fact that DG only licensed the diagnostic tool to purchasers of DG computer systems in its Cooperative Maintenance Organization program (CMO program).⁵⁶ Third-party maintainers (TPMs), such as Grumman, were denied access to the CMO program, except as required to maintain their personal DG computers.⁵⁷ Consequently, DG refused to authorize Grumman to use its diagnostic program to provide maintenance services to third parties. In support of its argument, Grumman invoked two Supreme Court opinions dealing with the essential facility doctrine, *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*,⁵⁸ and *Otter Tail Power Co. v. United States*.⁵⁹ Nevertheless, the court did not agree with Grumman's allegation that the diagnostic program was an essential facility "which DG must share with its competitors."⁶⁰ "The [c]rux of

51. *Data Gen. Corp. v. Grumman Sys. Support Corp.* (*Data Gen. I*), 761 F. Supp. 185 (D. Mass. 1991), *aff'd*, 36 F.3d 1147 (1st Cir. 1994). See also Gregory V.S. McCurdy, *Intellectual Property and Competition: Does the Essential Facilities Doctrine Shed Any New Light*, 25 EUR. INTEL. PROP. REV. 472, 475-76 (2003).

52. *Data Gen. I*, 761 F. Supp. at 187.

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.* at 189.

57. *Id.*

58. *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985).

59. *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

60. *Data Gen. I*, 761 F. Supp. at 191.

Grumman's essential facility argument," the court noted, "is that only the manufacturer of computer systems is capable of developing a diagnostic tool which is an essential device in the repair of those computers."⁶¹ The court added:

DG does not have monopoly power in the sale of computer systems and thus is not using a bottleneck to create another monopoly. The "bottleneck" of its superior knowledge in the design of DG computers is insufficient to invoke the essential facilities doctrine; *a better mousetrap is not necessarily an essential facility*. The Sherman Act has not been interpreted to require manufacturers to abandon their advantage in creating accessories to their systems. If manufacturers of complex and innovative systems were required to share with competitors the development of accessories, because they had a possibly absolute advantage through producing the system, the incentives of copyright and patent laws would be severely undermined. Not only would the manufacturer, who is in the best position to create these accessories, have less incentive to do so, *but also the impetus for competitors to reverse engineer and produce competing solutions would be reduced.*⁶²

However, the court's assumption that one of the patent system's goals is to lead competitors to produce competing solutions is only possible when one understands that competing solutions are always obtainable. For instance, a better mousetrap is not necessarily an essential facility because there is always a worse mousetrap to compete with it. Consumers may prefer to acquire the latter if the price or other commercial conditions are more appealing than the technical advance of the former. In other words, given that patents do not block, per definition, the possibility of competitors to find their own solutions or to use solutions available on the market (either patented by other inventors or in the public domain), there is a logical incongruence between patents and essential facilities. In the absence of government interference (imposing the mandatory use of a

61. *Id.*

62. *Id.* at 192 (emphasis added).

patented technology), patented inventions are inherently subject to be alternated by competing inventions.

However, it should be noted that under the statutes of some countries the solution would be different if a voluntary standard had been adopted by a large part of the industry—i.e., if it had become a *de facto* standard, as noted above.⁶³ In that case, statutory provisions could apply that order a compulsory license of patents where the refusal to license may block the establishment or the operation of the whole industry.⁶⁴

The existence of different approaches to the problems caused by refusals to license VSEPs to the establishment of commercial or productive activities means that the solution may be dependent on the maturity of the industry using the standard. Initially, courts might not see the exercise of exclusive patent rights as an unlawful restraint. But once the industry is set and thriving, and the products disseminated, the patent could be seen as an inconvenient obstacle. Compulsory licenses might then ensue. However, in other countries where enforceable VSEP rights may be deemed to hinder the

63. See *supra* note 18.

64. For example, the Australian Patents Act 1990, consolidated as of January 1, 2011, provides that compulsory licenses may be granted when “the reasonable requirements of the public with respect to the patented invention have not been satisfied.” *Patents Act 1990* s 133(2)(ii) (Austl.), available at <http://www.wipo.int/wipolex/en/details.jsp?id=8233>. Section 135 provides that

(1) For the purposes of sections 133 and 134, the reasonable requirements of the public with respect to a patented invention are to be taken not to have been satisfied if: (a) an existing trade or industry in Australia, or the establishment of a new trade or industry in Australia, is unfairly prejudiced, or the demand in Australia for the patented product, or for a product resulting from the patented process, is not reasonably met, because of the patentee’s failure: . . . (iv) to grant licences [sic] on reasonable terms
...

Id. § 135(1)(a)(iv). The United Kingdom Patents Act 1977, as revised in 1999, has a very similar provision. See Patents Act, 1999, c. 37, § 48A.1(a)(ii) (U.K.), available at <http://www.wipo.int/wipolex/en/details.jsp?id=1623>. Article 42 of the Industrial Property Act of the Dominican Republic provides for compulsory licenses as remedies for anti-competitive uses of patent rights: “For the purposes of this law, the following practices, among others, are considered to be anti-competitive: . . . (c) Hindrance of commercial or productive activities.” Industrial Property Act, art. 42 (Law 20-00) (2000) (Dom. Rep.). Article 44(c) of the Patent Law of Argentina, of 1996, and Article 42(c) of the Industrial Property Act of the Dominican Republic, of 2000, qualify the hindrance (as a result of the refusal to license a patent) of commercial or productive activities as an anticompetitive act and sanction it with a compulsory license. See REFUSALS TO LICENSE, *supra* note 45.

establishment of a new industry, compulsory licenses may be granted even during the infancy of that industry. The distinction between new activities and established ones for the purposes of compulsory licenses is clearly established in both the Australian and the United Kingdom statutes (compulsory licenses can be granted in both cases), but not in the statutes of the Dominican Republic and Argentina, where eventually a defense might be raised against the granting of compulsory licenses that block a new industry—after all, patents are about new technologies and it is expected that they produce an impact in blocking the establishment by competitors in the new fields of business the patents eventually cover.⁶⁵

The brief description of this Section of the various approaches to the exercise of patent rights in the context of standards, in particular of those patents whose exploitation is necessary to the operation of the standards, shows that there are several common points in different jurisdictions, namely the similarities in the treatment of patent rights under voluntary and mandatory standards, and the adoption of FRANDS in the first case. However, there is no total consistency. Discussions aiming at obtaining some consistency have emerged in multilateral organizations, such as the International Telecommunications Union (ITU)⁶⁶ and the World Trade Organization Committee on Technical Barriers to Trade (TBT),⁶⁷ but the fact is that we are very far from harmonizing the various approaches described. This may constitute a problem, particularly if we consider that the adoption of international standards is on the rise, especially in the context of technologies that need to be adapted to a globalized economy.

65. See *supra* note 45 and accompanying text.

66. See, e.g., Common Patent Policy for ITU-T/ITU-R/ISO/IEC, which the ITU defines as “a ‘code of practice’ regarding patents covering, in varying degrees, the subject matters of ITU T Recommendations, ITU-R Recommendations, ISO deliverables and IEC deliverables” *Common Patent Policy for ITU-T/ITU-R/ISO/IEC*, ITU, <http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx> (last visited Mar. 1, 2015).

67. See *Technical barriers to trade*, WTO, http://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm (last visited Mar. 1, 2015) (describing the work of the TBT Committee and the relevant documents).

III. COPYRIGHT AND STANDARDS

The interaction of copyrights with technical standards has been discussed in two different scenarios. The first scenario is the impossibility (or possibility) of recognizing copyrights in technical standards given the inexistence (or existence) of originality and creativity.⁶⁸ The second scenario is related to the acquisition and enforcement of copyrights: the exclusivity they generate would create a problem of dissemination of the texts containing standards, and therefore would directly conflict⁶⁹ with public policies favoring unencumbered access to them.⁷⁰

Technical standards are a blend of literary and scientific works, insofar as they are conveyed by means of written and numerical language. However, their eligibility for copyright protection has been challenged on the grounds of lack of originality. The argument is that, when confronted by the *scènes à faire* doctrine as well as the *merger* doctrine,⁷¹ the dichotomy idea/expression disappears and the

68. See, e.g., the decision of the Brazilian Federal Court quoted in note 72, *infra*.

69. See e.g., the decision of the Court of Appeals of the State of São Paulo. *Infra* note 89. This argument applies to all standards, both mandatory and voluntary. But this generalization is mistaken. As explained next, mandatory standards are “laws” for all purposes, and therefore they are inherently non-copyrightable. See, e.g., *Veeck v. S. Bldg. Cong. Int’l, Inc. (Veeck II)*, 293 F.3d 791, 793 (5th Cir. 2002) (en banc), which will be discussed see *infra* note 108 and accompanying text. But the same is not true as far as voluntary standards are concerned.

70. Samuelson, *supra* note 2, raises a mix of arguments against the copyrightability of standards, because they would not fit under 17 U.S.C. § 102(b) (2000) (which lists copyrightable works). However, the commentator, in spite of naming her article *Questioning Copyrights in Standards*, narrows her analysis down to standardized codes. That is why the article’s first conclusion is that “To sum up, industry standard codes promulgated by organizations such as the AMA and ADA may be unprotectable systems under § 102(b). Such codes and other systematic organizations of information are certainly uncopyrightable if they are dictated by rules or functionality.” *Id.* at 214–15. However, technical standards are not just codes. Most standards are descriptive texts, and they do not necessarily contain numbers—even if they do so frequently. For example, an apparel franchisor guide on how franchisees shall arrange their shop windows probably will not contain numbers (other than, eventually, the minimum area required for the window), and yet it is no less a standard than Qualcomm’s CDMA [code division multiple access] standards.

71. The Court of Appeals for the Second Circuit has noted:

Numerous doctrines separate protectable expression from elements of the public domain. For example, the doctrine of “*scènes-à-faire*” teaches that elements of a work that are “indispensable, or at least standard, in the treatment of a given topic”—like cowboys, bank robbers, and shootouts in stories of the American West—get no protection. Similarly, the “*merger doctrine*” instructs that some ideas can only be

formulation of standards becomes inevitable, with no room for arbitrariness.⁷² Thus, technical standards by their nature would be unable to demonstrate originality and creativity, compliance with which is a condition for protection by copyright.⁷³

An additional argument against copyrights in standards is that their ubiquity and the resulting inconvenience of recognizing copyright protection in them may be compared to the genericism of

expressed in a limited number of ways—single words or colors for example. When expression is so limited, idea and expression “merge.” Expressions merged with ideas cannot be protected, lest one author own the idea itself.

Zalewski, Draftics, Ltd. v. Cicero Builder Dev., Inc., 754 F.3d 95, 111 (2d Cir. 2014) (citations omitted).

72. See Samuelson, *supra* note 2. This same understanding was expressed by a Brazilian federal court (the Fifth Chamber of the Federal Regional Court of the 3rd Region) which analyzed the copyrightability of technical standards elaborated by a Brazilian SSO, the Brazilian Association of Technical Standards (ABNT), as follows:

Strictly speaking [in the elaboration of technical standards] there is no creation of the mind, intellectual manifestation of individuality; participants are bound to capture technical information already propagated with sufficient stability to substantiate a guide on the adequacy of inputs, products or services. . . .

The attributes of creativity, originality are not present, because the systematization contemplates only rooted technological data, built during the development of the economy and possibly achieved by patents or industrial designs.

TRF-5, App. Civ. No. 00100-71-65.2006.4.03.6100/SP, Relator: Des. Antonio Cedenho, 14.3.2014, DIÁRIO DA JUSTIÇA [D.J.], 02.04.2014 (Braz.) (citations omitted).

73. Unlike patent statutes, which invariably explain the substantive conditions that inventions must meet in order to become patentable, copyright statutes generally do not go beyond listing the sort of works that deserve copyright protection and cite those works that do not. Some statutes refer to copyrightable works as “original works” or “creations of the mind,” thereby implying the condition of originality. See, e.g., 35 U.S.C. § 102 (2011); Revised Law on Intellectual Property, regularizing, clarifying and harmonizing the Applicable Statutory Provisions art. 10, 12 (1996) (Spain), available at <http://www.wipo.int/wipolex/en/details.jsp?id=1358>; Lei No. 9.610, de 19 de Fevereiro de 1998, [Law No. 9610, of Feb. 19, 1998] (Braz.), available at <http://www.wipo.int/wipolex/en/details.jsp?id=514>; Copyright Act 1968 § 31 (Austl.), available at <http://www.wipo.int/wipolex/en/details.jsp?id=14953>. But other statutes do not even mention the term “original,” the condition of originality/creativity being assumed as subjacent to “literary, artistic and scientific works.” See, e.g., Copyright Act, B.E. 2537, art. 6 (1994) (Thai.), available at <http://www.wipo.int/wipolex/en/details.jsp?id=3801>. The Egyptian Intellectual Property Act of 2002, however, is an exception and, like patent statutes, defines “creation” as “The creative nature that confers originality on the work (Article 138(2).” Law No. 82 of 2002 (Law on the Protection of Intellectual Property Rights), 2 June 2002, art. 138.2 (Egypt), available at <http://www.wipo.int/wipolex/en/details.jsp?id=1301>. Either by statutory language, explicit or implied, or by judicial interpretation, works must be creative or original (the distinction between these two terms being highly ambiguous and very frequently non-existent), in order to be copyrightable.

certain trademarks, i.e., those trademarks whose use is so widespread that they are taken as synonymous with the common name of the product, sometimes to the point they are incorporated into the lexicon (for example, “cellophane” or “band aid”).⁷⁴ In other words, as the argument goes, standards are so frequently and necessarily used that they should not be subject to individual appropriation.

However, the suggestion that, by analogy with trademark law, the widespread use of a standard would lead to the loss of copyright can only be explained by a deep disregard for the fundamental notions of trademark law. Trademark genericism is not only caused by the widespread use of a mark. Genericism may also be caused by the negligence of the owner to educate consumers about the true nature of the mark as a proprietary asset. US doctrine and European legislation on this matter are clear: genericism only sanctions inert and negligent trademark holders, or those who, albeit diligent, are unable to keep consumers educated as to the distinctive nature of the mark not those who diligently induce consumers to equate the mark with the product they sell.⁷⁵

However, despite the technical nature of their contents, technical standards still reveal or result from creativity. Creativity exists where the creator—individual or collective—can make choices to achieve the same result. This fundamental characteristic of intellectual property has been designated in the patent context as the principle of alternativeness.⁷⁶ This theme was scrutinized by the Court of Appeals for the Seventh Circuit in *American Dental Ass’n v. Delta Dental Plans Ass’n*, a case involving a copyright claim about a standardized

74. See PAUL GOLDSTEIN, GOLDSTEIN ON COPYRIGHT §§ 2.3.2.1, 2.41 (2014); see also Samuelson, *supra* note 2, at 219.

75. For an introduction to genericism in US law, see J. THOMAS MCCARTHY ET AL., MCCARTHY’S DESK ENCYCLOPEDIA OF INTELLECTUAL PROPERTY 262–63 (3d ed. 2004) (entry on “genericide”), and CHARLES R. MCMANIS, UNFAIR TRADE PRACTICES IN A NUTSHELL, 142–44 (3d ed. 1993). For EU law, see Article 12(2)(a) of the First Council Directive of December 21, 1988, to approximate the laws of the Member States relating to trade marks (89/104/EEC). Marks, First Council Directive 21/12/1988, No. 89/104. Council Directive 89/104/EEC, to approximate the laws of the Member States relating to trade marks, art. 12(2)(a) (EU), available at <http://www.wipo.int/wipolex/en/details.jsp?id=1418>.

76. See *supra* note 4 and accompanying text.

dental procedures code and respective nomenclature.⁷⁷ The American Dental Association (ADA) produced a taxonomy that codified dental knowledge and technology. Dental procedures were classified into groups, and a number, followed by a brief and a longer description, designated each procedure. For example, the procedure of guided tissue regeneration, per site, per tooth, including the removal of the membrane, was assigned number 04267.⁷⁸ In holding that this kind of taxonomy is protectable by copyright, the court said:

Any original literary work may be copyrighted. The necessary degree of “originality” is low, and the work need not be aesthetically pleasing to be “literary.”

So too with a taxonomy—of butterflies, legal citations, or dental procedures. Facts do not supply their own principles of organization. Classification is a creative endeavor. Butterflies may be grouped by their color, or the shape of their wings, or their feeding or breeding habits, or their habitats, or the attributes of their caterpillars, or the sequence of their DNA; each scheme of classification could be expressed in multiple ways. Dental procedures could be classified by complexity, or by the tools necessary to perform them, or by the parts of the mouth involved, or by the anesthesia employed, or in any of a dozen different ways. The Code’s descriptions don’t “merge with the facts” any more than a scientific description of butterfly attributes is part of a butterfly.⁷⁹

The fundamental issue presented by the case was compliance with the condition of alternativeness.⁸⁰ In fact, the ADA had alternative classifications at its disposal, and other stakeholders could classify dental procedures without the need for copying or plagiarizing the

77. Am. Dental Ass’n v. Delta Dental Plans Ass’n, 126 F.3d 977 (7th Cir. 1997).

78. Am. Dental Ass’n, 126 F.3d at 977.

79. *Id.* at 979.

80. “Classification”, the court said, “is a creative endeavor. Butterflies may be grouped by their color, or the shape of their wings, or their feeding or breeding habits, or their habitats, or the attributes of their caterpillars, or the sequence of their DNA; each scheme of classification could be expressed in multiple ways.” *Id.* Alternativeness, as explained in note 4, *supra*, resides in the multiple ways of expressing an idea (or, for that matter, as far as patents are concerned, in the multiplicity of ideas that reach the same practical result).

ADA's code.⁸¹ Technical standards refer to production methods, but there are many different ways to write standards. The procedural stages of each standard can be organized differently, and its presentation does not have to follow a single format. SSOs have alternatives at their disposal to elaborate technical standards. There is creativity in the choices made, however modest those choices may be. That alternativeness makes technical standards eligible for copyright protection.

Moreover, as noted, technical standards are the expression of organized phases of production of goods and services. They should be presented and drafted so as to be well and easily understood by users. Consequently, there must be creative merit in the development of standards, to the extent that their degree of clarity and the way their instructions are organized influence the outcome. Standards are not a simple listing of facts, such as a phone book or a list of customers of a company. An SSO's bad choices in elaborating standards often lead to incomprehensible or confusing standards with

81. The Court of Appeals for the Seventh Circuit was emphatic about and exhaustive on this point:

Number 04267 reads "guided tissue regeneration—nonresorbable barrier, per site, per tooth" but could have read "regeneration of tissue, guided by nonresorbable barrier, one site and tooth per entry". Or "use of barrier to guide regeneration of tissue, without regard to the number of sites per tooth and whether or not the barrier is resorbable". The first variation is linguistic, the second substantive; in each case the decision to use the actual description is original to the ADA, not knuckling under to an order imposed on language by some "fact" about dental procedures. Blood is shed in the ADA's committees about which description is preferable. The number assigned to any one of the three descriptions could have had four or six digits rather than five; guided tissue regeneration could have been placed in the 2500 series rather than the 4200 series; again any of these choices is original to the author of a taxonomy, and another author could do things differently. Every number in the ADA's Code begins with zero, assuring a large supply of unused numbers for procedures to be devised or reclassified in the future; an author could have elected instead to leave wide gaps inside the sequence. A catalog that initially assigns 04266, 04267, 04268 to three procedures will over time depart substantively from one that initially assigns 42660, 42670, and 42680 to the same three procedures. So all three elements of the Code—numbers, short descriptions, and long descriptions, are copyrightable subject matter under 17 U.S.C. § 102(a). The *Maroon Book* and the *Bluebook* offer different taxonomies of legal citations; Wotquenne and Helm devised distinct catalogs of C.P.E. Bach's oeuvre; Delta Dental Association could have written its own classification of dental procedures.

Id.

which it is difficult to comply; conversely, good choices generate effective and efficient standards.⁸²

If one could admit the validity of the understanding of the Brazilian Federal Court, which held that in technical standards “there is no creation of the mind, intellectual manifestation of individuality,”⁸³ then no textbook, thesaurus, or dictionary—i.e., no work that does not contain new information, inaccessible before publication—could be deemed creative. According to the Brazilian Federal Court, because data collection is not a creative activity, the standards that may result therefrom are not creative either.⁸⁴ But this interpretation confuses the expression and the idea. This confusion is confirmed by the court’s holding that the technical standards at bar corresponded to “scientific content.”⁸⁵ Technical data may not be protected in and of themselves.⁸⁶ But copyright does not protect that sort of data. Copyright focuses on the expression of ideas. In rejecting copyright protection of technical standards the Brazilian court suggested that copyright enforcement would impose exclusivity on technical content.⁸⁷ However, this reasoning is false. When SSOs assert copyrights, they seek to protect documents that memorialize a single representation of technical standards for reproduction and dissemination throughout the industry, not protection for the actual techniques described by the documents.⁸⁸

82. On the advantages of well written standards see, e.g., U.S. EPA, EPA QA/G-6, Guidance for Preparing Standard Operating Procedures (SOPs) 2 (Apr., 2007), available at www.epa.gov/quality/qs-docs/g6-final.pdf (“Writing Styles”).

83. See *supra* note 72.

84. The court’s view, is worth of being repeated (in part): “The attributes of creativity, originality are not present, because systematization only contemplates rooted technological data” App. Civ. No. 00100-71-65.2006.4.03.6100/SP, Relator: Des. Cedenho, 14.3.2014 (Braz.).

85. *Id.* The court held, “ABNT could at most claim the protection of compilations [citation of the Brazilian statute omitted]. As regards their scientific content, technical standards are invulnerable [*sic*].” *Id.* at 7. In using the word “invulnerable,” an odd word in this context, the court perhaps wanted to refer to the ineligibility of copyright protection for standards’ scientific content.

86. But technical data may also be protected, as the court itself acknowledged when it mentioned patents and industrial designs. *Id.*

87. In this sense, the court held that “Therefore, the use of technical standards may not be refused to economic agents who engage in industrial manufacture and commercialization.” *Id.*

88. It is in this context that the TBT Agreement’s definition of technical regulations and of standards refers to “documents.” The term “documents” refers to the written expression of

To illustrate this, suppose that an employee of an SSO collects a series of technical recommendations and instructions agreed upon by the various working groups to elaborate a standard for the evaluation and accounting of patent portfolios. Suppose that that employee, a consummate poet, writes the standard in verse. And suppose that those responsible for making decisions in the SSO, thrilled by the employee's inspiration and convinced of the clarity and appropriateness of the poem, approve the standard. Would courts hold that such a technical standard would not be eligible for copyright protection because it was about scientific content and thus lacked creativity?

As said above, a second argument has been invoked to deny copyright protection to the written expression of technical standards. This argument is that technical standards, because they impose patterns of conduct, amount to norms of social behavior and, therefore, are equivalent to statutory rules.⁸⁹ Technical standards would thus consist of normative procedures. The vast majority of the Contracting Parties to the Berne Convention, exclude such norms from copyright protection.⁹⁰ Some countries have included such an exclusion in their statutes, including Bahrain (Act 22 of 2006, Article 4(b)), Belgium (Law on Copyright of 1994, Article 8(2)), Brazil (Law 9.610, of 1998, Article 8(IV)), Slovenia (Copyright and Related Rights Act of 1995, as last amended in 2006, Article 9(1)(2)), and Switzerland (Federal Act of 1992, Article 5(a))—

standardized technical instructions.

89. In *Target Engenharia v. ABNT*, Ap. Civ. No. 9220380-29.2008.8.26.000, Relator: Coelho Mendes, 11.3.2014 (Braz.), available at <http://www.migalhas.com.br/arquivos/2014/3/art20140313-04.pdf>, the Court of Justice of the State of São Paulo held that:

[I]t seems evident that the activity of coordination and supervision of the process of elaborating technical standards does not have the private nature sustained by the plaintiff. On the contrary, the purpose of the elaboration of a group of norms that manage life in society as a manifestly public purpose, given that it targets the organized and specific regulation of the commercial, technical, scientific and environment system in our country.

Id. at 5.

90. Article 2(4) of the Berne Convention provides: "It shall be a matter for legislation in the countries of the Union to determine the protection to be granted to official texts of a legislative, administrative and legal nature, and to official translations of such texts." Berne Convention for the Protection of Literary and Artistic Works art. 2(4), Sept. 9, 1886, last revised on July 24, 1971, last amended on Sept. 28, 1979, available at http://www.wipo.int/treaties/en/text.jsp?file_id=283698.

just to name a few. Other countries have set that exclusion by court decisions, such as the United States.⁹¹ The rationale for such exclusion is simple. In view of the universal principle that no one may be obliged to anything but the law,⁹² it is necessary in democratic societies that citizens be able to access a codification of such obligations to comply with them. If statutes and other mandatory enactments were protected by copyright, citizens would need to pay to access the law. This would deny the poor the possibility of knowing the law and would conflict with the public policy of making the law as much accessible and well known as possible.

In an opinion already discussed, the Court of Justice of the State of São Paulo, in *Target Engenharia v. ABNT*, refused copyright protection to technical standards on the ground that, because they embody normative procedures, they are excluded from copyright protection by the statutory provision that excludes “the texts of treaties or conventions, laws, decrees, regulations, judicial decisions and other official acts.”⁹³ The court said:

In this context, in view of the exegesis of the aforesaid law, it is easy to realize that the technical standards supervised by the plaintiff [ABNT] fall within the exclusion from copyright protection, either because they consist of normative procedures found by the methodology of studies focused on the interests of society; or because they are promoted to the category of

91. “Excluding ‘the law’ from the purview of the copyright statutes dates back to this nation’s earliest period. In 1834, the Supreme Court interpreted the first federal copyright laws and unanimously held that ‘no reporter has or can have any copyright in the written opinions delivered by this Court . . .’ *Wheaton v. Peters*, 33 U.S. (8 Pet.) 591, 668, 8 L. Ed. 1055 (1834).” *Veck v. S. Bldg. Cong. Int’l, Inc. (Veck II)*, 293 F.3d 791, 795 (5th Cir. 2002) (en banc).

92. This principle buttresses every democratic regime and is explicitly stated in many national constitutions, such as Canada’s, Canadian Charter of Rights and Freedoms, Part I of the Constitution Act, 1982, *being* Schedule B to the Canada Act, 1982, § 1 (U.K.), *available at* <http://www.wipo.int/wipolex/en/details.jsp?id=8656>, and Brazil’s, CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] art. 5, pt. 2, *available at* <http://www.wipo.int/wipolex/en/details.jsp?id=8755>.

93. *Target Engenharia*, Ap. Civ. No. 9220380-29.2008.8.26.000, Relator: Mendes, 11.3.2014 (Braz.). *See supra* note 88. For the statutory provision in question, see Lei No. 9610 [Law No. 9610], *supra* note 76.

official acts, to the extent compliance with them is required by legislation in force.⁹⁴

The idea that technical standards are normative procedures results from a misunderstanding of their true nature. When an SSO claims copyright in technical standards, it does not claim exclusivity in the processes or products used in the processes incorporated into the standards, but in their enunciation. Exclusivity in the underlying processes or products may be a matter of patents, utility models, designs, or plant varieties. But those processes or products should not be confused with their enunciation. To give an example, technical standards are in relation to the technical instructions they contain in the same position as the set of specifications of patents vis-à-vis the claimed inventions. Patent specifications are literary expressions; the inventions they describe are the ideas. Patent rights concern the latter, and, due to the public policy of facilitating the dissemination of inventions (for the sake of promoting “the progress of science and useful arts,” as Section 8 of the US Constitution says), patent specifications are not copyrightable. One could see here a good argument in favor of the refusal to grant copyright protection to technical standards, but there is a major difference between patents and standards: whereas patent law has been built on the necessity of

94. *Target Engenharia*, Ap. Civ. No. 9220380-29.2008.8.26.000, Relator: Mendes, 11.3.2014 (Braz.). The court refers to Article 39(VIII) of the Brazilian Code of Consumer Protection:

It is unlawful for the supplier of products or services, among other abusive practices: .
...

[T]o place on consumer’s market any product or service that is not in conformity with the standards issued by the competent official agencies or, in the absence of specific standards, by the Brazilian Association of Technical Standards or other entity credited by the National Council for Metrology, Standardization and Industrial Quality (Conmetro).

Lei No. 8.078, de 11 de Setembro de 1990, [Law No. 8078, of Sept. 11, 1990], art. 39(VII) (Braz.), available at <http://www.procon.sp.gov.br/texto.asp?id=745>. The court, however, misread that provision, because it did not designate as consumer fraud the breach of any standards elaborated by ABNT, but only those that special statutes made mandatory. *Id.* at 6. A different understanding would lead to the absurd conclusion that every standard elaborated and approved by ABNT—a private SSO—would be automatically transformed into mandatory rules without the need for the intervention of Brazilian official regulatory agencies.

fostering invention and promoting technological dissemination,⁹⁵ voluntary or consensual standards pursue the business interests of the industry, and there is no such supporting public policy. At most, the argument could serve—and does serve—to explain why mandatory standards are not copyrightable, but that is all.

However, if voluntary standards could be seen as norms of social conduct, as the Brazilian court did, all SSOs should be dissolved immediately on behalf of the fundamental interests of free societies, namely the values of freedom of initiative and freedom of competition.⁹⁶ Indeed, if manufacturers, merchants, and service providers were required to comply with all the thousands of standards developed by private SSOs, the freedom to create, invent, and introduce new products and services in world markets would be seriously compromised. The legislative, educational, and pedagogical work of SSOs—essential for improving not only the quality of life of citizens all over the world, but also the competitiveness of the services and products of companies—would become a prison and an obstacle to technical progress. Technical and social progress is the immediate and direct consequence of the introduction of inventions and improvements.⁹⁷ Societies would regress to the regime of the Middle Age craftsmen corporations, whose regulations, under the pretext of ensuring quality, imposed stringent technical precepts on

95. See, in this regard, Article 7 of the TRIPS Agreement:

The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology

TRIPS Agreement, *supra* note 14, art. 7.

96. Free competition is a mainstay of democratic societies, as Friedrich Hayek has explained: “It is only because the control of the means of production is divided among many people acting independently that we as individuals can decide what to do with ourselves.” FRIEDRICH A. HAYEK, *THE ROAD TO SERFDOM* 41 (1944), (published in a condensed version as FRIEDRICH A. HAYEK, *THE ROAD TO SERFDOM*, in *READER’S DIGEST* (Apr. 1945), available at mises.org/sites/default/files/Road%20to%20serfdom.pdf).

97. In a groundbreaking book, Robert Friedel has persuasively shown the linkage between invention and technical and social progress, even if this progress is not always linear, given the inherently cultural dimension of technology. As he concluded: “Technology and the pursuit of improvement are ultimate expressions of freedom, of the capacity of humans to reject the limitations of their past and their experience, to transcend the boundaries of their biological capacities and their social traditions.” ROBERT FRIEDEL, *A CULTURE OF IMPROVEMENT—TECHNOLOGY AND THE WESTERN MILLENIUM* 543 (2007).

masters and apprentices under severe penalties, including exposure in the pillory.⁹⁸

Under current law, the literary expressions of mandatory words are not copyrightable subject matter. By contrast, expressions of voluntary standards are copyrightable. This affirmation results from the language of paragraph J of the Agreement on Technical Barriers to Trade (Agreement on TBT), which is part of the Code of Good Practice for the Preparation, Adoption and Application of Standards:

The notification shall contain the name and address of the standardizing body, the name and issue of the publication in which the work programme is published, the period to which the work programme applies, *its price (if any)*, and how and where it can be obtained. The notification may be sent directly to the ISO/IEC Information Centre, or, preferably, through the relevant national member or international affiliate of ISONET, as appropriate.⁹⁹ (emphasis added)

This provision seems to deal with the formality of notifications, but it contains significant language (emphasized) that gives it a significantly substantive meaning. The WTO defines standards to mean voluntary standards.¹⁰⁰ The TBT language concerns transparency and defines the setting of standards by national SSOs towards other WTO Members. According to the Agreement on TBT, WTO Members must notify the WTO Secretariat on a regular basis of the standards they are elaborating.¹⁰¹ This provision seems to aim at avoiding surprises and give other Members' exporters time to prepare for the new requirements. The notification must include

98. For a detailed description of the organization of production in medieval Europe under the guilds regime, see E. LEVASSEUR, HISTOIRE DES CLASSES OUVRIERES ET DE L'INDUSTRIE EN FRANCE AVANT 1789, vol. II (Arthur Rousseau ed., 2d ed., 1901). On the role that the guilds regime played on the creation and use of protopatents and trademarks. See also Pires de Carvalho, *supra* note 6, at 164–75, 536–61. The term “protopatents” refers to patent-like titles that preceded modern patents, whose beginning can be traced back to the 1624 Statute of Monopolies and its judicial construction in the eighteenth century. The term was created by Hansjoerg Pohlmann, Hansjoerg Pohlmann, *The Inventor's Rights in Early German Law—Materials of the Time from 1531 to 1700* 43 J. PAT. OFF. SOC'Y 121 (F. D. Prager, trans., 1961).

99. Agreement on TBT, *supra* note 1, at Annex 3, ¶J, subpar. 3.

100. See *supra* note 1 and accompanying text.

101. Agreement on TBT, *supra* note 1, at Annex 3, ¶J, subpar. 3.

information about *the price* at which the standards will be sold.¹⁰² The provision embodies two distinct ideas. First, the idea that the texts of standards should be freely available is put aside. Second, WTO Members are expected to set a *price*, which may cover not only the costs of transmitting the texts but also the added value that stems from copyright protection. This extra charge is allowed by Paragraph M, which reads:

On the request of any interested party within the territory of a Member of the WTO, the standardizing body shall promptly provide, or arrange to provide, a copy of a draft standard which it has submitted for comments. Any fees charged for this service shall, *apart from the real cost of delivery*, be the same for foreign and domestic parties.¹⁰³

This topic was addressed in depth by the Court of Appeals for the Fifth Circuit in *Veeck v. Southern Building Code Congress International, Inc.*¹⁰⁴ The case concerned a dispute involving copyright infringement by a non-profit website administered by Veeck. The website published building codes adopted by the municipalities of Anna and Savoy, Texas, United States.¹⁰⁵ Those codes were developed by the Southern Building Code Congress International Inc. (SBCCI) and were part of a collection of building codes dealing with various topics, such as plumbing, gas, and fire prevention.¹⁰⁶ Veeck alleged there was no copyright infringement because the codes lost any copyright protection when the two municipalities adopted the codes and made them mandatory standards; having become legal rules, the public was entitled to free access.¹⁰⁷ In the court's first decision, *Veeck I*, three of four judges

102. Agreement on TBT, *supra* note 1, at Annex 3, ¶ J.

103. Agreement on TBT, *supra* note 1, ¶ M.

104. *Veeck v. S. Bldg. Cong. Int'l, Inc (Veeck I)*, 241 F.3d 398 (5th Cir. 2001).

105. *Id.* at 401.

106. *Id.*

107. *Id.* at 403.

did not agree with this argument. In a subsequent rehearing *en banc*, in *Veeck II*, the court reversed the initial decision:

The issue in this *en banc* case is the extent to which a private organization may assert copyright protection for its model codes, after the models have been adopted by a legislative body and become “the law”. Specifically, may a code-writing organization prevent a website operator from posting the text of a model code where the code is identified simply as the building code of a city that enacted the model code as law? Our short answer is that as law, the model codes enter the public domain and are not subject to the copyright holder’s exclusive prerogatives. As model codes, however, the organization’s works retain their protected status.¹⁰⁸ . . .

We emphasize that in continuing to write and publish model building codes, SBCCI is creating copyrightable works of authorship. When those codes are enacted into law, however, they become to that extent “the law” of the governmental entities and may be reproduced or distributed as “the law” of those jurisdictions.¹⁰⁹

Nothing should stand between a private SSO and the exercise of intellectual property rights in voluntary standards. However, an act of a government entity can convert a privately-set standard into a rule of mandatory obedience—in effect, a law. But a government agency can only transform a private work into a public norm through indirect expropriate of the work, which eliminates the work’s value as a private work but generates a right to fair compensation.¹¹⁰

108. *Veeck v. S. Bldg. Cong. Int’l, Inc. (Veeck II)*, 293 F.3d 791, 793 (5th Cir. 2002) (*en banc*). Five judges dissented on the ground that, absent a statute or a decision by the Supreme Court, the creator of a literary work is always entitled to copyright protection. *Id.* at 808.

109. *Id.* at 802.

110. The TRIPS Agreement also suggests that intellectual property rights, acknowledged by WTO Members to be private rights, *see* TRIPS Agreement, *supra* note 14, Preamble, ¶ 4, must be protected against confiscation, i.e., any taking must be compensated. Only exceptions that do not unreasonably prejudice the legitimate interests of the right holders are admitted. *See id.* art. 13, 26.2, 30. When the rights of intellectual property holders are taken, the holders must be compensated. *See id.* art. 31(h).

The obligation to pay compensation for the expropriation would only disappear in two situations: either a private SSO developed the technical standard per request of the official entity;¹¹¹ or, once the standard was elaborated, the SSO encouraged its adoption as a mandatory standard by the official entity. In the first case, the standard would have been elaborated under a “work for hire” contract, and the SSO would be incentivized to pursue payment given that it would not be able to charge for the reproduction of the standard because of its mandatory nature.¹¹² In the second case, an implicit waiver of rights (and the consequent estoppel) would occur, given that, by encouraging the adoption of one of its standards by a governmental agency, the SSO would know (or should know) that such an adoption would transform the standard in a “law” and it would therefore prevent it from collecting fees on its reproduction.

111. It should be noted, however, that copyright in standards does not depend on the private or public nature of the SSOs, but on the voluntary or mandatory nature of the standards themselves. Public entities may own copyrights. *See* *Cnty. of Suffolk v. First Am. Real Estate Solutions*, 261 F.3d 179, 179, 193 (2d Cir. 2001).

112. In this case, the standard will be treated as work for hire, under 17 U.S.C. § 101 (2000) and 17 U.S.C. § 201 (1978), unless the SSO and the governmental entity have agreed otherwise. Since the Second Circuit’s opinion in *Brattleboro Publishing Co. v. Winnill Publishing Corp.*, 369 F.2d 565 (2d Cir. 1966), the applicability of the work of hire regime to works made by independent contractors has been a settled matter. *See Brattleboro*, 369 F.2d at 568 (“We see no sound reason why these same principles are not applicable when the parties bear the relationship of employer and independent contractor”). In the case of works for hire, the copyright incentive is not needed—at least from the author’s perspective. Based on this rationale, it has been held that judges are not entitled to copyright in their opinions, because they are paid for elaborating them. They do not need the incentive of copyright to judge cases. *See Cnty. of Suffolk*, 261 F.3d at 193–94:

First American argues that the tax maps are sufficiently analogous to statutes and judicial opinions, which courts have found may not be copyrighted because they are in the public domain since their inception. The determination that no one may own a copyright in statutes and opinions arises not from a specific provision of the Copyright Act, but from a “judicial gloss” on the Act. In *Banks* [*Banks v. Manchester*, 128 U.S. 244 (1888)], for example, the Supreme Court held that as a matter of public policy judges may not own a copyright in the fruits of their judicial labor. . . . Because judges “receive from the public treasury a stated annual salary . . . and can themselves have no pecuniary interest or proprietorship, as against the public at large,” they cannot own a copyright.

Id. (citations omitted).

This second figure—the implicit waiver—was acknowledged by the Court of Appeals for the Fifth Circuit in the *Veeck II* opinion:

Section 201(e) of the [Copyright] Act reflects Congress’s intention to protect copyrights from involuntary appropriation by government entities. 17 U.S.C. § 201(e). This is not, however, a “takings” case, not least because SBCCI urged localities to adopt its model codes. The issue in the case is not the voluntariness of the appropriation but the legal consequences flowing from the permission that SBCCI gave.¹¹³

What is important now is to emphasize that copyrightability of standards depends not only on the existence of alternative ways of elaborating them, but also on their mandatory or voluntary nature. The vast majority of standards elaborated by SSOs are copyrightable because they have no coercive force. Companies that follow them do so on a voluntary basis. Overall, consumers believe that compliance with certain standards ensures quality and, therefore, standard compliance may be a good marketing policy by manufacturers and service providers.¹¹⁴ But, under the value of economic freedom, entrepreneurs are free not to follow those private standards or terminate compliance when they see fit.

One theme usually invoked in arguments against the copyright of technical standards is the barrier that copyright allegedly generates against their dissemination.¹¹⁵ The opinion of a Brazilian state court

113. *Veeck II*, 293 F.3d at 803; *see also* 17 U.S.C. § 201(e):

When an individual author’s ownership of a copyright, or of any of the exclusive rights under a copyright, has not previously been transferred voluntarily by that individual author, no action by any governmental body or other official or organization purporting to seize, expropriate, transfer, or exercise rights of ownership with respect to the copyright, or any of the exclusive rights under a copyright, shall be given effect under this title, except as provided under title 11.

Id. Title 11 of the United States Code deals with bankruptcy. *See generally*, 11 U.S.C. §§ 101–1532 (2013) (bankruptcy).

114. Compliance with standards helps raise the confidence of consumers and contributes to better informed consumption choices. *See* International Electrotechnical Commission (IEC), Introduction to Standards 14–15 (2007) (Presentation), available at http://www.iec.ch/about/globalreach/academia/pps/lect2007_1.pps (explaining why consumer organizations have an interest in participating in the elaboration of standards).

115. Particularly in the information technology (IT) sector, there is a movement against proprietary standards and in favor of “open standards,” which would be free for public

of appeals for São Paulo in *Target Engenharia v. ABNT* was sensitive to this argument:

However, it seems evident that the activity of coordinating and supervising the preparation of technical standards process does not have the private characteristics alleged by the plaintiff. Rather, the purpose of preparing a group of norms that manage life in society has a manifestly public objective, since it aims at setting the organized and specific regulation of the entrepreneurial, technical, scientific and environmental system in our country.¹¹⁶

There is some confusion in this statement, since the standards elaborated by ABNT, the Brazilian SSO, are not “norms that manage life in society.”¹¹⁷ If adopted by companies, the standards are nothing more than norms that manage processes of manufacturing products and providing services. Of course, the concern of the court to ensure the dissemination of those standards merits consideration.¹¹⁸ However, the same concern would apply to the need to disseminate a scientific paper revealing a new method of treating and curing cancer.¹¹⁹ No court would deny the right of that author to oppose the

inspection and use (including reproduction of the respective literature). See *Open Standards*, FSFE, fsfe.org/activities/os/def.en.html (last visited Feb. 6, 2015), which argues that open standards in IT “prevent lock-in and other artificial barriers to interoperability, and promote choice between vendors and technology solutions. FSFE pushes for the adoption of Open Standards to promote free competition in the IT market, as they ensure that people find it easy to migrate to Free Software or between Free Software solutions.” *Id.*

116. See *Target Engenharia*, Ap. Civ. No. 9220380-29.2008.8.26.000, Relator: Mendes, at 5, 11.3.2014 (Braz.).

117. *Id.* at 5.

118. In this regard, the court said:

Indeed, the activity of coordinating, orienting and supervising the process of standard elaboration and of publishing them is intrinsically connected with the regular exercise of public activities, and therefore it must abide by the principles that preside over public administration, among them that of publicity, which must be respected, in facilitating their dissemination—and taking notice and emphasizing the nonprofit purpose of the plaintiff.

Id. at 5.

119. To a reader less familiar with patent law, it may sound strange that a scientist may wish to extract revenues from a new therapeutic method by means of copyright. However, copyright may be the only means available to him/her to be rewarded for his/her creation. Therapeutic methods may be excluded from patentability in accordance with Article 27.3(a) of

unauthorized reproduction of that paper, despite the life-saving importance of its contents. But the situation would be identical.

Copyright law does not eliminate or hinder the spread of information. Quite the contrary, copyright encourages dissemination, since the more copies of technical standards the SSO sells, the more money it makes. The scientist who discovered a cure for cancer would think the same way: the more copies of his work that are sold, the more he gains. In the absence of copyright, an SSO would not waste time and resources developing standards that do not generate earnings. The scientist would react the same way: he would not invest his time and resources in disclosing such a fundamental discovery at his own expense. Copyright operates as an incentive to dissemination. It is not a barrier.

The idea that copyright is not a barrier to the spread of information has been, without dissent, invoked by several US court opinions.¹²⁰ In *County of Suffolk, New York v. First American Real Estate Solutions*, the Court of Appeals for the Second Circuit held that the right of citizens to access information generated by the government—provided it does not resemble the character of a law—is not prevented by the exercise of copyright.¹²¹ On the contrary, such

the TRIPS Agreement. This exclusion appears in most patent laws. Only very few countries grant them, such as the United States and Australia; and still in the United States the economic value of those patents is severely limited in view of limitations to their enforceability. See 35 U.S.C. § 287(c) (2011).

120. See, e.g., *Data Gen. Corp. v. Grumman Sys. Support Corp. (Data Gen. I)*, 761 F. Supp. 185, 192 (D. Mass. 1991), *aff'd (Data Gen. II)*, 36 F.3d 1147 (1st Cir. 1994); see also *supra* note 51 and accompanying text.

121. *Cnty. of Suffolk v. First Am. Real Estate Solutions*, 261 F.3d 179, 192 (2d Cir. 2001). The court articulated:

First, FOIL (New York's Freedom of Information Law) does not explicitly address what a *recipient* may or may not do once it receives the agency records; it provides only that the state agency must make the records available for public inspection and copying. Suffolk County may comply with both these mandates while maintaining its copyright. FOIL also does not prohibit a *state agency* from placing restrictions on how a record, if it were copyrighted, could be subsequently distributed. FOIL restricts only the fee which an agency may charge for copying or reproducing the record. Moreover, concluding that FOIL prohibits the state agency from initiating an infringement action also prevents that agency from taking action in the event that a reproduction inaccurately portrays the content of its record. Although there are limits to a state agency's ability to restrict access to its records, Suffolk County is not attempting to restrict *initial access* but is attempting to restrict only the *subsequent redistribution* of its copyrighted works. There is nothing inconsistent between fulfilling FOIL's goal of

an exercise leads to an increase of the spread of information. Only if the government refused to publish information and, by enforcing copyright, prevented citizens from having access to it, could the right be challenged.¹²²

Whereas some commentators and courts discuss excluding technical standards from copyright protection for the sake of facilitating dissemination, it seems that so far similar proposals have not been made with regards to the patentability of technical instructions that constitute standards. If the opponents of copyright prevailed, we could reach the paradoxical situation of seeing copyright protection refused to SSOs only to permit potential users of standards to obtain information on instructions whose use depends on the authorization of the patent holder. However, as explained, the suggestion that by eliminating copyright protection of voluntary standards, their dissemination would be facilitated is nonsense. Eliminating copyright would only disincentivize a private SSO from elaborating standards. The matter is not only of SSOs elaborating and using standards as a source of revenue, but SSOs acquiring financial sustainability by selling copyrighted standards.¹²³

It should be noted, however, that in very particular circumstances, copyrighted works incorporated into standards may be treated differently, i.e., they may be subject to the same regime that governs

access and permitting a state agency to place reasonable restrictions on the redistribution of its copyrighted works. For example, an agency's choice to notify the recipient that a portion of the record is protected by copyright law or an agency's requirement that the recipient enter into a licensing agreement if it wishes to distribute the record commercially does not restrict initial access but only what the recipient may do once it acquires access.

Id. (emphasis added) (citations omitted).

122. The court, in *Suffolk*, explicitly acknowledged that freedom of information law imposes "limits to a state agency's ability to restrict access to its records." *Id.*

123. The following joint statement by the ISO and the IEC is unequivocal:

ISO and IEC International Standards are sold in order to help fund the very process that leads to their development. ISO and IEC members also adopt the International Standards as National Standards and sell these to help fund their own respective national standardization activities. Therefore, protection of copyright is, on many levels, fundamental to the sustainability of the international standardization system.

patents. The reason is that some copyrighted works, such as computer software and creatively organized databases, even though only protected in their expressions or organization, have an impact on the use of the ideas conveyed by the protected expressions. This tension (which stems from the dilution of the dichotomy idea/expression) was acknowledged by the Court of Appeals for the First Circuit in *Data General Corp. v. Grumman Systems Support Corp.*:

Certainly, a monopolist's refusal to license others to use a commercially successful patented *idea* is likely to have more profound anti-competitive consequences than a refusal to allow others to duplicate the copyrighted *expression* of an unpatented idea (although such differences may become less pronounced if copyright law becomes increasingly protective of intellectual property such as computer software).¹²⁴

In reality, a copyrighted work's expression may be so entangled with the ideas that, even though a full merger does not occur, it is nevertheless practically impossible to use the idea without infringing the copyrighted expression.¹²⁵ This is true not only as far as the intention to develop interoperable products—when there is the need to know the software code—but also to manufacture and sell competing devices, which would not work properly without the computer program in question. In other words, alternativeness is not available for certain copyrighted works because they produce exclusivity not only as far as reproduction is concerned—a normal attribute of copyrights—but also as far as use is concerned—an attribute that normally pertains to industrial property, such as patent rights.

In a nutshell, the copyrightability of standards lies in their private nature. Standards are creative/original works, and therefore nothing justifies their exclusion from protection unless they are mandatory in nature—when they are treated as statutes and regulations, and thus

124. *Data Gen. Corp. v. Grumman Sys. Support Corp.* (*Data Gen. II*), 36 F.3d 1147, 1185 (1st Cir. 1994).

125. On the expansion of copyright into technical ideas, see generally Daryl Lim, *Copyright under Siege: An Economic Analysis of the Essential Facilities Doctrine and the Compulsory Licensing of Copyrighted Works*, 17 ALB. L.J. SCI. & TECH. 481 (2007).

fall under conventional and national exclusions. Adversaries of copyright in standards tend to confuse the expression of the standards with technical instructions. Copyright only covers the former. The latter may be the subject matter of industrial property. These notions are based on multilateral law, namely the Berne Convention and the TRIPS Agreement, and therefore they are generally shared by most jurisdictions. Standards, on the other hand, when voluntary—as the vast majority of standards are—should not be confused with legal statutes and regulations, which are excluded from copyright. Voluntary standards are not mandatory, i.e., no one is obliged to comply with them, and therefore their dissemination is not a legal obligation.

The only serious obstacle that may be raised as to the copyrightability of voluntary standards that consist or cover computer software and the organization of information. In this case, the expression/idea dichotomy is blurred and the enforcement of copyright in the expression actually becomes enforcement in the conveyed ideas. But this is not a problem specific to standards—it is, indeed, a problem of copyright itself, which the TRIPS Agreement has extended to expressions of a technical nature, such as copyright and the creative arrangement of databases and other compilations of information (TRIPS, Article 10(1) and (2)).

IV. TRADEMARKS AND STANDARDS

The interface between trademarks and standards is invoked in five different contexts: (a) names given to technical standards; (b) third-party trademarks mentioned in technical standards; (c) naming of SSOs' standardization services; (d) designation of services of certification of compliance with standards;¹²⁶ and (e) packaging and labeling standardized requirements.¹²⁷

126. The names given to technical standards and the names of certification services are not the same thing. An SSO that provides certification services may do so for all the standards it has adopted as well as standards established by other SSOs.

127. The basic requirement for a sign to be protectable (and registrable) as a trademark is its capacity of distinguishing the goods and services of one undertaking from those of other undertakings. See TRIPS Agreement, *supra* note 14, art. 15. In short, a sign has to be distinctive in order to be considered a trademark. Distinctiveness may be inherent or may be acquired

(a) Technical standards tend to be complex and prolix, and therefore the best way to designate them is by assigning them a short and distinctive name. That name—a genuine trademark, when distinctive—serves not only as an abbreviated designation of the standard, but also as a reference to a specific set of instructions in a world populated by numerous, competing standards.¹²⁸ For example, IEEE 754 stands for a technical standard elaborated by the Institute of Electrical and Electronics Engineers, a private chartered association, that governs binary floating-point arithmetic. “It specifies number formats, basic operations, conversions, and exceptional conditions. The 2008 edition supersedes both the 754-1985 standard and the related IEEE 854-1987 which generalized 754-1985 to cover decimal arithmetic as well as binary.”¹²⁹ ISO 14001 stands for a standard elaborated by the International Organization for Standardization (ISO), a non-governmental organization based in Geneva, Switzerland, that “sets out the criteria for an environmental management system It does not state requirements for environmental performance, but maps out a framework that a company or organization can follow to set up an effective environmental management system.”¹³⁰

IEEE 754 and ISO 14001 are trademarks for all purposes because they are distinctive of the standards they identify, even if the IEEE and ISO do not care for registering them. According to the Nice

through use. *Id.* The TRIPS Agreement permits WTO Members to adopt other requirements, of a secondary nature, such as susceptibility of being visually perceptible. *Id.*; TRIPS Agreement, *supra* note 14, art. 15.3).

128. ISO’s website indicates that ISO has developed more than 19,500 standards. *See Standards Catalogue*, ISO, http://www.iso.org/iso/home/store/catalogue_ics.htm (last visited Mar. 2, 2015). Many of those standards compete with standards set by other SSOs. Suppose that a telecommunications engineer is for a specific standard on how to design layout charts. Knowledge of the specific name of the standard in question will save an enormous amount of time for the researcher. This is the fundamental function of trademarks: to reduce search costs. *See* WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY* 168 (2001).

129. *IEEE 754: Standard for Binary Floating-Point Arithmetic*, IEEE.ORG, <http://grouper.ieee.org/groups/754/> (last visited Mar. 2, 2015).

130. *ISO 14000—Environmental Management*, ISO.ORG, <http://www.iso.org/iso/home/standards/management-standards/iso14000.htm> (last visited Mar. 2, 2015).

Classification, a classification that organizes trade and service marks according to subject matter, they could be registered in classes 41 (education) and 42 (technical and scientific services).¹³¹

Trademarks that designate standards are common trademarks, and therefore they abide by the legal regime that applies in normal circumstances. Trademark holders can enforce exclusive rights against third-party use, or the use of similar designations, that would result in a likelihood of confusion with the similar or identical signs for similar or identical services.¹³² However, it can be expected that standard names will be often cited in third-party technical and commercial literature, including users of the standards, once the standard reaches technical or commercial success. This use of trademarks by third parties for informative purposes is generally known as *fair use*, and it is widely allowed.¹³³

(b) Technical standards provide technical instructions for the production of goods and services. Some standards may refer to

131. The Nice Classification was established by the WIPO-administered Nice Agreement, of 1957, and consists of an international classification of goods and services applied for the registration of marks. The classification is revised regularly. Nice Classification, NCL (10-2015), June 23, 2014 (10th ed.) (effective Jan. 1, 2015), *available at* <http://web2.wipo.int/nc/en/project/1418/NC015> (in Spanish, *available at* http://www.wipo.int/classifications/en/news/nice/2014/news_0003.html).

132. TRIPS Agreement, *supra* note 14, art. 16.1.

133. On fair use of trademarks, see MCCARTHY ET AL., *supra* note 75, at 231–34 (entry on “Trademark Fair Use”). McCarthy makes a distinction between two sorts of trademark fair use. The first modality is the use of third-party marks with a descriptive purpose, i.e. “only to describe the [non-mark holder]’s goods or services, or their geographic origin, or to name the person running the business.” *Id.* at 231. McCarthy calls this “classic fair use.” This applies to signs that initially are not distinctive but have acquired distinctiveness through secondary meaning. The example he gives is “Payless” as a trademark for discount consumer stores. He says that a competitor “would probably have a right to make fair use in a non-service mark sense, such as ‘At Target stores, we guarantee you will pay less!’ or ‘Want to pay less? Come to Target stores.’” *Id.* at 232. This means that, in the first example of fair use, trademarks are not used by third parties as trademarks, but rather as descriptive terms. The second modality corresponds to the use by a third party of another’s mark with the purpose of designating the latter’s products and services (and not the own products of services of the user). McCarthy designates this modality as “nominative fair use.” *Id.* at 231, 233. This is the most common version of trademark fair use. Whenever one designates a third party’s product or service by its trademark, he or she is using that trademark with the purpose of information. Article 17 of the TRIPS Agreement covers both fair uses. *See* TRIPS Agreement, *supra* note 14, art. 17 (“Members may provide limited exceptions to the rights conferred by a trademark, such as fair use of descriptive terms, provided that such exceptions take account of the legitimate interests of the owner of the trademark and of third parties.”).

specific materials or ingredients that are unique, in the sense they have no market substitutes, or at least the SSOs does not trust the quality of substitutes. In this case, standards may designate those materials or ingredients by citing their trademarks.

This practical way of identifying precise materials and ingredients raises a competitive problem for manufacturers. The use of trademarked materials in standards induces the manufacturers that abide by those standards to acquire the trademarked products. Producers of competing ingredients might find it very hard to persuade those manufacturers to use the substitute ingredients.¹³⁴ To effectively incorporate their competing products into the standard, producers of the competing products would need to persuade the SSO to change the standard in question. This aspect was raised by the study elaborated for the European Commission that was cited above.¹³⁵ The authors have received opposite views as to the use of trademarks as references to ingredients of standards. One view was that such use is convenient when it references a second, trademarked standard, when it refers to technology that is trademarked but freely available, or when accompanied with the term “or equivalent.”¹³⁶ The opposite states that, “[w]henver possible, reference to trademarks in

134. One might see here a parallel between the citation of trademarked goods and the inclusion of patented technology in a standard. The situations are nevertheless different to the extent the trademarked good may have substitutes on the market, whereas the patented invention that is essential for the standard may not be replaced.

135. See Blind et al., *supra* note 2. The study reports on the analysis of about 250 standards of the most important SSOs that include technologies covered by intellectual property. The authors acknowledge it is a small figure as compared to the hundreds of thousands of standards available, but they trust that their findings reveal a trend. The authors' conclusion was that the European Commission should continue encouraging voluntary standards including FRAND commitments. Attention to anticompetitive behavior should be paid and cooperation with intellectual property offices should be ensured so as to better detect prior art. See *id.* at 11–13 (Executive Summary). On the specific relationship between standards and trademarks, the report states two opposite trends: (a) citing trademarks in standards is “Required and appropriate if: reference to another standard that is trademarked; reference to technology that is trademarked and freely available; in other cases if followed by the words ‘or equivalent’,” versus (b) “Whenever possible, reference to trademarks in standards should be avoided; when impossible to avoid, has to be done cautiously and subject to appropriate safeguards; risks resulting in undue competitive advantages for trademark holders.” *Id.* at 201.

136. *Id.* at 201.

standards should be avoided; when impossible to avoid, has to be done cautiously and subject to appropriate safeguards; risks resulting in undue competitive advantages for trademark holders.”¹³⁷

In any event, this use of trademark-protected ingredients in standards is “nominative fair use.” Trademark owners may not prevent this sort of use when it has an informative purpose.¹³⁸ Fair use is allowed by Article 17 of the TRIPS Agreement.¹³⁹

(c) The third context in which trademarks may interact with standards is perhaps the most obvious: the designation of the services provided by SSOs. For example, ISO 14001 is an ISO standard. In the expression “ISO standard,” ISO is not only an acronym that designates the SSO, but also a service mark to the extent it designates the services provided by the ISO of elaborating international technical standards.¹⁴⁰ ISO, used in the “ISO 14001” context, is clearly a service mark, like those marks mentioned in modality (a).

(d) The fourth context, SSO verification and certification services, is close to the previous modality, but presents significant differences. There are SSOs that, besides elaborating standards, also verify and certify manufacturers’ compliance with those same standards they elaborate. There are also independent organizations that provide the same compliance services, such as the International Standards Certifications (ISC),¹⁴¹ and the Marine Stewardship Council (MSC), but concerning standards developed by third parties.¹⁴²

137. *See id.*

138. MCCARTHY ET AL., *supra* note 75, at 231 and accompanying text.

139. *See* TRIPS Agreement, *supra* note 14, art. 17. If the reference to third-party marks is not distortive, fair use in technical standards is actually favorable to the mark holder to the extent it advertises the protected product.

140. ISO claims ownership in its logo and acronym (or short name), and has both registered as trademarks. *See ISO name and logo*, ISO, http://www.iso.org/iso/home/name_and_logo.htm (last visited Mar. 2, 2015).

141. *See* INTERNATIONAL STANDARDS CERTIFICATION, <http://isc-worldwide.com> (last visited Mar. 2, 2015). The ISC mainly provides certification for a wide range of industry and business, from infrastructure, such as construction and water and waste energy, to consumer goods, such as beverages, and retail in general. *Id.*

142. *See* MARINE STEWARDSHIP COUNCIL, <http://www.msc.org> (last visited Mar. 2, 2015).

Acronyms like ISC and MSC, like the names of certifying entities and corresponding logos, besides designating the entities and the services they provide, also serve as certification marks.¹⁴³ In this sense, the marks of certifying organizations are employed by companies that sell products or services that comply with certain standards, as certified by those same entities.¹⁴⁴

In this fourth context, unlike in the first three, standardization causes a strong impact on trademark registration and protection. Because of that impact, certification marks follow a regime that is different from the one that applies to trade and service marks. Two main aspects distinguish certification marks from normal trademarks, either individually or collectively owned. First, certification marks may only be used for distinguishing goods or services sold by third parties. They may not be used by the certifying entities to distinguish goods and services that they eventually sell. This aspect is reflected in the Lanham Act.¹⁴⁵ The reason is one of potential conflicts of

The MSC mainly provides certification for sustainable seafood. *Id.*

143. Under the Lanham Act, 15 U.S.C. § 1127 (2006),

The term “certification mark” means any word, name, symbol, or device, or any combination thereof—

(1) used by a person other than its owner, or

(2) which its owner has a bona fide intention to permit a person other than the owner to use in commerce and files an application to register on the principal register established by this chapter, to certify regional or other origin, material, mode of manufacture, quality, accuracy, or other characteristics of such person’s goods or services or that the work or labor on the goods or services was performed by members of a union or other organization.

Id.

144. See, e.g., the website of “All But Gluten” products, which claims that the firm’s products are certified “by those you trust.” The site mentions two certifications: the Gluten Free Certification Program (GFCP), awarded by the National Foundation for Celiac Awareness; and the Orthodox Union, certifying that the specified products are kosher. *Resources: Certified by those you trust*, ALL BUT GLUTEN, <http://allbutgluten.com/resources/plant-certification> (last visited Mar. 2, 2015). See also the website of Re-Bello, a fashion apparel brand, which claims the certification of no less than six certification organizations and displays their logos. *Sustainability: Our Certificates*, RE-BELLO, <http://www.re-bello.com/sustainability/our-certificates/> (last visited Mar. 2, 2015).

145. See 15 U.S.C. § 1127 (2006):

The term “certification mark” means any word, name, symbol, or device, or any combination thereof –

(1) used by a person *other than its owner*, or

interests and corresponds to the fact that certification entities may not certify themselves.

Second, the certifier cannot refuse to certify third parties that strictly comply with the standards overseen by the certifier. This obligation to certify third parties is explicitly present in the statutes of other countries and it can be submitted that it is implicit in the Lanham Act.¹⁴⁶ This rule prevents arbitrariness in the certification services, to the extent that the certifying entity may not refuse the permission for the use of its certification mark if the inspected company abides by the rules. Because this rule amounts to a compulsory license, in the case the certifying entity refuses permission, the inspected company can nevertheless use the certification mark. The certifying entity keeps, however, the right to be remunerated for that use.¹⁴⁷

As stated, this situation closely resembles a compulsory license, which results from the distortion caused by the interference of market

(2) which its owner has a bona fide intention to permit a person *other than the owner* to use in commerce

Id. (emphasis added).

146. See, e.g., Industrial Property Rights Law, Promulgating the Law on Industrial Property Rights, Royal Decree No. 67, May 18, 2008, available at <http://www.wipo.int/wipolex/en/details.jsp?id=11876> (last visited Mar. 2, 2015) (Oman) (“Any person who has proved to comply with the technical standards and other conditions of the Rules mentioned in Section 43(1) shall not be refused the right to use the certification sign in the same conditions established by those Rules”). It can be submitted, however, that where the Lanham Act refers to the bona fide intention of the certification mark owner to authorize others to use the mark it is implying the owner’s duty to license. This duty has already been qualified as a “limited ‘compulsory license’ in that it requires the certifier to permit the use of the certification mark by anyone who meets the standards.” See MCCARTHY ET AL., *supra* note 75, at 64.

147. It may sound unfair to impose the payment of remuneration on the compulsory use of certification marks, given that its compulsory nature stems from an arbitrary refusal to certify by the certifying entity. But it is not. First, one should not forget that certification marks are private property and unauthorized use of private property is not permitted without compensation. The only instance in which the TRIPS Agreement allows granting compulsory licenses for less remuneration than adequate compensation is the remedy of an anticompetitive practice. See TRIPS Agreement, *supra* note 14, art. 31(k). The TRIPS Agreement does not apply to certification trademarks, see NUNO PIRES DE CARVALHO, THE TRIPS REGIME OF TRADEMARKS AND DESIGNS 198 (3d ed., 2014), and Article 31(k) is about patents, but the analogy is a matter of course. Second, certification marks are not only private property, but the work of creating certification marks entails costs. The arbitrary refusal by the certifying entity to license its mark may be sanctioned by damages (or, in certain cases, by fines set by the supervising governmental agency), but not at the expenses of loss of private property.

regulation to accomplish standardization. Article 21 of the TRIPS Agreement prohibits compulsory licenses of trademarks, but certification marks are not regular marks and, therefore, are not covered by the Agreement.¹⁴⁸

(e) The fifth context, which concerns packaging and labeling standardized requirements, is also deeply affected by the impact of market regulation. However, this impact is not on the use of trademark rights, but on the use of the trademarks themselves—a matter which the TRIPS Agreement addresses in Article 20 by permitting encumbrances on the use of trademarks, where justified.¹⁴⁹

The field in which Article 20 acquires more relevance—and becomes more controversial—is public health.¹⁵⁰ Special labeling and packaging requirements adopted by WTO Members have particularly affected three areas: (i) pharmaceutical products; (ii) nutrition; and (iii) tobacco. In regard of these areas WTO Members have adopted special requirements that encumber the use of trademarks, which calls for an analysis of whether they are justified under Article 20.

148. See TRIPS Agreement, *supra* note 14, art. 21 (“Members may determine conditions on the licensing and assignment of trademarks, it being understood that the compulsory licensing of trademarks shall not be permitted . . .”). On the possibility of compulsory licenses of certification marks, see PIRES DE CARVALHO, *supra* note 147 at 372.

149. Article 20 of the TRIPS Agreement provides, in part:

The use of a trademark in the course of trade shall not be unjustifiably encumbered by special requirements, such as use with another trademark, use in a special form or use in a manner detrimental to its capability to distinguish the goods or services of one undertaking from those of other undertakings.

TRIPS Agreement, *supra* note 14, art. 20.

150. Thus far, packaging and labeling-related trademark controversies have emerged under public health considerations, namely in the areas of pharmaceutical generic products, infant baby milk formula, fast food, and tobacco. As a matter of course, packaging and labeling standards affects other industries, but no public policy has raised as much controversy as those mentioned. A brief search to the reports of the meetings of the TBT Committee provides clear evidence of this.

A. Labeling and Packaging Standards Affecting the Use of Trademarks of Pharmaceutical Products

In a 1999 statute, Brazil adopted the following definition of generic pharmaceutical products:

Article 3, XXI—Generic medicine—medicine similar to a product of reference or pioneer product, which is intended to be interchangeable with the latter, generally produced after the expiry or the abandonment of patent protection or of other exclusive rights, upon proof of its efficacy, safety and quality, and designated by the CBD [Common Brazilian Denominator] or, in its absence, by the ICD [International Common Denominator].¹⁵¹

In other words, generic medicines in Brazil must be designated by their generic or non-proprietary names, not by trademarks.¹⁵² In addition, the Brazilian sanitary agency has introduced requirements regarding the packaging of generic pharmaceuticals, including rules on the size and colors of certain characters.¹⁵³

These measures seem compatible with Article 20 because they aim to foster the competitiveness of generic products, put price pressure on branded drugs, and alleviate the burden imposed by branded pharmaceutical products on public health program budgets. Reducing the appealing effect of registered trademarks on the packaging and labeling of pharmaceuticals invites patients to trust generic products in the same way they trust name-brand products.

151. Lei No. 9.787, de 10 de Fevereiro de 1999, [Law No. 9787, of Feb. 10, 1999], available at http://www.planalto.gov.br/ccivil_03/leis/19787.htm (Braz.) (translated by author).

152. The Brazilian National Health Surveillance Agency (ANVISA) confirms this understanding by explaining on its website: “On the package of generics it must be stated ‘Generic Medicine’ inside a yellow ribbon. In addition, the reference to Law nr. 9,787/99 must be stated. Because generics have no trademarks, what you read on the package is the medicine’s active principle.” Manual of Drug Packaging, available at http://portal.anvisa.gov.br/wps/wcm/connect/fb84e68045c83f28a0bde2d10ee53f37/Manual+identidade+visual+medicamentos+SUS_DAF_11_09_14_atualizad.pdf?MOD=AJPERES; see also ANVISA, MANUAL DE EMBALAGENS DE MEDICAMENTOS [MANUAL OF VISUAL IDENTIFICATION FOR PACKAGES OF MEDICINES AND NEW RULES ON LABELING OF MEDICINES] (Sept. 2014), available at portal.anvisa.gov.br/wps/content/Anvisa+Portal/Anvisa/Inicio/Medicamentos/Assunto+de+Interesse/Bulas+e+Rotulos+de+medicamentos/Rotulos.

153. See ANVISA, *supra* note 152.

Therefore, several WTO Members have established requirements for the size and colors of brand marks printed on generic pharmaceutical packages. In a large number of WTO member countries, the advertisement of prescription drugs is also prohibited, so as to avoid the unwarranted pressure by patients on doctors. These measures may impose severe limitations on the strategic marketing and the use of trademarks by pharmaceutical companies. But, where justified by the public interest, those encumbrances are acceptable. Of course, those measures have a negative impact on the value of trademarks. This impact is justifiable, because Article 20 is not constrained by the legitimate interest of trademark holders. These are relevant for the purposes of Article 17, not of Article 20.¹⁵⁴

B. Labeling and Packaging Standards Affecting the Use of Trademarks of Nutrition-Related Products

Because of nutrition's immediate impact on health, the industry in nutrition has also been the subject of special requirements that have encumbered the use of trademarks. One particular sector that comes to mind is fast food, against which certain WTO Members have taken measures to discourage advertisement and promotion, particularly those aimed at children.¹⁵⁵ Another sector where restrictions are increasingly being imposed is that of alcoholic beverages. For example, in March 2014, Thailand notified the WTO Committee on Technical Barriers to Trade of restrictions imposed on the labeling of

154. As explained elsewhere, Articles 17 and 20 of the TRIPS Agreement have different scopes. Article 17 is about exceptions to rights conferred (as a consequence of which third parties, under certain circumstances can use trademarks owned by others). Article 20 is about restrictions on the use of trademarks of products whose commercialization is not prohibited but it is regulated. Exceptions to rights are limited by the need to protect the legitimate interests of trademark owners. Encumbrances on the use of trademarks are not so. The only condition imposed by Article 20, besides justifiability, is that the encumbrances should not operate in a manner detrimental to the trademarks' capability of distinguishing. On this subtle but important matter, see PIRES DE CARVALHO, *supra* note 147, at 331; TRIPS Agreement, *supra* note 14, arts. 17, 20.

155. Fast food advertisements aimed at children are prohibited in Quebec, Canada, and in the United Kingdom. In 2008 the FTC recommended that advertisement should be oriented to healthier food. See Tirtha Dhar & Kathy Baylis, *Fast-Food Consumption and the Ban on Advertising Targeting Children: The Québec Experience*, 48 J. MARKETING R. 799 (2011), available at <http://foodsecurecanada.org/sites/default/files/fastfoodconsumption.pdf>.

alcoholic beverages.¹⁵⁶ The restrictions attempt to avoid associating the consumption of alcohol with subliminal messages of social and sexual success, sports performance, and happiness.¹⁵⁷ To the extent those measures ban certain uses of names and drawings that are or may be protected as trademarks, they naturally affect the use of trademarks as well as of copyrighted works (the use of cartoons conveying those ideas having also been banned).¹⁵⁸

The World Health Organization (WHO) and the United Nations' Children's Fund (UNICEF) have proposed several measures addressing the way breast-milk substitutes are marketed. The main purpose of those measures is to avoid the belief that breast-milk substitutes are marketed as effective substitutes of the natural product.¹⁵⁹ The International Code of Marketing of Breast-milk Substitutes contains two measures that directly impact trademarks: Article 4.2 on information and education directs that:

When such [informational and educational] materials contain information about the use of infant formula, they should include the social and financial implications of its use; the health hazards of inappropriate foods or feeding methods; and, in particular, the health hazards of unnecessary or improper use of infant formula and other breast-milk substitutes. Such materials should not use any pictures or text which may idealize the use of breast-milk substitutes.¹⁶⁰

The second measure, Article 9.2 on labeling, directs that:

Neither the container nor the label should have pictures of infants, nor should they have other pictures or text which may

156. See Committee on Technical Barriers to Trade, *Draft Notification of the Alcoholic Beverages Control, Re: Rules, Procedure and condition for Labels of Alcoholic Beverages, issued under B.E., G/TBT/N/THA/437* (Mar. 28, 2014) (WTO), available at http://www.inmetro.gov.br/bareirastecnicas/pontofocal/textos/notificacoes/THA_437.pdf.

157. *Id.*

158. *Id.*

159. International Code of Marketing of Breast-milk Substitutes, 1981 (WHO). available at http://www.who.int/nutrition/publications/code_english.pdf (also published as International Code of Marketing of Breast-milk Substitutes, 1981 (UNICEF), available at http://www.unicef.org/nutrition/files/nutrition_code_english.pdf).

160. *Id.* art. 4.2.

idealize the use of infant formula. They may, however, have graphics for easy identification of the product as a breast-milk substitute and for illustrating methods of preparation. The terms “humanized”, “materialize” or similar terms should not be used.¹⁶¹

Though the Code does not mention trademarks explicitly, manufacturer’s marks cannot be used with photos or designs of infants on packages of infant food formulae. The same treatment is extended to designs that idealize the consumption of breast-milk substitutes, namely those that associate the consumption of substitutes with feelings of happiness, joy, and well-being.¹⁶² UNICEF reports that, so far, eighty-four countries have enacted legislation implementing the Code.¹⁶³

These encumbrances to the use of trademarks in the context of fast food, alcoholic beverages, and infant formulae are consistent with Article 20, given their obvious health-related justification. Concerned WTO Members, however, are bound by two obligations imposed by the TRIPS Agreement. First, in spite of the use of trademarks being restricted or even banned, WTO Members must provide for their registration and protection.¹⁶⁴ Second, when the use is banned, the ban must be accepted as a valid reason for non-use and therefore the

161. *Id.* art. 9.2.

162. *Id.*

163. UNICEF reports that fourteen other countries have drafted legislation that is awaiting approval. See *International Code of Marketing of Breast-milk Substitutes*, UNICEF (Jan. 12, 2005), http://www.unicef.org/nutrition/index_24805.html. It seems that in the 1990s, even before the TRIPS Agreement became applicable to developing countries, Guatemala challenged the owner of the well-known trademark GERBER, then the property of a US company. Based on legislation implementing the World Health Organization (WHO)/United Nations International Children’s Emergency Fund (UNICEF) Code, the government of Guatemala unsuccessfully tried to persuade the owner of the GERBER trademark to cease using the photo of a baby in its products. Alleging that the requested measure was an expropriation of its trademark and threatening to take the dispute to the WTO, the company convinced the Guatemalan government to withdraw their request. Information on the dispute, which ended with a national court opinion finding in favor of the trademark owner, is available at *The Gerber Baby—Trademark or Con Artist?* INFACT CANADA, <http://www.infactcanada.ca/gerbbaby.htm> (last visited Mar. 6, 2014).

164. Article 15.4 of the TRIPS Agreement provides: “The nature of the goods or services to which a trademark is to be applied shall in no case form an obstacle to registration of the trademark.” TRIPS Agreement, *supra* note 14, art. 15.4.

countries' authorities must not cancel the registrations of trademarks whose use is thus affected.¹⁶⁵

C. Labeling and Packaging Standards Affecting the Use of Trademarks of Tobacco Products

In the field of tobacco, the WHO has also adopted recommendations that strongly impact the use of trademarks with the WHO Framework Convention on Tobacco Control (FCTC).¹⁶⁶ Article 11 of the FCTC, on packaging and labeling of tobacco products, provides:

1. Each Party shall, within a period of three years after entry into force of this Convention for that Party, adopt and implement, in accordance with its national law, effective measures to ensure that:

(a) tobacco product packaging and labelling [sic] do not promote a tobacco product by any means that are false, misleading, deceptive or likely to create an erroneous impression about its characteristics, health effects, hazards or emissions, including any term, descriptor, trademark, figurative or any other sign that directly or indirectly creates the false impression that a particular tobacco product is less harmful than other tobacco products. These may include terms such as "low tar," "light," "ultra-light," or "mild"; and

165. Article 19.1 of the TRIPS Agreement provides:

If use is required to maintain a registration, the registration may be cancelled only after an uninterrupted period of at least three years of non-use, unless valid reasons based on the existence of obstacles to such use are shown by the trademark owner. Circumstances arising independently of the will of the owner of the trademark which constitute an obstacle to the use of the trademark, such as import restrictions on or other government requirements for goods or services protected by the trademark, shall be recognized as valid reasons for non-use.

Id. art. 19.1.

166. WHO Framework Convention on Tobacco Control, FCTC, http://www.who.int/fctc/text_download/en/ (last visited Mar. 2, 2015). The FCTC entered into force on February 27, 2005. *Id.* The text of and information about the FCTC are available at WHO.INT/FCTC, <http://www.who.int/fctc/en/> (last visited Mar. 2, 2015); Framework Convention on Tobacco Control, June 16, 2003 (WHO), available at http://www.who.int/fctc/text_download/en/ [hereinafter FCTC].

(b) each unit packet and package of tobacco products and any outside packaging and labelling [sic] of such products also carry health warnings describing the harmful effects of tobacco use¹⁶⁷

These provisions are worded very broadly and, therefore, leave health authorities with broad discretion. It is true that the FCTC, as far as trademarks are concerned, and to the extent it bans means that are false, misleading, deceptive or likely to create an erroneous impression, does not seem to go beyond measures that avoid deception. In other words, apparently the FCTC does not intend to restrict the use of tobacco trademarks that do not cause an erroneous impression on the dangerous characteristics of tobacco. But it implies the importance of measures aiming at reducing consumption—which is, ultimately, the overall thrust of the FCTC.¹⁶⁸ A growing number of countries have adopted requirements concerning the mandatory printing of images and illustrations, with a limited area on packages left for the brand marks. In addition, trademarks that include terms like “light” that create the false impression that one product is less harmful than another are banned.¹⁶⁹ Other countries have prohibited the use of tobacco-related marks on non-tobacco goods to reduce the goodwill associated to those marks and thus limit their power to

167. FCTC, *supra* note 166, art. 11(1)(a)-(b).

168. The thrust of the FCTC is to reduce absolute distinctiveness of tobacco trademarks by reducing their attractiveness. See PIRES DE CARVALHO, *supra* note 147, at 331. In doing so, the purpose of the FCTC is to reduce consumption. The WHO is unequivocal in this regard: the main purpose of the Convention is to “control the tobacco epidemic.” See WHO, HISTORY OF THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL 1 (2009), available at http://whqlibdoc.who.int/publications/2009/9789241563925_eng.pdf?ua=1. In the same sense, Australia’s Health Department, in introducing the Tobacco Plain Packaging Act (TPPA), indicates four objectives, the first one being “to reduce the attractiveness and appeal of tobacco products to consumers, particularly young people.” WHO, History of the WHO Framework Convention on Tobacco Control 1 (2009), available at http://whqlibdoc.who.int/publications/2009/9789241563925_eng.pdf?ua=1; see also *Introduction of Tobacco Plain Packaging in Australia*, DEP’T OF HEALTH () (Austl.), <http://www.health.gov.au/internet/main/publishing.nsf/Content/tobacco-plain> (last visited Mar. 2, 2015); *infra* note 173 and accompanying text.

169. See, e.g., Law on the Control of Tobacco Consumption, Law No. 18,256, art. 8 (2008) (Uru.). Under the framework of a bilateral investment treatment between Switzerland and Uruguay, Philip Morris is challenging Uruguay’s special requirements. See Fernando Cabrera Díaz, *Philip Morris initiates arbitration against Uruguay over new labeling requirements, taxes* INVESTMENT TREATY NEWS (May 11, 2010), <http://www.iisd.org/itn/2010/05/11/philip-morris-initiates-arbitration-against-uruguay-over-new-labeling-requirements-taxes/>.

induce consumption.¹⁷⁰ Another measure is the prohibition to sell tobacco product-shaped items—any sort of items, such as candy cigarettes—targeting infants and youth.¹⁷¹ This statute may affect both figurative trademarks and industrial designs. But the best known—and perhaps most radical—measure implementing Article 11 of the FCTC is the so-called plain packaging schemes, such as the one adopted by Australia.¹⁷² To discourage the use of tobacco products, the Australian Tobacco Plain Packaging Act of 2011

170. This measure was adopted in Canada, for example. See Simon V. Potter, *The Expropriation of Intellectual Property*, 8 REV. CANADIENNE DE PROPRIÉTÉ INTELLECTUELLE 59 (1991).

171. See Decreto No. 12.921, de 26 de Dezembro de 2013, [Decree No. 12,921, of Dec. 26, 2013] DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 27.12.13 (Braz.).

172. A quick search on Google.com of “Australia plain packaging” produced no less than 1,790,000 results (on Feb. 7, 2015). *Tobacco Plain Packaging Act 2011* (Austl.), available at <http://www.comlaw.gov.au/Details/C2011A00148> [hereinafter TPPA]. See TPPA, at ch 2, §§ 18–29 (“Requirements for Retail Packaging of Tobacco Products”). See Request for Consultations by Ukraine, *Australia—Certain Measures Concerning Trademarks and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS434/1 (Mar. 15, 2012); Request for Consultations by Honduras, *Australia—Certain Measures Concerning Trademarks and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS435/1 (Apr. 10, 2012); Request for Consultations by the Dominican Republic, *Australia—Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS441/1 (July 23, 2012); Request for Consultations by Cuba, *Australia—Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS458/1 (May 3, 2013); Result for Consultations by Indonesia, *Australia—Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging*, WT/DS467/1 (Sept. 25, 2013). See *Plain cigarette packaging law planned by Irish government*, BBC NEWS (May 28, 2013), <http://www.bbc.com/news/world-europe-22690032>. See *Plain packaging*, NEW ZEALAND MINISTRY OF HEALTH (last updated Aug. 15, 2014), <http://www.health.govt.nz/our-work/preventative-health-wellness/tobacco-control/plain-packaging>. See ANVISA *Will defend Adoption of Cigarette Pack ‘Generic’*, FOLHA DE S. PAULO (Dec. 30 2013), <http://www1.folha.uol.com.br/fsp/saudeciencia/145726-anvisa-vai-defender-adocao-de-maco-de-cigarro-generico.shtml>. Article 15.4, as noted above in note 164, *supra*, and the accompanying text, restricts the rights of WTO Members to deny the registrability of trademarks based on the nature of the goods or services to which they are to be applied. TRIPS Agreement, *supra* note 14, art. 15.4. In addition to Article 15.4, WTO Members are also bound by the provisions of Article 6quinquies of the Paris Convention as far as conditions for the exclusion of distinctive signs from registrability are concerned. See TRIPS Agreement, *supra* note 14, art. 15.2: “Paragraph 1 shall not be understood to prevent a Member from denying registration of a trademark on other grounds, provided that they do not derogate from the provisions of the Paris Convention (1967).” *Id.*

(TPPA),¹⁷³ among other measures, significantly restricts the use of trademarks on tobacco packages, such as the number of times the marks may appear, as well as their size and color.¹⁷⁴ The Australian initiative has upset several WTO Members, which have filed requests for consultations and the establishment of panels under the WTO Dispute Settlement Mechanism.¹⁷⁵ However, similar measures are under consideration in a number of other WTO member countries, such as Ireland,¹⁷⁶ New Zealand¹⁷⁷ and Brazil.¹⁷⁸

Like food and alcohol packaging restrictions, encumbrances on the use of trademarks on the packaging of tobacco are TRIPS compliant. As said, the TRIPS Agreement permits restrictions or encumbrances on the use of trademarks, if justifiable.¹⁷⁹ But the Agreement does not permit limitations to the acquisition and registration of trademark rights, except those that are precisely mentioned by the Agreement.¹⁸⁰ To avoid conflict with the TRIPS Agreement, the TPPA was carefully drafted to make clear that tobacco trademarks are still registrable and enforceable.¹⁸¹

173. *Id.*

174. TPPA §§20(3) and 21.

175. See in particular the TPPA, *supra* note 172, § 28 (“Effect on the *Trade Marks Act 1995* of non-use of trade mark as a result of this Act”). Section 29 of the TPPA adds provisions ensuring that restrictions on the use of designs shall not be the basis for licenses or revocation of designs. *Id.* § 29.

176. See *supra* note 172.

177. Matthew C. Porterfield & Christopher R. Byrnes, *Philip Morris v. Uruguay: Will Investor-State Arbitration Send Restrictions on Tobacco Marketing Up in Smoke?*, INVESTMENT TREATY NEWS (July 12, 2011), <http://www.iisd.org/itn/2011/07/12/philip-morris-v-uruguay-will-investor-state-arbitration-send-restrictions-on-tobacco-marketing-up-in-smoke/>.

178. See *supra* note 172.

179. See *supra* note 149 and accompanying text.

180. Article 15.4, as noted above in note 164, *supra*, and the accompanying text, restricts the rights of WTO Members to deny the registrability of trademarks based on the nature of the goods or services to which they are to be applied. TRIPS Agreement, *supra* note 14, art. 15.4. In addition to Article 15.4, WTO Members are also bound by the provisions of Article 6*quinquies* of the Paris Convention as far as conditions for the exclusion of distinctive signs from registrability are concerned. See TRIPS Agreement, *supra* note 14, art. 15.2: “Paragraph 1 shall not be understood to prevent a Member from denying registration of a trademark on other grounds, provided that they do not derogate from the provisions of the Paris Convention (1967).” *Id.*

181. See in particular the TPPA, *supra* note 172, § 28 (“Effect on the *Trade Marks Act 1995* of non-use of trade mark as a result of this Act”). Section 29 of the TPPA adds provisions ensuring that restrictions on the use of designs shall not be the basis for licenses or revocation of designs. *Id.* § 29.

The tobacco industry has challenged packaging requirements because they constitute an expropriation of trademarks.¹⁸² At the outset, it should be recalled that the TRIPS Agreement does not prohibit the taking of intellectual property assets upon the payment of compensation.¹⁸³ What the TRIPS Agreement prohibits is their taking without fair compensation.¹⁸⁴ However, plain package schemes do not expropriate trademarks because their holders continue to own and enforce the marks in question.¹⁸⁵ However, the fact that plain

182. Matthew C. Porterfield & Christopher R. Byrnes, *Philip Morris v. Uruguay: Will investor-State arbitration send restrictions on tobacco marketing up in smoke?*, INVESTMENT TREATY NEWS (July 12, 2011), <http://www.iisd.org/itn/2011/07/12/philip-morris-v-uruguay-will-investor-state-arbitration-send-restrictions-on-tobacco-marketing-up-in-smoke/>. A large part of the opinion of the High Court of Australia that approved the TPPA on constitutional grounds dealt with two issues: whether the TPPA led to a taking of tobacco trademarks (the answer was ‘no’) and whether the government was actually using tobacco packages to convey public health-related messages to consumers (the answer was ‘yes,’ but such use did not give rise to compensation). *See infra* note 188.

183. *See supra* note 110 and accompanying text.

184. The Preamble of the TRIPS Agreement also has language that may be construed as implicitly prohibiting the taking of intellectual property for public use without compensation. TRIPS Agreement, *supra* note 14, art. 31(h); *id.* at Preamble ¶ 4. This same issue was analyzed and decided in the same manner by the High Court of Australia, in 2012, upon claims formulated by two tobacco manufacturers against the enactment of the TPPA. *See JT Int’l SA v Commonwealth* [2012] HCA 43 (Austl.). For a summary of the claims and a description of the holdings, see Sam Ricketson, *Plain packaging legislation for tobacco products and trade marks in the High Court of Australia*, 3 QUEEN MARY J. INT. PROP. 224 (2013); *see also infra* note 188 and accompanying text.

185. Subsection 3 of Section 29 of the TPPA provides in this regard:

To avoid doubt, for the purposes of sections 38 and 84A of the *Trade Marks Act 1995*, and regulations 17A.27 and 17A.42A of the *Trade Marks Regulations 1995*:

(a) the operation of this Act; or

(b) the circumstance that a person is prevented, by or under this Act, from using a trade mark on or in relation to the retail packaging of tobacco products, or on tobacco products;

are not circumstances that make it reasonable or appropriate:

(c) not to register the trade mark; or

(d) to revoke the acceptance of an application for registration of the trade mark; or

(e) to register the trade mark subject to conditions or limitations; or

(f) to revoke the registration of the trade mark.

TRIPS Agreement, *supra* note 14, § 29.3. It follows from this language that tobacco trademarks, albeit subject to the encumbrances imposed by the TPPA, are fully entitled to registration and, hence, to protection.

packaging schemes lead to a loss of attractiveness and appealing in tobacco trademarks, and thereby cause a reduction in sales (at least that is what those schemes intend to achieve) generates a loss in their commercial value. As corporate assets, tobacco trademarks impacted by plain packaging have a loss in value. This might be seen as a form of taking, which must be compensated. However, the reduction of trademarks' value in pursuance of collective goals and in accordance with public policies does not constitute a taking. There is just the reduction in the value of trademarks. The reduction of the value of private property in pursuance of collective goals has been held by the United States Supreme Court as not constituting a taking, particularly in view of the fact that the regulatory encumbrance does not prevent the economic exploitation of the asset.¹⁸⁶ This scenario is therefore different from a situation where a government imposes a compulsory license on a patent and sets the royalty rate at a fixed amount of the patented product net sales price.

This royalty scheme would undoubtedly transfer revenue from one individual to another, and this is what explains the TRIPS provision on mandatory payment of adequate remuneration to the patent holder (Article 31(h)).¹⁸⁷ However, plain packaging does not lead to the transfer of revenue to other individuals, or to the government; nobody gains additional revenue just because the use of tobacco trademarks is restricted. This approach was adopted by the High Court of Australia, which held that there can be no taking (of private property) where there is no acquisition (of that property) by

186. In *Penn Central Transp. Co. v. New York City*, 438 U.S. 104 (1978), the Supreme Court of the United States discussed whether New York's Landmarks Preservation Law generated a taking because of restrictions imposed on certain modifications to the building (the Penn Central Station) that would significantly change its exterior. The Court held:

On this record, we conclude that the application of New York City's Landmarks Law has not effected a "taking" of appellants' property. The restrictions imposed are substantially related to the promotion of the general welfare, and not only permit reasonable beneficial use of the landmark site, but also afford appellants opportunities further to enhance not only the Terminal site proper but also other properties.

Penn Central Station, 438 U.S. at 138.

187. TRIPS Agreement, *supra* note 14, art. 31(h).

the State or any other person.¹⁸⁸ At most, national health departments (in those countries where universal healthcare exists) may save taxpayers' money as a consequence of the reduction in need for medical treatment of those infirmities that result from tobacco consumption. However, this result is too remotely separated from the constraints on the use of trademarks so as to lead to the finding of an acquisition.

Another argument promoted by the tobacco industry is that plain package schemes encourage counterfeiting.¹⁸⁹ The reason is that, in the absence of differentiating brands, trademark owners would have no economic or legal incentive to sue counterfeiters. Moreover, trademarks with diminished absolute distinctiveness (as a result of the limited size of printed brands and the ban on respective colors) are more easily confused by consumers, and therefore impairs their ability to choose.¹⁹⁰ This argument is contradictory and self-

188. *JT International SA* [2012] HCA 43, ¶ 44:

In summary, the TPPA is part of a legislative scheme which places controls on the way in which tobacco products can be marketed. While the imposition of those controls may be said to constitute a taking in the sense that the plaintiffs' enjoyment of their intellectual property rights and related rights is restricted, the corresponding imposition of controls on the packaging and presentation of tobacco products does not involve the accrual of a benefit of a proprietary character to the Commonwealth which would constitute an acquisition.

Id. ¶ 44 (French, C.J.); *see also, e.g.*, ¶¶ 101, 143 (Gummow, J.), 181 (Hayne, J. & Bell, J.), 357 (Kiefel, J.) ("The loss of trade or business does not spell acquisition. Although the protection afforded by s 51(xxxi) [Australia's constitutional provision that guarantees that the acquisition of private property by the State can be made only on just terms] to the owner of property is wide, it is a protection directed to proprietary interests and not to the commercial position of traders").

189. The position articulated by the International Chamber of Commerce: "Plain packaging makes it easier for packaging to be copied by counterfeiters, exposing consumers to products of unknown and potentially dangerous ingredients." *See, e.g., Plain Packaging*, BRITISH AM. TOBACCO, <http://www.bat.com/plainpackaging> (last visited Mar. 2, 2015).

190. These arguments have been endorsed by the International Chamber of Commerce in its analysis of the TPPA, as follows:

The Business Action to Stop Counterfeiting and Piracy (BASCAP) recognizes the health concerns associated with this issue, but is against the legislation because it sets a dangerous precedent in the fight against counterfeit products and undermines brand owners' ability to take action against infringers.

Plain Packaging in Australia, ICC, <http://www.iccwbo.org/Advocacy-Codes-and-Rules/BASCAP/International-engagement-and-Advocacy/Plain-packaging-in-Australia/> (last visited Mar. 2, 2015).

defeating. Australia's plain packaging scheme has not eliminated the use and the protection of trademarks. It just imposes special requirements on the use of trademarks, but does not reduce the level of their protection.¹⁹¹ So, the incentives for legitimate trademark owners to defend the distinctiveness of their brands remain intact.

In summary, like patents and copyright, trademarks are also significantly impacted by technical standards. But unlike the impact on those two other branches of intellectual property law, the impact on trademarks does not depend on whether the standards are mandatory or voluntary. Another significant difference is that standards may impact on the use of trademarked distinctive signs, whereas the respective rights are not affected. By contrast, the acquisition of copyrights and the enforcement of patents may be constrained as a consequence of their involvement with technical standards, but the use of the protected assets (works and inventions) is not restricted.

V. INTELLECTUAL PROPERTY AND STANDARDS: A BIRD'S EYE VIEW

The table that follows offers a bird's eye view of the impact of standardization on the acquisition and enforcement of intellectual property rights and, in the field of trademarks, on the use of the signs themselves. Though overly simplified, it is useful as an illustration of the complex relationship between intellectual property and technical standards, with various solutions being possible in the face of identical or similar circumstances. The purpose of the table is to call attention to the fact that the interconnection between standards and intellectual property may not be studied in just one or two fields, but should rather be approached holistically, even when such an approach does not necessarily solicit coherent solutions. This table and Article are far from exhaustive. The distortive impact of standardization might very well interact with other fields of intellectual property—such as geographical indications¹⁹² and layout designs (topographies) of integrated circuits—in different ways not explored in this Article.

191. *See supra* note 181 and accompanying text.

192. For example, a number of Muslim countries flatly prohibit the use of geographical indications and certification marks that designate banned substances, such as alcohol and pork.

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		Restrictions to acquisition	Restrictions to enforcement
Patents and Copyrights in technical works	Mandatory	No.	Yes, compulsory licenses.
	Voluntary		
	Regarding their elaboration	No.	Yes, FRANDS, hold ups, limitations to injunctions.
	Regarding their use	No.	Yes, FRANDS, ambushes, limitations to injunctions.
Copyrights	Mandatory	Yes, but protection against confiscation.	Yes.
	Voluntary	No.	No.
Trademarks	Names of standards	No.	Yes, fair use.
	Third parties' marks	No.	Yes, fair use.
	Service marks	No.	No.
	Certification marks	No, but there may be encumbrances to use by their holders.	Yes, compulsory licenses.
	Marking and labeling requirements	No, but there may be encumbrances to use by their holders.	No.

In those countries, unlike under the TPPA, technical (but morally guided) standards on package and labeling also impose restrictions on the registration of industrial property titles. For a discussion of those restrictions vis-à-vis Article 7 of the Paris Convention and Article 15.4 of the TRIPS Agreement, see PIRES DE CARVALHO, *supra* note 147, at 241–42.

VI. CONCLUSION

In general, it can be said that the impact of standardization on intellectual property is dictated by the interference of regulation in free markets. Because intellectual property protects differentiation, and because free markets thrive on differentiation—and fail in its absence—market regulation is responsible for distorting free markets, and, thus, naturally distorts intellectual property. The distortion of intellectual property by standardization, perhaps the ultimate and most radical form of market regulation, should not come as a surprise. Standardization affects the manner in which intellectual property rights are acquired and used; including exercising the right to exclude others from unauthorized use, and the countervailing right to license. In a very narrow sense, standardization may also affect the way the subject matter of intellectual property rights is used in the field of trademarks.

In general, except for trademarks, standards impact intellectual property the most when they are mandatory and, thus, acquire the nature of legally binding norms of conduct. The impact on intellectual property from voluntary standards is much less considerable, but it can occur in certain circumstances.

The tension between intellectual property and standards derives from the inherent tension in opposing public policies. Because the public policies that inform standards are oriented towards reducing product and service differentiation, they reduce market freedom. The reduction in market freedom is limited, however, because standards are frequently adopted for technical and economic efficiency, which may have a downstream, positive effect on competition.¹⁹³ For this reason intellectual property does not vanish completely even in the

193. See, e.g., Ruben Schellinghout, *Standard-setting from a competition law perspective*, COMPETITION POL'Y NEWSL., 1, 3 (2011), available at http://ec.europa.eu/competition/publications/cpn/2011_1_1_en.pdf:

Standards have a positive effect in the economy insofar as they promote economic interpenetration in the common market or encourage the development of new markets and improved supply conditions. Standards tend to increase competition and allow lower output and sales costs, thus benefiting the economy as a whole.

Id.

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presence of mandatory standards, and remains almost untouched in the context of voluntary ones.