COMMENTS

MAKE SOME SENSE OF SCENT TRADEMARKS: THE UNITED STATES NEEDS A GRAPHICAL REPRESENTATION REQUIREMENT

INTRODUCTION

When it comes to consumer loyalty, some businesses have decided to go beyond attracting the eyes. Why not keep customers via their nostrils? Accordingly, the scent marketing industry is booming. Jennifer Dublino, Vice President of Development at Scent-World Events, remarks that "smell is one of the most unique of human senses. Scent enters the limbic system [of the brain] and bypasses all of the cognitive and logical thought processes and goes directly to the emotional and memory areas of the brain." Companies like ScentAir have been created specifically to help stores design fragrances that best fit their image and objectives as a way to increase returns on investment.

Science indicates that olfactory cues are more effective than visual cues at triggering memory.³ Scents' strong ties to memory and emotions can make them a powerful branding tool. A study found that gamblers spent forty-five percent more money when there was a floral scent present around a slot machine than when there was not.⁴ Four hundred consumers, who were surveyed after shopping in a Nike store, reported that a "pleasant ambient scent" improved

^{1.} Annie Pilon, Want More Sales? Your Store Needs a Scent, SMALL BUSINESS TRENDS (Nov. 3, 2014) (alteration in original), https://smallbiztrends.com/2014/11/your-store-needs-a-scent.html?tr=sb_pop_tcs [https://perma.cc/ZLP9-MAR6].

^{2.} Scentair, https://scentair.com [https://perma.cc/7PFX-N2ZQ].

^{3.} Maaike J. de Bruijn & Michael Bender, Olfactory Cues Are More Effective than Visual Cues in Experimentally Triggering Autobiographical Memories, 26 MEMORY 547 (2017), https://www.tandfonline.com/doi/full/10.1080/09658211.2017.1381744 [https://perm $a.cc/5U\ YH-L4SC].$

^{4.} Suzanne Bopp, *Now Smell This*, SALON (Sept. 17, 2008), https://www.salon.com/2008/09/17/scent_marketing [https://perma.cc/6KW8-WY96].

not only their evaluation of the store and its products but the likelihood they would shop there again.⁵ Some human rights activists have even suggested that using scents to identify goods could be beneficial to those who are visually impaired and are not able to reap the benefits of visual trademarks.⁶ Overall, scents appear to both attract customers and increase their affinity to a particular good or service from a specific source, much like a mesmerizing logo or catchy slogan.

A scent's ability to create strong branding ties and increase consumer loyalty supports the underlying purpose of trademark law: to extend legal protections to source indicators. However, even though scents make sense as trademarks, because they can serve as effective source identifiers, scent protection and how scents are registered varies widely amongst countries. Some countries, like China, do not permit scents to be trademarked. Other countries, including the United States, have determined that scent marks can be registered, but the registration requirements vary. Several nations currently require (or until very recently have required) a scent to be graphically represented or visually perceptible in order to be registrable.

There has yet to be a suit over scent trademark infringement in the United States. Therefore, there is serious uncertainty as to how such a case would play out under current federal trademark infringement law. It is entirely unclear how fact finders would distinguish between scents or determine if scents are confusingly similar. The judiciary's role of conducting a likelihood of confusion analysis in a scent trademark infringement action is further complicated by the fact that scents are perceived differently depending on the environmental conditions and characteristics of the smeller. The subjectivity of scent creates a real risk of inconsistent

^{5.} Rym Bouzaabia, The Effect of Ambient Scents on Consumer Responses: Consumer Type and His Accompaniment State as Moderating Variables, 6 INT'L J. MKT. STUD. 155 (2014), https://www.ccsenet.org/journal/index.php/ijms/article/view/33672 [https://perma.cc/RW4J-HSFF].

^{6.} Raja Selvam, What Is Smell Trademark or Scent Trademark? – With Examples, SELVAM & SELVAM (Mar. 13, 2011), https://selvams.com/blog/smell-trademark [https://perma.cc/HB7-I-TFXP]

^{7.} Trademark Procedures and Strategies: China, WORLD TRADEMARK REV. (Mar. 29, 2017), https://www.worldtrademarkreview.com/portfolio-management/trademark-procedures-and-strategies-china [https://perma.cc/C5FM-WRM9].

^{8.} See William S. Cain & Janneane F. Gent, Olfactory Sensitivity: Reliability, Generality, and Association with Aging, 17 J. EXP. PSYCH. HUM. PERCEPTION & PERFORMANCE 382 (1991); R.L. Doty, S. Applebaum, H. Zusho & R.G. Settle, Sex Differences in Odor Identification Ability: A Cross-Cultural Analysis, 23 NEUROPSYCHOLOGIA 667 (1985).

judicial administration in likelihood of confusion analyses. To tackle this looming concern of inconsistent judicial administration, this Comment addresses how relying solely on written descriptions and specimens for scent mark registration in the United States is elusive and suggests that the United States develop a graphical representation requirement for its scent mark registration process. Adoption of a graphical representation requirement would provide fact finders with more information to judge whether a scent mark is likely to confuse the minds of consumers regarding the source of a good or service. Additionally, a graphical representation requirement would provide other entities with greater notice as to what the protected scent mark *is* and, in turn, make such marks easier to avoid and not infringe.

Part I discusses the global variation in registration requirements for scent trademarks to illustrate that there is no uniform international standard addressing scent marks. Part I also provides context for how the United States' current scent mark procedures can be considered deficient. Part II uses the trademark prosecution history of the scent of Play-Doh to discuss some of the general issues presented by scent marks, including the subjectivity of scent, difficulties in precisely defining the scope of a scent mark, and the risk of scent depletion. Part II also establishes context for why the United States should enact a graphical representation requirement in order to avoid inconsistent judicial administration. Part III of this Comment recommends that the USPTO implement a graphical representation requirement for scent trademarks in order to give fact finders more tools to understand what the scent mark is and help them decipher how similar or dissimilar competing scents are. Part III suggests that in addition to a written description, applicants should be required to submit the chemical formula of the scent for which they are seeking protection. Additionally, Part III recommends the United States Patent and Trademark Office ("USPTO") create a two-dimensional gas chromatography with time-of-flight mass spectrometry ("GCxGC-TOF-MS") color plot from submitted scent specimens that would be published on the trademark registry if it receives trademark registration.

I. THE GLOBAL VARIATION IN REGISTRATION REQUIREMENTS FOR SCENT MARKS

A. United States Protectability

In the United States, it is not easy to obtain registered scent trademarks, and there are currently only thirteen active scent trademark registrations. The recognition of scents as registrable trademarks began in *In re Clarke*, when a woman named Celia Clarke began selling varn that smelled of plumeria blossoms. 10 The USPTO rejected Ms. Clarke's trademark application, arguing that consumers would not recognize the plumeria blossom scent as an "indicat[or] of origin" but would merely view it as a nice side effect of the product.¹¹ In the initial rejection, the examining attorney cited a "competitive need for free access to pleasant scents or fragrances."12 Ultimately, the Trademark Trial and Appeal Board ("TTAB") held that the scent of plumeria blossoms functioned as a registrable mark for "sewing thread and embroidery yarn" because it found the scent was "not an inherent attribute or natural characteristic" of the yarn. 13 In re Clarke established that scent trademarks are registrable if the scent is used in a nonfunctional manner. 14 Scents that serve a utilitarian purpose, such as the scent of perfume, are functional and not registrable. 15 All of the scents currently registered are considerably nonfunctional—for example, strawberry, 16 cherry, 17 and grape 18 scented lubricants for combustion engines.

In addition to functionality, distinctiveness is also a barrier to protection. According to the Trademark Manual of Examining

^{9.} TRADEMARK ELEC. SEARCH SYS., https://tmsearch.uspto.gov/bin/gate.exe?f=login&p_lang=english&p_d=trmk [https://perma.cc/9L3D-7ELY] (follow "Word and/or Design Mark Search (Free Form)" hyperlink; then search "6 [MD] and 'scent' and live [LD]").

^{10. 17} U.S.P.Q.2d 1238, 1238 (T.T.A.B. 1990).

^{11.} Id. at 1239.

^{12.} *Id*.

^{13.} Id. at 1240.

^{14.} *Id.* at 1239–40. The criteria in *In re Clarke* sets forth four considerations: (1) the scent mark should distinguish the applicant's goods or services from competing products; (2) the scent should not be a natural characteristic of the goods it's applied to; (3) it helps if the scent mark has been used by the applicant in advertising the goods or services; and (4) the applicant should demonstrate that consumers encountering the goods or services to which the scent is applied come to associate the scent as a source identifier. *Id.*

^{15.} See TMEP § 1202.02(a)(viii) (July 2021) regarding functionality.

^{16.} The mark consists of the strawberry scent of the goods, Registration No. 2,596,156.

^{17.} The mark consists of a cherry scent, Registration No. 2,463,044.

^{18.} The mark consists of the grape scent of the goods, Registration No. 2,568,512.

Procedure ("TMEP"), a scent can never be inherently distinctive, ¹⁹ and there is a substantial amount of evidence required to establish that a scent or fragrance functions as a mark. ²⁰

Describing a scent mark is also an area of difficulty because describing a scent in written words is often, if not always, imprecise. Scent trademark applicants are not required to submit a drawing or graphical representation of the mark as long as they submit a detailed written description clearly describing the nonvisual mark.²¹ However, the TMEP does not specify what a proper written description includes. Arguably, relying on the inherently imprecise nature of language to describe scents means that the United States has no uniform standard for representing a scent mark. The currently registered scent marks vary in the level of their written descriptiveness and specificity. For example, Brazilian footwear company Grendene successfully trademarked the scent of jelly sandals, merely describing the scent as "bubble gum."22 On the more technically descriptive side, Japanese company Hisamitsu Pharmaceutical Company trademarked the "minty" scent of pain-relief packages, described as a "mixture of highly concentrated methyl salicylate (10wt%) and menthol (3wt%)."23

In addition to a written description, an applicant must submit a specimen that "contains the actual scent or flavor and that matches the required description of the scent or flavor."²⁴ The TMEP notes that a specimen for a scent mark will, in most cases, consist of the actual good.²⁵ The TMEP states that a "scratch and sniff" sticker may also be acceptable if it is used "in such a manner as to identify the goods and indicate their source."²⁶ This guidance provided by the TMEP does not quantify how much of the sample scent should be provided and, for a service mark, does not clarify

^{19. § 1202.13.}

^{20.} See In re Pohl-Boskamp GmbH & Co., 106 U.S.P.Q.2d 1042, 1052 (T.T.A.B. 2013) (noting the insufficiency of applicant's evidence of acquired distinctiveness in light of evidence that the use of peppermint scent by others in the relevant marketplace (i.e., pharmaceuticals) tends to show that such scents are more likely to be perceived as attributes of ingestible products than as indicators of source); In re Owens-Corning Fiberglas Corp., 774 F.2d 1116, 1125 (Fed. Cir. 1985) (requiring concrete evidence that the mark is perceived as a mark to establish distinctiveness).

^{21. § 807.09.}

^{22.} The mark consists of the scent of bubble gum, Registration No. 4,754,435.

^{23.} The mark is a scent mark having a minty scent by mixture of highly concentrated methyl salicylate (10wt%) and menthol (3wt%), Registration No. 3,589,348.

^{24. § 904.03(}m).

^{25.} Id.

^{26.} Id.

the *most* effective way of sharing the scent with examiners. All of this is left to the discretion of the applicant. Additionally, providing a specimen can be complex because some scents lose their potency over time.²⁷

B. International Protectability

The contours of scent trademark registration requirements are also not well defined or precise in international treaties or agreements. The International Trademark Law Treaty does not apply to scent marks.²⁸ The World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property Rights states host countries "may require, as a condition of registration, that signs be visually perceptible."29 Depending on the visually perceptible conditions implemented, a host country under this agreement could, as a practical matter, exclude scent marks if it desires. One reason international treaties overall fail to provide any set standards for scent marks is that, at present, there is "no generally accepted international classification of smells which would make it possible, as with international color codes or musical notation, to identify an olfactory sign objectively and precisely through the attribution of a name or a precise code specific to each smell."30 The following portions of this section will display that, globally, trademark legislation fails to address scent mark registration requirements in an explicit and precise manner.

1. Scent Mark Protection in the European Union ("EU") and the Watershed Case of *Sieckmann*

In 2002, the European Court of Justice ("ECJ") rejected the idea that scents could be registered trademarks.³¹ In *Sieckmann v*.

^{27.} See Susan L. Nasr, How Perfume Works, Howstuffworks, https://science.howstuffworks.com/perfume2.htm [https://perma.cc/N7LJ-SS5X] (noting that visible light can break apart fragrant molecules and air can corrode a fragrance via oxidation).

^{28.} World Intell. Prop. Org. [WIPO], Trademark Law Treaty art. 2(1)(a), Oct. 27, 1994, https://wipolex.wipo.int/en/text/294358 [https://perma.cc/2HAR-SHWT].

^{29.} World Trade Org. [WTO], Agreement on Trade-Related Aspects of Intellectual Property Rights art. 15(1), Apr. 15, 1994, https://www.wto.org/english/docs_e/legal_e/27-trips_01_e.htm [https://perma.cc/R8TP-PSM7].

^{30.} World Intell. Prop. Org. [WIPO], Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications, at 10, WIPO Doc. SCT/16/2 (Nov. 13–17, 2006).

^{31.} See Case C-273/00, Sieckmann v. Deutches Patent-und Markenamt [German Patent and Trade Mark Office], 2002 E.C.R. 1-11754, https://curia.europa.eu/juris/showPdf.jsf?text=&docid=47585&pageIndex=O&doclang=EN&mode=doc&dir=&occ=first&

Deutches Patent-und Markenamt [German Patent and Trade Mark Office, the ECJ tackled whether a mark described as "the pure chemical substance methyl cinnamate (= cinnamic acid methyl ester)" and "balsamically fruity with a slight hint of cinnamon," could be registered for use in business management and administration.³² In addition to the written descriptions, the applicant also included the chemical formula of the scent, as well as a scent specimen.³³ Despite the multiple descriptions, the specimen, and the inclusion of the chemical formula, the ECJ denied the scent registration.³⁴ The ECJ held that a trademark "may consist of a sign which is not in itself capable of being perceived visually, provided that it can be represented graphically."35 This graphical representation could be "by means of images, lines or characters," and the representation must meet the standard of: "clear, precise, self-contained, easily accessible, intelligible, durable and objective."36 The ECJ determined that the chemical formula of the scent could not satisfy the graphical representation requirement because members of the general public could not easily interpret a chemical formula and because the chemical formula represents the substances emitting the scent, not the scent itself.³⁷ The court held that "in respect of an olfactory sign, the requirements of graphic representability are not satisfied by a chemical formula, by a description in written words, by the deposit of an odour sample or by a combination of those elements."38

While *Sieckmann* did not explicitly preclude the registration of scent marks, it practically barred them completely due to the rigorous requirements of graphical representation. The ECJ did note that the Federal Patent Court of Germany had serious doubts as to whether any scent mark could satisfy the graphical representation requirements of the German Trade Mark Act.³⁹

This barrier to scent trademark protection changed when, effective as of October 1, 2017, EU Directive 2015/2436 ("the

part=1&cid=11592 [https://perma.cc/29NX-PQW3]. The German court had already determined that the scent would distinguish the applicant's service from competitors. Id.

^{32.} Id. at 1-11760 to 61.

^{33.} *Id.* at 1-11760.

^{34.} *Id.* at 1-11764.

^{35.} Id. at 1-11769 (emphasis added).

^{36.} *Id.* at 1-11771.

^{37.} Id. at 1-11773.

^{38.} Id. at 1-11775.

^{39.} *Id*.

Directive") eliminated the graphical representation requirement for trademarks. 40 In addition to removing the graphical representation requirement, the Directive explicitly mentions colors and sounds as being registrable.41 The preamble of the Directive instructs that a "sign should therefore be permitted to be represented in any appropriate form using generally available technology, and thus not necessarily by graphic means, as long as the representation offers satisfactory guarantees to that effect."42 The Directive codifies the Sieckmann factors, and to fulfill trademark registration conditions the sign must still be represented "in a manner which is clear, precise, self-contained, easily accessible, intelligible, durable and objective."43 "[T]he goal of eliminating the graphical representation requirement was to allow the use of any technology that is able to provide a sufficient representation of the sign for which protection is sought."44 The change primarily benefitted three-dimensional signs, 45 sound signs, 46 holographic signs, 47 and multimedia signs. 48

Despite the Directive's reforms, the practical effect of the elimination of the graphical requirement on scent trademarks is negligible to the codification of the *Sieckmann* factors. The European Union Intellectual Property Office ("EUIPO") trademark examining manual states that is it currently not possible to represent smells in compliance with the European Union Trade Mark Regulation ("EUTMR") because "the subject matter of protection cannot be determined with clarity and precision with generally available technology." 49 If a more generally available

^{40.} Victor Danciu, European Union: The Scent of a Trademark: Removal of Graphic Representability Requirement, Mondaq (Mar. 8, 2019), https://www.mondaq.com/trademark/788476/the-scent-of-a-trademark-removal-of-graphic-representability-requirement [https://perma.cc/3NR9-V5S8].

^{41.} Id.

^{42.} Id. (quoting Council Directive 2015/2436, 2015 O.J. (L 336) 1) (emphasis added).

^{43.} Id.

^{44.} Joao Pereira Cabral, European Union: The Elimination of the "Graphical Representation" Requirement and Its Effects on Non-Traditional EU Trademarks, MONDAQ (Nov. 23, 2020), https://www.mondaq.com/trademark/1008556/the-elimination-of-the-graph ical-representation-requirement-and-its-effect-on-non-traditional-eu-trademarks [https://perma.cc/722Q-PGL6].

^{45.} These can be represented with JPEG, OBJ, STL, or X3D files. Id.

^{46.} These can be represented with JPEG or MP3 files. Id.

^{47.} These can be represented with JPEG and MP4 files. Id.

^{48.} These can be represented with MP4 files. Id.

^{49.} Eur. Union Intell. Prop. Off., Guidelines for Examination of European Union Trade Marks, at 313-14 (Jan. 2, 2020), https://guidelines.euipo.europa.eu/binary/1803468/2000140000 [https://perma.cc/QL9J-ECS6].

technology develops that allows scents to be represented in a manner that is "clear, precise, self-contained, easily accessible, intelligible, durable and objective,"⁵⁰ then the elimination of the graphical representation requirement opens the door to more scent marks being registrable throughout the EU. For now, according to EUIPO, no existing technology can represent a scent so that it passes the *Sieckmann* standards.⁵¹ Various sensors have historically had trouble differentiating between smells that are mirror images of one another or contain similar chemical compounds.⁵² Robots and "electronic noses" that can sniff out chemical weapons and pollution may be coming soon, but our technology is not there yet.⁵³

So, despite the EU's recent elimination of the graphical representation requirement, the EU has still determined scent trademarks cannot be registered at this time because there is no existing technology that can satisfy the conditions of *Sieckmann*.

2. Countries that Functionally Exclude Scent Mark Registration

a. Brazil

Brazil trademark law establishes that any "visually perceptive distinctive sign" may be registered.⁵⁴ This visual representation requirement means that a mark must be perceived by the sense of sight.⁵⁵ As a result, nontraditional trademarks that are perceived by senses other than sight—like scent, sound, texture, and taste—are not registrable in Brazil.⁵⁶

^{50.} Id. at 303.

^{51.} Id. at 314.

^{52.} Sensors Could Give Machines More Accurate Sense of Smell than that of Humans, SCIENCEDAILY (Jan. 16, 2015), https://www.sciencedaily.com/releases/2015/01/1501160849 35.htm [https://perma.cc/H8W2-5UMW].

^{53.} Sarah Wells, Robots that Can Sniff Out Chemical Weapons and Pollution Are Coming Soon – Study, INVERSE, https://www.inverse.com/innovation/sense-of-smell-robots [https://perma.cc/46L3-R572].

^{54.~} Brazil Industrial Property Law, 9.279, Art. 122 (2013), https://www.jpo.go.jp/e/system/laws/gaikoku/document/index/brazil-e_industrial_property_law.pdf [https://perma.cc/3J4S-RTV4].

^{55.} For a definition of visually perceptible, see Denis Croze, Making a Large Universe Visually Perceptible: The Development of Non-Traditional Trademarks, in WIPO Treaties, in THE PROTECTION OF NON-TRADITIONAL TRADEMARKS: CRITICAL PERSPECTIVES 13, 22 (2018)

^{56.~} Bruna Lins, Brazil: Trademarks Comparative Guide, MoNDAQ (Nov. 24, 2021), https://www.mondaq.com/brazil/intellectual-property/1050426/trademarks-comparative-guide [https://perma.cc/45UA-LY2B].

b. India

Section 2(zb) of the Indian Trade Marks Act requires that a trademark be capable of being represented "graphically."⁵⁷ The Indian Draft Manual of Trade Marks codifies the *Sieckmann* factors as the standard for graphical representation requirement. ⁵⁸ Like the EU, this essentially means scent marks cannot be registered in India because no existing technology can represent a scent sufficiently for the *Sieckmann* standard.

c. China

In 2013, Article 8 of China's Trademark Law was amended to explicitly allow a nontraditional trademark—sound—to be registrable.⁵⁹ China's "visible representation" requirement was also eliminated in the 2013 amendment. However, scent marks (and other nontraditional marks such as hologram, taste, and touch marks) that are not explicitly listed in Article 8 cannot be registered in China.⁶⁰ The China National Intellectual Property Administration ("CNIPA") thinks that "scents being registered as trademark[s] would be confusing to the Chinese public."⁶¹ Based on the expansion of trademark registration to sound, it is possible that regulations could be passed in the future that would allow scent marks and other nonvisual signs to be registrable in China.

3. Australia Is More Amendable to Scent Mark Registration

Besides the United States, Australia is next most amenable to the registration of scent marks. In Australia, a trademark

^{57.} Potentiality of 'Smell' as a Trademark and its Limitations, IPR LAW INDIA (Jan. 15, 2021), https://iprlawindia.org/potentiality-of-smell-as-a-trademark-and-its-limitations [htt ps://perma.cc/N57U-W6DC] (quoting Indian Trade Marks Act, Sec. 2 (1999)).

^{58.} The factors are clear, precise, self-contained, easily accessible, intelligible, durable, and objective. Case C-273/00, Sieckmann v. Deutches Patent-und Markenamt [German Patent and Trade Mark Office], 2002 E.C.R. 1-11754, https://curia.europa.eu/juris/showPdf.jsf?text=&docid=47585&pageIndex=O&doclang=EN&mode=doc&dir=&occ=first&part=1&cid=11592 [https://perma.cc/29NX-PQW3].

^{59.} China: Trademark Laws and Regulations 2021, ICLG.COM (Apr. 19, 2021), https://iclg.com/practice-areas/trade-marks-laws-and-regulations/china [https://perma.cc/5 9FA-UVFK].

^{60.} Id.; Trademark Procedures and Strategies: China, supra note 7.

^{61.} Key Changes to China Trademark Law and Practice, HG.ORG, https://www.hg.org/legal-articles/key-changes-to-china-trademark-law-and-practice-32405 [https://perma.cc/R5 CE-WLFB].

application must include a graphical representation of the mark.⁶² However, Australia has a very liberal idea of what constitutes "graphical representation." A clear, written description is currently interpreted as meeting the requirement.⁶³ "The description must include both what the scent is and how it is to be used in respect of the goods or services claimed."⁶⁴ The Australian Trade Marks Manual of Practice and Procedure does not accept highly technical data—items like infrared spectroscopy, "electronic nose" analysis, chromatographic techniques, and more—as a form of graphical representation because these forms are not intelligible to the ordinary person.⁶⁵ Australia also does not require a specimen of the scent at the time of filing but may request one during the course of the trademark application's examination.⁶⁶ This all makes scent mark registration possible in Australia.

C. Takeaways from the Global Landscape of Scent Mark Registration

From surveying the international stage, it becomes clear that countries take varied approaches to how they require a scent mark to be described and represented in order to achieve registration. Some countries, like Brazil, exclude scent marks merely because scents cannot be visually perceived. Many other countries currently do or have previously required a scent mark to be graphically represented. Countries also take various approaches to they define and enforce graphical representation requirements. In Australia, where graphical representation is liberally defined as a clear written description, the Sieckmann considerations of being easily accessible and intelligible to the public remain strong.⁶⁷ Even in the EU, where the graphical representation requirement has been eliminated, the codification of the Sieckmann standards creates hurdles for the scope of scent marks to be adequately defined with current technology.

The next Part of this Comment will address a recently registered trademark in the United States, the scent of the toy modeling

^{62.} WIPO, GROUNDS FOR REFUSAL IN AUSTRALIA 1–2, https://www.wipo.int/export/sites/www/sct/en/comments/pdf/sct21/ref_australia.pdf [https://perma.cc/J6X4-CKVE].

^{63.} Id.

^{64.} Austl. Trade Marks Manual of Prac. & Procs. § 21.7 (Nov. 2021), https://manuals.ipaustralia.gov.au/trademark/7.-scent-trade-marks [https://perma.cc/8VHV-XPKN].

^{65.} *Id*.

^{66.} Id.

^{67.} See id.

compound commonly known as Play-Doh. Through the lens of the trademark prosecution history of Play-Doh, this Comment will discuss some of the general issues scent marks present, including the subjectivity of scent, difficulties in precisely defining the scope of a scent mark, and the risk of scent depletion. This Comment will also discuss how the United States' current registration requirements for scent marks, without more, could lead to inconsistent judicial administration. Part II establishes a context for why the United States should enact a graphical representation requirement for trademarks that is more demanding and specific than Australia's but less strict than the *Sieckmann* standards.

II. PLAY-DOH AND THE ISSUES SCENT MARKS PRESENT

A. Play-Doh

"Sweet, slightly musky, vanilla fragrance, with slight overtones of cherry, combined with the smell of a salted, wheat-based dough": initially, this seems like a quality written description of some kind of pastry. What comes to mind? If your mind raced back to a distant childhood memory of excitedly opening a container of Play-Doh, you would be exactly right according to Hasbro and the USPTO. This is the written description of the registered scent mark of the toy modeling compound commonly known as Play-Doh. 68

The scent of Play-Doh has been used in commerce since 1955, and Hasbro filed to protect the scent of the toy modeling compound on Valentine's Day, 2017.⁶⁹ In an initial office action, the USPTO stated that the practice of adding scents to toy modeling compounds was hardly revolutionary in the marketplace and found Hasbro's initial evidence of long-term use insufficient to establish acquired distinctiveness.⁷⁰

Since it is not unusual to add a scent to toy modeling compounds, the USPTO believed that "when purchasers are confronted by the scent" of Play-Doh, they will likely "perceive it as an incidental feature of the goods; rather than perceiving it as a source identifier."⁷¹ The USPTO stated that "further evidence in the nature of type, expense, and amount of advertising of the mark in

^{68.} Registration No. 5,467,089.

^{69.} Id.

^{70.} Office Action Outgoing, Case No. 87335817, at 2 (May 26, 2017).

^{71.} Id.

the United States; applicant's sales success; unsolicited media coverage; and consumer studies" were necessary to show acquired distinctiveness. That has promptly responded to the office action with over 300 pieces of evidence displaying how the mark had acquired distinctiveness through continual use. Has bro specifically relied on media articles discussing Play-Doh's scent, unsolicited social media posts discussing the unique and identifiable scent of Play-Doh, and advertisements by Has bro that focused on Play-Doh's particular scent. Has bro also provided an analysis of how the scents of six toy modeling compounds cited by the USPTO were decidedly different than Play-Doh's "distinct" scent that includes a combination of vanilla, cherry, and salted wheat-based dough.

In considering the 300 pieces of evidence provided by Hasbro, the USPTO's task was to determine whether the smell of Play-Doh had garnered secondary meaning and was used by consumers as a source identifier. The USPTO concluded that the scent of Play-Doh acquired distinctiveness and granted Hasbro trademark registration of the scent on May 15, 2018.⁷⁶

Since Hasbro was applying for trademark registration for the scent of Play-Doh, making clear what the scent *is* and what the scope of the trademark protection would be is incredibly important. As discussed above, the proper description of scent marks is a significant issue not only in the United States, but throughout the world. Trademark examining attorneys and competitors need a firm understanding of what the protectable subject matter is when they're trying to assess whether a smell has acquired distinctiveness or if there is any risk the applied-for mark would pose a likelihood of confusion with other protected marks. This importance leads to questions and considerations of how to best memorialize a specific scent for the purposes of trademark applications and registrations.

^{72.} Id. at 3.

^{73.} Response to Office Action, Case No. 87335817 (Nov. 27, 2017).

^{74.} Id. at 5-8.

^{75.} Id. at 2–4. Hasbro also sent in specimens of each of the six cited toy modeling compounds in response. Id.

^{76.} Registration Certificate, Case No. 87335817 (May 15, 2018).

B. The Issue at Nose

1. Subjectivity of Scent

The primary issue with describing scent trademarks lies at the heart of the thing itself—smell is an incredibly subjective sense. If you have ever interacted with a pregnant woman, you will recognize that some individuals have a keener sense of smell than others. 77 How an individual perceives a smell depends on a range of factors, including but not limited to age, hormones, sex, environment, and overall health.⁷⁸ Oftentimes, humans have difficulty identifying smells of common items. 79 In this way, the subjective nature of smell has an objective quality—how one perceives scent is dependent on how one is wired physically.⁸⁰ These qualities of the human sense of smell raise questions of how effective scents really are at being source identifiers and what exactly is the "scent" being protected. The reality is that the smell of Play-Doh may be perceived a bit differently by everyone. It would be extremely difficult, if not impossible, to recreate the circumstances of a scent's objective perception because scents will change from consumer to consumer. This creates some problems when relying on finders of fact to properly apply a likelihood of confusion analysis to a scent mark. Fact finders could face a difficult time precisely identifying which scents are at issue in a trademark infringement suit, as well as if two scents are confusingly similar so as to constitute infringement.

2. Unreliability of Written Descriptions

Hasbro describes the scent of Play-Doh as a "sweet, slightly musky, vanilla fragrance, with slight overtones of cherry, combined with the smell of a salted, wheat-based dough."⁸¹ However, the scent that conjures up in the mind when reading this description could smell nothing at all like Play-Doh. Likewise, if you sat a room full of people down with a container of Play-Doh and asked them to provide a sentence-long written description of

^{77.} See sources cited supra note 8.

^{78.} Id

^{79.} Frank R. Schab & William S. Cain, *Memory for Odors*, in The Human Sense of Smell at 231 (New York: Springer-Verlag ed. 1991).

^{80.} Bettina Elias, Do Scents Signify Source? – An Argument Against Trademark Protection for Fragrances, 82 Trademark Rep. 475, 490–91 (1992).

^{81.} Registration No. 5,467,089.

its scent, every person would probably give a different answer. Describing a smell with written words is, at best, a wordsmithing approximation of what the smell actually is. Some scholars, like intellectual property practitioner Douglas Churovich, argue that "accurate scent descriptions cannot effectively be communicated through language."⁸²

In Hasbro's response to the USPTO's initial office action, Hasbro attempts to differentiate Play-Doh from six other toy modeling compounds cited by the USPTO. When it does so, it exposes how arbitrary written descriptions of smells can be. For example, Special Needs Toy Scented Play-Clay has a red toy modeling compound scented as "Cherryberry," and Lakeshore Scented Dough also offers a cherry-scented compound.83 Hasbro maintains that what makes Play-Doh's scent unique is the "combination" of "vanilla, cherry, and salted, wheat-based dough scents."84 However, who is to say that if Special Needs Toy Scented Play-Clay or Lakeshore Scented Dough needed to create a trademarkapplication-worthy description of their cherry-scented compounds, that Hasbro's description of Play-Doh would not accurately capture If Special Needs Toy Scented Play-Clay or Lakeshore Scented Dough were to file a trademark application today for a cherry-scented compound, all the trademark examining attorney would have to assess the application would be a specimen and a written description. It would be difficult for an examining attorney to effectively articulate not only what the applied for smell "is" but also how "similar" two smells are with only specimens and elusively written descriptions. In this space, scents could smell very different but be described similarly or be described differently and smell very similar. Additionally, the written description of Play-Doh alone does not provide Hasbro's toy modeling compound competitors with adequate notice of what precisely the protected scent mark is so that they can avoid infringing it.

3. Scent Depletion Theory

When the Supreme Court was first considering the registration of nontraditional trademarks, the Court addressed the potential problem of depletion in the context of colors in *Qualitex Co. v.*

^{82.} Douglas D. Churovich, Scents, Sense or Cents?; Something Stinks in the Lanham Act, 20 St. Louis U. Pub. L. Rev. 293, 312 (2001).

^{83.} Response to Office Action, supra note 73.

^{84.} Id. (emphasis added).

Jacobson Products Co.⁸⁵ In Qualitex, the opponent to color mark registration argued that colors are "in limited supply" because a finite number of colors exist.⁸⁶ The opponent to color mark registration maintained that the number of potential color marks would diminish as color marks were awarded, which would result in competitors being at a "significant disadvantage" and hinder fair competition principles.⁸⁷ In the color mark space, the Court held that color depletion is a nonissue because if the award of a color mark would harm competition, the mark would have aesthetic functionality and should be rejected on those grounds.⁸⁸ However, depletion could pose an issue in the scent space.

Pleasant smells are universal and predictable.⁸⁹ Many smells are universally ranked as either good or bad, crossing cultural lines.⁹⁰ While there may be an endless supply of scents out there, only so many will be pleasing enough for brand managers to use and apply for trademark registration. Some markets, like household cleaners and personal care products, have a "competitive need" for certain scents profiles.⁹¹ For example, consumers prefer "soft" scents for tissues or "fresh" scents for laundry detergent.⁹²

As a result, registering scents in certain markets could restrain competition on non-source related lines, which is antithetical to the trademark regime's main purpose of being a source and product identifier. If a scent infringement suit is ever brought in the United States, since the competitive need for scents appears to be greater than for colors, a scent depletion argument could entirely preclude the possibility of scent mark registration.⁹³

4. Inconsistent Judicial Administration

The most concerning aspect of registering scent marks seems to be the high likelihood of inconsistent judicial administration due

^{85. 514} U.S. 159 (1995).

^{86.} Id. at 168.

^{87.} Id.

^{88.} Id. at 169, 172–73

^{89.} Annalee Newitz, Scientists Discover Five Things that Smell Good to Nearly Everyone, GIZMODO (Apr. 15, 2010), https://gizmodo.com/scientists-discover-five-things-that-smell-good-to-near-5515453 [https://perma.cc/RZR4-QUN9].

^{90.} *Id*.

^{91.} Elias, supra note 80, at 489.

^{92.} Id.

^{93.} See id. at 483.

to the undefined and flexible nature of scents and scent perception. The thought of a judge or jury, let alone a trademark examiner, sniffing different toy modeling compounds back and forth in the comfort of chambers or a jury deliberation room brings up amusing imagery. However, to date, there has yet to be a suit for scent trademark infringement in the United States. Thus, there exists no standard for how such a case would be judicially administered. If a scent trademark infringement suit were brought against Play-Doh today, the main materials a fact finder would have to determine whether scent marks are confusingly similar would be a sniff test as well as the written description of the scent of Play-Doh.

Thus, the largest and foremost obstacle scent marks present in judicial administration is that the subjective nature of scent hinders the ability of triers of fact to conduct a robust likelihood of confusion analysis. Knowing that smell is influenced by environmental factors, personal factors and that humans often have trouble identifying common scents, ⁹⁴ this sounds more like a game of chance than a meaningful comparison of one scent to another. These factors make the outcome of a likelihood of confusion analysis extremely unpredictable.

Currently, there is no ability to classify or perceive scents universally, so it is quite difficult for triers of fact to predictably identify a particular scent, let alone evaluate the similarity of scents. These difficulties make the process of bringing a scent mark infringement claim riskier and more onerous than traditional trademark litigation, which can downplay the protection that a trademark registration offers. The uncertainties of how a scent trademark infringement suit would play out can also function to unfairly restrain competition, as it could make competitors overly careful in avoiding certain types of scents. In sum, relying on sniff tests and written descriptors alone could establish arbitrary case law in this space unless more objective measures to attain registration are put in place. Accordingly, the United States should enact a graphical representation requirement for trademarks that is more demanding and specific than Australia's but less strict than the Sieckmann standards.

III. GRAPHICAL REPRESENTATION REQUIREMENT AS AN AID

A. The Point of Graphical Representation

What is the point of a graphical representation requirement? Well, requiring graphical representation in trademark registration is "analogous to a patent claim in a patent application because it sets the scope and boundary for the protection of the sign sought to be protected." In the subjective and flexible world of scents, setting a defined scope and boundary of protection is of increased importance. Second, graphical representations are informative in nature because they serve as public notice to competitors of what the protected material is. This notice function gives third parties the opportunity to identify what the protected sign is in order to avoid infringing it. Third, requiring graphical representation can assist "administrative purposes particularly in the classification and comparison of existing signs with new ones." These three functions of graphical representation work to "ensure legal certainty in the process of registering a sign."

B. The United States Should Adopt a Graphical Representation Requirement

To aid finders of fact in conducting a likelihood of confusion analysis for scent trademarks, the USPTO should administratively implement a graphical representation requirement for scent trademarks. As discussed above, due to the imprecise nature of describing scents and wide variations in scent perceptions, a textual written description and specimen could lead to inconsistent judicial determinations of whether scents have a likelihood of being confused by consumers. In order to give finders of fact more tools to understand what the scent mark *is* and then decipher how similar or dissimilar competing scents are, this Comment suggests that in addition to a written description, applicants should be required to submit the chemical formula of the scent they are seeking protection for. In addition, for every scent mark application, the USPTO should create a two-dimensional gas

^{95.} Tolulope Anthony Adekola, Abolition of Graphical Representation in EU Trademark Directive: Should Countries with Similar Provisions Follow EU's Footsteps?, 24 J. INTELL. Prop. Rts. 62, 62 (2019).

^{96.} Id.

^{97.} Id. at 62-63.

^{98.} Id. at 63.

chromatography with time-of-flight mass spectrometry ("GCxGC – TOF-MS") color plot from submitted scent specimens. These specifically defined geographical representation requirements call for more than just a mere written description but need not be bound by the restrictive Sieckmann standards. This Comment does not advocate for the application of the Sieckmann standards because the public's ability to comprehend the precise bounds of a scent mark is less important than the USPTO and the judiciary being able to thoroughly screen for likelihood of confusion.

1. Chemical Formula

While Sieckmann found chemical formulas to be insufficient graphical representations because they are not intelligible to the general public, it is known that chemical formula similarity can, in some cases, predict the odor of a particular compound. 99 Therefore, having the "recipe" for a scent could assist finders of fact in a likelihood of confusion analysis. The presentation of a chemical formula would give a fact finder notice if the chemical composition of two scents is similar, and they can apply that knowledge to a sniff test and can analyze the written descriptors of scents. In a trial setting, expert witnesses could testify as to how the chemical composition of a scent would smell when applied to a particular good or service and give greater insight into how similar competing scents would be based on their chemical compositions. Requiring the chemical formula of a scent in addition to a written description would also provide the general public, as well as trademark examining attorneys and competitors, with a certain level of notice that if the chemical formulas of two scents appear similar that they may pose a threat of being confusingly similar.

2. GCxGC-TOF-MS Color Plot

To visually represent the smell, the USPTO should conduct a GCxGC-TOF-MS analysis from provided scent specimens for each scent trademark application in order to obtain comprehensive data on a scent. Out of the data, the USPTO should develop a color plot of the scent that would be published on the registry if registration is awarded. Gas chromatography/mass spectrometry instruments

^{99.} Manon Genva, Tierry Kenne Kemene, Magali Deleu, Laurence Lins & Marie-Laure Fauconnier, *Is It Possible to Predict the Odor of a Molecule on the Basis of Its Structure?*, 20 INT'L J. MOLECULAR SCI. 3018 (2019).

separate chemical mixtures and identify components of a sample at a molecular level, thereby identifying chemical compounds of scents with specificity. One Gas chromatography/mass spectrometry instruments are one of the most accurate tools to conduct "quality control in the manufacture of many products" and can be used to identify things such as pollutants in the air or pesticides in food.

The USPTO should use GCxGC-TOF-MS specifically because the diverse range of chemical classes in scents "requires advanced separations to resolve co-elutions¹⁰² to provide identification" of the various chemical compounds present.¹⁰³ GCxGC-TOF-MS is capable of separating compounds that would normally fail to separate in one-dimensional gas chromatography.¹⁰⁴ Studies have shown that GCxGC-TOF-MS data can be used to uncover subtle differences between brand and imitation perfumes in the perfume industry¹⁰⁵ and have even been used to identify the chemical compounds of items as elusive as insect pheromones.¹⁰⁶ Figure 1, appended to this Comment, displays GCxGC-TOF-MS color plots and shows how they visually represent brand and imitation perfumes. The general similarities of the chemical profiles are easily understood from the color plots in Figure 1.

As a result, if GCxGC-TOF-MS can be effective means of differentiating between materials that are specifically designed to smell confusingly similar, GCxGC-TOF-MS color plots could function to visually display whether or not two scents in a scent mark infringement action are substantially similar, such that they could create a likelihood of confusion. GCxGC-TOF-MS color plots would provide yet an additional layer of evidence for a finder of fact to consider when conducting a likelihood of confusion

^{100.} Diane Turner, Gas Chromatography – How a Gas Chromatography Machine Works, How to Read a Chromatograph and GCxGC, TECH. NETWORKS (Mar. 17, 2021), https://www.technologynetworks.com/analysis/articles/gas-chromatography-how-a-gas-chromatography-machine-works-how-to-read-a-chromatograph-and-gcxgc-335168#D6 [https://perma.cc/2RJV-QXBZ].

^{101.} Id.

^{102.} Co-elutions are compounds that do not easily separate chromatographically. Jason P. Dworkin, *Chromatographic Co-Elution*, in ENCYCLOPEDIA OF ASTROBIOLOGY (2011).

^{103.} Laura McGregor, Aaron Parker & Elinor Hughes, Enhanced Evaluation of the Authenticity of Perfumes Using GCxGC-TOF-MS, COLUMN, July 8, 2021, at 16.

^{104.} *Id.* at 16–17.

^{105.} Id. at 16.

^{106.} Blanka Kalinova, Pavel Jiros, Jan Zd'arek, Xiujun Wen & Michal Hoskovec, GCxGC/TOF MS Technique – a New Tool in Identification of Insect Pheromones: Analysis of the Persimmon Bark Borer Sex Pheromone Gland, 69 TALANTA 542 (2006).

^{107.} See examples of color plots in McGregor et al., supra note 103, at 17.

analysis. Once again, in a trial setting, expert witnesses could testify to how similar or dissimilar the scents objectively are based on the GCxGC-TOF-MS color plot data. The color plots could also assist trademark examining attorneys in recognizing when there may be a likelihood of confusion between scent marks.

There are some limitations of gas chromatography/mass spectrometry, however. The results from one detector can differ from the results of another detector, and there can also be risks of instrument malfunction.¹⁰⁸ Sample analysis can also be time consuming. 109 And, of course, there is always the risk that some compounds will not completely separate. However, generally, if a gas chromatography/mass spectrometry instrument is properly maintained and operated, they are highly reliable. 110 To offset some of these weaknesses, the USPTO or plaintiff in a trademark case should bear the burden and cost of conducting GCxGC-TOF-MS analyses on scent samples to make sure that the analyses are consistently conducted and that color plots are consistently represented. The USPTO bearing the burden would also save smaller entity applicants the cost and expertise of conducting such analyses and developing color plots off of the data. This cost could be shifted back to applicants by requiring a slight increase in the cost of scent trademark registration applications.

3. Why Both?

The optimal process involves requiring the applicant to submit a chemical formula of the scent as well as requiring the USPTO to conduct a GCxGC-TOF-MS analysis on the scent sample, creating a color plot to display the data. Both measures should be done because while a chemical formula may not be entirely intelligible to the general public, competitors to holders of scent marks should be able to recognize that if the chemical formula of their scent is close in composition to a registered mark that they may be at risk of infringing. This provides an additional level of notice to competitors of what the protected scent is and shields competitors from relying solely on an imprecise written description on the trademark registry.

^{108.} Frederic Douglas, GC/MS Analysis, SCIENTIFIC TESTIMONY, https://www.scientific.org/tutorials/articles/gcms.html [https://perma.cc/EX9R-K4TW].

^{109.} Gas Chromatography/Mass Spectrometry, CTR. FOR PUB. ENV'T OVERSIGHT, https://www.cpeo.org/techtree/ttdescript/msgc.htm [https://perma.cc/6MXK-6XX6].

^{110.} Douglas, supra note 108.

The color plots go a step further in breaking down on a molecular level what the chemical compounds of a scent are. This information can be used by trademark examining attorneys and finders of fact to assess how similar competing scents are in even greater detail. Both the color plots and the chemical formulas will visually assist trademark examining attorneys and finders of fact in identifying when scent marks may pose a likelihood of confusion with other marks. practical reason both registered Α graphical representations are suggested is that the combination of the two gives a surface-level view (chemical formula) and a more specific view (color plot) of what composes the scent. Providing both a surface level and in-depth visual representation of the composition of a scent gives a more holistic understanding of what the protected material is.

4. Implications of Recommendation for Play-Doh and Other Countries

It is not likely that this recommendation would have made Hasbro's registered trademark for the scent of Play-Doh any easier to obtain. However, if these requirements were implemented (and Hasbro were made to submit the chemical formula of the scent and the USPTO created a GCxGC-TOF-MS color plot of the scent), trademark examiners would have an easier time assessing if scent mark applications from competitors could create likelihood of confusion with Hasbro's mark. Additionally, if Hasbro were to sue another toy modeling compound producer for infringement of its scent mark, the finders of fact would have a more holistic assessment, likely with the aid of expert witnesses, to deduce whether likelihood of confusion is present.

Other countries have their own prerogatives to establish (or not establish) graphical representation requirements for scent marks and may define graphical representation however they desire. The specific recommendation of requiring chemical formulas and GCxGC-TOF-MS color plots in addition to specimens and written descriptions provides a good middle ground and avenue for other countries to step away from the exacting *Sieckmann* standards.

Since the EU and India do not currently allow scent marks to be registered due to codifying the exacting *Sieckmann* standards, this proposal could encourage them to walk away from those standards and allow scent mark registration. This proposal provides those countries assurance that there would be more consistent judicial

administration in any potential scent trademark infringement lawsuit.

This recommendation could also encourage Brazil to interpret their "visually perceptive" requirement to include graphical representations of scents such as chemical formulas and GCxGC—TOF-MS color plots.

China's primary concern with registering scent marks is that doing so would be confusing to the public. Well, this graphical representation recommendation provides more concrete visual representations of what a scent mark *is*, which could somewhat diminish public confusion.

While Australia currently permits scent trademark registration, it prohibits the use of highly technical data in representing scent marks. This proposal highlights that highly technical data is ultimately utilitarian to triers of fact in a scent trademark infringement suit. This model could show Australia that highly technical data is worth being amenable to in order to guarantee more consistent judicial administration.

With companies developing specifically to help brands create fragrances that fit their image, 111 scent marketing seems to be an enticing way forward. Countries that develop an avenue for scent mark registration can help promote these inventive marketing methods that are known to generate profits 112 as well as provide consumers with more pleasant experiences with products and services. 113

5. Limitations of Recommendation

Both graphical representations recommended here would likely fail the *Sieckmann* standards codified by other countries that currently or have previously required graphical representation. But, if the United States is to continue permitting scent marks to be registrable, the ability of the public to precisely comprehend the bounds of a scent mark is of less importance than finders of fact and trademark examining attorneys being able to conduct a robust likelihood of confusion analysis. Both graphical representations

^{111.} ScentAir, supra note 2.

^{112.} Bopp, supra note 4; Bouzaabia, supra note 5, at 155.

^{113.} See Bouzaabia, supra note 5, at 163.

would assist the USPTO and the judiciary in more robustly screening and assessing for likelihood of confusion.

This recommendation also does not solve the potential issue of scent depletion. However, this recommendation could aid in establishing a threshold of when scents are "too similar."

CONCLUSION

The United States should not leave a judge or jury or a trademark examining attorney struggling to sniff toy modeling compounds and analyze subjective written descriptions to determine if another company is infringing on Hasbro's scent trademark for Play-Doh by using a mark that is confusingly similar. Additional graphical representations should be required in the United States to register scent trademarks so that finders of fact have a broader foundation of evidence to apply to their likelihood of confusion analyses. Additional representations would also allow USPTO trademark examining attorneys to more quickly identify applications that pose a threat of being confusingly similar to registered scent marks. This Comment suggests requiring the chemical formula of a scent be provided by a scent mark applicant, as well as requiring a visual GCxGC-TOF-MS color plot of a scent be developed by the USPTO. These requirements would be in addition to the written description and specimen required today. As technology continues to improve, we could one day have a reliable type of robot to sort out scents for us. For now, a mere written description and scent sample is not enough to provide consistent judicial administration for likelihood of confusion analyses. If scent is the way to consumers' hearts and the forward motion of brand management, United States trademark law should work to help courts establish more consistent judicial administration when tackling future scent trademark infringement suits.

Gabrielle E. Brill *

^{*} J.D. Candidate, 2022, University of Richmond School of Law; B.A., magna cum laude, 2018, Dickinson College. I would like to thank the members of the *University of Richmond Law Review* for their diligent work in preparing this Comment for publication during the end of a hectic academic year. I would also like to extend my gratitude to Professor Christopher A. Cotropia for his feedback, edits, and guidance during the writing process.

