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LOST AND FOUND: INTELLECTUAL PROPERTY OF THE FRAGRANCE INDUSTRY; FROM TRADE SECRET TO TRADE DRESS

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INTRODUCTION

The foundations of the modern fragrance industry can be traced to fragrance producers established in the south of France during the sixteenth century.¹ France's Mediterranean coast offers excellent conditions for cultivating plants whose flowers, fruit, stems, and roots are used to produce fragrances.² For centuries fragrance manufacturers located themselves near growers in order to obtain and process the plant materials as soon as possible after their harvest.³ By the nineteenth century many of the essences produced by these manufacturers were shipped to Paris to be purchased by hundreds of small perfume houses there that mixed them and sold the compounds in branded retail products like fine fragrances, soaps, and cosmetics.⁴

Throughout the nineteenth century, the farms, essential oil producers, and manufacturers of branded fragrances, were family enterprises.⁵ With small staffs, often comprised of related individuals who spent their entire careers with the same firm, it was relatively easy for these businesses to maintain proprietary information about distillation techniques, the composition of branded perfumes, and other elements of the production process.

During the twentieth century, the fragrance industry underwent radical changes. Increasing real estate values in the area of Grasse, coupled with rising labor costs, prompted the sale of land once used to cultivate jasmine and other flowers for more profitable uses like condominium developments.⁶ Today, most of the crops used in fragrance manufacture are grown and processed in countries like Algeria and India where land and labor are relatively inexpensive.⁷

Most of the small perfumeries in Paris have disappeared or have been consolidated. By the end of the twentieth century, five fragrance and flavor companies – none of them French – had come to supply over half of the world

¹ See Richard Stamelman, Perfume: Joy, Obsession Scandal Sin; A Cultural History of Fragrance from 1750 to the Present 94 (2006).

 $^{^{2}}$ Id.

³ See Eugénie Briot, From Industry to Luxury: French Perfume in the Nineteenth Century, 85 BUS. HIST. REV. 273, 277 (2011).

⁴ *Id*.

⁵ See id. at 277-79.

⁶ See generally SUE MINTER, Fragrant Plants, in THE CULTURAL HISTORY OF PLANTS ch. 13 (2005). The small city of Grasse is situated a few miles north of Cannes on the Ligurian sea.

⁷ See id. See also STAMELMAN, supra note 1, at 95 (noting that the production of jasmine in Grasse peaked in the 1920s and 1930s but subsequently declined dramatically).

fragrance market.⁸ Whereas the perfumeries in Paris in the nineteenth century created their own branded proprietary blends, today most perfumes are developed and manufactured by a few large corporations with branches all over the world.⁹

The inexorable consolidation in the fragrance manufacturing industry over the past century has made the remaining fragrance houses more vulnerable to misappropriation of their intellectual property, particularly of fragrance formulas that they develop at significant expense. Members of the close-knit cadres of the small fragrance houses of the nineteenth century worked in one location, and on behalf of one enterprise, their entire career. Today, perfumers, like professionals in other high technology industries, commonly change not only their locations, but also their employers. This itinerancy has engendered an element of unease among fragrance houses as to the security of their most valuable assets: formulas and other trade secrets that can now be readily obtained, copied, and shared by employees with access to the relevant information stored on the company's servers.¹⁰

Another late-twentieth-century development that has unnerved fragrance manufacturers is the improving accuracy of analytic technologies in revealing a fragrance's chemical composition. Unlike digital technologies that have unsettled the media industry by enabling surreptitious copyright infringement, chemical analytic technologies do not enable the illegal acquisition or distribution of intellectual property. It is generally considered lawful to use these technologies, not only to obtain the fragrance formulas of competitors, but also to develop competing products.¹¹

The fragrance business is by no means the only industry that has had to cope with developing analytic and reproduction technologies, or increasingly itinerant employees. For centuries, many industries have struggled to maintain the confidentiality of proprietary business information, and the ongoing viability of these industries has depended in part on negotiating these challenges. Chartreuse liqueur, and Meissen porcelain manufacturers, for instance, effectively confronted such provocations, and may offer perspectives on how the fragrance industry might best come to terms with its weakened capacity to maintain proprietary knowledge.

⁸ See LEFFINGWELL & ASSOCIATES, 1999–2002 Flavor and Fragrance Industry Leaders, http://www.leffingwell.com/top_10_2.htm (last visited Jan. 12, 2016).

^{&#}x27; See id.

¹⁰ See infra text accompanying note 57.

¹¹ See infra text accompanying note 38.

Since the early seventeenth century, monks of the Carthusian Order have produced Chartreuse.¹² In 1903 the French government appropriated the order's monastery, exiling the monks to Tarragona, Spain, where they reestablished their eponymous liqueur manufactory.¹³ The government sold the monks' distillery in France, along with the Chartreuse trademark, to private investors who attempted to produce the monks' cordial.¹⁴ In a demonstration of divine justice, the "new" Chartreuse failed utterly in the market because its makers could not determine the complex formula; the Carthusians were careful to leave no trace of their secret recipe and methodology when they were expelled from France.¹⁵

Today the Carthusians thrive in France once again, thanks, in part, to their effective maintenance of this centuries-old trade secret.¹⁶ Their ability to do so stems from the order's remarkable avoidance of verbal communication, and extremely limited transfer of proprietary information; each monk vows to a life of silence, and only two monks know the formula for Chartreuse at any time.¹⁷

¹² In the eleventh century, on a mountainside north of Grenoble, Saint Bruno of Cologne established the Carthusian monastic order. *See* JOHN F. FINK, 100 IMPORTANT EVENTS IN CATHOLIC HISTORY: FROM POPE PETER TO POPE FRANCIS 43 (2013). The region's harsh climate, however, accommodated the cultivation of little more than medicinal herbs. *See La Vallée du Secret*, VSD MAGAZINE (Jun. 18, 2014). *Faute de mieux*, the Carthusians grew herbs that they eventually used in the manufacture of the "elixir" that in the eighteenth century they began to distribute beyond the monastery as "Chartreuse". *See id*.

¹³ Their expulsion appears to have been motivated by the French government's resentment of the order's financial prosperity. *See France Banishes Carthusian Monks*, N.Y. TIMES, Mar. 27, 1903, at 3.

¹⁴ See History of the Chartreuse Liqueurs, CHARTREUSE.FR, http://www.chartreuse.fr/en/ histoire/history-of-the-chartreuse-liqueurs/ (last visited Jan. 12, 2016).

¹⁵ See id. Meanwhile, the Carthusians in Spain continued to produce the original liqueur that they then called "Tarragone" because the French government forbade their use of the trademark "Chartreuse" on products sold in France. Id. Accordingly, until 1929, when the trademark "Chartreuse" was restored to the Carthusians, those drinking Chartreuse in cafes and restaurants in France would order "a Tarragone". *Id.*

¹⁶ See generally, INTO GREAT SILENCE (Zeitgeist Films 2005).

¹⁷ See The Carthusian Order, Quick Presentation, http://www.chartreux.org/en/quickpresentation.php (last visited Jan. 11, 2016). Carthusian monks avow a life of silence, which is spent at one monastery. Many aspects of their life are hermetic, but the Carthusians are a coenobitic order in which all monks work for the communal good, with no ambition for personal financial gain. *Id.* Only two monks know the formula for Chartreuse at any time. See History of the Chartreuse Liqueurs, supra note 14. Like wine, Chartreuse is a volatile drink, the quality of which typically improves over time. Accordingly, even if one successfully reverse engineered the molecular composition of Chartreuse, one would need also to discover the techniques by which to nurse the liqueur to maturity over many years, to match the quality of that of the monks'. See id. Moreover, there are over 100 ingredients in Chartreuse, many of which grow

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Messien porcelain provides another perspective for how the fragrance industry might face threats to its trade secrets. Early in the eighteenth century Johann Böttiger, an alchemist working for the Saxon king in Meissen, discovered how to make porcelain.¹⁸ Soon thereafter, Böttiger relocated his workshop to Albrechtsberg Castle, atop a high hill, which protected his trade secrets from the predacious eyes of competitors prowling the streets of Meissen.¹⁹ Despite Böttiger's precautions, his secrets of the materials and manufacturing techniques for porcelain were appropriated, and widely disseminated, within decades of his breakthrough.²⁰ Böttiger's motley crew of laborers, artists, and chemists, were notoriously disloyal, tempted by potential financial windfalls from disclosing his secrets, or by establishing competing enterprises implementing them.²¹

¹⁹ See text panels for exhibition: The Arnhold Collection of Meissen Porcelain, 1710 - 50 (Frick Collection, 2008) (copy on file with author). I am grateful to Frick curator Charlotte Vignon who provided me a copy of these text panels.

²⁰ See GLEESON, supra note 18, at 295 (noting how "the efforts of discontented employees and wandering arcanists had demolished its monopoly and spread the secret arcanum for porcelain far and wide"). Moreover, the manufacture of Böttiger's porcelain depended upon a rare white clay called kaolin, available at the time from a sole provider in the Saxon town of Aue. When the Aue clay merchant realized that Böttiger no longer monopolized porcelain manufacture, he increased the price for clay that he charged Böttiger. He also began to sell his clay to Böttiger's competitors, despite the fact that he was contractually bound to supply only Böttiger's enterprise. See id. at 106.

 21 *Id.* In the eighteenth century the nation we now call Germany was comprised of many independent states like Saxony, Bavaria, and Württemberg. Each state had its own legal regime and there was little chance of being prosecuted for a malfeasance like trade secret misappropriation outside the jurisdiction of the owner of the trade secret. *See* JAMES SHEEHAN, GERMAN HISTORY, 1770 – 1866 14 (1989) (noting that the "Reich came from a historical world in which nationality had no political meaning and states did not command total sovereignty.").

only in Alpine locations like that of the Carthusians' motherhouse. *See* Christina Rebuffet-Broadus, *Chartreuse*, FRANCE TODAY (Apr. 9, 2013), http://www.francetoday.com/articles/2013/04/09/chartreuse.html. Over time there have been a number of attempts to market counterfeit Chartreuse, the bottles of which are displayed at the museum of the Caves de la Chartreuse in Voiron, located near La Grande Chartreuse. WIKIMEDIA COMMONS, *File:Chartreuse-fake.jpg*, https://commons.wikimedia.org/wiki/File:Chartreuse-fake.jpg (last visited Jan. 22, 2016).

¹⁸ See JANET GLEESON, THE ARCANUM 56 (1998). After Vasco da Gama discovered a sea route between Europe and the Orient in the late-fifteenth century, Europeans began to collect Chinese porcelain. As porcelain became popular in Europe, huge quantities were obtained at great cost from China because Europeans did not possess the information needed to manufacture it. *Id.* at 45 (noting porcelain's imperviousness to the water damage that threatened other luxuries like tea, silk, and spices shipped from the Orient).

Despite the loss of its most precious asset, Böttiger's enterprise still survives as "Meissen Couture" a luxury products manufacturer and retailer that sells an enormous range of products ranging from porcelain to clothing to furniture.²² This diversification was essential for the survival of the enterprise. It was made possible, however, only by associating thousands of unrelated products to the porcelain on which the company was founded, and for which it is renowned.²³ All Meissen products are branded with the logo of crossed swords with which the company has marked its porcelain since the 1720s.

 ∞

The fragrance industry now faces a dilemma similar to that confronting the Meissen porcelain business 250 years ago, when Böttiger's trade secrets were lost through breaches of physical security measures, and collegial disloyalty. To stanch a similar loss of their proprietary information, fragrance manufacturers *could* attempt to replicate the Carthusians' success with Chartreuse. They could adopt the monks' code of secrecy and silence, and relocate their manufactories to remote locations where they also cultivate the crops used to create new proprietary blends.²⁴ This solution, however, would be practically, agriculturally, and legally infeasible. Unlike the small cadre of monks whose conduct is governed by regulations that transcend the secular world, the fragrance industry, employs hundreds of thousands of direct and indirect workers, making secrecy practically impossible.²⁵ Legally, such restrictions would be indefensible, due to the

²² See MEISSEN COUTURE, Our Famous Brands, http://www.meissen.com/en/world-meissen-couture/maison-meissen-couture/our-famous-brand (last visited Jan. 11, 2016).

²³ *Id.* Martin Lindstrom refers to this association as the "Organizational Selling Proposition" in which not a physical product, but rather "the organization or corporation behind the brand in fact became the brand." *See* MARTIN LINDSTROM, BRAND SENSE: BUILD POWERFUL BRANDS THROUGH TOUCH, TASTE, SMELL, SIGHT, AND SOUND 4 (2005).

 $^{^{24}}$ The quality of a fragrance, like a culinary dish, depends upon not only the formula or recipe, but also the particular ingredients used to instantiate it. If Chanel were to use jasmine from India rather than that from France to manufacture *No. 5* the scent of this perfume would differ slightly from that of *No. 5* – made from jasmine grown in the south of France – despite the fact that the same chemical formula would be used in creating it. Accordingly, even if one successfully reverse engineers the formula for a fragrance, one still may not be able to replicate exactly the original without access to the same source of ingredients used in the original. Cathy Newman offers a bird's-eye view of fragrance manufacturing in her book *Perfume: The Art and Science of Scent.* (1998).

²⁵ See Int'l Fragrance Ass'n, The Socio-Economic Impact of Fragrance in Europe 7 (2012).

extraordinary constraints on employees' speech and movement.²⁶ Therefore, Chartreuse does not offer an apposite potential new business model for the fragrance industry.

Meissen porcelain, however, may provide the fragrance industry an encouraging example of the value of reorienting its intellectual property focus. Despite the loss of its greatest asset, the Meissen porcelain business survived, not only by diversifying its merchandise, but also by invigilating over another significant intellectual property asset it has never lost: the crossed swords mark with which it has always branded its goods.²⁷

Like the secrets of porcelain manufacture, those used to create fragrances have been revealed, or are increasingly vulnerable to discovery, through reverse engineering and disclosure regulation.²⁸ Meanwhile, fragrances are increasingly being used as a component of trade dress in branding goods and services.²⁹ It is the corporate customers of the fragrance industry, rather than the fragrance manufacturers themselves, who benefit financially from fragrance trade dress. However, the increasingly widespread application of fragrances in this manner has added value to an expanding number of goods and services, and the fragrance manufacturers should reasonably expect to share in profits generated thereby.³⁰

This article proposes that while trade secret protections for fragrances have lost much of their efficacy, trademark and unfair competition law may offer currently unrealized legal protection of the *use* of fragrances as trade dress. Part I chronicles how reverse engineering has undermined the fragrance industry's reliance, from time immemorial, on secrecy to protect its intellectual property. Part II considers the limited efficacy of copyright and patent protection for fragrances. Part III canvasses the growing practice of using of fragrance as a component of multisensory trade dress, and the potential legal protection of such uses through trademark and unfair competition law. The article concludes by drawing an

²⁶ The tension between employees' rights of free expression and employment mobility, and employers' right to control the dissemination of information they consider proprietary underlies most trade secret misappropriation claims today. *See* ROGER MILGRIM, MILGRIM ON TRADE SECRETS § 5.01 (1994) (noting that "as reliance on trade secret protection increases, controversies between former employers and ex-employees … will not only increase in number, they will be contested for significantly higher stakes").

²⁷ See MEISSEN COUTURE, supra note 22.

²⁸ See infra Part I.B.

²⁹ See infra text accompanying note 189.

³⁰ Most fragrance manufacturers do not produce retail products but rather develop and produce proprietary blends that are sold to consumer goods producers like Unilever, Proctor & Gamble, and brands like Dior. *See infra* note 75 and accompanying discussion.

analogy between the dissemination of fragrances and the performance of musical works, to enhance commercial spaces. It suggests that the fragrance industry might temper the economic injury incurred from the loss of intellectual property protection it once enjoyed by seeking a portion of the economic dividends generated by these enhancements of public and commercial venues.

Ι

THE FRAGRANCE INDUSTRY AND THE CHALLENGE OF REVERSE ENGINEERING

A. Regulation of Reverse Engineering in the United States and the European Union

In the twenty-first century, trade secrets have become increasingly vulnerable to disclosure, not only because of the ease with which information can be shared, but also because of advances in analytic technologies enabling reverse engineering.³¹ Legislatures in both the United States and European Union are aware of this increased vulnerability affecting a broad range of industries, as evidenced in recent legislative proposals.³²

To obtain legal protection as a trade secret, information must be commercially valuable, not generally known, and subject to reasonable efforts to maintain its secrecy.³³ While trade secrets in the United States are not broadly protected under federal statute, they are regarded as intellectual property alongside information protected by patents, copyrights, and trademarks.³⁴ The recently

³¹ See Tracy Lewis & Jerome Reichman, Using Liability Rules to Stimulate Local Innovation in Developing Countries: Application to Traditional Knowledge, in INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME 342 (Keith Maskus & Jerome Reichman eds., 2005).

³² See infra notes 44, 46 and accompanying text.

³³ See UNIF. TRADE SECRETS ACT (amended 1985), 14 U.L.A. 433 (1990). This Act has now been adopted by 47 of the United States. UNIF. LAW COMM., Legislative Fact Sheet – Trade Secrets Act, http://www.uniformlaws.org/LegislativeFactSheet.aspx?title=Trade%20Secrets %20Act. The same criteria define trade secrets in the pending European Union trade secret legislation. See Commission Proposal for a Directive of the European Parliament and of the Council on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against their Unlawful Acquisition, Use and Disclosure, COM (2013) 813 final (Nov. 28, 2013) [hereinafter Commission Proposal].

³⁴ The United States Economic Espionage Act criminalizes the misappropriation of trade secrets on behalf of a foreign government. *See* 18 U.S.C. §§ 1831–1839 (2012). In 2015, for the third time, United States legislators have introduced a bill that would create allow civil trade secret claims to be brought in federal court. *See* Defend Trade Secrets Act of 2015, S. 1890, 114th Cong. (2015). The United States Patent & Trademark Office identifies trade secrets as "a fourth type of intellectual property, in addition to patents, trademarks, and copyrights." *See*

proposed European Union Trade Secrets Directive, on the other hand, suggests that trade secrets, while intellectual "assets", should not be protected as "formal" intellectual property rights like patents, etc., but rather as a "complement" or "alternative" to these "classical IP rights."³⁵

Unlike owners of patents, copyrights, and trademarks, who are provided the right to prohibit most unauthorized uses of their protected intellectual property,³⁶ owners of trade secrets, do not enjoy this privilege. While trade secret law may protect a trade secret indefinitely, if another individual or organization acquires the information in question, it is no longer secret, and its original owner cannot prevent others from using it. Moreover, another person may independently develop secret know-how or, more commonly, will learn it through reverse engineering, i.e., by analyzing the composition of an object implementing the trade secret.³⁷

A trade secret's vulnerability to reverse engineering depends on both the complexity of the secret and the nature of the product it implements. A material object, like a fragrance, is more tractable to reverse engineering than an intangible product or service, because it provides palpable and otherwise perceptible information. While it may be easier to "crack" trade secrets used in the production of material goods than of immaterial services, it may be more difficult to implement the acquired information, because the value of physical products depends – to varying degrees – upon the materials used in their manufacture. For example, the secret formula for a fine fragrance is more valuable to a company with established ties to suppliers of top-tier natural raw materials than to a start-up sourcing from an unknown grower selling adulterated plant essences.

USPTO, *Trade Secrecy Policy*, http://www.uspto.gov/patents-getting-started/international-protection/office-policy-and-external-affairs-patent-trade (last visited Jan. 12, 2016).

³⁵ "Although not protected as a classical IPR, trade secrets are nevertheless a key complementary instrument for the required appropriation of intellectual assets that are the drivers of the knowledge economy of the 21st century. The holder of a trade secret does not have exclusive rights over the information covered by the trade secret." *Commission Proposal, supra* note 33, at 3.

³⁶ Under U.S. law the rights of copyright owners are limited by statutory provisions allowing for unauthorized uses of copyrighted information by journalists, educators, et al. *See* 17 U.S.C. §§ 107, 108 (2012).

³⁷ Many manufacturers anticipate and avert such losses through sales contract provisions that prohibit customers from reverse engineering products acquired from the manufacturer.

It is generally legally permissible in the United States to acquire trade secrets through reverse engineering.³⁸ This permissibility is desirable because it forestalls the possibility that trade secret law would provide monopolist protection for innovations, a right under the exclusive purview of federal patent law.³⁹ Federal legislation has, nevertheless, restricted unauthorized use of information acquired through reverse engineering of certain products.

Congress has effected these limitations on reverse engineering by amending the copyright statute to provide sui generis protection for certain products like semiconductor chips, digital content anti-circumvention technologies, and original boat hull designs.⁴⁰ These protections constitute legislative "carve outs" from the broad right to reverse engineer a product and use the information learned thereby. In providing these protections, Congress' purpose was to avert potentially gross unfairness that may occasion market failure, resulting from the easy replication of a technological advancement that may have cost another years of work and hundreds of thousands of R&D dollars.⁴¹

On the other hand, the European Union's proposed Directive on trade secrets would establish a liberal policy toward the acquisition of trade secrets through reverse engineering, akin to that found under United States law.⁴² This approach is

³⁸ See Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 490–493 (1974) (distinguishing patent protection that operates "against the world" from trade secret protection that does not protect against independent creation or reverse engineering).

³⁹ See Chicago Lock Co. v. Fanberg, 676 F.2d 400, 405 (9th Cir. 1982) (finding that federal patent law would preempt any state-conferred monopoly through absolute protection of a trade secret).

⁴⁰ See Semiconductor Chip Protection Act of 1984, 17 U.S.C. §§ 901–914. (2012) (providing ten years protection for registered computer chip topographies); Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (codified in scattered sections of 5, 17, and 28 U.S.C.) (restricting the production and use of devices whose purpose is to circumvent digital rights management technologies). *See* Vessel Hull Design Protection Act, 17 U.S.C. §§ 1301–1332 (2012). The fashion industry has attempted, so far unsuccessfully, to obtain similar *sui generis* federal protection for apparel designs. *See* Innovative Design Protection and Piracy Prevention Act, H.R. 2511, 112th Cong. (2011).

⁴¹ See J.H. Reichman, Legal Hybrids Between the Patent and Copyright Paradigms, 94 COLUM. L. REV. 2432, 2443 (1994) (discussing the economic and social underpinnings of sui generis intellectual property protection enacted in the United States and Europe "owing to the advent of new, information-based technologies, including computer science … whose industrial applications were costly to develop but vulnerable to rapid duplication.").

⁴² Article 4 of the Directive states: "The acquisition of trade secrets shall be considered lawful when obtained by any of the following means: (a) independent discovery or creation; (b) observation, study, disassembly or test of a product or object that has been made available to the public or that it is lawfully in the possession of the acquirer of the information; (c) exercise of the

somewhat paradoxical: while the fundamental objective of the Directive is to harmonize and *strengthen* the legal protection of trade secrets across all member states, its permissive approach to reverse engineering would likely *weaken* extant trade secret protection available under the domestic law of some European Union members, such as Italy.⁴³ For example, while some states, such as Italy, consider trade secret law as a distinct form of intellectual property, the Directive transforms it into a component of unfair competition law.⁴⁴

Furthermore, as argued in a critique from the Max Planck Institute, the Directive's liberal stance on reverse engineering is particularly troublesome to industries that depend upon innovative products embodying intellectual investment that is not protected as intellectual property.⁴⁵ The Institute's Comments identify fragrance manufacturing as a prime example of such an industry, and suggest that the Directive's lax approach to the acquisition of trade secrets eventually could

right of workers representatives to information and consultation in accordance with Union and national law and/or practices; (d) any other practice which, under the circumstances, is in conformity with honest commercial practices." Commission Proposal, supra note 33. The underlying motivation for the proposed Directive was the lack of harmonization among the trade secret laws of the twenty-eight member states of the European Union. See Study on Trade Secrets and Confidential Business Information in the Internal Market, at 15-16 (Apr. 2013), http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8269. In June 2015 the EU Parliament approved the key features of the draft prepared by the EU Commission and EU Council. See Report on the Proposal for a Directive of the European Parliament and of the Council on the Protection of Undisclosed Know-How and Business Information (Trade Secrets) Against Their Unlawful Acquisition, Use and Disclosure, COM (2013) 813 final (Jun. 25, 2015), http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2015-0199+0+DOC+XML+V0//EN&language=en - title1. The Directive is now being reviewed by the EU Council that will finalize a draft that will be become EU law and ultimately the basis of member states domestic legislation for trade secrets. See Mark P. Wine, One Step Closer: European Parliament Legal Affairs Committee Approves Trade Secret Directive, ORRICK TRADE SECRETS WATCH (Jun. 26, 2015), http://blogs.orrick.com/trade-secrets-watch/2015/06/26/onestep-closer-european-parliament-legal-affairs-committee-approves-trade-secret-directive/.

⁴³ See Roland Knaak, et al., Comments of the Max Planck Institute for Innovation and Competition On the Proposal of the European Commission for a Directive on the Protection of Undisclosed Know-how and Business Information (Trade Secrets) Against Their Unlawful Acquisition, Use and Disclosure of 28 November 2013, COM (2013) 813 Final, Max Plank Institute for Innovation and Competition Research Paper No. 14-11, ¶ 11 (2014) (noting that the Directive does not consider trade secret protection an exclusive right but rather one obtained under unfair competition law, whereas Italian law considers trade secrets to be an intellectual property right).

⁴⁴ *Id.* ⁴⁵ See id. \P 37. result in the evisceration of innovation in this industry and lead to the failure of this market.⁴⁶

B. Challenges to the Fragrance Industry's Traditional Reliance on Trade Secrets

The modern fragrance industry has a longstanding reputation for exceptional secrecy.⁴⁷ Its clandestine nature is an outgrowth of its origins in early medical and pharmaceutical endeavors in France, in which the creators of curative potions and elixirs carefully guarded their formulas.⁴⁸ By the nineteenth century, fragrance manufacturing had become largely independent of the pharmaceutical business.⁴⁹ Many enterprises had been established in the area of Grasse exclusively for the production of fragrances, particularly perfumes to be applied to the body.⁵⁰

Unlike most retail products incorporating materials produced by the fragrance industry today, these goods were considered luxuries to be enjoyed by a few affluent consumers, and produced in small quantities by family-owned enterprises.⁵¹ It was relatively easy to keep manufacturing know-how and formulas secret among the small staffs of these enterprises.⁵² Moreover, these teams were often comprised of related employees, most of whom who would spend their entire careers at the company.⁵³

⁵⁰ *Id*.

⁴⁶ *Id*.

⁴⁷ "Perfumers work in the strictest secrecy, jealously guarding the mysteries of their art. Since the beginning of perfume, formulas have been kept hidden from prying eyes...." ELIZABETH BARILLÉ & CATHERINE LAROZE, THE BOOK OF PERFUME 45 (1995).

⁴⁸ The still-secret formula for the liqueur Chartreuse was originally used to create a more potent potable used as medicine. *See History of the Chartreuse Liqueurs, supra* note 14.

⁴⁹ Napoleon III, Emperor of France between 1852 and 1870, was perhaps indirectly responsible for the separation of the fragrance and pharmaceutical industries by promulgating a regulation requiring makers of pharmaceuticals to disclose on the labels of their products the ingredients they contained. To preserve the secrecy of their formulas, perfume manufacturers disassociated themselves and their products with pharmacists and pharmaceuticals. *See* STAMELMAN, *supra* note 1, at 95.

⁵¹ "Hubigant legend ... is that Marie Antoinette, in disguise on her flight to Varennes, was wearing a Houbigant fragrance, which caused her to be identified as royalty when her coach was stopped, because none but royalty would have possessed such a magnificent perfume!" *Lightyears Collection: Houbigant*, PERFUMEPROJECTS.COM, http://www.perfumeprojects.com/museum/marketers/Houbigant.php (last visited Jan. 19, 2016).

⁵² See Briot, supra note 3, at 276 (reporting that by the end of the nineteenth century there were over 300 perfume producers in France and around 2000 small perfume shops in Paris).

⁵³ See, e.g., Anna Chesters, A Brief History of Guerlain, THE GUARDIAN (Mar. 26, 2012), http://www.theguardian.com/fashion/fashion-blog/2012/mar/26/brief-history-guerlain (discussing the origins of Guerlain, long a family enterprise).

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While the industry still produces luxury products, like fine fragrances, today it is highly consolidated and creates scents used for innumerable consumer products like laundry detergent and hair gel.⁵⁴ The largest of these fragrance manufacturers have thousands of employees who commonly move among companies over the course of their careers.⁵⁵

The enormous expansion of both the fragrance industry's now-itinerant workforce, as well as the number of consumer products it affects, has made it much more difficult for fragrance producers today to maintain their trade secrets.⁵⁶ This difficulty has been reflected in a flurry of trade secret misappropriation claims made by former employers of perfumers and flavorists who joined competing firms.⁵⁷

One of the most acrimonious of these disputes involves the ongoing prosecution by Givaudan, a large Swiss-based fragrance manufacturer, of a claim against its former perfumer James Krivda.⁵⁸ The circumstances surrounding this ongoing dispute illustrate both a company's vulnerability to misappropriation of proprietary information given employees' itinerancy, and the difficulty of establishing misappropriation without disclosing the secrets themselves.

⁵⁴ Eighty percent of the fragrances sold today are incorporated into personal care and household care products. *See* INT'L FRAGRANCE ASS'N, *supra* note 25, at 14-17.

⁵⁵ In 2013, Givaudan, the world's largest producer of flavors and fragrances had 9,331 employees distributed throughout eighty-eight locations in five continents. GIVAUDAN, ANNUAL REPORT 3 (2013).

⁵⁶ The same factors have simultaneously challenged many other high technology industries that rely on trade secrets, resulting in an enormous increase in trade secret litigation in federal courts. *See* David Almeling, et al., *A Statistical Analysis of Trade Secret Litigation in Federal Courts*, 45 GONZ. L. REV. 291, 293 (2009/10).

⁵⁷ One such example is IPRA Fragrances' (France) claim in 2012 against employees who joined a competitor. *See* Mathilde Tranoy, *Deux Salairiés Accusés d'avoir Vendu des Formules Aromatiques Secrètes*, NICE MATIN (Mar. 30, 2012, 7:37 AM), http://archives.nicematin.com/faits-divers/deux-salaries-accuses-d%E2%80%99avoir-vendu-des-formules-aromatiques-

secretes-a-grasse.830888.html. Another example is Estée Lauder's claim against ex-employee Shashi Batra for sharing its trade secrets with a direct competitor. *See* Estée Lauder Cos. Inc v. Batra, 430 F. Supp. 2d 158, 160 (S.D.N.Y. 2006). A third example is, Intarome Fragrance & Flavor's prosecution of fired employee Michael Zarkades for sharing trade secrets with E.T. Horn, a flavor manufacturer. *See* Intarome Fragrance & Flavor Corp. v. Zarkades, No. 07-873, 2007 U.S. Dist. LEXIS 22780, *4 (D.N.J. Mar. 29, 2007).

⁵⁸ Givaudan Fragrances Corp. v. Krivda, No. 08-04409, 2013 U.S. Dist. LEXIS 153437, *1 (D.N.J. Oct. 25, 2013).

In 2008 Krivda left a vice-president position at Givaudan for a similar appointment at Mane USA, Inc., a direct competitor.⁵⁹ Givaudan asserts that in the days immediately prior to resigning, Krivda downloaded and printed from the company's secure database over 600 proprietary formulas that he brought with him to Mane.⁶⁰

At trial Givaudan offered detailed evidence that Mane had capitalized on thirty-four of the formulas that it claimed Krivda misappropriated, by marketing fragrances identical to Givaudan's under new names.⁶¹ The trial court, however, granted in part the defendants' motion for summary judgment based on a finding of insufficient disclosure by Givaudan of information about 600 of the additional formulas that Givaudan claimed the defendants had misappropriated. ⁶² Accordingly, testimony at trial was limited to a small fraction of the information Givaudan claimed Krivda misappropriated. In February 2014 a federal district court jury in New Jersey exonerated Krivda and Mane of all liability, and Givaudan is now seeking a new trial.⁶³

In prosecuting this claim Givaudan faced a commonplace dilemma of plaintiffs in trade secret litigation. To establish a meaningful claim of trade secret misappropriation, an owner must convey information about the secret both to the court and to the defendant. Once this information is voluntarily disclosed, however, it may no longer be protectable as a trade secret, because its secrecy has been unquestionably compromised.⁶⁴

What rattled Givaudan most about Krivda's alleged theft was that Mane obtained the information without any cost. By purportedly absconding with hundreds of Givaudan's formulas, Krivda provided its competitor a windfall of valuable information without the reverse engineering costs that would be incurred through legal acquisition. Krivda *could* have purchased hundreds of products incorporating Givaudan's fragrances, and worked with Mane's chemical analysts

 64 Apparently Givaudan did not trust the efficacy of the court's protective order that would have purportedly prevented the disclosure of over 600 Givaudan formulas through their inclusion in the docket for this litigation. Because Givaudan would not fully disclose these formulas to the defendant and the court, the court dismissed the case based on its determination that the plaintiff failed to provide defendant adequate notice of the allegedly misappropriated trade secrets. *See id.* at 7–8.

⁵⁹ See id.

⁶⁰ *Id.* at *4.

 $^{^{61}}$ *Id.* at *6.

⁶² See id.

⁶³ See generally Motion for New Trial by Givaudan Fragrances Corporation, Givaudan Fragrances Corp. v. Krivda, No. 08-04409 (D.N.J. Mar. 7, 2014).

on the painstaking task of isolating and dissecting them. Given the brief life cycle of most fragrances, however, the market success of an innovative product depends significantly on the potentially dissuasive expense and time lag incurred in reverse engineering and developing a competing product. Therefore, if Krivda provided to Mane the trade secrets Givaudan claims he stole, Mane could not only avoid the temporal and financial cost of reverse engineering, but also produce, within the period of market viability, competing merchandise offered at a lower price. Moreover, because reverse engineering technologies cannot always provide exact and complete information about the chemical composition of a fragrance, a competitor can avoid any potential ambiguities by simply lifting the formula itself.

C. The Impact of Gas Chromatography-Mass Spectrometry (GC-MS) Technologies on the Fragrance Industry

In the popular imagination, consumers have held to the romantic notion that fragrances, particularly perfumes applied to the body, are created from closely held and undetectable formulas. For instance, the conceit of Patrick Süskind's novel *Perfume* centers on its murderous protagonist's prodigious capacity to analyze scents.⁶⁵ Tom Robbin's *Jitterbug Perfume*, on the other hand, tells the picaresque tale of the arduous quest to discover the formula of an ancient fragrance ultimately revealed to have contained the *recherché* ingredient of beet blossom essence.⁶⁶

In fact, using contemporary GC-MS technologies, one can learn with remarkable accuracy the formula of any fragrance.⁶⁷ GC-MS is a technique for separating the components of a vapor by observing the different speed by which each chemical component is expelled from a long tube through which a sample of the vapor is swept.⁶⁸ Once the components have been separated, a mass spectrometry apparatus identifies the various separated molecules and their relative volumes in the composition of the vapor.⁶⁹

GC-MS technology has disconcerted fragrance houses because it enables practically anyone to obtain a fragrance's formula swiftly and inexpensively.⁷⁰ The most costly component of a fragrance, the formula is typically developed from

⁶⁵ See generally PATRICK SÜSKIND, PERFUME: THE STORY OF A MURDERER (1985).

⁶⁶ See generally TIM ROBBINS, JITTERBUG PERFUME (1984).

⁶⁷ See Arian van Asten, *The Importance of GC and GC-MS in Perfume Analysis*, 21 TRENDS IN ANALYTICAL CHEMISTRY 698, 699 (2002) (noting that there is little discussion in the open literature about the work of analytic chemists in the fragrance industry because "that is usually not in the best interest of the companies operating in this highly competitive market.").

⁶⁸ See JOHN DAINTITH, A DICTIONARY OF CHEMISTRY (6th ed. 2008).

⁶⁹ See id.

⁷⁰ See Arian van Asten, supra note 67, at 701.

months, or even years, of research costing hundreds of thousands of dollars.⁷¹ Unsurprisingly, as GC-MS technologies have become increasingly affordable and effective, a parasitical industry has emerged, that manufactures and distributes lower cost "smell-alike" versions of well-known fragrances.⁷²

Five multinational corporations, four of which originated in Western Europe, dominate the world fragrance market.⁷³ For years this industrial concentration fostered a tacit agreement among the industry's largest players. Under this informal understanding, the major fragrance houses would not cannibalize each other by manufacturing competing products based on formulas of a competitor acquired through reverse engineering.⁷⁴ Otherwise, a competitor could undercut an innovator's market by selling products at prices that did not reflect the innovator's R&D expenditures.

The increasing accessibility and accuracy of GC-MS technologies in recent years has tested the stability of this "gentleman's agreement" among fragrance manufacturers. Moreover, this understanding never extended to the client base of the major fragrance producers, ranging from consumer products giants like Unilever to couture houses like Dior (LVMH), that attach their brands to fine fragrances that are developed and manufactured by large external suppliers.⁷⁵

Moreover, GC-MS technologies have provided these clients a new means of negotiating lower prices for the development of new fragrances, as well as those

⁷¹ See INT'L FRAGRANCE ASS'N, supra note 25, at 22-23.

⁷² For example, Pirate Parfum, the self-proclaimed producer of "[t]he greatest perfumes, at impertinent prices," is a significant player in this industry. It does not sell counterfeits of well-known perfumes, but rather copies of them that are branded with different names, and sold in uniform and non-descript packaging with no resemblance to that of the original products. *See* PIRATE PARFUM: MASTER PERFUMER, https://us.pirate-parfum.com (last visited Jan. 19, 2016).

⁷³ See LEFFINGWELL & ASSOCIATES, 2010–2014 Flavor and Fragrance Industry Leaders, http://www.leffingwell.com/top_10.htm (last visited Jan. 12, 2016). International Flavors & Fragrances (IFF) is headquartered in the United States, but originated in the Netherlands. See IFF, History Timeline, http://www.iff.com/company/history-timeline - /timeline(last visited Jan. 19, 2016).

⁷⁴ See CLAIRE GUILLEMIN, LAW AND ODEUR: FRAGRANCE PROTECTION IN THE FIELDS OF PERFUMERY AND COSMETICS Part I, § 3 (forthcoming 2016) (discussing the origins of this understanding in the quasi-familial ethos of the fragrance industry through the early twentieth century).

⁷⁵ See Nicole Vulser, Le Groupe LVMH se Réapproprie la Fabrication de ses Parfums, LE MONDE 16 (May 28, 2011) (noting that LVMH owns the Sephora chain, one of the largest retail outlets for perfume). See also, Fabien Pigalle, Grasse: Louis Vuitton se (Re)met au Parfum, NICE-MATIN 36 (Apr. 13, 2012) (discussing LVMH's plans to open in 2014 a workshop for fragrance development in Grasse).

for ongoing supplies of already commissioned products. If a fragrance house balks at the price negotiated by a client for ongoing supplies of a product that it developed for the client, the client could reverse engineer the fragrance, and then buy supplies of it at a lower price from a competitor of the initial supplier. The competitor would have legitimately obtained the formula without incurring the cost of creating it.⁷⁶

GC-MS technologies also make it more feasible for clients themselves to produce supplies of perfumes developed at their behest by fragrance houses. This discomfiting potential was realized in 2011, when the luxury conglomerate LVMH built a fragrance compounding facility outside Paris and began producing supplies of concentrates for their popular scents like "Miss Dior Chérie", "Dior Homme", and "Kenzo Flowers".⁷⁷ Previously, they had obtained these supplies from Givaudan, Firmenich, and IFF, after these companies had developed the respective formulas.⁷⁸ LVMH claimed that the blends that they produced for these brands embodied subtle modifications of those that had been produced by Givaudan, et al., presumably a tactic to avert liability for breaching any contractual obligation to purchase concentrates from the companies that developed the original fragrances.⁷⁹ LVMH's actions were particularly distressing to fragrance houses because they involved the production of successful and well-established perfumes.⁸⁰ Profits derived from sale of the liquid blends to produce these goods cover not only the costs of their development, but also the formulation of a constant stream of new proprietary blends that manufacturers use to compete for new business.⁸¹

As the owner of fragrance brands like Givenchy and Dior, LVMH is one of the most significant players in the retail fragrance industry.⁸² Moreover, the company is one of the most important clients for fragrance houses, continually commissioning the development of new products that capitalize on their deep R&D expertise. Therefore, fragrance houses are naturally reluctant to alienate themselves from such a powerful client. These companies could contractually preclude clients

⁷⁶ Vulser, *supra* note 75.

⁷⁷ Id.

⁷⁸ Id.

⁷⁹ Id.

⁸⁰ "We were presented with a fait accompli. Dior did not warn us that it would no longer market one of our flagship products," said Frédéric Rivoire, CEO of Givaudan Fine Fragrances Europe. The shortfall for the company, even though it is working for other brands, amounts to several million euros of turnover." *Id.*

⁸¹ See INT'L FRAGRANCE ASS'N, supra note 25, at 44.

⁸² See LVMH, Perfumes & Cosmetics, http://www.lvmh.com/houses/perfumes-cosmetics/ (last visited Jan. 19, 2016).

such as LVMH from certain uses of newly developed formulas, or from obtaining supplies of certain fragrance compounds from other sources. Such terms, however, would be difficult to negotiate in light of the bargaining advantage that analytic technologies now provide to these industry clients. Given the feasibility of legally reverse engineering and independently producing a fragrance, clients would agree not to do so only in exchange for price concessions, or guarantees regarding the ongoing manufacture and quality of a product, *e.g.*, the sourcing of ingredients from a particular supplier.

To summarize, over the past few decades, the availability and enhanced capacity of GC-MS technologies have significantly challenged the fragrance industry's business model. The industry's most valuable assets, proprietary formulas, can now be legally acquired by anyone with access to a well-equipped laboratory. The effects of the loss of trade secret protection, resulting from use of these technologies, have been compounded by unprecedented calls for greater government regulation of the industry's products, which could require the public disclosure of the ingredients, or even the formulas, of proprietary fragrance compounds.⁸³ Now that trade secret protection has been compromised for the fragrance industry, are there other forms of intellectual property for which this industry should seek protection instead?

Π

PATENT AND COPYRIGHT PROTECTION FOR FRAGRANCES

A. Patent

U.S. and E.U. law provides patent holders with a twenty-year monopoly on the manufacture, use, and sale of their inventions.⁸⁴ Even those who independently develop or reverse engineer an invention covered by patent are prohibited from unauthorized manufacture, use, and sale of products or services that implement it. However, this sweeping prohibition is tempered by the patent holder's obligation to disclose, at the time of registration, the composition and functioning of his

⁸³ See, e.g., Commission Regulation 1367/2006 of Sept. 6, 2006, The Application of the Provisions of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to Community Institutions and Bodies, 2006 O.J. (L 264) 13, 14 (granting a public right of access to information held by EU agencies relating to "emissions into the environment").

⁸⁴ See 35 U.S.C. § 154 (2012); Convention on the Grant of European Patents, Oct. 5, 1973, 1065 U.N.T.S. 199.

invention, which information enters the public domain when the patent term expires.⁸⁵

Despite the strength of patent protection, the fragrance industry does not rely heavily upon this form of intellectual property for the protection of fragrance formulas, and those of fine fragrances in particular.⁸⁶ An invention must be useful to be patentable.⁸⁷ Like the jewelry business, the fragrance industry promotes highend perfumes as pure luxuries. Ascribing utility to these goods tarnishes their *cachet* of exclusivity, and thereby the economic value associated with entirely discretionary products.⁸⁸

Moreover, the fragrance industry eschews the trade-off between patent's twenty-year term of monopolistic control and full disclosure of the patented invention. This is not only because the market for many of the industry's high-end products lasts more than twenty years, but also because longevity in the marketplace of some of these products actually makes them *more* valuable over time.⁸⁹

While the fragrance industry does not primarily rely on patents to protect the formulas used to produce fragrances, there have been thousands of applications in

wastefulness and lack of utility of certain products. "The superior gratification derived from the use and contemplation of costly and supposedly beautiful products is, commonly in great measure a gratification of our sense of costliness masquerading under the name of beauty." THORSTEIN VEBLIN, THE THEORY OF THE LEISURE CLASS 128 (Prometheus Books 1998) (1899).

⁸⁹ The prestige and prices of Chanel's *No. 5* and Patou's *Joy* for instance, are bolstered by the fact that both products have endured since 1929 and 1921 respectively, in a market in which hundreds of new fragrances are launched (and typically fail) annually. On the other hand, most new seasonal or "celebrity" fragrances have such a limited shelf life that they need no IP protection whatever.

⁸⁵ See 35 U.S.C. § 112 (2012).

⁸⁶ Within the fragrance industry "fine fragrances" refers to stand-alone perfumes that are worn on the body for aesthetic purposes.

⁸⁷ See 35 U.S.C. § 101 (2012).

⁸⁸ The appeal and economic value of a perfume are actually enhanced by its lack of utility. Lysol underscores the utility of its stolidly named aerosol *Sanitizing Spray* as an economical and effective product to control "bathroom, pet, garbage, and diaper odors," whereas Patou fosters an attitude of hedonic and heedless extravagance in advertising *Joy* as "the costliest perfume in the world." *See* LYSOL, *Lysol Neutra Air Sanitizing Spray*, http://www.lysol.com/products/neutra-air/lysol-neutra-air-sanitizing-spray/ (last visited Jan. 22, 2016); *Two Sides of Dear: Demystifying Patou's Joy Perfume Promotion*, PERFUME SHRINE (May 13, 2014), http://perfumeshrine.blogspot.com/2014/05/two-sides-of-dear-demystifying-patous.html. Economist Thorstein Veblen (1857-1929) pointed out the value associated with conspicuous wastafulness and lack of utility of certain products.

U.S. Patent Class 512 covering "perfume compositions".⁹⁰ However, most of these applications are for innovative means for extracting, manufacturing, or delivering fragrances.⁹¹ The relatively few registered patents that protect the formulas of fragrant compounds are grounded in claims of the product's useful capacity to supplant noxious odors or – more dubitably – to promote physical and mental health.⁹²

Fragrance companies also rely upon patents to protect some of their most valuable assets: new fragrance molecules that they have developed, known as "captives".⁹³ These proprietary molecules typically are not valuable because of the beauty of their scent, but rather for their capacity to create original, safer, or less costly fragrances.⁹⁴ The handful of fragrance companies that dominate the world market create and own most captives because only these companies can afford the significant R&D investment required for their creation.⁹⁵ Companies that develop patentable molecules may initially manufacture fragrances employing these captives, but much of their profit is derived from selling or licensing them to other fragrance manufacturers that more exhaustively explore and capitalize on their potential.⁹⁶

⁹³ See Erin McAvoy, Chemical Romance: How did Chemists Become the Greatest Force in Fragrance? THE INDEPENDENT (Dec. 10, 2010), http://www.independent.co.uk/life-style/fashion/features/chemical-romance-how-did-chemists-become-the-greatest-force-in-fragrance-2155817.html (noting that "synthetic raw materials, usually single molecules, enable perfumers to create entirely new smells....").

⁹⁴ See id. See also Emma Davies, *The Sweet Scent of Success*, 2009 CHEMISTRY WORLD 40 (Feb. 2009) (discussing the deployment of several of the most significant proprietary perfume molecules in fragrances like Dior's *Poison* and Donna Karan's *Be Delicious*).

⁹⁵ See LEFFINGWELL & ASSOCIATES, supra note 73.

⁹⁶ See generally Wendy Wolfson, In the Fragrance Business, the Right Molecule Smells like

⁹⁰ See USPTO, USPC INDEX: CLASS 512 PERFUME COMPOSITIONS (2011), http://www.uspto.gov/web/patents/classification/uspc512/sched512.htm.

⁹¹ *Id.* (providing an interactive index of applications).

 $^{^{92}}$ E.g., U.S. Patent No. 7,169,746 col 1 l. 6–7 (filed Mar. 26, 2002) (Shiseido's patent for a "perfume for effecting mental control through psycho-sedation or psycho-stimulation."). United States regulation of fragrances has been relatively sparing. The United States Fair Packaging and Labeling Act requires disclosure of ingredients used in consumer products unless such disclosure would reveal trade secrets. 15 U.S.C. § 1453 (2006). Because fragrance manufacturers assert that their compositions constitute trade secrets, their incorporation into a product is typically indicated not with a list of constituent chemicals but rather simply the term "fragrance". The United States Food and Drug Administration (USFDA), however, classifies fragrances that are marketed for their aroma-therapeutic capacities as drugs that are subject to the Administration's more stringent regulation. *See* USFDA, AROMATHERAPY (2015), http://www.fda.gov/Cosmetics/Products/Products/Products/ucm127054.htm.

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B. Copyright

Copyright registration is easier to acquire than patent, ⁹⁷ because the registering author must simply claim that his work is more than *de minimus* original expression.⁹⁸ In other words, an author may register expression already copyrighted or in the public domain, as long as it is *his* expression produced independently of the preexisting work.⁹⁹

Copyright owners enjoy a "bundle of rights" in a protected work, including those to reproduce and perform it, and to create derivative works.¹⁰⁰ The term of copyright is significantly longer than that of a patent, although the protection copyright offers is moderated – particularly in the United States – by "fair use" and other exemptions permitting certain unauthorized uses of copyrighted works for educational and archival purposes.¹⁰¹

Globally, the scope of copyrightable expression has grown exponentially since enactment of the Statute of Anne in 1710, which established authors' rights in their books.¹⁰² The margins of protection have expanded, accommodated by evolving copyright statutes that provide illustrative, but not exhaustive, examples of copyrightable works. The French copyright statute, for instance, delineates

⁹⁸ One must register an invention to obtain a patent for it; an author automatically obtains a copyright, however, simply by recording his original expression as text, sound, images or other copyrightable content. 17 U.S.C. § 102 (2012).

⁹⁹ In the timeworn words of Judge Learned Hand: "if by some magic a man who had never known it were to compose anew Keat's *Ode on a Grecian Urn*, he would be an 'author,' and, if he copyrighted it, others might not copy the poem, though they might of course copy Keats's." Sheldon v. Metro-Goldwyn-Mayer Pictures Corp., 81 F.2d 49, 54 (2d Cir. 1936).

¹⁰⁰ See 17 U.S.C. § 106 (2012); WIPO, Summary of the Berne Convention for the Protection of Literary and Artistic Works (1866), http://www.wipo.int/treaties/en/ip/berne/summary_berne.html (last visited Jan. 19, 2016).

¹⁰¹ See 17 U.S.C. §§ 107-110 (2012). Germany's copyright law, for instance, has no general fair use provision, and specifies all limitations on authors' rights under the statute. See Wencke Bäsler, Technological Protection Measures in the United States, the European Union and Germany: How Much Fair Use do We Need in the "Digital World"?, 8 VA. J.L. & TECH. 13, ¶ 4 (2003).

¹⁰² 8 Anne, c. 19 (1710).

Money, 12 CHEMISTRY & BIOLOGY 857 (2005) (discussing Flexitrol's attempt to become a clearinghouse for scent molecule licensing).

⁹⁷ A patent is costly and difficult to obtain because the claimant must establish that his invention effectuates new information for a useful purpose. *See* 35 U.S.C. §§ 101–103 (2012). Patent prosecution is costly in large part because it involves the work of highly trained examiners who investigate claims of novelty against the state of the art in a given class of goods. *See* MPEP § 2131 (9th ed. 2014).

fourteen exemplary categories of works typically considered works of protectable authorship, but prefaces this list with a broad statement extending copyright protection to all intellectual creations, "regardless of their embodiment, merit, or purpose."¹⁰³ The United States Copyright Statute offers a similarly broad definition of copyrightable authorship, followed by an illustrative list of eight categories of copyrightable works.¹⁰⁴

Because copyrights are easy to obtain and provide lengthy terms of protection, they would appear to be an attractive means of protection for the fragrance industry. Copyrights, like patents, provide owners near monopolies on the use of their protected information, so one could not reverse engineer and reproduce a copyrighted fragrance without authorization from the copyright owner.¹⁰⁵ Moreover, the term of protection offered by copyright is now several times that of a patent, typically providing owners control over their works for the better part of a century.¹⁰⁶

Fragrances are ultimately embodied and perceived as particular combinations of airborne molecules. Nevertheless, fragrances, like pharmaceuticals, may ultimately be reduced to works of information fixed in visual symbols comprising a formula. In this respect – and in others – they are akin to music scores whose visual information is used to produce a performance by which a work of music is typically broadly disseminated, and ultimately perceived as sound.

A skilled and patient musician can "reverse engineer" and reproduce a music score from repeatedly listening to a performance.¹⁰⁷ Digital audio technologies can

¹⁰³ Code de la Propriété Intellectuelle [Intellectual Property Code] Art. L. 112-1 (the last of the fourteen categories covers articles of haute couture).

¹⁰⁴ The House Report on the Copyright Act of 1976 states: "The bill does not intend either to freeze the scope of copyrightable subject matter at the present stage of communications technology or to allow unlimited expansion into areas completely outside the present congressional intent. Section 102 implies neither that the subject matter is unlimited nor that new forms of expression within that general area of subject matter would necessarily be unprotected." H.R. REP. NO. 94-1476, at 51 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659, 5664.

¹⁰⁵ Theoretically, another fragrance manufacturer could independently and legitimately recreate the copyrighted fragrance as long as this effort were done without access to the original fragrance. *See* discussion *supra* note 99.

¹⁰⁶ See 17 U.S.C. § 302 (2012).

¹⁰⁷ The most famous example of such a transcription from memory is Mozart's of the score of Gregorio Allegri's "Miserere" after hearing two performances of it at the Vatican in 1770. The Vatican owned the only score and parts to Allegri's work that was performed only twice a year, during Holy Week, in the Sistine Chapel. Performers with access to the score and parts were

dissect the sounds of performances of even relatively complex musical works and render increasingly accurate scores in traditional music notation.¹⁰⁸ Just as an audio recording of the reading of a book is a copy of a literary work, a music score derived from the sounds of a performance is a copy of the musical work underlying both the performance and the score.¹⁰⁹ Likewise, if we consider man-made fragrances to be copyrightable works of authorship, the dissection and reconstruction of a fragrance, whether by a human with preternatural olfaction or by a mechanical apparatus for molecular analysis, results in a copy of that fragrance, which only the copyright owner is authorized to make.

There is no indication, until the latter half of the twentieth century, that perfumers regarded copyright as a means to protect their original blends of fragrances.¹¹⁰ Apart from the fact that the original focus of copyright protection was literary texts, there was no need for such protection given the difficulty of copying a fragrance by separating the components and determining their role in a particular blend. ¹¹¹ Given this impediment, fragrance formulas could enjoy perpetual protection as trade secrets rather than merely a term of perhaps fourteen or twenty-eight years as copyrighted works of authorship.¹¹²

By the end of the twentieth century, the breadth of copyrightable subject matter had grown to include works as disparate as fictional characters, and computer programs, far beyond the contemplation of those who promoted authors'

threatened with excommunication if they were found to have copied or distributed the work outside the Vatican. "The Papacy, realising that it owned a composition of exceptional appeal, shrewdly heightened its reputation by refusing to allow any copy to leave the Sistine Chapel. This ban was supported by threats of severe punishment." PETER PHILLIPS, BROCHURE NOTES TO THE TALLIS SCHOLARS RECORDING OF ALLEGRI'S MISERERE (Gimell Records 1985).

¹⁰⁸ Makers of Sibelius music notation software, for instance, claim that their program can convert the sound of "up to 16 instruments or notes at a time into multiple staves, with up to four voices per staff." *AudioScore Ultimate* 8, SIBELIUS, http://www.sibelius.com/products/ audioscore/ultimate.html (last visited Jan. 13, 2016).

¹⁰⁹ See generally U.S. COPYRIGHT OFFICE, CIRCULAR NO. 50, COPYRIGHT REGISTRATION FOR MUSICAL COMPOSITIONS 1 (2012).

¹¹⁰ See infra note 120 and accompanying text.

¹¹¹ This difficulty is nicely illustrated in one of the opening scenes of the film adaptation of Patrick Süskind's novel *Perfume: The Story of a Murderer,* in which the hapless perfumer played by Dustin Hoffman struggles vainly to analyze a popular fragrance of one of his competitors. PERFUME: THE STORY OF A MURDERER (Dreamworks Pictures 2006).

¹¹² The 1909 Copyright Act that was effective until 1978, provided an initial term of twentyeight years, which could be renewed. Act of Mar. 4, 1909, Pub. L. No. 60-349, 35 Stat. 1035, as amended (formerly codified at 17 U.S.C. § 1 *et seq.*). When copyright (and patent) terms expire, the once-protected work enters the public domain and can be used by anyone.

rights in the eighteenth century.¹¹³ At the same time, technologies for molecular analysis had become so advanced and accessible that perfumers could no longer depend upon secrecy to prevent competitors from learning the formulas of their fragrances. Copyright surfaced, therefore, as a potential new means of protecting fragrance formulas, attractive to an increasing number of perfumers who consider themselves authors and artists creating original aesthetic works.¹¹⁴

Although France is no longer a leading fragrance producer, it remains an influential force in the fragrance industry.¹¹⁵ Though France has lost much of the agriculture and extraction work associated with the industry, it has retained the expertise for manufacturing fragrances and creating new blends. French ventures have capitalized upon this element of national patrimony, offering education and degrees for the study of fragrance creation.¹¹⁶ Even today many perfumers at major fragrance companies have trained, at least in part, in France.¹¹⁷ Not surprisingly then, the most significant *débat* on whether fragrances are copyrightable expression occurred in France.¹¹⁸

¹¹³ See Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp., 562 F.2d 1157 (9th Cir. 1977) (finding that characters used in a McDonald's television commercial copied not merely the plaintiffs' idea of fanciful characters in action, but substantially also their specific means of conveying the idea); Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983) (finding that if "other programs can be written or created which perform the same function as an Apple's operating system program, then that program is an expression of the idea and hence copyrightable").

¹¹⁴ See About Us, EDITIONS DE PARFUMS-FRÉDÉRICK MALLE, http://www.fredericmalle.com/ about-us/frederic-malle (last visited Jan. 13, 2016).

¹¹⁵ E.g., the American company International Flavors & Fragrances designated the Frencheducated Carlos Benaim as its first "master perfumer". *IFF Names Carlos Benaim Master Perfumer*, PERFUMER & FLAVORIST (Jan. 18, 2013), http://www.perfumerflavorist.com/ networking/news/people/IFF-Names-Carlos-Benaim-Master-Perfumer-187443131.html.

¹¹⁶ See, e.g., Perfumery School, GIVAUDAN, https://www.givaudan.com/fragrances/ perfumery-school (last visited Jan. 13, 2016); Perfumery School in Grasse, GRASSE INST. OF PERFUMERY, http://www.grasse-perfumery.com/perfumery-school-in-grasse/ (last visited Jan. 13, 2016).

¹¹⁷ See generally Perfumery School, supra note 116; Perfumery School in Grasse, supra note 116.

 <sup>116.
&</sup>lt;sup>118</sup> See GUILLEMIN, supra note 74, at Part IV (providing exhaustive coverage of French and Dutch copyright litigation involving fragrances).

C. France and the Netherlands: Odor in the Courts¹¹⁹

In the early 1970's, the French fragrance manufacturer De Laire contracted with the couture house Rochas to create several new fragrances.¹²⁰ De Laire agreed to divulge the formulas of these fragrances to Rochas in exchange for Rochas's promise to purchase from De Laire all concentrates of any new fragrances that the fashion house chose to add to its perfume line. After providing Rochas the formula for one or two perfumes, but subsequently receiving no orders to produce them, De Laire sued, claiming that Rochas had infringed its copyright by producing a fragrance using De Laire's formula.

De Laire's claim failed when an appeals court upheld a lower court's finding that perfumes are practical works and therefore eligible only for patent protection.¹²¹ Moreover, because perfumes are not tractable to meaningful and consistent description by those who perceive them, they cannot be considered copyrightable "works of intellect".¹²² The holding reflects a view that perfumes cannot be considered original expression because human olfaction is too crude to perceive and describe fragrances except in broad terms.

Fifteen years after the *Rochas* dispute the French perfume house Molinard created a fragrance marketed as a "smell-alike" of "Angel," the popular perfume created by Olivier Cresp for Quest International, commissioned by fashion designer Thierry Mugler. ¹²³ When Mugler sued Molinard for copyright infringement, the Paris Tribunal de Commerce discounted the defendant's argument based on *Rochas* that as products of industrial technique, perfumes couldn't qualify as original works of personal intellection. ¹²⁴ Comparing the

¹¹⁹ Olivia Su, Odor in the Courts! Extending Copyright Protection to Perfumes May Not Be so Nonscentsical: An Investigation of the Legal Bulwarks Available for Fine Fragrances Amid Advancing Reverse Engineering Technology, 23 S. CAL. INTERDISC. L.J. 663 (2014).

¹²⁰ See Rochas v. de Laire, Cour d'appel [CA] [regional court of appeal] Paris, 4e ch., July 3, 1975, Gaz. Pal. 1976.

¹²¹ See id.

¹²² "Oeuvres de l'esprit." *Id*.

¹²³ Mugler v. Molinard, Tribunal de commerce [T. Com.] [court of commerce] Paris, 15e ch., Sept. 24, 1999, Gaz. Pal. 2001, 17-18.01, at 5. Quest International was subsequently acquired by Givaudan in 2006. *See* Sam Cage, *Givaudan Buys Quest from ICI*, REUTERS BUSINESS NEWS (Nov. 22, 2006), http://uk.reuters.com/article/2006/11/22/uk-chemicals-givaudan-idUKL2288 827020061122.

¹²⁴ See Mugler v. Molinard, Gaz. Pal. 2001, 17-18.01, at 5. Historically, in civil law regimes, like that of France, courts pay less obeisance to case law precedence than their common law counterparts; see generally Vincy Fon & Francesco Parisi, Judicial Precedents in Civil Law Systems: A Dynamic Analysis, 26 INT'L REV. L. & ECON. 519 (2006). Accordingly, the Mugler

formula of a perfume to a music score, the *Mugler* court suggested that variations among perceptions and reactions to a scent are akin to idiosyncratic receptions among those listening to the same musical work, and do not indicate ineligibility for copyright protection.¹²⁵

Several years after *Mugler* the cosmetic giant L'Oréal sued Bellure, an importer of "smell-alike" fragrances, claiming it was infringing L'Oréal's copyright in *Trésor*.¹²⁶ Deciding the dispute in favor of L'Oréal, the Paris Cour d'appel noted that the fact that the French Intellectual Property Code does not include fragrances among its list of copyrightable works was not dispositive on the issue of copyrightability.¹²⁷ All works of intellect are eligible for copyright protection, even those that might also be patentable, or are not fixed, if they are perceptible and reveal the imprint of the creator's personality.¹²⁸

At the same time L'Oréal was prosecuting its claim against Bellure in France, its subsidiary Lancôme initiated a copyright infringement action against the Dutch perfume seller Kecofa in the Netherlands.¹²⁹ Lancôme claimed Kecofa's *Female Treasure* was not only a counterfeit of *Trésor*, but also infringed its copyright. The dispute advanced to the Netherlands' Supreme Court, which ultimately confirmed the lower courts' findings that fragrances are copyrightable.¹³⁰ The Court also noted that the Dutch copyright statute has a catholic scope of protection, and cannot be read as excluding fragrances that are perceptible, original (i.e., bearing the personal imprint of their creator) and not purely technical (i.e., useful).¹³¹

Back in France, shortly after the conclusion of the *Kecofa* litigation in the Netherlands, the same Paris appeals court that determined L'Oréal's *Trésor* could be protected by copyright reached a consistent conclusion in a claim involving designer Jean-Paul Gaultier's perfume *Le Mâle*.¹³² Gaultier's perfume

¹²⁷ See id.

 $\frac{128}{120}$ *Id*.

¹³⁰ *See id.*

¹³¹ *Id.*

¹³² See Beauté Prestige Int'l v. Senteur Mazal, Cour d'appel [CA] [regional court of appeal] Paris, 4e ch., Feb. 14, 2007, D. 2007, at 735, J. Daleau.

court evidently felt no compunction about rendering a decision incompatible with that of the earlier *Rochas* decision by a higher court.

¹²⁵ See Mugler v. Molinard, Gaz. Pal. 2001, 17-18.01.

¹²⁶ See Bellure v. L'Oréal, Cour d'appel [CA] [regional court of appeal] Paris, 4e ch. A, Jan. 25, 2006, D. 2006, at 580, J. Daleau, *aff'g* Bellure v. L'Oréal, Tribunal de Grande Instance [TGI] [ordinary court of original jurisdiction] Paris, May 26, 2004, D. 2004, at 2641, note Galloux.

¹²⁹ HR 16 juni 2006, NJ 2006, 585 m.nt. JHS (Lancôme/Kecofa) (Neth.).

manufacturer, Beauté Prestige International, sued a competitor, Senteur Mazal for infringing the copyrights and trademarks of Gaultier's perfumes by which it marketed "smell-alikes" sold at prices much lower than those of the Gaultier products.¹³³

Like the court in the earlier *Mugler* decision, the *Gaultier* court discounted the defendant's argument that variances in human perception of fragrances make it impossible to establish that a perfume possesses the originality required for copyright protection.¹³⁴ Responding to this argument the court noted that literary, graphical, and musical works are also perceived variously, but these variations in perception do not undermine the originality of these works.¹³⁵

The opinions in these Dutch and French cases, which emphasize the role of the perfume creator, give short shrift to that of the user in determining whether fragrance may be copyrightable. The decision in L'Oréal's case against Bellure, for instance, expressly found that a perfume could reveal the personality of its creator, and thereby be an original work.¹³⁶ Neither *L'Oréal*, nor any of the other cases, however, addressed the issue of what constitutes the "revelation" of a work, a question that necessarily implicates those perceiving the "revealed" work.¹³⁷

The shortcoming of these decisions lies not in their determination that the work of perfumers can be a complex intellectual and aesthetic endeavor akin to writing and painting, but rather in the fact that they do not consider the lack of human olfactory capacity to perceive the complexity of the work rendered from this intellectual investment. The ultimate issue in all of the cases involving the copyrightability of fragrance, therefore, is *how perceptible* must expression be to be protectable by copyright.

Despite the pro-copyright outcomes of the *Kecofa*, *Mugler*, and *Gaultier* cases, the Cour de cassation recently delivered a severe check to those advocating copyright eligibility for fragrances in France, by addressing this issue of perception.¹³⁸ In 2006 Patrice Farque was prosecuted for selling counterfeit

¹³³ *Id*.

 $^{^{134}}$ Id.

¹³⁵ *Id*.

¹³⁶ See Bellure v. L'Oréal, Cour d'appel [CA] [regional court of appeal] Paris, 4e ch. A, Jan. 25, 2006, D. 2006, at 580, J. Daleau.

¹³⁷ See Charles Cronin, Genius in a Bottle: Perfume, Copyright, and Human Perception, 56 J. COPYRIGHT SOC'Y U.S.A. 427 (2009) (discussing relative acuity of human senses and its relevance to intellectual property protection).

¹³⁸ The Cour de cassation is France's highest appellate court that is separated into six subjectmatter divisions, e.g., labor, criminal, civil, etc.

fragrances at a flea market outside Paris.¹³⁹ When the case foundered for lack of evidence Lancôme et al. claimed that by selling imitations of its fragrances Patrice Farque had infringed Lancôme's copyright in these products.¹⁴⁰

When Lancôme's case ultimately advanced to the Cour de cassation (commercial section) in 2013, the court determined unequivocally that fragrance is not copyrightable expression.¹⁴¹ The court separated the act of creating a fragrance from that of perceiving it, finding that while the development of a perfume may involve creative intellection beyond technical know-how, this original thought cannot be broadly *communicated* because it cannot be sufficiently *perceived*.¹⁴²

With its 2013 decision in *Lancôme v. Farque* the Cour de cassation dashed expectations that French copyright law might offer the fragrance industry a new means by which to protect its perfume formulas. Courts in the United States have not yet fielded the question of whether fragrances may enjoy copyright protection. In fact, the existing classifications under which works may be registered in the United States would not accommodate an application for a work of fragrance.¹⁴³ Accordingly, except in the Netherlands, copyrights, like patents, offer little potential solace to an industry unsettled by the vulnerability of its most valuable intellectual property.

III

FRAGRANCE AND TRADEMARK PROTECTION

A. The Expanding Scope of Trademark Protection

Like the sphere of copyrightable expression in the United States, the range of commercial indicators protectable as trademarks increased dramatically in the

¹⁴³ The U.S. Copyright Office accepts registrations for works of: literature, visual arts, performing arts, sound recordings, and single serials. See eCO Frequently Asked Questions, U.S. COPYRIGHT OFFICE, http://copyright.gov/eco/faq.html (last visited Jan. 14, 2016).

¹³⁹ Société Lancôme v. Patrice Farque, Cass. com., Dec. 10, 2013 [pourvoi n° 11-19872] available at http://www.cecoa.eu/images/cecoa/artdroit201312001.pdf.

¹⁴⁰ See id. ¹⁴¹ Id.

¹⁴² Jean-Michel Bruguière has argued that the court's rationalizing its decision on the imperceptibility of the intellectual investment in the creation of a fragrance is flawed: "[t]he olfactory notes of Chanel No. 5 or Eau Sauvage are as reliably and accurately identifiable as musical notes - the harmony of the Beach Boy's "Good Vibrations" or the melody of the Rolling Stones' "Satisfaction". Jean-Michel Bruguière, Chroniques: Droit d'Auteur et Droits Voisins [News Column: Copyright and Neighboring Rights], 50 PROPRIÉTÉS INTELLECTUELLES 51, 52 (2014). He also suggests that some contemporary works of [classical] music are no more intelligible to the public than are fragrances. See id.

latter half of the twentieth century. By the end of the century, trademark protection extended to sounds,¹⁴⁴ and even single colors.¹⁴⁵ Moreover, legally protectable visual trademarks were no longer limited to those comprising words and/or designs, but had been extended also to the "trade dress" of products and services.¹⁴⁶

Although U.S. law now protects colors, scents, and sounds, international conventions and other national trademark regimes are typically less accommodating than the United States of these non-traditional marks. For example, the World Trade Organization's multilateral Agreement on Trade-Related Aspects of Intellectual Property establishes only that *combinations* of colors may be eligible for trademark protection, and that registration may be conditioned on the mark having already acquired distinctiveness in the market through use.¹⁴⁷ There is considerable variation among national trademark regimes on trademark protection for color marks, and even relatively liberal regimes, like that of Germany, may protect only those single-color marks that have acquired secondary meaning.¹⁴⁸

There is a similar lack of consistency among national trademark regimes with respect to sound marks, stemming in part from the fact that some nations, like Mexico and Brazil, permit registration only of marks that are visually perceptible.¹⁴⁹ While sound marks are not visually perceptible, they can be verbally documented quite accurately. Many sounds, like the iconic NBC chimes comprising the intervals of a rising sixth followed by a falling third, can be represented visually through music notation. Similarly, scent marks can be

¹⁴⁴ See generally Trademark "Sound Mark" Examples, U.S, PATENT & TRADEMARK OFFICE, http://www.uspto.gov/trademark/soundmarks/trademark-sound-mark-examples (last visited Jan. 14, 2016).

¹⁴⁵ See, e.g., Qualitex Co. v. Jacobson Products Co., 514 U.S. 159 (1995).

¹⁴⁶ See discussion *infra* Part III.C. "The 'trade dress' of a product is essentially its total image and overall appearance. It 'involves the total image of a product and may include features such as size, shape, color or color combinations, texture, graphics, or even particular sales techniques." Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763, 765 n.1 (1992) (citing Blue Bell Bio Medical v. Cin Bad, Inc., 864 F.2d 1253 (5th Cir. 1989), and John H. Harland Co. v. Clarke Checks, Inc., 711 F.2d 966 (11th Cir. 1983)).

¹⁴⁷ See Daniel Zendel & Dennis Prahl, *Making Sense of Trademarks: An International Survey of Non-Visual Marks*, TRADEMARK WORLD, Issue 89 (1996), http://ladas.com/making-sense-trademarks-colors-sounds-scents/.

¹⁴⁸ See id. (noting that while the German Marks Act of 1995 accommodates color marks, the German Patent Office internal guidelines require these marks to be combined with other distinctive features to be registrable).

¹⁴⁹ See id. (noting the "visual perceptibility" requirement of both the Mexican Industrial Property Law and Brazilian Industrial Property Code).

accurately visually represented using the standard chemical symbols and verbal instructions of formulas, but are less tractable to verbal description than sound marks.

Courts have been reluctant to recognize colors, scents, and flavors as trademarks because doing so could allow the initial user to unfairly monopolize the viable marks for particular categories of goods and services.¹⁵⁰ A fundamental purpose of trademark protection is to protect consumers from deceptively labeled goods.¹⁵¹ However, courts have held that this objective should not limit competition in a market by rewarding early entrants with potentially perpetual exclusive use of a limited number of marks.¹⁵²

In particular, scent, flavor, and single-color marks are more readily depleted than design and word marks. This is not because there are fewer potential marks in these classes, but rather because consumers are less able to distinguish among them than among design, word, and sound marks.¹⁵³ For example, there are innumerable shades of red, but it is difficult to distinguish readily between Stanford's "cardinal" and Harvard's "crimson" without additional verbal or visual information. On the contrary, it is impossible to confuse the different verbal mottos also branding these universities.¹⁵⁴ Consumers would not be served by a prohibition on other

¹⁵¹ See William Landes & Richard Posner, *Trademark Law: An Economic Perspective*, 30 J. L. & ECON. 265, 269 (1987) (discussing this benefit as reducing "consumer search costs").

¹⁵⁰ In 1949, for instance, in *Campbell Soup Co. v. Armour & Co.*, the Third Circuit rejected plaintiff's claim to the exclusive right to use the color combination of red and white on food products: "If they may thus monopolize red in all of its shades the next manufacturer may monopolize orange in all its shades and the next yellow in the same way. Obviously, the list of colors will soon run out." Campbell Soup Co. v. Armour & Co., 175 F.2d 795, 798 (3d Cir. 1949). Over forty years later, in *NutraSweet Co. v. Stadt Corp.*, the Seventh Circuit rejected the plaintiff's claim to the exclusive right to use pastel blue on its sugar substitutes packaging: "if each of the competitors presently in the tabletop sweetener market were permitted to appropriate a particular color for its product, new entrants would be deterred from entering the market." NutraSweet Co. v. Stadt Corp., 917 F.2d 1024, 1028 (7th Cir. 1990). Ultimately, in *Qualitex*, the Supreme Court "concluded that the color depletion issue would rarely arise and could be resolved, if necessary, by applying the functionality doctrine to prevent anticompetitive results." 1-2 GILSON ON TRADEMARKS § 2.11.

¹⁵² See NutraSweet, 917 F.2d at 1028.

¹⁵³ See Cronin, Genius in a Bottle, supra note 137.

¹⁵⁴ "Die Luft der Freiheit weht" and "Veritas" respectively. The greater the number of different colors in a mark the greater the likelihood of its distinctiveness. Nevertheless, the particular perception of color marks depends to a greater extent than that of word marks on geographical location. San Franciscans will associate a combination of the colors blue and gold with the University of California at Berkeley while residents in St. Paul will think of their city's Bethel University. Residents of both cities will associate the combination of red, white, and blue

universities using the color red as part of their "brand" simply because Harvard was the first to do so. It is desirable, however, to curtail another university's branding itself with the color red, the motto "Veritas", and – obviously – the name Harvard, because it curbs potential confusion on the part of consumers, as well as unwarranted derogation that the original Harvard might suffer.¹⁵⁵

Like single colors, scents and flavors are problematic trademarks because the typical consumer cannot distinguish variations in scents and flavors as easily as those of designs and words.¹⁵⁶ While there is an infinite variety of scents and flavors, we tend to classify them, as we do shades of color, using relatively limited taxonomies: "royal blue", "blood red", etc. For instance, we use "floral" to describe the scents of hundreds of different flowers, and "spicy" to refer to the taste of hundreds of different piquant flavors.

The greater the number of words or designs that are combined in a mark, the more complex and inherently distinctive it is likely to be.¹⁵⁷ This is not true for scents and flavors. Combinations of different scents and of different flavors may yield more complex chemical compounds, but we tend to perceive these not as distinctive new scents and flavors but rather as muzzy blends of the relatively few existing generic categories: "this wine has a citrusy flavor;" "this moisturizer has a vegetal scent."¹⁵⁸ There are, of course, thousands of varieties of vegetal scents and

¹⁵⁷ Visually or verbally complex marks, however, may be weaker than simple marks because they demand more intellectual effort on the part of consumers to decipher and recall their association with a particular product or service.

¹⁵⁸ Most notorious is the wine industry's attempts to suppress the fact of weak human perception of tastes and smells, with the humbuggery it uses to market its products. *See* David

with the United States; those of Paris and Lyon, on the other hand, will think of France (though they will reorder the colors to that of their *tricolore:* blue, white, and red).

¹⁵⁵ See 1-2 GILSON ON TRADEMARKS § 2.11 (discussing case law establishing that school colors, when used with "other indicia" of the school, can acquire secondary meaning to qualify for trademark protection).

¹⁵⁶ See Douglas Churovich, Intellectual Property: Policy Considerations from a Practitioner's Perspective: Scents, Sense or Cents? Something Stinks in the Lanham Act: Scientific Obstacles to Scent Marks, 20 ST. LOUIS U. PUB. L. REV. 293, 293–94 (2001) (claiming that "the landmark In re Clarke decision was ill-advised since it was founded upon a poor, if not non-existent, understanding of osphresiology and the misguided application of legal principles that fail to apply to scents"); Bettina Elias, Do Scents Signify Source? An Argument Against Trademark Protection for Fragrances, 82 TRADEMARK REP. 475 (1992) (claiming that "fragrances only rarely, if ever, function as trademarks in the marketplace and, in those few cases in which fragrances do arguably indicate a product's source, their trademark protection remains doctrinally problematic and potentially impossible to implement and enforce in a consistent fashion.").

citrusy flavors but humans cannot readily distinguish among them using a broadly shared taxonomy. Accordingly, because this perceptual inadequacy presents a risk for trademark depletion, most trademark regimes do not accommodate scent marks.¹⁵⁹

International conventions touching on intellectual property, like the TRIPS Agreement and the European Union Trademark Directive, do not expressly permit or prohibit trademark protection for scent marks. However, international courts and national laws have made it difficult or impossible to register them.¹⁶⁰ On the national level the trademark statutes of France and Germany implicitly preempt scent mark registrations by limiting protection to marks that can be visually represented.¹⁶¹

In 2002 the European Court of Justice (ECJ) considered the question of what constitutes graphical representation of a scent mark.¹⁶² The dispute involved an appeal from the ruling of a German court that upheld the national trademark office's refusal to register a scent.¹⁶³ The applicant, Ralf Sieckmann, had submitted a fragrance claiming it as a mark denoting a range of professional services.¹⁶⁴ As graphical representations of the mark Sieckmann provided a sample of the fragrance in a liquid, the chemical composition of the fragrance (C6H5-CH = CHCOOCH3), and a description of it as "balsamically fruity with a slight hint of cinnamon."¹⁶⁵

Derbyshire, *Wine-Tasting: It's Junk Science*, GUARDIAN (June 22, 2013, 7:01 PM), http://www.theguardian.com/lifeandstyle/2013/jun/23/wine-tasting-junk-science-analysis.

¹⁵⁹ On this question "[t]he door is firmly closed in ... countries such as Brazil Japan, China and Taiwan, where scent marks are neither registrable and the courts do not appear to have considered the protection of unregistered scent marks under other legal theories." *See* Zendel & Prahl, *supra* note 147.

¹⁶⁰ See First Council Directive to Approximate the Laws of the Member States Relating to Trade Marks, art. 2, O.J. L 40/1, at 2 (1989) (broadly defining trademarks as comprising "any sign capable of being represented graphically ... provided that such signs are capable of distinguishing the goods or services of one undertaking from those of another undertaking"); Agreement on Trade Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments-Results of the Uruguay Round, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) (offering a similarly broad definition of trademarks, and the right of convention members to "require, as a condition of registration that signs be visually perceptible").

¹⁶¹ See Zendel & Prahl, supra note 147.

¹⁶² Case C-273/00, Ralf Siekmann v. German Pat. & Tmk. Office , 2002 E.C. R. I- 11754.

¹⁶³ *Id.* at ¶/14-15.

¹⁶⁴ *Id.* at \P 10-11.

¹⁶⁵ *Id.* at ¶/11-13.

The ECJ determined that none of these submissions, alone or combined, were an effective graphical representation of the scent as a trademark.¹⁶⁶ Although the submissions were visual, they did not enable consumers "... to guarantee the identity of the origin of the marked product or service...by enabling him, without any possibility of confusion, to distinguish that product or service from others..." ¹⁶⁷ In other words, these representations are ineffective graphical representations because the appearance of an amber liquid, and the words "balsamically fruity" are so commonplace that when consumers encounter them they will conjure any number of scents (and tastes). Moreover, only a narrow sector of consumers who are trained as chemists might recognize "C6H5-CH = CHCOOCH3" as the fragrant compound Methyl Cinnamate.

Consumers' limited capacity to perceive Sieckmann's mark through these visual representations would obscure the boundaries of protection trademark registration might provide. This would defeat the purpose of graphical representation, which is required "...specifically to avoid any element of subjectivity in the process of identifying and perceiving the sign," and would provide overly broad protection that is potentially detrimental both to consumers and competitors of the trademark owner. ¹⁶⁸ Moreover, even if consumers recognized the chemical formula for Methyl Cinnamate, as readily as we recognize H2O as that for water, the fragrance mark itself is inherently unstable "...because of different factors which influence the manner in which it can actually be perceived, such as concentration, quantity, temperature or the substance bearing the odor."¹⁶⁹

Unlike the European Union, the United States does not require that trademarks be represented graphically to be registered. In fact, the United States Patent and Trademark Office (USPTO) has accommodated registration for such marks by establishing a classification for them: Mark Drawing Code 6, "for situations for which no drawing is possible, such as sound."¹⁷⁰

Nevertheless, while there are many United States trademark registrations for sounds there are remarkably few for scents.¹⁷¹ The first scent mark registration was issued in 1991, after the Trademark Trial and Appeal Board overturned the USPTO's initial denial of a trademark registration for a floral scent used to brand

¹⁶⁶ *Id.* at ¶/39, 45-48.

¹⁶⁷ *Id.* at $\P{35}$.

¹⁶⁸ *Id.* at $\sqrt[n]{54}$.

 $^{^{169}}$ *Id.* at $\sqrt[9]{63}$.

¹⁷⁰ See TMEP § 807.09 (8th ed. Oct. 2014).

¹⁷¹ See Trademark "Sound Mark" Examples, supra note 144.

sewing thread.¹⁷² Since then, only fifteen additional fragrance marks have been registered, and only four are still "living".¹⁷³ These include the scents of vanilla and citrus for cosmetics and fuel oil respectively, and that of coconut to mark the retail space of a beach apparel seller.¹⁷⁴

Most of the now expired fragrance marks were registered by Smead, Inc., a Minnesota office supplies manufacturer, to protect their branding of their paper products with fragrances like peppermint and peach.¹⁷⁵ The fact that Smead allowed their scent trademark registrations to lapse suggests that the company determined that consumers did not effectively associate the scents with their particular source. Smead might have more successfully developed consumer association between the scent of the paper products and their manufacturer if it had deployed a single fragrance across its entire line of products. While Smead could not monopolize the *idea* of scenting paper, which stationers have been doing for centuries, it might have monopolized the use of a *particular* fragrance for paper products. Smead's use of *various* fragrances to mark interchangeable products, likely led consumers to associate the fragrance more with the particular variants – scent of peaches for the peach colored file folders, etc. – than with the manufacturer.

B. Growing Significance of Multisensory Trade Dress

Retail sales of consumer goods have always been driven in part by visual cues in the presentation of the merchandise, which comprise not only the distinctive packaging that we identify with specific products, but also the overall visual ambiance in which the products are displayed and sold. While one shops for apparel at Saks, the flattering lighting and carpeted dressing rooms promote

¹⁷² See In re Celia Clarke, 17 U.S.P.Q.2d 1238 (T.T.A.B. 1990) (finding that "the scent of a product may be registrable if it is used in a non-functional manner").

¹⁷³ Sixteen records were obtained July 21, 2015 using the USPTO's Trademark Electronic Search System searching the terms "for situations for which no drawing is possible, such as sound," in the Mark Drawing Code field, and the term "fragrance" in the Description of Mark field. *Trademark Electronic Search System (TESS)*, U.S. PATENT & TRADEMARK OFFICE, http://tmsearch.uspto.gov (last visited Jan. 15, 2016).

¹⁷⁴ CITRUS FRAGRANCE, Registration No. 3,726,789 (issued 2009 for biofuel); the mark consists of a coconut scent or fragrance, Registration No. 4,113,191 (issued 2012 for retail sales); the mark consists of a high impact fragrance primarily consisting of musk, vanilla, rose, and lavender, Registration No. 4,057,947 (issued 2011 for cosmetics).

¹⁷⁵ The specific paper products they sought to protect were hanging file folders. *See, e.g.*, APPLE CIDER SCENT, Registration No. 3,140,701 (cancelled in 2013).

lingering, and palliate sticker shock.¹⁷⁶ In contrast, the buzzing fluorescence and concrete floors of Costco generate brisk efficiency for the grim acquisition of huge quantities of "house brand" paper products and similar utilitarian goods sold at "volume discount" prices.¹⁷⁷

In general, the more a product's economic value stems from its purported refinement and exclusivity (e.g., perfume, jewelry, haute couture) the more its retail sales are tied to visual presentation and other factors extrinsic to the product itself. The cost of presentation and other less immediately apparent external factors, like polite salesclerks, clean washrooms, or a forgiving returns policy, are built into the retail prices of these goods. Accordingly, while Target sells for \$80 a two-and-a-half ounce bottle of the *eau de* toilette of Patou's *Joy*, Nordstrom charges \$130 for the same item.¹⁷⁸

Retailers also use sound to boost sales, which is not a recent phenomenon. Even before the advent of technologies for recording and broadcasting musical works, department stores engaged musicians whose live performances promoted not only sales of sheet music, but also the sale of other merchandise, once the music had lured customers into the store.¹⁷⁹ Some retailers, restaurants, and hotels still enhance their public spaces with live music performances.¹⁸⁰ However, with

¹⁷⁶ See generally, MARTIN LINDSTROM, BUYOLOGY: TRUTH AND LIES ABOUT WHY WE BUY (2008) (discussing tactics by which retailers and consumer products companies sell products through the use of various sensory stimuli).

¹⁷⁷ See generally id.

¹⁷⁸ These prices were found on websites of these retailers on July 28, 2015. Target does not sell *Joy* in its physical stores, so its presentation costs for this product are minimal. TARGET, http://www.target.com/ (last visited July 28, 2015); NORDSTROM, http://www.nordstrom.com/ (last visited July 28, 2015). Target's decision not to sell *Joy* in stores may have been motivated by fears that the small but relatively expensive item would be attractive to shoplifters. It may also have contracted with Patou not to do so based on Patou's concern about the pollution of its brand through association with Target. The existing arrangement benefits both companies because underlying it is a conspiratorial understanding between them and consumers who would be embarrassed by purchasing a high-end product at a brick-and-mortar Target bargain-counter. *Eau de toilette* is the most diluted version of a fine fragrance, and the only version of *Joy* sold by Target. Nordstrom also sells *Eau de parfum* that is less diluted, and more expensive, than the *Eau de toilette*. Nordstrom does not sell the *parfum*, a half ounce of which is sold only at top-tier shops like Neiman Marcus for about \$350. TARGET, http://www.target.com/ (last visited July 28, 2015); NORDSTROM, http://www.nordstrom.com (last visited July 28, 2015); Nieman Marcus, http://www.niemanmarcus.com/ (last visited July 28, 2015).

¹⁷⁹ See David Suisman, Selling Sounds: The Commercial Revolution in American Music 66 (2012).

¹⁸⁰ These venues include not only restaurants featuring the dreaded "strolling musicians" but also Nordstrom department stores where former U.S. Secretary of State Condoleezza Rice once

the development of recording and broadcasting technologies, this goal is now met mainly through recorded performances of musical works.¹⁸¹

"Background music" is now so prevalent in commercial spaces in the United States that it is disconcerting to enter a shop or restaurant blessedly free of it.¹⁸² Like the visual décor of commercial spaces, these aural ambiances are now artfully developed and deployed to promote sales of goods and services to specific populations of consumers.¹⁸³ This deployment is now so pervasive in retail spaces that the withholding of music and all visual adornment in "big box" stores like Costco, appears to be a deliberate reassurance to customers seeking to purchase goods at "no-frills" prices.

Because the sound of recorded music is now so commonplace in retail locations, customers do not *listen* to it as they might have a century ago. Customers still hear the music, however, and the character of the music becomes a familiar and predictable attribute of a particular commercial milieu.¹⁸⁴ In other words, regardless what music being played, it is being deployed as "muzak", i.e. an aural enhancement of an environment in which retailers anticipate that we will focus on something else, namely purchasing their goods or services.¹⁸⁵

This ambient music affects the experience and behavior of customers in these retail spaces.¹⁸⁶ Retailers play music to entice customers to linger over merchandise by providing familiar and affirmative "sound tracks".¹⁸⁷ They tailor

¹⁸¹ See SUISMAN, supra note 179.

¹⁸³ See generally George Prochnik, IN PURSUIT OF SILENCE: LISTENING FOR MEANING IN A WORLD OF NOISE (2010) (discussing soundscapes developed on behalf of Abercrombie & Fitch).

¹⁸⁴ See LINDSTROM, BRAND SENSE, supra note 23, at 72 (observing that "while hearing involves receiving auditory information through the ears, listening relies on the capacity to filter, selectively focus, remember, and respond to sound").

¹⁸⁵ Broadcasting music recordings has also been used effectively to alienate undesirables from commercial spaces. See Twilight of the Yobs: How Classical Music Helps Keep Order, ECONOMIST (Jan. 6, 2005), http://www.economist.com/node/3536150.

¹⁸⁶ See LINDSTROM, BRAND SENSE, supra note 23, at 74 (noting that in Disney World "carefully choreographed sound is piped through the entire park. Even the bird sounds are controlled. It's a whole environment designed to capture the hearts of children and waken the child within each adult.").

¹⁸⁷ A Gap store in San Francisco enables customers to use smart phones to select the muzak they hear while shopping. See Gap Pilots In-Store DJ System, Lets Customers Pick and Play

anticipated making a living as a musician. See ELISABETH BUMILLER, CONDOLEEZZA RICE: AN AMERICAN LIFE 56 (2007).

¹⁸² "[M]usic, any music at all, is so welcome to the weak of mind and so readily supplied by their commercial manipulators that almost all the music you hear, at least all you hear inadvertently, is BAD." PAUL FUSSELL, BAD: OR, THE DUMBING OF AMERICA 126 (1991).

the music to appeal to consumers based on factors like age, race, gender, and economic class.¹⁸⁸ While a misogynist rap number broadcast in a Nike store might subliminally flatter the egos of young male customers, it would likely alienate shoppers at Tiffany's browsing engagement rings and bone china.¹⁸⁹ Accordingly, shopping malls and department stores broadcast varied "soundscapes" in which the disparate "sound tracks" comprising them are regularly updated to conform to the evolving musical tastes of their targeted consumers.¹⁹⁰

Like music, scents have long been used in the marketing of goods and services. The aroma of baking cookies, with its homey associations, has often been used to market houses; the alarming odor of burnt wood has been used to sell fire insurance policies to protect such property.¹⁹¹ Moreover, developers of scent delivery systems have capitalized upon existing technologies like ink-jet printing and smartphones to create new means of communicating scents, particularly in connection with advertising and entertainment.¹⁹²

Music, VENTUREBEAT (Nov. 21, 2011, 9:13 AM), http://venturebeat.com/2011/11/21/roqbotgap/. It seems unlikely, however, that retailers would ever provide customers the wondrous capacity simply to turn off a soundtrack.

¹⁸⁸ See generally PROCHNIK, supra note 183.

¹⁸⁹ Marketing researchers have established that classical music played in a commercial setting increases the "quality sensation". See Annabel Elliott, The Buy-ology of a Shopping Spree: How Stores like Apple and Victoria's Secret Use Scent, Sound and Color to Make You Spend More Money, DAILY MAIL (Dec. 5, 2014), http://www.dailymail.co.uk/femail/article-2861386/The-Buy-ology-shopping-spree-stores-like-Apple-Victoria-s-Secret-use-scent-soundcolor-make-spend-money.html. Accordingly, one is more likely to hear classical music in a highend restaurant or art gallery catering to discerning customers than in a fast-food joint or sneaker shop targeting teenagers. See id.

¹⁹¹ In the 1930s, a Connecticut home insurance firm impregnated their advertising brochures with the scent of charred wood. See Marston Bogert, Your Nose Knows, 39 SCI. MONTHLY 345 (1934). Such uses of scents capitalize on their potential to conjure powerful memories instantaneously, a phenomenon known as the "Proustian effect". See Sarah Dowdey, Does What You Smell Determine What You Buy?, HOW STUFF WORKS, http://money.howstuffworks.com/ scent-marketing.htm (last visited Jan. 14, 2016). "When you first perceive a scent, you connect it to an event, person or thing. When you smell the scent again, it often triggers memory in the form of a conditioned response . . . smell can also activate the subconscious and influence your mood. Instead of reminding you of specific details from [a] vacation, [an] ocean scent might make you feel content or happy." Id.

¹⁹² See Roxie Hammill & Mike Hendricks, Scent Received, With a Tap of a Smartphone, N.Y. TIMES (July 8, 2015), http://www.nytimes.com/2015/07/09/technology/personaltech/scentreceived-with-a-tap-of-a-smartphone.html (discussing "Scentee", "oPhone Duo" and other mechanisms developed to generate specific scents in response to digitally communicated instructions).

Marketers, however, increasingly use fragrances not to conjure a narrowly defined good or service, but to mark an overall environment in which retail customers purchase the goods or services of a particular seller.¹⁹³ This practice is not limited to sellers of luxury goods and services: today "… marketing using scent is catching on among retailers and in car showrooms, sports stadiums, airports, banks and apartment buildings that seek to distinguish themselves with customers via the deeply influential sense of smell."¹⁹⁴

For example, the air in the lobbies of all Omni hotels is infused with the scent of lemongrass.¹⁹⁵ Omni anticipates that its repeat customers will learn to associate this scent with comfortable accommodations, and specifically those offered by Omni. Hyatt's objectives in their use of fragrance are more nuanced than Omni's. Hyatt scents the air of the public spaces of each of its sumptuous "Park Hyatt" properties with a different and unique bespoke fragrance, which is also used to scent the lotions, soaps, and candles liberally sprinkled throughout the particular hotel's public and private spaces.¹⁹⁶ Hyatt hopes that because customers will encounter a particular bespoke fragrance *only* at the hotel in which it is deployed; they will associate it not with "Hyatt" – which has properties ranging from relatively austere to luxuriant - but with a particular top-tier Hyatt hotel that is purposefully distinct from all other Hyatt properties.¹⁹⁷

¹⁹³ "The real action, however, lies in projecting olfactory character into indoor commercial spaces. This application has been fully embraced in one large business sector: the gaming industry. Las Vegas is the trend's epicenter; half the major properties on the Strip have scent systems. The MGM Grand has deployed as many as nine scents simultaneously around its property and the Venetian features a corporate logoscent called 'Seduction'." LINDSTROM, BRAND SENSE, *supra* note 23, at 171.

¹⁹⁴ Alexia Elejalde-Ruiz, *For Branding, Many Places Adopt Signature Scents,* L.A. TIMES (April 14, 2014, 7:05 PM), at http://www.latimes.com/business/la-fi-scent-branding-20140419-story.html - page=1. Even Goodwill Industries now infuse the air of their retail shops with a bespoke fragrance. *See id.* Goodwill's motivations for doing so, however, differ from those of a retailer like Bloomingdales. Bloomingdales scents its air to *promote* an atmosphere of luxury and exclusivity; Goodwill uses fragrance to *counter* an atmosphere of frugality, if not penury, associated with the sale of used apparel of questionable cleanliness.

¹⁹⁵ See L. Aruna Dhir, Scent of a Hotel, 4 HOTELIERS (Dec. 3, 2013), http://www.4hoteliers.com/features/article/8037.

¹⁹⁶ See Caroline Cerny, A New Scent at Park Hyatt Zurich, HYATT (May 1, 2008), http://newsroom.hyatt.com/2008-05-01-A-New-Scent-At-Park-Hyatt-Zurich (discussing how parfumeur Blaise Mautin creates different scents for Hyatt depending upon the location of the hotel; Zurich's commercial vibe is captured in an astringent scent).

¹⁹⁷ "Global Hyatt offers... more than 750 hotels in more than 45 countries." *Id.*

Retailers scent their salesrooms hoping to imprint customers' memories with a positive association between a fragrance and the experience of shopping at their stores. Retailers may do so also to promote sales of the fragrance itself, like Abercrombie & Fitch's "Fierce." The distinctive environment of this retailer is a carefully manufactured mix: visual elements like dim lighting and exiguously dressed young clerks; a loud soundtrack of popular music that teenagers find appealing; and an atmosphere constantly infused with the scent of "Fierce," the retailer's "signature" scent.¹⁹⁸ As Abercrombie's website proclaims, "Fierce", sold as a cologne, body wash, and candles, is "[k]nown as the world's hottest fragrance...a symbol of masculinity and great American achievement."¹⁹⁹ In other words, the retailer's hypertrophic sensory ambiance is intended to evoke that of attractive nuisances like Los Angeles's Sunset Strip music "clubs" that entice the same customers that Abercrombie targets: just-legal teenagers untethered from their parents, but in possession of their credit cards.²⁰⁰

C. U.S. Trademark Protection for Trade Dress

Trade dress is the "total image and overall appearance" of a product, or the totality of elements that "may include features such as size, shape, color or color combinations, texture, graphics."²⁰¹ A product's trade dress may be a concatenation of elements that are not separately protectable as trademarks, but the amalgamation of these elements is protectable because of its capacity to identify the source of a product or service.²⁰² In this respect, the whole is greater than the sum of its parts.

¹⁹⁸ In one branding study, a teenager expressed confidence that the Abercrombie jeans she had been handed were authentic, and not a knockoff pair bought from a sidewalk vendor, because they were imbued with Abercrombie's signature scent. See LINDSTROM, BRAND SENSE, supra note 23, at 2.

¹⁹⁹ Fierce Cologne, ABERCROMBIE & FITCH, http://www.abercrombie.com/shop/us/menscologne/fierce-cologne-5217072 01 (last visited Jan. 14, 2016). "Fierce" was created by Christophe Laudamiel, a gay parfumeur from France. See Serguey Borisov, Intervew with Christophe Laudamiel, FRAGRANTICA (Apr. 13, 2014, 7:03 AM), http://www.fragrantica.com/ news/Interview-with-Christophe-Laudamiel-5381.html.

²⁰⁰ Abercrombie & Fitch is a "retailer of men's and women's casual clothing, such as t-shirts, outerwear, sweatshirts, woven shirts, sweaters, jeans, khakis, shorts, baseball caps, belts, socks, and other accessories . . . designed primarily to appeal to young men and women of college age." Abercrombie & Fitch Stores, Inc. v. Am. Eagle Outfitters, Inc., 280 F.3d 619, 624 (6th Cir. 2002). See generally PROCHNIK, supra note 183, at 89 – 106 (2010) (documenting the marketing tactics of Abercrombie and similar retailers to attract young customers by creating alluringly risqué environments) ²⁰¹ TMEP, § 1202.02 (8th ed. Oct. 2014).

²⁰² See Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763 (1992) (finding that the overall décor of the respondent's restaurant was inherently distinctive, and therefore protectable trade

The trade dress of a product or service might also be the combination of separately protectable marks. If, for instance, a computer manufacturer tagged its products with an image of a lemon, colored them a bright yellow, and imbued their laptops and peripherals with a lemon scent, all three tags contribute to the products' trade dress despite the fact that each of them might be separately protected as a trademark when applied to computing machinery.

Trade dress can now be registered as trademarks on the Principal Register in the United States.²⁰³ Nevertheless, the trade dresses for most products and services have not been registered.²⁰⁴ This may be because a trade dress, like a trade secret, is typically developed incrementally over time, and its value often becomes apparent to the owner only when another tries to capitalize upon it.²⁰⁵ Also, trade dress tends to be more protean than word and design marks. Whereas the hairstyle and apparel of Betty Crocker or the Morton Salt Girl needs to be updated only every few decades, the soundscape of a department store must be adjusted to evolving markets far more frequently to retain its potency.²⁰⁶

Moreover, trade dress often combines non-traditional marks like sounds, colors, and scents that retailers use to create a deeper emotional response in consumers than that engendered by purely visual marks.²⁰⁷ In recent decades, as these non-traditional marks and trade dress have become more prevalent, U.S.

Register). ²⁰⁴ See 1-2 GILSON ON TRADEMARKS § 2A.01 (noting that "although there is no empirical evidence, it appears that most trade dress is not registered and may instead be judicially protected under Section 43(a) of the Lanham Act").

²⁰⁵ This was true, for example, of the trade dress at issue in *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159 (1995). Qualitex had been using the contested trade dress for about thirty years and only attempted to register it as a trademark when a competitor began using a similar trade dress.

²⁰⁶ GENERAL MILLS, HISTORY OF INNOVATION: THE HISTORY OF BETTY CROCKER, www.generalmills.com/~/media/Files/history/hist_betty.pdf; *History of the Morton Salt Girl*, MORTON SALT, http://www.mortonsalt.com/our-history/history-of-the-morton-salt-girl (last visited Jan. 14, 2016).

²⁰⁷ See 1-2 GILSON ON TRADEMARKS § 2.11 (citing Martin Lindstrom's *Brand Sense: Build Powerful Brands Through Touch, Taste, Smell, Sight, and Sound*, in which the author argues that given the overload of information in today's marketplace, retailers must develop multisensory brands to reach consumers). LINDSTROM, BRAND SENSE, *supra* note 23.

dress, even though respondent had not demonstrated that this décor had acquired secondary meaning).

²⁰³ Marks that are not inherently distinctive, but otherwise meet registration requirements, may be registered on the Secondary Register. *See* Glynn S. Lunney, *The Trade Dress Emperor's New Clothes: Why Trade Dress Does Not Belong on the Principal Register*, 51 HASTINGS L.J. 1131 (2000) (discussing significance of registration on the Principal rather than Supplemental Register).

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courts have recognized their capacity, like that of traditional word and design marks, to enable consumers to distinguish among sources of goods and services. Two Supreme Court cases, in particular, have established a vastly larger sphere of protectable trademarks than that of half a century ago.²⁰⁸

In *Two Pesos, Inc. v. Taco Cabana, Inc.*, the Supreme Court determined that trade dress was entitled to the same protection as that afforded to word and design trademarks.²⁰⁹ The parties were small Mexican fast food chains that deployed a similar décor in all of their restaurants. Taco Cabana was established seven years earlier than Two Pesos, and claimed that Two Pesos infringed its trade dress by using interior decoration confusingly similar to theirs.²¹⁰ The plaintiff's description of their trade dress was more discursive than those typically used for word or design marks, comprising not only specific ornamental objects like "artifacts, paintings, and murals," but also color schemes and architectural features like "a stepped exterior," and "bright awnings and umbrellas."²¹¹

A district court jury found Two Pesos liable for trademark infringement, having determined that that Taco Cabana's décor was protectable trade dress because it was inherently distinctive, despite the fact that the plaintiff had not demonstrated that its trade dress had acquired secondary meaning.²¹² The Fifth Circuit upheld the lower court's judgment and Two Pesos appealed. The Supreme Court granted a writ of certiorari because of a circuit split; the Second Circuit precedent conflicted with that of the Fifth, holding that, unlike a registered trademark, unregistered trade dress like the plaintiff's could obtain protection under the Lanham Act only if it were inherently distinctive *and* had acquired secondary meaning through use in commerce.²¹³

²⁰⁸ See generally Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763 (1992); Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159 (1995).

²⁰⁹ See Two Pesos, 505 U.S. at 767.

²¹⁰ See id. at 766.

²¹¹ See id. at 764.

²¹² See id. at 766. The plaintiff's exhibits of images of the competing restaurants suggest that the district court jury was likely swayed in their verdict of infringement by the fact that the defendant not only copied the plaintiff's colors, and architectural features, but also the size and arrangement of these features, down to the flower pots along an exterior wall. Photos of both restaurants are provided in the slides of Michael Atkins' presentation *Trade Dress Protection in the United States*, given at the University of Washington School of Law. Michael Atkins, *Trade Dress Protection in the United States*, SLIDESHARE, http://www.slideshare.net/mikeatkins/ alicante-presentation-7504041 (last visited Jan. 14, 2016).

²¹³ See Two Pesos, 505 U.S. at 767.

In *Two Pesos*, the Supreme Court rejected the Second Circuit's narrower approach, and upheld the Fifth Circuit's broader understanding of protection available to trade dress under the Lanham Act. Because trade dress serves exactly the same function as trademarks, the Court reasoned, there is no reason why trade dress should be subject to more stringent standards than traditional registered marks like words and designs, to obtain protection under the federal statute.²¹⁴

Three years later, in *Qualitex Co. v. Jacobson Prods. Co.*, the Supreme Court further accommodated trade dress as protectable information, determining that a single color could constitute a valid trademark.²¹⁵ The single color at issue was a bilious green/gold hue that Qualitex used on the dry cleaning pads they manufactured.²¹⁶

When Jacobson appealed the district court's ruling that it was liable for infringing Qualitex's single-color trademark, the Ninth Circuit court overturned this decision, finding that color alone could not qualify for trademark protection.²¹⁷ Qualitex, in turn, appealed to the Supreme Court, which granted a writ of certiorari to resolve contradictory precedent from various federal circuit courts on the validity of single-color trademarks.²¹⁸

The Supreme Court overruled the Ninth Circuit and upheld the validity of Qualitex's single-color trademark registration.²¹⁹ Like the multifaceted décor indicating Taco Cabana's restaurant services, the particular shade of green with which Qualitex "dressed" its products distinguished them from those of others, and served no other practical purpose.²²⁰ Moreover, Qualitex had used the color in this capacity for over thirty years, during which it acquired distinctiveness as consumers came to associate it with this company's product.²²¹

Qualitex's trade dress gradually matured into a protectable trademark as it developed secondary meaning through ongoing use in the marketplace.²²² In other words, it is only through ongoing exposure to a single color used to dress a product

²¹⁴ *See id.* at 766.

²¹⁵ Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159 (1995).

²¹⁶ See id. The pads, sold to dry cleaning establishments, look like ironing board covers. See SunGlow Press Pads, QUALITEX, http://www.qualitexco.com/http/pads.html (last visited Jan. 15, 2016).

²¹⁷ See Qualitex Co. v. Jacobson Prods. Co., 13 F.3d 1297 (9th Cir. 1994).

²¹⁸ See Qualitex, 514 U.S. at 161.

²¹⁹ See *id*. at 174.

²²⁰ See id. at 164.

²²¹ See Qualitex Co. v. Jacobson Prods. Co., 13 F.3d 1297, 1299 (9th Cir. 1994).

²²² See id.

that consumers will begin to link that particular color with that product's manufacturer. This gradually built association renders the color protectable despite the fact that consumers may have encountered or associated it with unrelated products. Taco Cabana's décor, on the other hand, was found to be inherently distinctive and therefore did not require a similar incubatory period in which to establish its eligibility for trademark protection.²²³ Such complex trade dress tends to be unique, and consumers are likely to immediately associate it with the source of the product or service it is "dressing".²²⁴

D. Fragrance as Trade Dress

Trademark, and specifically trade dress, might ultimately provide the only legally protectable intellectual property to fragrances and their manufacturers. The earlier discussion of patents and copyrights concluded that neither form of legal protection held much potential for safeguarding the fragrance industry's intellectual property.²²⁵ The term for a patent is only twenty years – shorter than the market lifespan of a successful perfume.²²⁶ Moreover, fragrances must be "useful" to be patented – not a designation that fragrance manufacturers would want applied to most of their products, particularly fine fragrances.²²⁷ As French courts ultimately determined, copyright is not a viable form of protection for fragrances, despite the creative thought their creation may involve, because this intellection cannot be communicated or perceived in an effective and consistent manner.²²⁸ Given these shortcomings of other forms of legal protection for intellectual property, trademark and trade dress emerge as the most viable options for protection. However, a number of idiosyncrasies particular to fragrance trade dress may condition its trademark protection.

Recorded music is one of the most commonly used elements to create a distinctive trade dress, but recorded music is more tightly constrained by intellectual property law than is fragrance. Retailers typically do not own the copyrights of musical works that they broadcast in their stores, and therefore must

²²³ See Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763, 775 (1992).

²²⁴ See, e.g., AmBrit, Inc. v. Kraft, Inc., 812 F.2d 1531, 1536 (11th Cir. 1986) (basing its finding that plaintiffs owned protectable trade dress in their packaging of Klondike ice cream bars on the fact that the images were not "a basic shape or common design [but] . . . [r]ather . . . a complex composite of size, color, texture and graphics . . . [creating] a distinctive visual impression").

²²⁵ See discussion supra Part I.

²²⁶ See discussion supra Part I.

²²⁷ See discussion supra Part I.

²²⁸ See supra note 139 and accompanying text.

pay royalties to their owners.²²⁹ However, the legitimate use of another's intellectual property might become part of the user's legally protectable multisensory trade dress.²³⁰ For instance, if one retailer were to consistently broadcast Bee Gees songs in its shops, it might be able to prevent other retailers from using these songs by claiming that consistent use and consumer association had transformed the music into a protectable component of its trade dress. Such use of another's copyrighted material does not provide a retailer any legal interest in the music or the recordings themselves.

If a retailer owns the underlying musical work being performed in connection with their goods, it might also seek trademark protection for the music itself. While sound marks typically comprise merely a few non-musical sounds or notes – like NBC's – a larger musical work, like a jingle, can also function as a trademark.²³¹ The efficacy of such marks, however, may ultimately depend upon consumers' ongoing familiarity with the words of the jingle that identify the retailer or brand. Accordingly, while NBC's sound mark continues to be effective, that of Mr. Softee, Inc. for instance, has become genericized.²³² Today the tinkling sound of the Mr. Softee jingle, invariably heard without its long-forgotten words, conjures the sale of aerated ice cream from itinerant trucks by any number of purveyors.²³³ In fact, any singsong tune, rendered in a chimey timbre, and sounding

²²⁹ See Copyright Act of 1976, 17 U.S.C. §106 (2012). "Mom & Pop" restaurants and retail establishments are exempt from this requirement. See id. at § 110. These royalties are managed by performing rights organizations, the largest of which is ASCAP. See AM. SOC'Y OF COMPOSERS, AUTHORS & PUBLISHERS, http://www.ascap.com (last visited Jan. 14, 2016).

²³⁰ See Kimberlianne Podlas, I Do Not Endorse This Message! Does a Political Campaign's Unauthorized Use of a Song Infringe on the Rights of the Musical Performer?, 24 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1 (2013) (arguing that performers of copyrighted musical works should not be able to prevent uses of their performances that are legitimate under copyright law, based on trademark claims). ²³¹ See id.

²³² Mr. Softee, Inc. could still assert copyright to control performances of their registered song, written by jingle composer Les Waas in 1958. See Daniel Neely, Ding, Ding!: The Commodity Aesthetic of Ice Cream Truck Music, in MOBILE MUSIC STUDIES, VOL. II 155 (2014). In fact, Les Waas's melody is highly derivative of the English Folk tune, "How many miles to Babylon?". See Eloise Hubbard Linscot, FOLK SONGS OF OLD NEW ENGLAND 18 (1939) (providing words and music notation of the song).

²³³ The same fate did not befall Coca Cola Company's jingle "I'd Like to Buy the World a Coke" despite the fact that Coca Cola later authorized the use of its melody in the pop song "I'd Like to Teach the World to Sing," recorded by The Hillside Singers. See The "Hilltop" Ad: The Story of a Commercial, LIBR. OF CONGRESS, http://lcweb2.loc.gov/ammem/ccmphtml/ colaadv.html (last visited Jan. 15, 2016). This is because whenever Coca-Cola advertised its

from a truck on a city street during the summer will elicit memories of ice cream and popsicles.²³⁴

Because fragrance enjoys relatively limited intellectual property law protection, retailers are less legally constrained in their deployment of fragrance in their public sales spaces.²³⁵ Fragrances are not copyrightable works, so the copyright performance and display rights applicable to musical and artistic works do not regulate their release into communal spaces, even commercial spaces.²³⁶ Many small retailers and service providers like spas routinely scent their atmospheres, delivering established brands of fragrances through various delivery methods, such as aerosols, scented candles, and potpourris. For example, there is nothing objectionable to Diptyque or Shoyeido about a clothing boutique owner lighting a Diptyque candle in his shop, or a spa manager burning a stick of Shoyeido incense on the premises, because doing so promotes sales of these products among customers who inquire about what they smell. Fragrance brands would likely object, however, if a large retailer used their air conditioning system to disseminate one of their fragrances consistently, and without authorization.

With scant intellectual property protection fragrance producers possess little control over use of their products, but trademark protection may offer an untapped compensatory benefit. Once Chanel sells a bottle of its well-known *No. 5* the company has virtually no legal means of controlling how the buyer uses it. However, trademark may allow it to regain some authority over sales and use of this product. For instance, if Omni Hotels began to scent all of their properties with

products using the jingle, the words identifying Coca-Cola were always heard along with the melody.

²³⁴ See Neely, supra note 232, at 146 (noting that the sound of ice cream truck music is not Pavlovian – i.e. stimulating a reflexive response to want ice cream – but rather plays on an "anamnesis" conditioned on the ability to recognize a specific product through sound).

²³⁵ Health regulations rather than intellectual property rights are more likely to affect a retailer's use of fragrances in commercial and public spaces. *See* Stuart Elliott, *Joint Promotion Adds Stickers to Sweet Smell of Marketing*, N.Y. TIMES (Apr. 2, 2007), http://www.nytimes.com/2007/04/02/business/media/02adcol.html (discussing the San Francisco's Municipal Transportation Authority's order to the California Milk Processor Board to remove chocolate-scented advertisements posted near public bus stops); RACHEL HERZ, THE SCENT OF DESIRE: DISCOVERING OUR ENIGMATIC SENSE OF SMELL 14 (2007) (noting that Halifax, Nova Scotia has enacted regulations making illegal the wearing of fragrances in public).

²³⁶ See Copyright Act of 1976, 17 U.S.C. §106 (2012). The possibility of copyright protection for fragrances raises the question how moral rights of attribution, reputation, etc. would be applicable to them under copyright regimes like that of France, that provide such protection. *See* Code de la Propriété Intellectuelle [Intellectual Property Code] L. 121-1- L. 121-4 (1992).

No. 5, rather than using their proprietary lemongrass fragrance, Chanel would likely assert a claim under the Lanham Act of unfair competition, and "passing off".²³⁷ Even if Omni used no visual evidence of the brand, Chanel would argue that by "marking" their air with the well-known *No.* 5 Omni was attempting to lead consumers to believe that its mid-range hotels are legitimately associated with this purveyor of top-tier luxury products. This association would potentially sully Chanel's image.²³⁸ Therefore, even though no other business uses *No.* 5 as trade dress, Chanel could prevent such use if it can demonstrate that consistently scenting the air of a commercial space would likely create confusion "as to the source, sponsorship, or association between goods or services."²³⁹

Fragrance's relatively brief period of perceptibility affects its trademark capacity. While consumers may "tune out" the sounds and images of a retailer's trade dress they cannot stop hearing and seeing them unless they block or replace the sounds and images.²⁴⁰ In contrast, humans become habituated to scent relatively swiftly.²⁴¹ Once we have perceived an odor, our awareness of it rapidly wanes even though we continue to be exposed to the same concentration of it in the atmosphere.²⁴²

²³⁸ See John Tagliabue, *Why European Computer Makers Flop*, N.Y. TIMES (Oct. 7, 1996), http://www.nytimes.com/1996/10/07/business/why-european-computer-makers-flop.html.

²³⁹ Lanham Act § 43(a), 15 U.S.C. § 1125 (2012).

²⁴⁰ Such efforts would involve wearing unwieldy headphones, blinders, or similar paraphernalia, the use of which may elicit ambivalence by spectators as to the mental stability of the wearer.

²⁴¹ See Jennifer Chen, Human Olfactory Perception: Mechanism, Characteristics, and Functions (May, 2013) (unpublished Ph.D. dissertation, Rice University) (on file with author); *see also* AVERY GILBERT, WHAT THE NOSE KNOWS: THE SCIENCE OF SCENT IN EVERYDAY LIFE 85 (2008) (positing that "[t]he longer you are exposed to an odor, the more you adapt to it. Step into a garlic factory and the reek will overwhelm you. A few minutes later its intensity fades, and after an hour you might not be able to smell garlic at all, no matter how hard you try. Work there a few months and this adjustment will happen almost as soon as you step in the door").

²⁴² See GILBERT, supra note 241, at 85. It is this habituation that prompts retailers of perfumes to keep at hand a saucer of coffee beans, the odor of which contrasts sharply with that of fine fragrances, thereby enabling customers to "reset" their olfaction, allowing them to perceive fragrances anew. Nevertheless, Gilbert notes that: "the bean meme is now a fixture in perfume retailing... The Jo Malone display in Saks had them [coffee beans] in an apothecary jar with a metal lid. It's all good fun and marketing, but there is not a jot of science behind it. (There

²³⁷ Lanham Act § 43(a), 15 U.S.C. § 1125 (2012) (prohibiting conduct "likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person. . . . ").

LOST AND FOUND

Because of its brief period of perceptibility, fragrance is more likely to be protected as trade dress when used in a multisensory combination of various stimuli like colors, images, and sounds. When one first enters an interior space, a signature fragrance by itself may be the first confirmation that one is at a particular retailer, hotel, or spa. As that perception wanes, however, visual and aural stimuli will play a more prominent role in consumers' awareness of a particular vendor. In fact, the consistent combination of a particular fragrance with other visual and aural stimuli will likely *strengthen* through such amalgamation, the association of that fragrance with a specific retailer.

The greater the number of sensory elements comprising a trade dress, the more likely it is to be protectable as a distinctive indicator of a particular source of goods or services. Taco Cabana's trade dress was protectable only because it combined a number of architectural and decorative elements; the murals, umbrellas, and interior design only become distinctive when combined.²⁴³ The greater the complexity of the trade dress, however, the narrower the scope of its protection. Accordingly, if Abercrombie were to claim a trade dress that comprises visual elements as well as sounds and scents, it would be difficult for this retailer to establish unfair competition based upon a competitor's use of a discrete element of Abercrombie's multisensory trade dress.

Fragrance's capacity for trademark protection may directly benefit retailers and fragrance brands, but not the industrial manufacturers of fragrance blends. A fragrance manufacturer cannot protect a fragrance as trade dress for its products or services because fragrances *are* its products and services. As such they cannot acquire the distinctiveness, or secondary meaning necessary to obtain trademark protection. Manufacturers sell even fine fragrances to retail products manufacturers like couture houses and cosmetic companies that package and label commissioned blends under their own brands.²⁴⁴ These brands, like retailers and hotel chains that scent their atmospheres, do not publicize the name of the manufacturer that produced the scent. In short, major fragrance manufacturers are akin to

are twenty-seven aroma impact molecules in roasted Arabica coffee – how could smelling all these help clear the nose?)" *Id.* at 108.

²⁴³ See Two Pesos, Inc. v. Taco Cabana, Inc., 505 U.S. 763 (1992).

²⁴⁴ Dior's fragrances like *Miss Dior and Diorissimo*, for instance, were developed, and manufactured by Givaudan. *See supra* note 77 and accompanying text

ghostwriters who cede copyright in their writings in exchange for fees from the commissioning parties to whom the published works are attributed.²⁴⁵

Although they are not the primary beneficiaries of fragrance trade dress protection, fragrance manufacturers may indirectly capitalize on the growing accommodation under U.S. trademark law for the protection of non-traditional trade dress. Ghostwriters are aware of the economic value of the copyrights that they assign to the attributed author of their works, and this value is reflected in their fees. The fact that a commissioned fragrance may now be deployed and protected as trade dress adds economic value greater than that of fragrances distributed exclusively as retail products. Given that fragrances increasingly function as valuable and legally protectable branding agents, fragrance creators should factor this development into the fees they charge for the creation and production of products deployed in this innovative manner.

CONCLUSION

Over the past twenty-five years advances in analytic technologies, and increasingly stringent government disclosure regulations, have challenged fragrance manufacturers' efforts to maintain exclusive control over their most valuable assets: proprietary information relating to the creation and manufacture of fragrances.²⁴⁶ As discussed earlier, once this information has been disseminated there is little recourse under copyright or trade secret law to check its distribution or implementation.²⁴⁷ Patents also are of limited efficacy to fragrance manufacturers, effectively protecting only newly discovered "captive" molecules.²⁴⁸

Johann Böttiger's enterprise (Meissen Porcelain) lost its most valuable, and seemingly mission-critical, trade secret within decades of its establishment. Yet, hundreds of years after what would appear to have been a devastating loss,

²⁴⁵ See ROBERTA KWALL, THE SOUL OF CREATIVITY: FORGING A MORAL RIGHTS LAW FOR THE UNITED STATES 91 (2009) (suggesting an inherent "degradation" of both attributed author and ghostwriter when the ghostwriter creates most of a literary work but without attribution).

²⁴⁶ See, e.g., United Nations Economic Commission for Europe, Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, June 25, 1998, 2161 U.H.T.S. 450 (granting the public right of access to any information held by European Union agencies relating to emissions into the environment); International Fragrance Association, North America, Federal Regulatory Chart, http://ifrana.org/advocacy/laws-and-regulations/federal/ (identifying seven federal agencies involved in regulating fragrance ingredients and manufacturing in the United States).

²⁴⁷ See discussion supra Parts I & II.

²⁴⁸ See discussion supra Part II.A.

Meissen Porcelain is flourishing not only because it diversified its merchandise, but more importantly because it capitalized upon the prestige associated with the quality of its porcelain, and also its market lead, made possible by the fact that it was the first European enterprise capable of producing it.

Like Meissen Porcelain, major fragrance houses have long histories, most having existed for well over a century.²⁴⁹ Unlike Meissen, however, these fragrance companies have functioned as ghostwriters, creating and manufacturing products ultimately sold as emanations of their customers, including couture houses, retailers, and consumer products companies. To an increasing extent, these fragrances are not merely sold by retailers as consumer products but are also used, like broadcast recordings of musical works, as a component of a larger trade dress by which consumers identify a particular retailer or service provider.

The economic potential in fragrance trade dress can be analogized to that inherent in the public performance of copyrighted musical works. Copyright owners of musical works cannot control, or derive financial benefit from, private performances of their songs. When their copyrighted compositions are performed in public, however, they are legally entitled to receive royalties for these uses of their works.²⁵⁰ Like copyright owners, fragrance manufacturers and retailers cannot control, or derive financial benefit from, private uses of their legitimately acquired products. Nonetheless, as these products are increasingly deployed in public – especially commercial – spaces, they acquire value beyond that ascribable to their hedonic attributes, by contributing to the branding of a commercial product or service. In other words, just as a copyrighted song realizes greater economic value through public performances, a fragrance acquires greater economic value when it becomes part of a legally protectable trade dress through its deployment in a commercial public space.

²⁴⁹ Givaudan, the largest fragrance manufacturer, dates its origins to 1786. *See A Rich Heritage of Growth*, GIVAUDAN, https://www.givaudan.com/our-company/rich-heritage (last visited Jan. 14, 2016). IFF was established in 1889. *See History Timeline*, INT'L FLAVORS & FRAGRANCES, INC., http://www.iff.com/Company/IFF-History (last visited Jan. 14, 2016). Firmenich was established in 1895. *See Company*, FIRMENICH, http://www.firmenich.com/ en_INT/company.html (last visited Jan. 14, 2016). Symrise merged Haarmaan & Reimer (1874) and Dragoco (1919). *See History*, SYMRISE, https://www.symrise.com/company/organization/ history/ (last visited Jan. 14, 2016). Only Takasago was established in the twentieth century. *See History of Taskago*, TAKASAGO, http://www.takasago.com/en/aboutus/history/1920.html (last visited Jan. 14, 2016).

²⁵⁰ See generally, Podlas, supra note 230 and accompanying text.

The legal protections for fragrance remain limited. Like the Meissen Porcelain enterprise in the 1720s, individual fragrance manufacturers today can never recapture once-secret information that is now widely known, or readily and legitimately ascertained by others through reverse engineering. Accordingly, trade secret protection is an increasingly elusive quarry for this industry. Patent protection is similarly inefficacious, due to its limited duration and requirement of usefulness -- a characterization unpalatable to luxury purveyors. As works of fragrance are not copyrightable, their diffusion in public spaces cannot be regulated as performances of them. When such use results in the establishment of legally protectable trade dress, however, fragrance creators could acquire a portion of the economic value of this interest, in the creation of which they have played a significant role. By capitalizing on the value stemming from the increasing *use* of fragrances in establishing protected brands, fragrance houses might find through trademark law partial compensation for this loss of intellectual property.