A TASTEFUL EXPANSION OF THE ALREADY FULL PLATE OF INTELLECTUAL PROPERTY

*Leigha Santoro**

ABSTRACT

Determining flavor is generally viewed as a subjective inquiry, and because an individual's perception of flavor is based on characteristics specific to that individual, it is assumed that there is no general consensus as to what a particular flavor may taste like. In terms of intellectual property, even as recent as November 2018, courts have found that flavor cannot be protected because of its subjective nature. The opinion that flavor is subjective should change because of the development of taste profiles, visualized through spider diagrams. Experts can accurately identify the flavor of a product and map it onto one of these diagrams, providing an objective standard for a product's flavor. Courts can now use these profiles to characterize flavors in a way that provides them with protection under intellectual property laws. After providing an analysis of how all types of intellectual property—copyright, patent, trademark, and trade secret—can encompass flavor as a protectable item, this Note concludes that trademark law is the avenue companies will most likely pursue to obtain protection for their products' flavors. Current trademark laws should be viewed more broadly to encompass the non-traditional mark of flavor.

* J.D. Candidate, December 2019, Drexel University Thomas R. Kline School of Law; B.Eng., October 2016, McGill University. I would like to thank Professor Amy Landers and the members of Drexel Law Review for their advice and feedback throughout the note writing process.

TABLE OF CONTENTS

INTRODUCTION

The European Union has recently decided several cases related to intellectual property rights associated with food products; one of which decided the issue of whether taste can be protected by Europe's copyright laws.[1] Heksenkaas (meaning "witches' cheese"), a spreadable dip made from cream cheese and herbs, is a product owned by the Dutch company Levola, and it was created in 2007.[2] Smilde, another Dutch company, began manufacturing Witte Wievenkaas (meaning "wise women's cheese") in January 2014.[3] Levola argued that the taste of its product was protected under copyright law and that Smilde's product was a reproduction of that taste.[4] In response, Smilde argued that taste is a subjective characteristic and, therefore, it did not qualify for copyright protection.[5] The European Court of Justice ultimately sided with Smilde, finding that taste does not qualify as a "work," and in order to obtain copyright protection, there needs to be more than just "an idea."[6]

1. *See Food Taste 'Not Protected by Copyright' Rules EU Court*, BBC (Nov. 13, 2018), https://www.bbc.com/news/world-europe-46193818 (noting that the European Court of Justice has also found that the shape of Kit Kats did not merit trademark protection, plant-based foods cannot be branded with dairy terms, but sorbet containing twelve percent champagne could be labeled as "Champagner Sorbet").

2. *Hard Cheese: The Taste of Food Cannot Be Copyrighted, EU Court Says*, DUTCHNEWS (Nov. 13, 2018), https://www.dutchnews.nl/news/2018/11/hard-cheese-the-taste-of-food-cannot-be-copyrighted-eu-court-says/; *see also* Case C-310/17, Levola Hengelo BV v. Smilde Foods BV, ECLI:EU:C:2018:899, ¶ 14 (Nov. 13, 2018), http://curia.europa.eu/juris/document/document.jsf?text=&docid=207682&&doclang=EN& Amie Tsang, *E.U., Settling a Cheese Duel, Says Taste Can't Be Copyrighted*, N.Y. TIMES, Nov. 14, 2018, at B3, https://www.nytimes.com/2018/11/13/business/eu-cheese-copyright.html (describing the product with a "uniqueness [that] is attributable to a combination of freshness, sweetness and fat . . . '[i]t's not a cream cheese, it's not a salad, it's not a sauce, it's a little bit in between those concepts'").

3. *Hard Cheese: The Taste of Food Cannot Be Copyrighted, EU Court Says*, *supra* note 2; *see also* Court of Justice of the European Union Press Release 171/18, The Taste of a Food Product Is Not Eligible for Copyright Protection (Nov. 13, 2018), https://curia.europa.eu/jcms/upload/docs/application/pdf/2018-11/cp180171en.pdf [hereinafter Press Release 171/18].

4. Casey Quackenbush, *Can the Taste of Cheese Be Copyrighted? Europe's Highest Court Rules No*, TIME (Nov. 14, 2018), http://time.com/5453945/european-union-cheese-taste-copyright/.

5. *Id.*

6. *Id.*; *see also Food Taste 'Not Protected by Copyright' Rules EU Court*, *supra* note 1.

How would this case come out had it been a dispute between companies in the United States? Can the taste of Heksenkaas be protected under American copyright law? In an article discussing the *Levola* decision, Laurel Wamsley provides a recipe to "whip up your own batch of witches' cheese."[7] She made a point of mentioning "[y]ou're on firm legal ground, even if it tastes just like the real thing."[8] While that may be true in the European Union, it is not necessarily the case in the United States.[9] This Note provides an analysis of what might happen if this issue arose under American law. In addition to looking at copyright law, this Note examines the potential for intellectual property protection for the taste of food products through other means including patent, trademark, and trade secret law.

While Europe now has case law prohibiting the protection of the taste of food under copyright law,[10] there are no statutory provisions or case law explicitly prohibiting the protection of taste under intellectual property laws in the United States.[11] This Note argues that intellectual property law should protect the flavor of food; both courts and regulatory agencies should view intellectual property rights with a broader scope to allow this protection. Spider diagrams, which are used to map the flavor profiles of food products, have been developed to make taste an objective inquiry capable of being protected as

7. Laurel Wamsley, *There's No Copyrighting Taste, Rules EU Court in Dutch Cheese Case*, NPR: SALT (Nov. 13, 2018, 2:16 PM), https://www.npr.org/sections/thesalt/2018/11/13/667461481/theres-no-copyrighting-taste-rules-eu-court-in-dutch-cheese-case.

8. *Id*.

9. *See Food Patents: Everything You Need to Know*, UPCOUNSEL, https://www.upcounsel.com/food-patents (last visited Nov. 24, 2019) ("The federal government tries to encourage innovation in all fields, including cooking, by granting patents through the United States Patent and Trademark Office (USPTO).").

10. *See generally* Case C-310/17, Levola Hengelo BV v. Smilde Foods BV, ECLI:EU:C:2018:899, (Nov. 13, 2018), http://curia.europa.eu/juris/document/document.jsf?text=&docid=207682&&doclang=EN&amp (holding that taste is not eligible for copyright protection).

11. *See* Emily Cunningham, *Protecting Cuisine Under the Rubric of Intellectual Property Law: Should the Law Play a Bigger Role in the Kitchen?*, 9 J. HIGH. TECH. L. 21, 32 (2009) (highlighting that the United States Trademark Trial and Appeal Board left open the potential to protect flavor as intellectual property).

intellectual property.[12] In the United States, it is not common for companies to bring suit to try to protect the flavor of their food, likely because of the lack of precedent in this area.[13] In the cases where companies have tried to obtain such protection, their particular factual patterns did not satisfy the current laws.[14] This Note presents an analysis of the current intellectual property protection available, and it proposes the best solution for how to achieve such protection for flavor.

Part I of this Note will discuss the history surrounding the cultural notions of flavor and how technology has developed, making flavor an objective inquiry. The decision from the European Court of Justice will be discussed in detail to provide a comparison for the rest of this Note. Part II will discuss the current legal standards for copyright, patent, trademark, and trade secret law in relation to the food industry. Finally, this Note will conclude that intellectual property is available for taste and flavor under all forms of intellectual property protection because taste is not subjective.

I. BACKGROUND

This section begins with a discussion on the history and cultural values associated with tastes and flavors. Traditionally, taste was viewed as a low sense, which is perhaps one of the main reasons for very few attempts at obtaining protection for flavors. Overtime, however, cuisine has become more intricate

12. *See Coffee Spider Graphs Explained*, COFFEE ENTERPRISES: WHAT'S BREWING (Nov. 7, 2011), https://www.coffeeenterprises.com/2011/11/coffee-spider-graphs-explained/.

13. *See* Mary Grace Hyland, *A Taste of the Current Protection Offered by Intellectual Property Law to Molecular Gastronomy*, 8 CYBARIS, INTELL. PROP. L. REV. 155, 162 (2017) (noting that the lack of litigation in this industry could be a result of the social norms governing the behavior of chefs).

14. *See, e.g.*, Publ'ns Int'l, Ltd. v. Meredith Corp., 88 F.3d 473, 480–82 (7th Cir. 1996) (finding the recipes in this case comprised lists of ingredients, which did not meet the requirements for copyright protection); Buffets, Inc. v. Klinke, 73 F.3d 965, 968 (9th Cir. 1996) (finding that recipes for "American staples" including BBQ chicken and macaroni and cheese were not protectable through trade secret law); *In re* N.V. Organon, 79 U.S.P.Q.2d (BNA) 1639, 1648 (T.T.A.B. 2006) (finding orange flavor for a pharmaceutical was functional, and therefore, could not be protected through trademark law).

and experimental; science is now used to map exactly what a flavor may taste like. This section then provides a detailed analysis of the case addressed by the European Court of Justice regarding the copyrightability of flavor—*Levola Hengelo BV v. Smilde Foods BV*—which sets forth a factual scenario that will be used to compare the different forms of intellectual property protection throughout the rest of this Note.

A. *History of Tastes and Flavors*

There are five basic human senses: touch, sight, hearing, smell, and, of course, taste.[15] There are four main tastes—"sweet, salty, bitter, and sour"—that create different flavors when combined.[16] An adult mouth has between two thousand and four thousand taste buds, each of which has cells with varying sensitivity levels to all of the flavors.[17] When the information from each cell in the tongue is viewed as a whole, the full experience of taste or flavor is produced.[18]

Taste, touch, and smell have been seen as less important among the senses according to traditional and cultural values.[19] Taste, touch, and smell are viewed as "low senses" in comparison to vision and hearing, which are "high senses."[20] Because of this status as low senses, our understanding of taste is not well developed or studied in comparison to other senses.[21] Philosophers since the times of Plato have regarded the senses

15. Alina Bradford, *The Five (and More) Senses*, LIVE SCI. (Oct. 24, 2017), https://www.livescience.com/60752-human-senses.html.

16. J. Austin Broussard, Note, *An Intellectual Property Food Fight: Why Copyright Law Should Embrace Culinary Innovation*, 10 VAND. J. ENT. & TECH. L. 691, 719 (2008). Some sources argue that there are additional types of tastes including "umami," "neutral," and "astringency," however those are less common. *Id.* at 719 n.185; *see also* Ole G. Mouritsen, *The Science of Taste*, FLAVOUR J., Jan. 26, 2015, at 1–2.

17. Bradford, *supra* note 15.

18. *Id.*

19. *See* Constance Classen, *The Senses*, ENCYCLOPEDIA.COM, https://www.encyclopedia.com/international/encyclopedias-almanacs-transcripts-and-maps/senses (last visited Nov. 24, 2019).

20. Christopher Buccafusco, *Making Sense of Intellectual Property Law*, 97 CORNELL L. REV. 501, 527 (2012) [hereinafter Buccafusco I].

21. *Id.* at 527–28.

in this hierarchy and view the relationship of food to survival as one of the main reasons why taste is treated as a low sense.[22] Some argue that tastes developed to "provide gratification from food," and the lack of scientific inquiry into the area of how flavor and tastes work is because of the historically "savage nature of eating and flavor."[23] John McQuaid, author of a book about how taste and food drove human evolution, notes that "[i]f you are an animal, you would go out and seek out food, and eat it, and stay alive"; he then goes on to say how this type of natural instinct still exists in humans "every time [they] bite into a hamburger or drink a glass of wine."[24] Others claim that taste assisted in human evolution because it provided an opportunity to test food to determine if it was potentially poisonous or rotten, as opposed to being rich in nutrients.[25] Finally, some argue that taste is a low sense because it is a "bodily sense," requiring an intimate connection to the body through the digestive tract.[26]

The status of flavor and food as a low sense has shifted over the last century, due in part to the rise of celebrity chefs.[27] These chefs have increased technical skills and social statuses that

22. *See* CAROLYN KORSMEYER, MAKING SENSE OF TASTE: FOOD AND PHILOSOPHY 1 (1999) ("So closely are taste and eating tied to the necessities of existence that taste is frequently cataloged as one of the lower functions of sense perception, operating on a primitive, near instinctual level."); Christopher J. Buccafusco, *On the Legal Consequences of Sauces: Should Thomas Keller's Recipes Be Per Se Copyrightable?*, 24 CARDOZO ARTS & ENT. L. J. 1121, 1141 (2007) [hereinafter Buccafusco II]; Buccafusco I, *supra* note 20, at 527, 530–31 (arguing that "low senses are constrained by the objective, biological properties of humans because they must meet the functional demands of the body"); Simon Worrall, *From Campfire to Haute Cuisine: How Food and Flavor Drove Human Evolution*, NAT'L GEOGRAPHIC (Jan. 18, 2015), https://www.nationalgeographic.com/news/2015/1/150118-evolution-flavor-taste-hamburger-ngfood/.

23. Worrall, *supra* note 22.

24. *Id.*

25. Bradford, *supra* note 15; *see also* Claire O'Connell, *A Matter of Taste and Survival for the Human Race*, IRISH TIMES (Nov. 13, 2014, 1:00 AM), https://www.irishtimes.com/news/science/a-matter-of-taste-and-survival-for-the-human-race-1.1992571 ("In our ancestral human population, those who had the ability to perceive dangerous compounds in their food could better avoid them, and those who could better assess the nutritive and caloric value of their food could get a good supply of energy.").

26. KORSMEYER, *supra* note 22, at 3; *see also* Buccafusco I, *supra* note 20, at 529 (arguing that low senses were "inherently private and incommunicable").

27. *See* Buccafusco I, *supra* note 20, at 539.

bring the flavor of food into the spotlight.[28] Modern cuisine, often associated with celebrity chefs, is both innovative and capitalized.[29] For example, consider molecular gastronomy, a method of food preparation that chefs have developed in recent years.[30] This preparation technique is used in various ways around the world, bringing more attention to taste through new food products.[31]

In addition to the celebrity status chefs are achieving, continuing research in the area of food science helps overcome the earlier perceptions of taste as a low value sense.[32] Research has demonstrated that "all areas of the mouth contain[] taste buds [that] . . . are sensitive to all taste qualities."[33] This research helps develop better taste profiles, lowering the public perception of taste as a subjective inquiry.[34]

Combinations of the basic tastes create what is known as a flavor profile: "a set of basic and common spices, seasonings and aromatics that emulate a specific cuisine."[35] Flavor profiles are already used to characterize the sensory properties of many

28. Buccafusco II, *supra* note 22, at 1145.

29. *Id*. at 1150.

30. *See* Morgan P. Arons, *A Chef's Guide to Patent Protections Available for Cooking Techniques and Recipes in the Era of Postmodern Cuisine and Molecular Gastronomy*, 10 J. BUS. & TECH. L. 137, 146 (2015) ("'Molecular Gastronomy' can be described as a discipline of food service . . . commonly defined as 'a style of cuisine in which chefs explore culinary possibilities by borrowing tools from the science lab and ingredients from the food industry.'").

31. *See* Buccafusco II, *supra* note 22, at 1150 (pointing out several molecular gastronomists and their restaurants including Homaro Cantu from Moto in Chicago, Grant Achatz from Alinea in Chicago, Heston Blumenthal from The Fat Duck in London, and Ferran Adria from El Bulli in Spain).

32. *See* Arons, *supra* note 30, at 146.

33. Steven D. Munger, *The Taste Map of the Tongue You Learned in School Is All Wrong*, SMITHSONIAN.COM (May 23, 2017), https://www.smithsonianmag.com/science-nature/neat-and-tidy-map-tastes-tongue-you-learned-school-all-wrong-180963407/. Historically, researchers believed that the tongue was mapped into sections and that the receptors for each of the basic tastes could be found in a specific section on the tongue; this theory has now been discredited. *Id*.

34. *See generally Flavor Profile*, SOC'Y SENSORY PROFS., https://www.sensorysociety.org/knowledge/sspwiki/Pages/Flavor%20Profile.aspx (last visited Nov. 24, 2019) (describing the history and process of the "flavor profile" method).

35. *10 Basic Flavor Profiles to Keep Meal Prep Interesting (and Tasty!)*, WORKWEEKLUNCH (Oct. 14, 2017), https://workweeklunch.com/basic-flavor-profiles/.

different types of foods ranging from beverages to condiments and sauces.[36] Flavor profiles also provide individuals with food recommendations based on their preferences.[37] Flavor profiles are "thought of as the 'mother' of many other descriptive methods," with respect to characterizing sensory attributes, and in fact they have been used for these very purposes since the 1940s.[38] These profiles describe flavors in terms of the typical components: the flavor attributes themselves, as well as the intensity, aftertaste, and amplitude of those attributes.[39] To develop a flavor profile, a group of trained panelists first individually evaluate products, then they work together to determine an overall profile, combining each of their individual observations.[40] Because of the procedures taken to develop these profiles—selection of an appropriate panel, training of the panelists, blind taste testing, etc.—industry professionals consider flavor profiles to be accurate representations of flavor.[41]

Recipes combine ingredients with different tastes to create flavors.[42] For example, Thai curry is sweet because of the combination of coconut milk and sugar; it is savory because of the addition of fish sauce; it is spicy from the addition of curry paste; and it is sour because of the lime juice.[43] Experts know that one flavor balances another "to achieve an even more harmonious taste"; for example, cayenne pepper (a spice) is added to Mexican hot chocolate (a sweet) to produce a dynamic

36. Robert J. Lewis, *Protecting A Sensory Attribute of Food by Patent*, 18 INTELL. PROP. & TECH. L.J. 17, 18 (2006).

37. *See Castello Taste Profile*, CASTELLO, https://www.castellocheese.com/en-us/taste-profile-info-page/ (last visited Nov. 24, 2019).

38. *Flavor Profile*, *supra* note 34.

39. *Id.*

40. *See id.*; *see also* CHARLES W. BAMFORTH, BEER: TAP INTO THE ART AND SCIENCE OF BREWING 183–85 (2nd ed. 2003); *Coffee Spider Graphs Explained*, *supra* note 12.

41. *Flavor Profile*, *supra* note 34.

42. Jess Dang, *A Study of Flavor Profiles*, COOK SMARTS (Oct. 6, 2014), https://www.cooksmarts.com/articles/study-flavor-profiles/.

43. *Id.*

flavor.[44] Alternatively, a flavor can be used to enhance another flavor—for example, salt enhances sweet, as with a salted caramel.[45] For those of us who are not experts in the culinary industry, recipes provide the ingredients to combine to develop whatever flavor profile is desired.[46] Recipes combine ingredients in the exact proportions to build an overall "flavor and taste experience."[47]

Spider diagrams are the typical method for illustrating flavor profiles, transforming the low value sense into a visual, or high value, experience.[48] Appendix A provides some examples of what these diagrams look like, with multiple axes representing taste components.[49] Spider diagrams are created through the blind taste tests of professional panelists, as discussed above; the results of the evaluations are illustrated, showing the most prevalent flavors in a product.[50] Spider diagrams are already used in many different food sectors to describe flavors ranging

44. *Id.*; *see also* Melanie Pinola, *Learn to Make Any Dish You Cook Better with the Science of Taste*, LIFE HACKER (Dec. 6, 2013, 11:00 AM), https://lifehacker.com/learn-to-make-any-dish-you-cook-better-with-the-science-1477864259.

45. Dang, *supra* note 42.

46. *See* Shannon, *Learning to Cook by Flavor Profile, Not Recipe*, PLAN TO EAT (Jan. 15, 2013), https://www.plantoeat.com/blog/2013/01/learning-to-cook-by-flavor-profile-not-recipe/.

47. Chef Chris Koetke, *The Art of Building Flavor in Recipes,* MSGDISH (Nov. 30, 2018), https://msgdish.com/the-art-of-building-flavor-in-recipes/.

48. *Coffee Spider Graphs Explained*, *supra* note 12; *see also* Niamh Michail, *The Flavour of Food Cannot be Copyrighted, ECJ Told. So How Can You Protect Your Product?*, FOODNAVIGATOR, https://www.foodnavigator.com/Article/2018/07/31/The-flavour-of-food-cannot-be-copyrighted-ECJ-told.-So-how-can-you-protect-your-product (last updated July 31, 2018, 1:39 GMT) (showing how there are also sensory panels and chemical tests that indicate flavor profiles).

49. *See infra* Appendix A.

50. *Coffee Spider Graphs Explained*, *supra* note 12 (describing the process for creating a spider graph for coffee to document sensory attributes for both flavor and aroma); *see also* BAMFORTH, *supra* note 40, at 185.

from alcohol[51] and coffee[52] to chocolate,[53] tomatoes,[54] and cheese.[55] The fact that professionals are able to develop flavor profiles to describe taste demonstrates that taste is not as subjective as it was once thought to be.[56] Because spider diagrams are already used to identify the taste of a variety of food products,[57] there is no reason why their use should not be expanded to involvement in legal settings. Such diagrams make taste an objective inquiry by accurately representing the flavor of a product.

B. Levola Hengelo BV v. Smilde Foods BV

When Levola learned of the similarity between its cheese spread product, Heksenkaas, and Smilde's product, Witte Wievenkaas, it argued to Dutch courts that Smilde's product "infringed its copyright in the 'taste' of Heksenkaas."[58]

51. *See* BAMFORTH, *supra* note 40, at 185; JEFFREY L. LAMY, THE BUSINESS OF WINEMAKING 245 (Judith Chien ed., 2015); F. Richard Sharpe, *Assessment and Control of Beer Flavour*, 95 J. INST. BREWING 301, 303 (1988); Cassie Poirier, *Taking Sensory to the Next Level*, BRIESS MALT & INGREDIENTS (Nov. 11, 2015), http://blog.brewingwithbriess.com/taking-sensory-to-the-next-level/.

52. *See Coffee Spider Graphs Explained*, *supra* note 12; *see also August/September 2013: Spider Graphs and Cold Brew*, SWEET MARIA'S, https://legacy.sweetmarias.com/library/augustseptember-2013-spider-graphs-and-cold-brew/ (last visited Nov. 24, 2019).

53. *See generally* Marlene Stauffer, *The Flavor of Milk Chocolate*, BLOMMER CHOCOLATE CO. (2000), http://www.blommer.com/_documents/flavor-changes-caused-by-processing-article.pdf (demonstrating the flavor differences among milk chocolates using the same recipe); *see also Chocolate Flavor Profiles*, C-SPOT, https://www.c-spot.com/atlas/chocolate-flavor-profiles/ (last visited Nov. 24, 2019); Nitin Chordia, *The Chocolate Map*, HINDU, https://www.thehindu.com/life-and-style/food/the-chocolate-map/article24104458.ece (last updated June 8, 2018, 1:32 IST).

54. *See* Brian Farneti et al., *Aroma Volatile Release Kinetics of Tomato Genotypes Measured by PTR-MS Following Artificial Chewing*, 54 FOOD RES. INT'L 1579, 1587 (2013).

55. *See* Patrizia Papetti & Angela Carelli, *Composition and Sensory Analysis for Quality Evaluation of a Typical Italian Cheese: Influence of Ripening Period*, 31 CZECH J. FOOD SCI. 438, 442 (2013); Sue Riedl, *Cheese Spider Graphs Are for a True Curd Nerd*, GLOBE & MAIL, https://www.theglobeandmail.com/life/food-and-wine/food-trends/cheese-spider-graphs-are-for-a-true-curd-nerd/article21354069/ (last updated May 12, 2018).

56. *Flavor Profile*, *supra* note 34.

57. *See Coffee Spider Graphs Explained*, *supra* note 12.

58. Case C-310/17, Levola Hengelo BV v. Smilde Foods BV, ECLI:EU:C:2018:899, ¶ 17 (Nov. 13, 2018), https://curia.europa.eu/juris/document/document.jsf?text=&docid=207682&&doclang=EN&amp.

Specifically, Levola stated that "copyright in a taste refers to the 'overall impression on the sense of taste caused by the consumption of a food product, including the sensation in the mouth perceived through the sense of touch.'"[59] The company argued that the taste of Witte Wievenkaas was a reproduction of its copyrighted work, the taste of Heksenkaas.[60] Levola sought a court order to cease production and sale of Smilde's product.[61]

The general court found that Levola's claims "had not indicated which elements, or combination of elements, of the taste of Heksenkaas gave it its unique, original character and personal stamp."[62] Therefore, the general court found it was unnecessary to determine whether the taste was protectable under copyright law.[63]

On appeal, Levola relied on an earlier decision by the Supreme Court of the Netherlands, where the possibility of copyright protection for the scent of perfume was accepted, to argue that taste could be classified as a work eligible for protection.[64] In contrast, Smilde argued that the "copyright system . . . is intended purely for visual and auditory creations," thus taste does not fall into those categories warranting protection.[65] Additionally, Smilde argued that taste could not qualify as a work eligible for protection because of "the instability of a food product and the subjective nature of

59. *Id.* ¶ 18; *see also* Noor Maraghi, *ECJ Copyright Ruling Leaves Cheese-Maker with a Bitter Aftertaste*, FRESHFIELDS BRUCKHAUS DERINGER (Nov. 15, 2018), https://riskandcompliance.freshfields.com/post/102f5ve/ecj-copyright-ruling-leaves-cheese-maker-with-a-bitter-aftertaste (Michel Wildenborg, director of Heksenkaas, claimed that "it's a discrimination of senses that something you can taste with your mouth is not protectable by copyright").

60. Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 18.

61. *Id.*

62. *Id.* ¶ 19.

63. *Id.*

64. *Id.* ¶ 22. Scent, along with flavor, is one of the low senses. *See supra* Section I.A. Scent is also typically viewed as a subjective inquiry, although it has been argued that it should not be seen as such. *See* Jennifer C. Brookes, *Science Is Perception: What Can Our Sense of Smell Tell Us About Ourselves and the World Around Us?*, 368 PHIL. TRANSACTIONS ROYAL SOC'Y 3491, 3491 (2010).

65. *Id.* ¶ 23.

the taste experience."[66] The appeals court asked the European Court of Justice to decide the issue of "whether the taste of a food product can be protected under the Copyright Directive."[67]

The Court of Justice determined that for the taste of a product to qualify for copyright protection, it must be capable of being classified as a "work."[68] Under European copyright law, there are two requirements for subject matter to qualify as a work: (1) the subject matter must be original, meaning that it is a product of the author's "intellectual creation," and (2) it must be an expression of that intellectual creation.[69] In other words, to be considered a "work," the expression of the subject matter must be precise and objective, not necessarily permanent.[70] The court provided two main reasons for this holding.[71] First, for the proper authorities to ensure copyright protection, and for individuals to know of the protected subject matter, they "must be able to identify, clearly and precisely, the subject matter so protected."[72] Second, "to ensure that there is no element of subjectivity . . . means that the [protected subject matter] must

66. *Id.*; *see also* Tsang, *supra* note 2 (arguing for Smilde, Tobias Cohen Jehoram, an attorney for the company, stated that "if you can't describe what your monopoly is, you have not sufficiently stated your claim," and "[e]ven an expert had to admit it's really difficult to describe what a taste is").

67. Press Release No 171/18, *supra* note 3; *see also* Anandashankar Mazumdar & Stephanie Bodoni, *Taste of Cheese Can't Get Copyright Protection, EU Court Says (1)*, BIG L. BUS. (Nov. 13, 2018), https://biglawbusiness.com/taste-of-cheese-cant-get-copyright-protection-eu-court-says-1 (noting the growing trend for nations to refer their questions to the EU for resolution but pointing out that this question should not have made it as far as it did because there is prior case law on point). The Directive at issue here, Directive 2001/29, "concerns the legal protection of copyright and related rights in the framework of the internal market, with particular emphasis on the information society." Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 9. "[A]lthough the European Union is not a party to the Berne Convention, it is nevertheless obliged, under Article 1(4) of the WIPO Copyright Treaty, to which it is a party and which Directive 2001/29 is intended to implement, to comply with Articles 1 to 21 of the Berne Convention." *Id.* ¶ 38.

68. *Id.* ¶¶ 36–37.

69. *Id.*

70. *Id.* ¶ 40 ("for there to be a 'work' as referred to in Directive 2001/29, the subject matter protected by copyright must be expressed in a manner which makes it identifiable with sufficient precision and objectivity, even though that expression is not necessarily in permanent form").

71. *Id.* ¶ 41.

72. *Id.*

be capable of being expressed in a precise and objective manner."[73]

The Court of Justice found that the taste of Heksenkaas was not copyrightable, and in general, "the taste of a food product cannot . . . be pinned down with precision and objectivity," so it is unable to ensure copyright protection, notify individuals of the protected subject matter, and ensure there is no element of subjectivity.[74] The court found that unlike literary or pictorial works, taste is subjective and variable, depending on factors particular to individuals including "age, food preferences and consumption habits, as well as on the environment or context in which the product is consumed."[75] The court mentioned that current scientific technology is not yet advanced enough to provide an identification of a taste with the precision and objectivity necessary to enable it to differentiate between products.[76] Therefore, the court held that "the taste of a food product cannot be classified as a 'work'" and consequently is not eligible for copyright protection under the Directive.[77]

The court's opinion found that the directive "must be interpreted as precluding (i) the taste of a food product from being protected by copyright under that directive and (ii)

73. *Id.*; *see also Chalk and Cheese*, EURONEWS, https://www.euronews.com/2018/11/13/chalk-and-cheese (last updated Nov. 13, 2018) (highlighting that photographs, songs, or pieces of writing would be examples of items that could be "identified with precision and objectivity").

74. Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 42; *see also* Patricia Mariscal, *Copyright Case: Levola v Smilde, Court of Justice of the European Union (CJEU)*, KLUWER COPYRIGHT BLOG (Feb. 13, 2019), http://copyrightblog.kluweriplaw.com/2019/02/13/copyright-case-levola-v-smilde-court-of-justice-of-the-european-union-cjeu/ (summarizing the holding by stating "it is impossible to objectively and accurately define the subject matter of protection, leading to legal uncertainty, which determines that a flavour cannot be classified as an intellectual work").

75. Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 42; *see also* Press Release No 171/18, *supra* note 3; Brigit Katz, *Dutch Company Can't Copyright the Taste of Its Cheese, E.U. Court Rules*, SMITHSONIAN.COM (Nov. 15, 2018), https://www.smithsonianmag.com/smart-news/dutch-company-cant-copyright-taste-its-cheese-eu-court-rules-180970822/ (stating that because of this ruling, taste is more like the concept of an "idea" as opposed to a "work" under copyright laws); Tsang, *supra* note 2 (same).

76. Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 43; *see also* Press Release No 171/18, *supra* note 3; Maraghi, *supra* note 59 (noting how future developments in technology may provide reasons to revisit this ruling).

77. Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 44.

national legislation from being interpreted in such a way that it grants copyright protection to such a taste."[78] The effect of this holding is that no member country of the European Union can grant copyright protection for flavor because of its subjective nature.[79] Although this outcome may not be favorable to companies like Levola,[80] the decision does help "to further define the boundaries of intellectual property" in the European Union.[81] For food manufacturers in general, this means they cannot obtain copyright protection for the taste of their products in the European Union until they can find an objective way to convey that taste.[82]

Despite the *Levola* holding, Europe does allow some protection for specific products through geographic indications which highlight "the geographical origin of food products with specific qualities."[83] Manchego cheese, for example, is "made from raw or pasteurized milk from sheep of the hardy

78. *Id.* ¶ 46. Note that the Court of Justice usually follows the advocate general's advice. Kait Bolongaro, *Edam It! The Taste of Cheese Cannot Be Copyrighted, Court Told*, POLITICO, https://www.politico.eu/article/edam-it-the-taste-of-cheese-cannot-be-copyrighted-court-told/ (last updated Apr. 30, 2019, 12:06 PM CET). Prior to ruling on this case, it was advised that "copyright could only cover something that can be seen or heard" by Advocate General Melchior Wathelet; he wrote "[t]he flavor of a food product cannot be compared with any of the 'works' protected . . . and, to my knowledge, no other provision in international law protects, by copyright, the flavor of a food product." *Id.*

79. *See* James Crisp, *The Taste of Food Can't Be Copyrighted, Says EU's Top Court in Cheese Ruling*, TELEGRAPH (Nov. 13, 2018, 10:01 AM), https://www.telegraph.co.uk/business/2018/11/13/taste-food-cant-copyrighted-says-eus-top-court-witches-cheese/.

80. *See* Foo Yun Chee, *You Can't Copyright Taste, EU Court Says in Setback for Food Industry*, REUTERS (Nov. 13, 2018, 7:47 AM), https://www.reuters.com/article/us-eu-copyright-netherlands-food/you-cant-copyright-taste-eu-court-says-in-setback-for-food-industry-idUSKCN1NI1IN ("'We find it a pity and incorrect that the creative expression in food and perfumes do not have copyright protection and that everyone can make a copy of it,' said Heksenkaas director Michel Wildenborg.").

81. *Hard Cheese: The Taste of Food Cannot Be Copyrighted, EU Court Says*, *supra* note 2.

82. *See* Tsang, *supra* note 2 (Ben Allgrove, chairmen of the intellectual property, technology, and communications group at Baker McKenzie, stated "[f]or anyone who wants to protect taste, smell, touch, those sorts of sensory perceptions of a product, it pretty much takes the copyright off the table.").

83. Xiomara Fernanda Quinoñes Ruiz et al., *How Are Food Geographical Indications Evolving? – An Analysis of EU GI Amendments*, 120 BRIT. FOOD J. 1876, 1876 (2018).

Manchego breed, pressed paste type, not cooked."[84] It comes from the dry region in Spain where there is an "arid climate" that "the sheep have adapted to over the years."[85] The specifications are so detailed, and all must be met for a product to have a label indicating it is Manchego, showing that it is of a specific, desired quality.[86] Geographic indications allow producers to focus on the process of food preparation, which secures protection for the taste that results.[87] Such geographic indications receive intellectual property rights—but these rights are not available in the United States.[88]

II. AN INTELLECTUAL PROPERTY ANALYSIS

Unlike the laws in Europe, the United States has no statutes and very little common law regarding the intellectual property protection of flavors.[89] Additionally, as mentioned, the United States does not provide protections that may be eligible for geographic indications.[90] However, this Note argues that flavors can be protected through current intellectual property laws in the United States. Copyrights are used to protect works

84. EMILIE VANDECANDELAERE ET AL., STRENGTHENING SUSTAINABLE FOOD SYSTEMS THROUGH GEOGRAPHICAL INDICATIONS: AN ANALYSIS OF ECONOMIC IMPACTS 91 (2018).

85. *Id.*

86. *Id.* at 93 ("The Manchego cheese specifications contain: a description of the product (physical, chemical and microbiological characteristics of the milk and cheese and sensory characteristics of the cheese); the geographical demarcation; controls that prove that the product comes from the demarcated area; a description of how the product is obtained from milk through to maturation; the historical, natural and production characteristics justifying the link with the particular *terroir*; an indication of the monitoring and control structure; and labelling and forms of marketing.").

87. *See generally* EUROPEAN COMM'N, WORKSHOPS ON GEOGRAPHICAL INDICATIONS 3 (2014) (noting that "GIs may [] enable producers . . . to exercise more control over the marketing of their products, combat counterfeiting, and secure a higher share of the value added by distinguishing their product in the marketplace").

88. *Id.* at 1.

89. *See Geographical Indication Protections*, USPTO, https://www.uspto.gov/learning-and-resources/ip-policy/geographical-indications/office-policy-and-international-affairs-0 (last modified Nov. 1, 2019, 9:15 AM EDT); Ruiz et al., *supra* note 83, at 1876.

90. *See Geographical Indication Protections*, *supra* note 89.

of authorship.[91] Patents are used to protect functional or ornamental features.[92] Trademarks are used to protect brands.[93] And, trade secrets are used to protect secret information.[94] These four types of intellectual property can be used to protect flavor.[95] Chefs, whether on their own or through the company they are employed by, should be rewarded with intellectual property protection for their creativity and originality in the kitchen, as Levola would likely have been rewarded for the taste of Heksenkaas under United States law.

A. *Copyright Law*

Copyright law was first provided for in the Constitution, created "[t]o promote the Progress of . . . useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their respective Writings."[96] Copyright law is intended to promote progress and protect creative works, providing rights to their creators, while also making them available for the benefit of the public.[97] 17 U.S.C. § 102(a) codifies the subject matter that can be protected: "[c]opyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a

91. *See* James Yang, *Four Types of Intellectual Property You Can Use to Protect Your Idea and How to Use Them*, OC PAT. LAW., https://ocpatentlawyer.com/four-types-intellectual-property-protect-idea/ (last visited Nov. 24, 2019) (describing the general categories of intellectual property protections).

92. *See id.*

93. *See id.* (using Coca-Cola as an example of a brand protected by trademark law).

94. *See id.*

95. *See* discussion *infra* pp. 44–47.

96. U.S. CONST. art. I, § 8, cl. 8.

97. Daniel R. Kimbell, *Intellectual Property: An Attorney's Guide*, 27 BEVERLY HILLS B. ASS'N J. 109, 109, 114 (1993) (stating that the two purposes of copyright law are (1) "to protect the creative expression of ideas, which expression might not themselves otherwise be capable of protection," and (2) "to put copyrighted works to their most beneficial use so that the public good fully coincides with the claims of individuals").

machine or device."[98] Some examples of statutory works of authorship include literary, musical, dramatic, choreographic, and pictorial works.[99]

As with the European law illustrated through *Levola*, copyright protection does have some limitations in the United States.[100] Such protection cannot be used for "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."[101] Some examples of works that are not subject to copyright protection include titles and slogans, ideas or methods, blank forms, standard calendars, and lists or tables taken from public documents.[102]

In order to qualify for copyright protection, the copyrightable work of authorship needs to be fixed in some tangible medium.[103] Recipes should be seen as the fixed medium, where the underlying work of authorship is the dish with a specific flavor created by the recipe.[104] This argument compares a recipe, representing a dish, to sheet music, representing a symphony.[105] If a recipe is the physical embodiment of a dish with a specific flavor, copyright law can protect that flavor, just as copyright

98. 17 U.S.C. § 102(a) (2018). Note that if there is adequate subject matter, copyright protection exists as soon as the work is created and fixed in a tangible medium. *Copyright in General*, U.S. COPYRIGHT OFF., https://www.copyright.gov/help/faq/faq-general.html#register (last visited Nov. 24, 2019); *Obtaining Copyright Protection*, BITLAW, https://www.bitlaw.com /copyright/obtaining.html (last visited Nov. 24, 2019). Registration is not necessary, but it does have benefits; for example, lawsuits cannot be filed for infringement without registration, damages and attorney's fees are only accessible with successful litigation, and registration can sometimes be considered *prima facie* evidence of a copyrighted work. *Copyright in General*, *supra* note 98. Copyright protection lasts for the lifetime of the author plus an additional seventy years, and registration is fairly inexpensive. Yang, *supra* note 91 (stating that the duration of copyright protection can also vary from seventy years to be ninety-five years or 120 years for certain types of works).

99. 17 U.S.C. § 102(a).

100. *See* 17 U.S.C. § 102(b) (2018).

101. *Id.*

102. 37 C.F.R. § 202.1 (2018).

103. 17 U.S.C. § 102(a).

104. Broussard, *supra* note 16, at 715.

105. *Id.*

law can protect the sounds of a symphony through the physical embodiment of the sheet music.[106] Recipes should be viewed as literary works; therefore, they should receive the benefits of copyright protection, "no different from the next great American novel."[107]

Looking to the application of copyright law to flavor, the biggest issue that needs to be addressed is the originality of the flavor profile.

1. *Originality as a requirement for copyright protection with respect to flavor*

Copyrightable material must be original.[108] To be considered an original product, there must be an element of skill or labor invested in the new product's development.[109] This could potentially present a problem for the protection of flavor, since oftentimes recipes lack originality.[110] However, the Eighth Circuit has held that recipes are copyrightable so long as they are "original compositions."[111] In *Feist Publications, Inc. v. Rural Telephone Service Co.*, the United States Supreme Court held that the term original in copyright contexts "means only that the work was independently created by the author (as opposed to copied from other works), and that it possess at least some minimal degree of creativity."[112] Because the level of skill

106. *See id.*

107. Arons, *supra* note 30, at 152.

108. 17 U.S.C. § 102(a) (stating that "[c]opyright protection subsists, in accordance with this title, in *original* works of authorship fixed in any tangible medium of expression") (emphasis added); *see also Copyrighting Recipes*, FINDLAW, https://smallbusiness.findlaw.com/intellectual-property/copyrighting-recipes.html (last visited Nov. 24, 2019).

109. Laura Symons, *5 Essential Ways to Protect Your Food and Drinks Brand*, LAWBITE (Mar. 23, 2017), https://www.lawbite.co.uk/resources/blog/5-essential-ways-to-protect-your-food-and-drinks-brand/.

110. *See* Broussard, *supra* note 16, at 706.

111. *See* Fargo Mercantile Co. v. Brechet & Richter Co., 295 F. 823, 828 (8th Cir. 1924). The court explained that recipes are "original compositions" that "serve to advance the culinary art." *Id.* at 828. This assertion seems to support the conclusion that copyright protection for recipes is possible; however, courts have read this "to apply to collections of recipes, rather than to each recipe within the collection." *Copyrighting Recipes*, *supra* note 108.

112. Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991).

required to create an original copyrightable product is so low, it is possible that an addition of only one ingredient will create a copyrightable taste, as changing one ingredient can drastically change the flavor of the dish.[113]

In *Publications International v. Meredith Corp.*, the Seventh Circuit found that the recipes at issue did not contain any expressive additions to the functional components and, therefore, were not copyrightable.[114] The court relied on Professor Melville Nimmer's opinion in this decision: "This conclusion [i.e., that recipes are copyrightable] seems doubtful because the content of recipes are clearly dictated by functional considerations, and therefore may be said to lack the required element of originality, even though the combination of ingredients contained in the recipes may be original in a noncopyright sense."[115] Protection is not provided to the actual idea, rather it is extended to the expression of the idea; so, if the recipe is presented in an original manner, it can be protected.[116] As discussed, recipes create flavor profiles, and individual ingredients make those recipes.[117] Because recipes merely need expressive elements to make them original, an original recipe does not necessarily mean an original flavor profile.[118] Rather, one of the ingredients in the flavor profile must be original to that dish for copyright protection.[119]

113. *See* Cunningham, *supra* note 11, at 38.

114. Publ'ns Int'l, Ltd. v. Meredith Corp, 88 F.3d 473, 480 (7th Cir. 1996).

115. *Id.* at 481.

116. *See* Jani Ihalainen, *Can You Own a Recipe? When Food Meets Intellectual Property Law*, IP IUSTITIA (Sept. 19, 2014, 9:28 AM), https://www.ipiustitia.com/2014/09/can-you-own-recipe-when-food-meets.html.

117. *See supra* Section I.A.

118. *See* Joy Butler, *Protecting Your Recipes. What Culinary Professionals Want to Know.*, GUIDE THROUGH LEGAL JUNGLE (Jan. 23, 2018, 11:14 PM), https://www.guidethroughthelegaljungleblog.com/2018/01/protecting-your-recipes.html#page=1.

119. *See id.*

2. *Facts are not copyrightable*

The Court in *Feist* held that facts alone are not considered copyrightable material because they are not original.[120] But, if there is an additional expressive element, such that it is more than a statement of fact, a work can be protected through copyright law;[121] a list of items, ingredients in a recipe for example, may be protected if it is "an original selection or arrangement of facts."[122] The copyright office has noted that "[a] mere listing of ingredients is not protected under copyright law," but recipes are not per se excluded from copyright protection.[123] "[W]here a recipe or formula is accompanied by substantial literary expression in the form of an explanation or directions, or when there is a collection of recipes as in a cookbook, there may be a basis for copyright protection."[124] In contrast, "mere techniques, information on ingredients or methods or the 'idea' of an overall recipe" would not be seen as an original work of authorship and therefore, would not be eligible for copyright protection.[125]

Recipes themselves are not protectable under copyright law if they are statements of fact necessary for the preparation of food; however, recipes that contain some element of literary expressiveness are copyrightable.[126] In *Lambing v. Godiva Chocolatier*, Godiva was accused of infringing the copyright of a recipe for a truffle that was included in an unpublished cookbook.[127] The court held that identifying the ingredients as a list is not an expressive element deserving copyright

120. *See* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 350 (1991).

121. *See id.*

122. *Id.*

123. *What Does Copyright Protect?*, U.S. COPYRIGHT OFF., https://www.copyright.gov/help/faq/faq-protect.html (last visited Nov. 24, 2019).

124. *Id.*

125. Ihalainen, *supra* note 116.

126. *See* Lambing v. Godiva Chocolatier, No. 97-5697, 1998 WL 58050, at *1 (6th Cir. Feb. 6, 1998).

127. *Id.*

protection.[128] Rather, "recipes are functional directions for achieving a result and are excluded from copyright protection."[129]

The court in *Meredith*, however, held that recipes can be protected by copyright law, but they need to be considered on a case-by-case basis to determine whether there is an appropriate amount of literary expressiveness in the recipe's directions.[130] The court did not necessarily rule out copyrightability for recipes in every case; rather, it held that authors can "lace their directions for producing dishes with musings about the spiritual nature of cooking or reminiscences they associate with the wafting odors of certain dishes in various stages of preparation."[131] This suggests that recipes are original in some situations.

As these cases are addressing elements of recipes, a distinction should be made between recipes and flavor profiles. Dishes are physical embodiments of flavor profiles; recipes are embodiments of dishes fixed in a tangible medium.[132] This Note is not seeking to protect the recipe; it is seeking to protect the flavor profile embodied by the recipe. Therefore, expression needs to be included in the recipe because that is ultimately what the Copyright Office will be assessing; however, the protection sought is for the flavor, not the recipe itself.[133]

128. *Id.*

129. *Id.*

130. Publ'ns Int'l, Ltd. v. Meredith Corp., 88 F.3d 473, 481–82 (7th Cir. 1996).

131. *Id.* at 481.

132. Ryan King, *Can and Should You Protect Your Recipes?*, FINE DINING LOVERS (Sept. 7, 2012), https://www.finedininglovers.com/article/can-and-should-you-protect-your-recipes (stating that "a chef in most cases is not looking to protect the written form but the end product").

133. *Meredith*, 88 F.3d at 481.

3. *Copyright protection should be extended to the taste and flavor of food*

Flavor profiles can be protected under copyright law if they meet all the necessary requirements, such as originality.[134] As with many copyrightable products, originality is the main hurdle, but the level of creativity required to meet the originality requirement is very low.[135] Whether a recipe or a flavor profile is eligible for copyright protection is a fact-specific inquiry particular to each case because it depends on how the author presents the recipe and other material that may be included with the recipe.[136]

Some argue that courts are reluctant to provide copyright protection to food products because of "faulty assumptions that the recipe for a dish, rather than the dish itself, is the proper subject matter of copyright protection."[137] Chefs, however, are "not looking to protect the written form"; rather, they are looking to protect "the end product"—the dish they created with a specific flavor profile.[138] The recipe is merely the expression of that dish, fixed in a tangible medium.[139]

One negative impact associated with copyrighting dishes is the duration of protection.[140] Copyright protection lasts for a very long time, especially compared to that of patents.[141] It is possible that, depending on the chef's product, it may not be desirable to have such a long term as a shorter duration can be more beneficial and profitable for chefs to capitalize on their

134. *See* Ihalainen, *supra* note 116 ("The ideas of the recipes themselves (for example the concept of a pancake) cannot be protected by copyright.").

135. *See Copyrighting Recipes*, *supra* note 108 (stating how "[a] run-of-the-mill story with stereotypical characters and a predictable ending will probably be creative and original enough, as long as it isn't copied or derived from an existing work").

136. *Id.*

137. Broussard, *supra* note 16, at 703.

138. King, *supra* note 132.

139. *Id.*

140. Arons, *supra* note 30, at 152.

141. Yang, *supra* note 91 (noting that copyright protection lasts for a minimum of seventy years, while patent protection lasts for a maximum of twenty years).

works.[142] Some argue that the copyright term is much too long for the food industry in particular, where "there are constantly changing tastes and new creations."[143] Therefore, copyright protection may not be the best option.

Steven Shaw, co-founder of eGullet[144] and a former lawyer, argues that "if a chef comes up with a new soup, copyrights it, and demands a licensing fee from anyone who serves it, it will spur creativity," which would be in keeping with the purpose of copyright law—to promote progress in the arts.[145] In contrast, others argue that chefs may not want to pay licensing fees,[146] and diners do not necessarily want the cost of their food to rise to the level of being "outrageous."[147] Some also argue that there is no evidence that creativity in the kitchen needs to be spurred;[148] in fact, creativity is already expanding in the culinary industry to a point where consumers return not just to eat their favorite dishes, but "also to see what the chef is currently doing."[149] That being said, chefs can easily change one ingredient and drastically alter the composition of a flavor profile, providing the requisite level of originality required for copyright protection.[150]

4. *Application of United States copyright law to* Levola

First, it is important to note that the European Court of Justice in *Levola* found that the taste of Heksenkaas was an idea, not an expression, avoiding the issue of whether the taste "should be

142. Arons, *supra* note 30, at 152–53.

143. *Id.* at 153.

144. EGullet is an online forum for the Society for Culinary Arts & Letters, a not-for-profit organization "dedicated to the advancement of the culinary arts." *Forums*, EGULLET SOC'Y, https://forums.egullet.org/ (last visited Nov. 24, 2019).

145. Cunningham, *supra* note 11, at 36.

146. *Id.* at 38.

147. *Id.* at 37.

148. *Id.* at 36.

149. *Id.*

150. *See id.* at 38 (noting that this raises the question of whether an addition of one ingredient creates a wholly new copyrightable work, or whether it is merely a derivative work).

treated as a form of literary, scientific or artistic work."[151] As argued above, taste comes from the development of a recipe; a recipe should be treated as the literary work embodiment of a dish.[152] Although the Court of Justice found that the flavor of Heksenkaas was just an idea,[153] when you look at a flavor profile as described by a recipe, it becomes more of an expression and less of an idea, making it eligible for copyright protection under both European law and United States law.[154]

The Court of Justice stated that the taste of Heksenkaas was not a "work" because it was not "expressed in a manner which makes it identifiable with sufficient precision and objectivity."[155] As discussed, flavor profiles illustrated by spider diagrams are used in many different food industries, including the cheese industry,[156] to objectively define the taste of a product.[157] The *Levola* court mentioned that scientific technology had not yet developed far enough along to provide such a precise and objective identification,[158] but the use of spider diagrams throughout the food industry would say otherwise.[159]

In order for a company such as Levola to succeed in showing copyrightability in an American jurisdiction, it would need to show that the flavor of Heksenkaas is sufficiently original to meet the low bar of originality established by the Supreme Court in *Feist*.[160] It is likely that the combination of garlic and

151. Ron Moscona, *Copyright in the Taste of Cheese?*, JD SUPRA (Nov. 27, 2018), https://www.jdsupra.com/legalnews/copyright-in-the-taste-of-cheese-23547/.

152. King, *supra* note 132.

153. *Id.*

154. *See supra* Section I.A.

155. Case C-310/17, Levola Hengelo BV v. Smilde Foods BV, ECLI:EU:C:2018:899, ¶ 40 (Nov. 13, 2018), http://curia.europa.eu/juris/document/document.jsf?text=&docid=207682&&doclang=EN&amp.

156. *See supra* Section I.A; *see also* Papetti & Carelli, *supra* note 55, at 441–42; Riedl, *supra* note 55.

157. Lewis, *supra* note 36, at 18.

158. Levola Hengelo BV, ECLI:EU:C:2018:899, ¶ 43; *see also* Maraghi, *supra* note 59 (noting the court's decision and potential for future technical developments).

159. *Flavor Profile*, *supra* note 34 (stating how industry professionals consider flavor profiles to be accurate representations of flavor); *see also* discussion *supra* Section I.A.

160. Cunningham, *supra* note 11, at 37.

leeks in a cream cheese spread would be able to meet this bar.[161] It is possible that Smilde would rely on the defense of fair use,[162] but if the tastes are really as similar as Levola suggests, then Levola would likely be able to claim that the taste of Witte Wievenkaas was a reproduction of its copyrightable product.[163]

Levola certainly would have faced an uphill battle to obtain copyright protection for its product in the United States. However, it would likely be a more favorable outcome than in the European Court of Justice because recipes and therefore, flavors, are not necessarily unsuitable for protection under American copyright laws.

B. *Patents*

As with copyright law, patent law was initially provided for in the Constitution "[t]o promote the Progress of Science . . . by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries."[164] A patent is a property right issued by a governmental agency, the United States Patent and Trademark Office (USPTO).[165] This right "exclude[s] others from making, using, offering for sale, selling or importing the invention,"[166] and by granting these rights, inventions are protected, encouraging inventors to be creative in their contributions to society.[167]

161. *See* Tsang, *supra* note 2 (quoting Joshua Marshall, an intellectual property lawyer from the European law firm Fieldfisher, stating "[t]he taste of a leek-and-garlic cheese is really an idea").

162. *See* Cunningham, *supra* note 11, at 28. Fair use is a defense against infringement of the exclusive rights provided by copyright protection that allows the use of a copyrighted work "for purposes such as criticism, comment, news reporting, teaching, . . . scholarship, or research." 17 U.S.C. § 107 (2018).

163. *See id.* at 27 (stating how the exclusive rights to reproduce or prepare a derivative work belong to the rights holder, so this would likely come out in favor of Levola if it were applied).

164. U.S. CONST. art. I, § 8, cl. 8.

165. *General Information Concerning Patents*, USPTO, https://www.uspto.gov/patents-getting-started/general-information-concerning-patents#heading-2 (last updated Aug. 16, 2019, 10:34 AM EDT).

166. *Id.*; Kimbell, *supra* note 97, at 110.

167. Cunningham, *supra* note 11, at 32; Arons, *supra* note 30, at 139.

There are three types of patents: utility patents, design patents, and plant patents.[168] For flavor, the most relevant would be a utility patent, which is granted for a process, machine, article of manufacture, or composition of matter.[169] Flavors are likely to be considered as compositions of matter that are the result of "the intermixture of two or more ingredients."[170]

There are four main statutory requirements for a patentable invention: subject matter,[171] utility,[172] novelty,[173] and non-obviousness.[174] For registration, there is an examination process

168. *General Information Concerning Patents*, *supra* note 165.

169. *See Food Patents: Everything You Need to Know*, UPCOUNSEL, https://www.upcounsel.com/food-patents (last visited Nov. 24, 2019) (stating how utility patents are used to cover many different food patents: edible products, food-related processes, and compositions); *see also* Arons, *supra* note 30, at 139 ("A utility patent is granted to an individual who invents or discovers any new and useful process or composition of matter. Additionally, anyone who invents a new and useful machine, article of manufacture, or improvement thereof, may receive utility patent protection. A design patent is issued for a new, ornamental, and original design for an article of manufacture. Lastly, a plant patent 'may be granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant.'" (quoting *General Information Concerning Patents*, *supra* note 165)); Lewis, *supra* note 36, at 17; *General Information Concerning Patents*, *supra* note 165.

170. Arons, *supra* note 30, at 141–43; *see also* P.E. Sharpless Co. v. Crawford Farms, Inc., 287 F. 655, 658 (2d Cir. 1923) (holding "[a] patentable composition of matter may well result or be formed by the intermixture of two or more ingredients, which develop a different or additional property or properties which the several ingredients individually do not possess in common").

171. 35 U.S.C. § 101 (2018) ("Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."). As noted, flavor is likely to be considered as a composition of matter which is eligible subject matter. *See* Arons, *supra* note 30, at 141–43.

172. *Id.* The utility requirement is a very low threshold, and these issues do not usually arise, so they will not be discussed in this Note.

173. 35 U.S.C. § 102(a) (2018) ("A person shall be entitled to a patent unless—(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention; or (2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.").

174. 35 U.S.C. § 103 (2018) ("A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed

administered by the USPTO,[175] which usually takes about two years from the time of filing to the date of issuance.[176] The length of protection, much shorter than that for copyright protection, is twenty years from the application's filing date.[177] The registration process can be very expensive,[178] but it is important to note that inventors must file applications in order to receive protection under patent law; if the inventor does not file in a timely fashion, the invention will pass into the public domain making it available for all to use, preventing the inventor from claiming his right to the invention.[179] The invention also passes into the public domain when the patent expires.[180]

When considering flavor, non-obviousness and novelty will be the two biggest hurdles to overcome when seeking protection through patent law.[181]

1. *Non-obviousness*

The non-obviousness inquiry considers "whether the process would be obvious to someone with 'ordinary skill in the art' at the time" of filing.[182] Applying this to flavor profiles, the inquiry

invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.").

175. *Patent Process Overview*, USPTO, https://www.uspto.gov/patents-getting-started/patent-process-overview (last updated Mar. 18, 2019, 12:09 PM EDT).

176. *How Long Does It Take to Get a Patent?*, ROCKET LAW., https://www.rocketlawyer.com/article/how-long-does-it-take-to-get-a-patent-ps.rl (last visited Nov. 24, 2019); Kimbell, *supra* note 97, at 110.

177. Yang, *supra* note 91; *Patent vs. Copyright: Everything You Need to Know*, UPCOUNSEL, https://www.upcounsel.com/patent-vs-copyright (last visited Nov. 24, 2019).

178. *Do You Have a Great Invention Idea?*, INVENTS CO., https://www.invents.com/how-much-does-a-patent-cost/ (last visited Nov. 24, 2019) (stating how typical fees range from $5,000 to $15,000 with some international applications costing up to $100,000); Kimbell, *supra* note 97, at 111 (stating that maintenance fees are also required throughout the lifetime of a patent).

179. Arons, *supra* note 30, at 140.

180. *Id.*

181. *See* 35 U.S.C. §§ 102, 103 (2018).

182. Arons, *supra* note 30, at 139 (quoting 35 U.S.C. § 103); *see also* Leslie A. Gordon, *Patently Delicious: Meat Specialist Seeks to Patent a Certain Cut of Meat*, A.B.A. J. (Oct. 1, 2012, 9:10 AM CDT), http://www.abajournal.com/magazine/article/patently_delicious_meat_specialist_seeks_to_patent_a_certain_cut_of_meat.

considers whether a recipe is obvious to a person skilled in the art of cooking.

It is not enough that new recipes involve the addition of common ingredients; to be an invention, there must be more disclosed to show that "no one else ever did the particular thing upon which the applicant asserts his right to a patent."[183] In other words, applicants must show that there is a relationship between the ingredients, resulting in something new.[184] In *Application of Levin*, the applicant sought a patent for a butter substitute product.[185] The board found, and the court of appeals affirmed, that because the relationship between heat and acidity was "well-known to food chemists" it would be obvious to combine the ingredients in such a way.[186] This case is an example where there was not a "cooperative relationship between the selected ingredients" producing a new, unexpected, useful function.[187]

Under the standard provided by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, patent examiners are permitted to use common sense as part of their analysis for non-obviousness.[188] This means that if the examiner can find every element disclosed in relevant prior art, it is likely that the examiner will consider the invention obvious; however, an applicant can rebut this argument, as is often done.[189] For recipes, rebutting this argument will be difficult because it is

183. *In re* Levin, 178 F.2d 945, 948 (C.C.P.A. 1949); *see also* Arons, *supra* note 30, at 143–44.

184. *Levin*, 178 F.2d at 948.

185. *Id.* at 946.

186. *Id.* at 948; *see also* KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 421–22 (2007) (holding that common sense is now an element that should be taken into consideration when evaluating whether an invention is non-obvious).

187. *Levin*, 178 F.2d at 948; *see also* Lewis, *supra* note 36, at 18 (mentioning that courts have additionally held food patents invalid for a lack of co-action between the various ingredients).

188. *KSR Int'l Co.*, 550 U.S. at 420; *see also* Gene Quinn, *The Law of Recipes: Are Recipes Patentable?*, IP WATCHDOG (Feb. 10, 2012), https://www.ipwatchdog.com/2012/02/10/the-law-of-recipes-are-recipes-patentable/id=22223/.

189. Quinn, *supra* note 188.

not likely that a particular combination of ingredients will be non-obvious to combine.[190]

2. *Novelty*

The standard for novelty is whether "the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention."[191] For example, recipes that cannot be protected under patentability standards are those taken from one's ancestors, such as your grandmother's recipe for meatloaf or apple pie.[192] In contrast, recipes that rely on new aspects from research and development, such as ingredients that lead to increased nutrition and shelf life, may be considered novel, and therefore, patentable.[193]

It is possible for a food product or culinary process to receive a patent if the resulting product has characteristics that the original ingredients do not possess alone.[194] For example, the case of *P.E. Sharpless Co. v. Crawford Farms, Inc.* involved a patent for a process of creating a new variety of cheese with physical characteristics of one type of cheese and flavor

190. *Id.* ("[Y]ou absolutely need to have some peculiarity to have any hope to get your recipe or food item patented.").

191. 35 U.S.C. § 102(a) (2018); *see also* Arons, *supra* note 30, at 140.

192. *See* Arons, *supra* note 30, at 141.

193. Shayne Nam, *New Zealand: Protecting IP in Novel Food Ingredients & Derived Products*, MONDAQ, http://www.mondaq.com/NewZealand/x/148596/Trade+Secrets/Protecting+IP+in+novel+food+ingredients+derived+products (last updated Oct. 12, 2011); *Reimaging a Brand for a New Generation of Consumers*, WIPO, https://www.wipo.int/ipadvantage/en/details.jsp?id=2598 (last updated July 11, 2012) (showing how research and development for an ice cream company can be used to develop new flavors, enhancing brand awareness). Although these sources are not specifically referring to laws in the United States, other countries apply very similar analyses for novelty, so the same principles would apply.

194. *In re* Levin, 178 F.2d 945, 948 (C.C.P.A. 1949) (citing P.E. Sharpless Co. v. Crawford Farms, Inc., 287 F. 655, 658 (2d Cir. 1923)); *see also In re* White, 39 F.2d 974, 975 (C.C.P.A. 1930) (holding that a new recipe cannot be patented unless there is more to it than what is expected); Nam, *supra* note 193 (stating that combinations of ingredients in ice cream, for example, are allowed where either "synergy exists between these ingredients, or there is an unexpected effect by combining them").

characteristics of another.[195] The Second Circuit held that because the combination of the ingredients developed additional properties that the individual ingredients alone did not possess, this process was inventive and met the patentability requirements.[196] Patent protection may be afforded for unique recipes and cooking techniques.[197] As the court stated in *Meredith*, this would be appropriate because recipes are ideas, and "[p]rotection for ideas or processes is the purview of patent."[198]

3. *Patent law allows for the protection of many food products, including flavor*

Many aspects of food have already received patent protection.[199] However, "a patent for a food as characterized by the sensory attribute itself has not been found."[200] That being said, because taste profiles can be developed by the addition of a single taste-inducing ingredient, as long as the other patentability requirements are met, flavors are patentable when considered as combinations of ingredients.[201] To patent a recipe, the resulting flavor must be new and non-obvious.[202]

Recipes must create products that have characteristics materially different from their individual properties.[203] Novelty is about "exact identity," and if the ingredients of a recipe are the exact copy of the ingredients of a recipe in prior art, the

195. P.E. Sharpless Co., 287 F. at 656, 659.

196. *Id.* at 658.

197. *See id.*

198. Publ'ns Int'l, Ltd. v. Meredith Corp., 88 F.3d 473, 481 (7th Cir. 1996); *see also* Arons, *supra* note 30, at 140 (discussing how this case could afford protection for limited circumstances of recipes).

199. Lewis, *supra* note 36, at 18 (noting that other patented items include "packaging, convenience, storage stability, processability, digestibility, nutrition, achievement of color, and prevention of off flavors" and microwaveable foods, fried pizza crust, pie crust, pasta, and frozen toaster pastry).

200. *Id.*; *see also* Arons, *supra* note 30, at 142.

201. Lewis, *supra* note 36, at 18–19.

202. *Id.* at 17.

203. Arons, *supra* note 30, at 145.

invention will not be considered novel.[204] Articulation of differences to avoid prior art, no matter how small, will make patentability that much easier.[205] For example, if the prior art claims cheddar cheese as an ingredient, and the recipe seeking patentability claims goat cheese, it might avoid prior art because the two ingredients are not exactly the same. Postmodern cuisine incorporates novel cooking techniques, such as molecular gastronomy, which has an effect on the way a particular food tastes.[206] This is one reason why patents should be awarded to chefs.[207]

Patentability also requires a written description.[208] This requirement is interpreted to mean that sufficient information must be given to inform one of ordinary skill in the art to understand that the inventor actually possessed the invention.[209] Chefs have often struggled when trying to adequately describe flavor profiles in recipes when attempting to obtain patent protection, but patent examiners consider recipes to be "akin to a scientific invention."[210] For example, technological advances in areas such as molecular gastronomy have enabled more "scientific description[s]" that can make the patent application process smoother for food products.[211] With respect to flavors, statutory requirements will be met when there is an adequate description of taste profiles and an adequate description of how such a profile is created.[212] As discussed, there are trained panelists who develop taste

204. Quinn, *supra* note 188.

205. *Id.*

206. *See* Arons, *supra* note 30, at 146.

207. *Id.* at 147–48.

208. 35 U.S.C. § 112 (2018).

209. Ariad Pharm., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1355 (Fed. Cir. 2010) (en banc) (holding that the written description requirement was separate from the enablement requirement, and the written description requirement must show that the inventor possessed the invention); *see also* Lewis, *supra* note 36, at 17 (providing that a written description must be "in such full, clear, concise, and exact terms as to enable one skilled in the art to which the invention pertains to make and use the invention").

210. Arons, *supra* note 30, at 146–47.

211. *Id.* at 146.

212. Lewis, *supra* note 36, at 18.

profiles, and spider diagrams are often implemented for visualizing accurate taste profiles.[213] Because one needs to be able to rely on taste profiles for adequate descriptions in patent applications, the advancement and continued usage of spider diagrams would be beneficial to the industry.[214] Chefs could use these profiles to disclose a flavor invention in a patent application.

As with any other industry, protection fosters creativity, and promoting progress and creativity is the goal of patent law, as it is with copyright law.[215] Some argue that the culinary industry does not need the incentives provided by the patent system; however, inventions related to recipes and food technologies provide the same incentives as inventions for any other industry with patents granted by the USPTO.[216] Some negative side effects to patenting recipes include the cost involved, the limited timespan for protection, and the public disclosure.[217] Patents are expensive to obtain and require maintenance fees.[218] Additionally, their protection only lasts for a maximum of twenty years and as soon as the patent expires the invention is in the public domain.[219] That being said, if a chef were given protection over his recipes, he would operate a monopoly and could charge more for the use of his recipes.[220] He could even increase revenue because of the marketability of patent protection.[221] Should a chef decide that the downsides to patentability outweigh the benefits, he is able to obtain protection through another form of intellectual property.[222]

213. *Id.* at 18–19; *see supra* Section I.A.

214. Lewis, *supra* note 36, at 19.

215. *See* Buccafusco I, *supra* note 20, at 510–11.

216. Arons, *supra* note 30, at 147.

217. *Id.* at 148–49 (stating that it is possible for an applicant to request that the application remain confidential if it does not issue as a patent, but this is not commonly done).

218. *Id.* at 139.

219. *Id.* at 140.

220. *See id.* at 153.

221. *Id.* at 148–49.

222. *See id.* at 151–55 (describing the applicability of copyright and trade secret protection).

4. *Application of United States patent law to* Levola

If Levola wanted to obtain a patent for the flavor of its Heksenkaas product, it would need to meet the requirements of non-obviousness and novelty.[223] With the use of spider diagrams, Levola would meet the other patentability requirements, such as written description, because spider diagrams are accepted in the industry as a way to visualize flavor profiles.[224]

Considering obviousness from the perspective of a person skilled in the art of cooking, the inquiry is whether it would be obvious to combine a leek-and-garlic flavor and a cheese spread.[225] There is no evidence in the case regarding this inquiry, but it is possible for Levola to show this is a non-obvious product because it was considered to be "really an idea."[226] However, a more factual inquiry and analysis of prior art in the area would be necessary to show whether this is an accurate statement.

With respect to novelty, Levola would need to show that there is no recipe that exists in the relevant prior art describing their product.[227] The ingredients in a prior art document would need to be exactly the same for it to be invalid for novelty reasons.[228] If, for example, there was an old Dutch recipe for a product that was exactly the same as Heksenkaas, Levola would not be entitled to a patent; but, if there was a recipe for garlic cheese spread that did not use leeks, Levola could still be

223. *See* 35 U.S.C. § 103 (2018); 35 U.S.C. § 102 (2018).

224. *See Coffee Spider Graphs Explained*, *supra* note 12.

225. *See* 35 U.S.C. § 103.

226. *See* Tsang, *supra* note 2. Note that the intellectual property lawyer who referred to the cheese as "really an idea" did not mean it in the sense of an abstract idea which would be unpatentable subject matter; he meant an idea as in something no one had thought of before. *Id*.

227. *See* 35 U.S.C. § 102.

228. *See id*.

entitled to a patent provided it could meet the other patentability requirements, such as non-obviousness.[229]

As one may imagine, it would not be easy for Levola to patent Heksenkaas because of the similar food products that exist in the marketplace today. However, it is possible to picture a situation where a new product could be developed that is not similar to anything in the marketplace and that would not be obvious to a person of skill in the art.[230]

C. *Trademarks*

Trademarks protect brands by acting as an indicator of the source of a product; trademarks are intended "to protect goodwill developed in connection with a particular mark which has been adopted and used by an entity to identify it as the source of those goods and/or service."[231] The term "trademark" is defined by the Lanham Act:

> [A]ny word, name, symbol, or device, or any combination thereof—(1) used by a person, or (2) which a person has a bona fide intention to use in commerce and applies to register on the principal register established by this chapter, to identify and distinguish his or her goods, including a unique product, from those manufactured or sold by others and to indicate the source of the goods, even if that source is unknown.[232]

229. *See Patent Requirements*, BITLAW, https://www.bitlaw.com/patent/requirements.html (last visited Nov. 24, 2019).

230. *See* MPEP § 2141 (9th ed. Rev. 8, Jan. 2018).

231. Kimbell, *supra* note 97, at 109; Yang, *supra* note 91; Jessica Nicole Cox, *Why Coca-Cola's Fictional Lawsuit Against Coke Zero for Taste Infringement Is a Losing Battle*, 17 J. INTELL. PROP. L. 121, 124 (2009) ("The trademark owner is protected against lost sales that occur when consumers purchase infringing products mistakenly believing they have purchased the mark owner's products."); Cunningham, *supra* note 11, at 29 (stating how another purpose of trademark law is to "encourage fair competition and prevent parties from passing off their goods or services as those of another" because of its origin in the laws of unfair competition).

232. 15 U.S.C. § 1127 (2018).

Trademarks are designed to prevent competitors "from using . . . confusingly similar mark[s]"; they are not intended to prevent others from selling similar goods.[233] Typically, a trademark is a word, logo, or slogan that is used to refer to a product.[234] But, the Supreme Court has interpreted the term "trademark" broadly, stating that "[s]ince human beings might use as a 'symbol' or 'device' almost anything at all that is capable of carrying meaning, this language [defining trademark], read literally, is not restrictive."[235] The Supreme Court also stated that "[i]t is the source-distinguishing ability of a mark—not its ontological status as color, shape, fragrance, word, or sign—that permits it to serve these basic purposes."[236] Trademarks can range from "generic" to "arbitrary," where generic marks closely describe the goods or services and arbitrary marks are not instinctively indicative of the goods or services they represent to consumers.[237]

Trademarks are a common law right "to prevent others from using the same mark or a similar mark which is likely to cause confusion."[238] However, it is possible to register them on the federal level with the United States Patent and Trademark Office which provides nationwide statutory rights.[239]

233. *General Information Concerning Patents*, *supra* note 165.

234. Yang, *supra* note 91.

235. Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 162 (1995).

236. *Id.* at 164; *see also In re* N.V. Organon, 79 U.S.P.Q.2d (BNA) 1639, 1644 (T.T.A.B. 2006) (discussing how the Supreme Court interpreted this language with respect to the flavor of a pharmaceutical product).

237. Kimbell, *supra* note 97, at 113 (describing how generic marks are only afforded trademark protection if secondary meaning can be established, while arbitrary or fanciful marks are granted protection unless they are confusingly similar to previously existing marks).

238. *Id.* at 112.

239. Yang, *supra* note 91. While registration is not required, it has benefits that include national rights, and the right to prevent others from securing similar marks. Additionally, trademark protection can last indefinitely if the mark is continuously in use. Kimbell, *supra* note 97, at 112–14.

Two main hurdles that will need to be overcome when considering trademark protection for flavors are secondary meaning and functionality.[240]

1. *Secondary meaning*

An issue often brought up in trademark cases, and one that is likely a concern when considering flavor, is secondary meaning.[241] Flavors are not considered "fanciful, arbitrary, or suggestive," and consumers do not automatically associate flavors with a brand; therefore, for flavors to acquire trademark protection they must acquire secondary meaning.[242] Secondary meaning is obtained when the source of the product, as opposed to the product itself, resonates in the public's mind.[243] In *N.V. Organon*, a company attempted to register an orange flavor as a trademark for a pharmaceutical product.[244] This was the Board's first opportunity to consider the issue of trademark registration for a flavor.[245] The Board held that consumers are not likely to consider the flavor to be a source identifier because it is common practice for pharmaceuticals to have an additional flavor, making the product more palatable, so consumers would view this type of flavor as an "inherent feature of the product that renders it more appealing."[246] It is, however, possible for a flavor to potentially become source identifying if

240. *See* Amanda E. Compton, *Acquiring a Flavor for Trademarks: There's No Common Taste in the World*, 8 NW. J. TECH. & INTELL. PROP. 340, 346–47 (2010).

241. *Id.* at 341.

242. *See* Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 163 (1995).

243. *See generally* Inwood Labs., Inc. v. Ives Labs., Inc., 456 U.S. 844 (1982) (concluding that the colors had not acquired secondary meaning as they did not indicate the drug's origin); *see also Qualitex*, 514 U.S. at 163 (noting "[s]econdary meaning is acquired when 'in the minds of the public, the primary significance of a product feature . . . is to identify the source of the product rather than the product itself").

244. *In re* N.V. Organon, 79 U.S.P.Q.2d (BNA) 1639, 1640 (T.T.A.B. 2006).

245. *Id.* at 1644.

246. *Id.* at 1649; *see also In re* Pohl-Boskamp GmbH & Co. KG, 106 U.S.P.Q.2d (BNA) 1042, 1051 (T.T.A.B. 2013) (holding consumers were not likely to equate the scent of peppermint for medication with a particular source).

secondary meaning is established, as with any other generic trademark.[247]

2. *Functionality*

Under the functionality doctrine, trademark rights are restricted in situations where a producer would gain control over a product's useful features.[248] When considering functionality, "strong evidence of consumer source recognition" is necessary to overcome any possibility of being seen as functional.[249] Functionality is a two-part inquiry considering (1) whether the feature is "essential to the use or purpose of the [object]," and (2) whether the feature "affects the cost or quality" of the product.[250] As mentioned, *N.V. Organon* was the Board's first consideration of registration for a flavor mark.[251] The Board held that it would be unlikely for a flavor to overcome the functionality problem for a pharmaceutical product because in this context, the flavor is used to mask the unpleasant taste of the medication.[252] Trademark registration was denied because of "the functional nature of its orange flavor, and the lack of evidence of acceptable alternatives."[253] Considering the competitive need, the flavor was used to improve palatability for pharmaceutical products, confirming the conclusion that it is functional.[254] The Board in this case was specific in its holding, limiting it to flavors in the pharmaceutical industry.[255] Similarly, in *New York Pizzeria, Inc.*

247. *See infra* Section II.C.3.

248. *Qualitex*, 514 U.S. at 164.

249. Martin S. Loui, *Traditional and Nontraditional Trademarks: Illustrated by Food Wars, Chef Egos and the Malasada Truck*, 15 HAW. B.J. 4, 8 (2011).

250. *N.V. Organon*, 79 U.S.P.Q.2d (BNA) at 1644 (citing *Qualitex*, 514 U.S. at 165).

251. *Id.*

252. *Id.* at 1647.

253. *Id.* at 1646.

254. *Id.* at 1647.

255. The holding is limited because trademark registration was sought for "'an orange flavor' as a trademark for '*Pharmaceuticals* for human use, namely, antidepressants in quick-dissolving tablets and pills.'" *Id.* at 1640 (emphasis added). In this case, the court held that

v. Syal, the court held that "[t]he flavor of food undoubtedly affects its quality, and is therefore a functional element of the product."[256] Functionality will likely be the most difficult hurdle to overcome when considering the trademark protection for a flavor.[257]

3. *Trademark law should be construed more broadly to encompass flavors because technological advances have made flavors less subjective*

Taste is a non-traditional mark, along with "color, motion, sound, scent, . . . touch (texture), and three-dimensional configurations."[258] The basis for expanding trademark protection to non-traditional marks comes from the Lanham Act itself, which provides "[n]o trademark . . . shall be refused registration . . . on account of its nature."[259] Based on this proposal, non-traditional marks, such as flavor marks, can be used as trademarks.[260] In fact, recent case law has expanded the Lanham Act to include some non-traditional marks already.[261]

Some argue, however, that "[f]lavor marks cannot be inherently distinctive, and [therefore, they] must gain secondary meaning" to be protectable as a trademark. [262] Secondary meaning occurs when, "in the minds of the public, the primary significance of a product feature . . . is to identify

"flavor, including an orange flavor, is so intrinsic a feature of *Pharmaceuticals*, that consumers will not perceive a flavor, even a 'unique' orange flavor, as a trademark unless they have been educated to perceive it as such." *Id.* at 1650 (emphasis added).

256. N.Y. Pizzeria, Inc. v. Syal, 56 F. Supp. 3d 875, 882 (S.D. Tex. 2014).

257. *See id.*

258. Loui, *supra* note 249, at 7; Thomas A. Gallagher, Commentary, *Nontraditional Trademarks: Taste/Flavor*, 105 TRADEMARK REP. 806, 808 (2015).

259. Cox, *supra* note 231, at 125–26.

260. *See id.* at 126–29.

261. Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 162 (1995) (holding color functions as a trademark); *In re* Clarke, 17 U.S.P.Q.2d (BNA) 1238, 1240 (T.T.A.B. 1990) (holding a scent used for yarn and string was a sufficient source identifier to be considered for trademark registration).

262. Loui, *supra* note 249, at 8.

the source of the product rather than the product itself."[263] There are several ways to show that a product has acquired secondary meaning: "the length of time the mark has been in use, advertising expenditures, volume of sales, and professional opinions within the trade."[264] One company with a flavor that can likely establish secondary meaning is Coca-Cola: the soda has been produced for more than one hundred years, it is available on a global scale, and it has been taste-tested against the very similar Pepsi Cola.[265] The soda is so well-known there was "consumer outcry" over the formula change in 1985.[266] This shows that it is possible for a flavor to acquire secondary meaning, allowing for the potential of trademark protection.[267]

Others argue that in order to obtain trademark registration and avoid the issue of secondary meaning, it would be better to have a flavor instilled in something not meant for consumption.[268]

> [A]n unusual flavor—like melon or caramel or peanut butter—added to a toothbrush or dental floss would be more likely to be protected than the same flavors for cookies or bread if food manufacturers would be more likely to have a competitive need for flavors than those who make dental hygiene products.[269]

This shows how a product could be seen as inherently distinctive, in which case it would not need to acquire

263. *Qualitex*, 514 U.S. at 163 (citing Inwood Labs., Inc. v. Ives Labs., Inc., 456 U.S. 844, 851 n.11 (1982)).

264. Cox, *supra* note 231, at 132.

265. *Id.* at 139–40.

266. *Id.* at 140.

267. *See id.*

268. Loui, *supra* note 249, at 8; Steve Baird, *When Is a Flavor/Taste Trademark Possible?*, DUETS BLOG (Oct. 27, 2014), https://www.duetsblog.com/2014/10/articles/trademarks/when-is-a-flavortaste-trademark-possible/ (arguing that taste is available as a non-traditional trademark for things that are not meant for human consumption, such as a flavored ballpoint pen cap).

269. Jerome Gilson & Anne Gilson LaLonde, *Cinnamon Buns, Marching Ducks and Cherry-Scented Racecar Exhaust: Protecting Nontraditional Trademarks*, 95 TRADEMARK REP. 773, 801 (2005).

secondary meaning.[270] Inherent distinctiveness of the mark would require the flavor to indicate the source to the consumers.[271] It is likely that consumers would come to recognize these flavored toothbrushes with the company that makes them, as opposed to just the product of toothbrushes. Therefore, a flavor for a product not meant for consumption could obtain trademark protection without acquiring secondary meaning.[272]

Despite the court's decision in *New York Pizzeria* and the Board's decision in *N.V. Organon*, some argue that flavor can be non-functional.[273] For example, consider a situation like the one cited above where a toothbrush is flavored with melon. Applying the test for functionality as prescribed by *N.V. Organon*, the flavor feature is not essential to the product—there are plenty of toothbrushes that do not have any flavor associated with them; therefore, this will pass the first inquiry in the functionality test.[274] Second, consider whether the feature affects the cost or quality of the product.[275] It is likely that if anything, the flavor will increase the cost of the product contrary to the test's purpose–finding features that will make the cost lower, encouraging consumers to buy this specific toothbrush. Therefore, it is possible for a flavor to be non-functional.[276]

Requirements for trademark registration of non-traditional marks present a technical problem, and it is likely to be an uphill battle because of the non-functionality and

270. *See id.* ("Flavor marks are almost certainly not protectable without acquired distinctiveness, just as color and scent marks cannot be inherently distinctive.").

271. Cox, *supra* note 231, at 139.

272. *See* Baird, *supra* note 268.

273. *See* John T. Cross, *Trademark Issues Relating to Digitalized Flavor*, 19 YALE J. L. & TECH. 339, 374–76 (2017) (noting that the reasoning used in *New York Pizzeria* and *N.V. Organon* "does not lead to the conclusion that flavor will be functional for *all* flavor-related products"); *see also* Gallagher, *supra* note 258, at 807.

274. *See supra* Section II.C.2.

275. *See* Cross, *supra* note 273, at 371.

276. *See id.* at 373–74.

distinctiveness doctrines.[277] Because flavor perception is often seen as a subjective inquiry, there is a problem for this non-traditional trademark registration since consumers cannot sample the products before purchasing them.[278] This can, in turn, eliminate the possibility of the mark being used as a source identifier, which is the function of trademarks.[279] Historically, it was not possible to adequately describe flavors for registration purposes.[280] As previously discussed, however, the continued usage of taste profiles and spider diagrams can alleviate this problem.[281] Taste profiles are used to identify the flavor of many different products from an objective standpoint; the more they are used, the more acceptable they will be as an identification of the flavor of a product, allowing registration for flavor as a trademark.[282]

4. *Application of United States trademark law to* Levola

Based on the limited facts provided in the *Levola* decision, it is difficult to determine whether Heksenkaas has acquired secondary meaning.[283] An analysis of "the length of time [Heksenkaas] has been in use, advertising expenditures, volume of sales, and professional opinions within the trade" would show whether the taste of the product acquired secondary meaning.[284] Alternatively, it was suggested that the garlic-and-leek flavor used in Heksenkaas was "really an idea," and perhaps, as with a melon flavored toothbrush, garlic-and-leek flavored cheese has the potential to be inherently

277. *See* Gallagher, *supra* note 258, at 808–09.

278. Compton, *supra* note 240, at 357.

279. *See* Gallagher, *supra* note 258, at 808; Cox, *supra* note 231, at 129.

280. Gallagher, *supra* note 258, at 808.

281. *See* Lewis, *supra* note 36, at 18; *see also supra* Section I.A.

282. Lewis, *supra* 36, at 18.

283. *See* Case C-310/17, Levola Hengelo BV v. Smilde Foods BV, ECLI:EU:C:2018:899, ¶¶ 44–46 (Nov. 13, 2018), http://curia.europa.eu/juris/document/document.jsf?text=&docid=207682&&doclang=EN&amp.

284. Cox, *supra* note 231, at 132.

distinctive.[285] Again, an analysis of the product with more detail than the opinion provided would be necessary to establish secondary meaning. If this flavor is inherently distinctive, establishing secondary meaning is not necessary.[286]

For trademark registration, Levola also needs to show that the garlic-and-leek flavor is not functional.[287] Applying the test for functionality under *N.V. Organon*, garlic-and-leek flavor is not essential to the cheese spread product.[288] For example, Boursin, a United States company that produces similar products, has six different flavors listed on its website.[289] If garlic-and-leek were "essential," other flavors would not exist. Therefore, Heksenkaas passes the first inquiry. Second, consider whether the garlic-and-leek flavor affects the cost or quality of the product. As seen above with the example regarding a melon-flavored toothbrush, it is likely that if anything, the flavor will increase the cost of the product, contrary to the functionality doctrine's purpose. As a result, the garlic-and-leek flavor passes the test for functionality.

As shown, the flavor of Heksenkaas can meet the requirements of trademark registration.[290] Because spider diagrams provide an objective flavor profile, the precise flavor of the product may be determined, and the flavor may thus be eligible for registration.[291] Courts are able to assess whether there is a likelihood of confusion with similar products because spider diagrams provide a visual description of the flavor.[292] Courts can compare two spider diagrams as they would compare two labels on the packages of cheese.[293] Because of this, Heksenkaas and other flavored products can overcome the

285. *See* Tsang, *supra* note 2.

286. *See* Gilson & Lalonde, *supra* note 269, at 801.

287. *See supra* Section II.C.3.

288. *See supra* Section II.C.2.

289. *Flavors That Please the Taste Buds*, BOURSIN, https://www.boursin.com/products/ (last visited Nov. 24, 2019).

290. *See* Lewis, *supra* note 36, at 18; *see also supra* Section I.A.

291. Lewis, *supra* note 36, at 18.

292. *Id.* at 19; *see also Coffee Spider Graphs Explained*, *supra* note 12.

293. *See Coffee Spider Graphs Explained*, *supra* note 12.

hurdles of trademark law and obtain protection in the United States.[294]

D. *Trade Secrets*

Trade secret protection is often used to keep an inventor's ideas out of the public domain.[295] The Uniform Trade Secrets Act was enacted to reconcile differences amongst common law in the states,[296] and it defines a trade secret as:

> information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.[297]

In other words, a trade secret is information that has some sort of value attached to it, of which the owner reasonably maintains the secrecy.[298] Trade secret law "protects the misappropriation of trade secret information"[299] by

> deal[ing] with the protection of confidential information, such as secret formulas and processes, methods of doing business, confidential business information, . . . and many other types of knowledge which may or may not

294. *See supra* Section I.A.

295. *See* Yang, *supra* note 91 ("Most inventions start off as trade secrets which provides short-term protection prior to the marketing of your invention.").

296. *See* UNIF. TRADE SECRETS ACT § 8 (amended 1985) (stating "[t]his [Act] shall be applied and construed to effectuate its general purpose to make uniform the law with respect to the subject of this [Act] among states enacting it.").

297. UNIF. TRADE SECRETS ACT § 1(4) (amended 1985).

298. *Id.*

299. Yang, *supra* note 91 (emphasis in original).

> otherwise be patentable or copyrightable, yet which give its owner some competitive advantage by being kept secret from its competitors.[300]

According to the USPTO there are three main elements common for all trade secrets; a trade secret is "information that is secret, commercially valuable because it is secret, and subject to reasonable steps to keep it secret."[301] Trade secrets are intended to encourage innovation and provide competitive advantages, and their protection can range across a variety of industries from chemical formulas and product designs to customer contact lists and marketing strategies.[302]

There is no registration process for trade secrets; they simply must meet the definition of a trade secret as set forth in the Uniform Trade Secrets Act[303]—it must "have limited availability, economic value and relative secrecy."[304] Trade secret protection can extend indefinitely if the secrecy is reasonably maintained; in other words, the protection lasts as long as the information is valuable and secret.[305] According to the USPTO, failure to not only protect trade secrets, but also failure to be able to identify trade secrets, can result in "a loss of competitive advantage, loss of core business technologies, and reduced profitability."[306]

The most difficult hurdle to overcome with respect to protection of a flavor as a trade secret is the maintenance of secrecy.

---

300. Kimbell, *supra* note 97, at 109–10.

301. *Trade Secret Policy*, USPTO, https://www.uspto.gov/patents-getting-started/international-protection/trade-secrets-policy (last updated Oct. 21, 2019, 12:04 PM EDT); *see also* Imperial Chem. Indus. Ltd. v. Nat'l Distillers & Chem. Corp., 342 F.2d 737, 742 (2d Cir. 1965) ("a trade secret can exist in a combination of characteristics and components, each of which, by itself, is in the public domain, but the unified process, design and operation of which, in unique combination, affords a competitive advantage and is a protectable secret").

302. *See Trade Secret Policy*, *supra* note 301.

303. Yang, *supra* note 91; *see also* Symons, *supra* note 109 (stating how despite the fact that trade secrets do not need to be registered, strict control over the disclosure of such secrets must be exercised on a "need to know" basis).

304. Cunningham, *supra* note 11, at 35.

305. Yang, *supra* note 91; Arons, *supra* note 30, at 153.

306. *Trade Secret Policy*, *supra* note 301.

1. *Maintaining secrecy*

In order to have a trade secret, maintaining secrecy, limited availability, and economic value are required of the flavor.[307] As in *Buffets, Inc. v. Klinke*, a recipe must not be generally known to the public to be protected by trade secret law.[308] The recipe must have some competitive advantage.[309] Additionally, it must still be eligible for trade secret protection even if parts of the process are obvious.[310] The recipe for Kentucky Fried Chicken and the secret formula for Coca-Cola, two well-known trade secrets, are both protected by nondisclosure agreements.[311] This is an example of one way to obtain, and keep, protection for the secret recipe, resulting in an extended lifetime for the product.[312]

Trade secrets are "the most effective way of protecting a recipe – providing it remains secret within an organization[]."[313] The steps necessary to ensure the maintenance of secrecy can be extensive, including consulting with an attorney to develop an adequate policy for safeguarding the secret, informing all

307. Cunningham, *supra* note 11, at 35; *see also* Arons, *supra* note 30, at 153; *"Trade Secret" Ingredients*, U.S. FOOD & DRUG ADMIN., https://www.fda.gov/cosmetics/labeling/ucm414211.htm (last updated Aug. 8, 2018) (stating how "flavor" can be listed as an ingredient instead of listing the actual ingredients, if disclosure is made to the FDA for it to adequately evaluate then need for secrecy, but this is written for the cosmetic industry and may not be the same for the food industry).

308. *See* 73 F.3d 965, 968–69 (9th Cir. 1996).

309. *See* Anneliese Mahoney, *Trade Secret Laws: Competitive Advantages at Work*, L. STREET MEDIA (Aug. 22, 2014), https://www.lawstreetmedia.com/issues/law-and-politics/does-trade-secret-law-unfairly-empower-big-businesses/.

310. Arons, *supra* note 30, at 153–54.

311. *Id.* at 154; Cunningham, *supra* note 11, at 50; *see also* Kevin T. Higgins, *Protecting Your Intellectual Property*, FOOD ENGINEERING (Feb. 1, 2009), https://www.foodengineeringmag.com/articles/87097-protecting-your-intellectual-property; King, *supra* note 138 (describing how employees who sign nondisclosure agreements because the recipe has been disclosed to them can be sued for misappropriation if they reveal that recipe).

312. *See* Alex Ross & Jenifer Elmy, *Protecting Trade Secrets Using Non-Disclosure Agreements*, GOWLING WLG (Feb. 24, 2017), https://gowlingwlg.com/en/insights-resources/articles/2017/protecting-trade-secrets-using-non-disclosure-agre/.

313. Hejab Azam, *Intellectual Property & Food: Patents vs Trade Secrets*, PATSNAP (May 2, 2017, 9:24 AM), https://www.patsnap.com/blog/intellectual-property-food-patents-trade-secrets; *see also* Cunningham, *supra* note 11, at 50 (discussing how in addition to nondisclosure agreements, the International Association of Culinary Professionals also recommends providing written contracts for procedures of maintaining secrecy once employment is terminated).

employees of the value of the secret and the policy around it, limiting access to the secret, and providing nondisclosure agreements to all who come into contact with it.[314] And despite having these practices in place, there is still the risk and threat of misappropriation.[315] For these reasons, the use of trade secrets should be limited to situations where companies are extremely confident their product cannot be duplicated.[316]

2. *Trade secret law already applies to tastes and flavors, but it is not sufficient protection in all circumstances*

Trade secret laws cannot be used to protect against dishes that have an "undeniably obvious" recipe.[317] In *Klinke*, an all-you-can-eat buffet attempted to protect recipes for barbecue chicken and macaroni and cheese with trade secret laws; the Ninth Circuit held that these could not be protected because they were served at restaurants across the country.[318] However, recipes that have an economic value and are maintained as secret by the owner are protectable under trade secret law, as the court held in *Magistro v. Lou, Inc.*[319] The trade secrets in *Magistro* included "an entire array of information starting with the ingredients that go into the Don Carmelo's pizza, strombli [sic], calzone and other Italian dishes."[320] This shows that if flavors

314. *Protecting Your Recipes: Trade Secrets & Patents*, WEBSTAURANTSTORE, https://www.webstaurantstore.com/article/57/protecting-your-recipes-trade-secrets-and-patents.html (last updated June 20, 2018); *see also* Sabra Chartrand, *Patents; Many Companies Will Forgo Patents in an Effort to Safeguard Their Trade Secrets*, N.Y. TIMES (Feb. 5, 2001), https://www.nytimes.com/2001/02/05/business/patents-many-companies-will-forgo-patents-effort-safeguard-their-trade-secrets.html.

315. *See* Chartrand, *supra* note 314 (describing how KFC immediately sued the Settles, the couple who bought a house from Harland Sanders, the KFC founder, when it heard that they were looking to sell a handwritten note they discovered containing a list of eleven herbs and spices; KFC dropped the lawsuit when it examined the list and found it not to be the "original recipe").

316. *Protecting Food & Beverage Recipe and Process Ownership*, TASA GROUP, https://www.tasanet.com/Knowledge-Center/Articles/ArtMID/477/ArticleID/338902/Protecting-Food-Beverage-Recipe-and-Process-Ownership (last visited Nov. 24, 2019).

317. Buffets, Inc. v. Klinke, 73 F.3d 965, 968 (9th Cir. 1996).

318. *Id.*; *see also* Cunningham, *supra* note 11, at 35.

319. Magistro v. J. Lou, Inc., 703 N.W.2d 887, 890 (Neb. 2005).

320. *Id.* at 888.

are secret and provide an economic value to the company, they can be enforced under trade secret law.[321]

Trade secret protection is appropriate where the taste cannot be reverse engineered, as reverse engineering is not sufficient to create a cause of action under trade secret law.[322] Trade secrets are already used to protect ingredients, formulas, and methods in the food industry.[323] In fact, many of the most well-known trade secrets that exist today are for the flavor of food products: Kentucky Fried Chicken, Coca-Cola, Twinkies, Krispy Kreme Doughnuts, and McDonald's Big Mac Special Sauce.[324] This shows the ease with which trade secret law can be used for intellectual property protection for flavors of foods.

Several advantages to trade secrets, besides the extended lifetime, include the low costs, lack of registration requirements, and lack of required disclosure.[325] Although there is the risk of reverse engineering, a chef is not required to disclose a recipe, as he would be in a patent, trademark, or copyright scenario.[326] Often, trade secret protection is used when a recipe may not quite meet the eligibility requirements for a patent.[327] Note that chefs can try to obtain patent protection, and if they fail, they can resort to trade secret protection; chefs do not "lose the right to trade secret protection by seeking patent protection."[328]

321. *See id.* at 890.

322. Yang, *supra* note 91; *see also* Nam, *supra* note 193 ("[o]nce the secret has been discovered [through reverse engineering], any third party is entitled to use it").

323. Nam, *supra* note 193.

324. *Trade Secrets: 10 of the Most Famous Examples*, VETHAN L. FIRM, P.C. (Nov. 8, 2016), https://info.vethanlaw.com/blog/trade-secrets-10-of-the-most-famous-examples; *see also Original Recipes—How Big Corporations Protect Trade Secrets*, SUMO NOVA, https://sumonova.com/original-recipes-how-big-corporations-protect-trade-secrets/ (last visited Nov. 24, 2019).

325. Azam, *supra* note 313.

326. Arons, *supra* note 30, at 154.

327. Nam, *supra* note 193.

328. Arons, *supra* note 30, at 154–55 (noting that it is possible to request that a patent application is not published).

3. *Application of trade secret law to the facts of* Levola

Applying trade secret law to *Levola* is difficult because there is no evidence in the record that Levola was trying to maintain the secrecy of the taste of Heksenkaas.[329] For purposes of this Note, however, assume that Levola has taken the necessary steps for secrecy, such as keeping the recipe locked in the safe, only revealing it to critical employees, and having those employees sign nondisclosure agreements. As discussed above, trade secret protection does not protect against reverse engineering.[330] Levola would need to show that someone took the recipe of Heksenkaas and gave it to Smilde to succeed at claiming misappropriation of a trade secret. Because Smilde's product is not the exact same product—it is just "too similar"[331]—this would likely only show potential reverse engineering, and it would be more akin to the flavor distinction between Coca-Cola and Pepsi. The flavors are not exactly the same, so there is no misappropriation of the trade secret. However, they are similar enough that consumers may view them as substitutes.

Although trade secrets may be appropriate in some situations, the process of maintaining the secret needs to begin immediately to prevent any revelations of the secret to outsiders.[332] For an individual chef in a restaurant, this may be easy to do; if Levola wrote the recipe down and kept it a secret from the moment the leek-and-garlic cheese spread was developed, it may be protectable under trade secret law.

CONCLUSION

With the development of spider diagrams as a visualization of taste profiles, flavor is more of an objective standard than the

329. *See* Case C-310/17, Levola Hengelo BV v. Smilde Foods BV, ECLI:EU:C:2018:899, (Nov. 13, 2018), http://curia.europa.eu/juris/document/document.jsf?text=&docid=207682&&doclang=EN&amp.

330. Arons, *supra* note 30, at 154.

331. *Hard Cheese: The Taste of Food Cannot Be Copyrighted, EU Court Says*, *supra* note 2.

332. *See* Nam, *supra* note 193.

court in *Levola* believed it to be, making it possible to obtain protection under the intellectual property laws in the United States. If a spider diagram, illustrating the flavor profile of Heksenkaas, was provided for the court, the outcome may have been different. The European Court of Justice may have found the flavor of Heksenkaas was infringed by Witte Wievenkaas. Had Levola brought the case to a court in the United States and presented a spider diagram, it is likely that the result would be different because Levola could have used the spider diagram as an expression of the objectivity of the flavor to show that the flavor profile was original. This Note seeks to answer the question of whether increasing development in the accuracy of spider diagrams means that copyright protection is the best form of intellectual property protection for companies like Levola, or whether they would be more successful with a patent, trademark, or trade secret. Spider diagrams provide the missing detail for cases where a company, or chef, sought protection for the flavor of food. Since spider diagrams allow for the protection of the flavor of food under all forms of intellectual property, other aspects need to be taken into consideration to determine which option is best.

Copyright protection is inexpensive to obtain; in fact, registration is only necessary to allege infringement.[333] Copyright also allows for the demand of attorney's fees from infringers.[334] However, copyright protection has a very long duration, lasting a minimum of seventy years,[335] in comparison with patent protection which only lasts for a maximum of twenty years.[336] The length of duration for a patent provides the "perfect balance to give chefs time to capitalize from their creations, yet promote and foster development in the culinary

333. Yang, *supra* note 91.

334. *Id.*

335. *How Long Does Copyright Protection Last?*, U.S. COPYRIGHT OFF., https://www.copyright.gov/help/faq/faq-duration.html (last visited Nov. 24, 2019).

336. Yang, *supra* note 91.

field."[337] Therefore, patents may be a better avenue for companies, like Levola, instead of copyrights.

In comparison, trade secret law does not require any of the expenses or delays associated with registration of patents, copyrights, or trademarks, so it provides immediate, and potentially everlasting, protection.[338] Trade secret protection may be most appropriate for taste and flavor because recipes are "simply variations on a previous incarnation of a dish," making copyright protection unlikely.[339] Recipes do not "usually . . . produce something totally unexpected," making patent protection unlikely.[340] Therefore, trade secret protection would likely be better than patent protection for companies with products similar to Heksenkaas. But, it is easy to reverse engineer a recipe and determine the ingredients, which trade secret law cannot protect against.[341] Because of this, trade secrets typically have weaker protection than other forms of intellectual property.[342] And because of the secret nature and confidentiality requirements of trade secrets, it is important to maintain vigilance to ensure that confidentiality is maintained, which can be a burdensome task.[343]

That leaves trademarks. As mentioned, trademark law is already expanding to incorporate non-traditional marks.[344] It provides the potential for everlasting protection as trade secret

337. Arons, *supra* note 30, at 152–53.

338. Kimbell, *supra* note 97, at 109–10.

339. *Protecting Your Recipes: Trade Secrets & Patents*, *supra* note 314.

340. *Id.*

341. Chartrand, *supra* note 314, at 3.

342. Azam, *supra* note 313; *see also* Ella Patel, *How to Protect Your Intellectual Property in Food & Beverage Industry?*, DRINKPRENEUR (Sept. 19, 2018), https://www.drinkpreneur.com/beverage-howto/how-to-protect-your-intellectual-property-in-food-beverage-industry/ (discussing how with recent developments in technology and inventions, it is even easier to reverse engineer food products now than it has been in the past).

343. Nam, *supra* note 193.

344. *See generally* Robert D. Litowitz & Linda K. McLeod, *To Create and Own a Nontraditional Trademark, Just Follow Tradition*, LANDSLIDE, Jan.–Feb. 2018, https://www.americanbar.org/groups/intellectual-property-law/publications/landslide/2017-18/january-february/create-own-nontraditional-trademark-just-follow-tradition/ (discussing the expansion of trademark law to non-traditional marks).

law provides, but without the possibility of reverse engineering.[345] The main problem associated with trademarks is that flavor is too subjective to allow adequate registration because companies are unable to provide potential infringers with an example of what would be likely to cause confusion.[346] Spider diagrams have eliminated that concern because they accurately represent flavor profiles for all types of food products.[347] If Levola provided Smilde with a copy of the spider diagram for the flavor profile of Heksenkaas, along with a cease and desist letter when it discovered the potential infringement, Smilde could have compared this to its own spider diagram for Witte Wievenkaas to see if the profiles were similar enough to cause confusion. As with any other comparison evaluating the likelihood of confusion between two marks, a court would be able to compare the spider diagrams to determine whether the flavor of Witte Wievenkaas is likely to cause confusion with Heksenkaas.[348]

The current laws governing intellectual property rights are already sufficient to protect flavors. Because of the development and improvements made in characterizing flavor profiles, courts can now view the copyright, patent, trade secret, and trademark laws with a broader scope that encompasses cuisine. Ultimately, the choice for which form of protection a company chooses to pursue can vary. A large company may seek to capitalize on the limited monopoly provided by a patent. In contrast, it may seek to capitalize on its product

345. James Pooley, *The Art of Reverse Engineering*, IPWATCHDOG (Dec. 4, 2017), https://www.ipwatchdog.com/2017/12/04/art-reverse-engineering/id=90439/.

346. *See* Krista L. Cox, *No, You Can't Copyright a Taste – And Other Dumb Things You Can't Get IP Protection Over*, ABOVE L. (Aug. 9, 2018, 10:44 AM), https://abovethelaw.com/2018/08/no-you-cant-copyright-a-taste-and-other-dumb-things-you-cant-get-ip-protection-over/ (critiquing the ability of taste to function as a trademark by noting "[t]aste is highly subjective").

347. *Flavor Profile*, *supra* note 34.

348. "Courts traditionally decide quite difficult questions about whether two words or phrases or symbols are sufficiently similar, in context, to confuse buyers. . . . Legal standards exist to guide courts in making such comparisons. We do not see why courts could not apply those standards to a color, replicating, if necessary, lighting conditions under which a colored product is normally sold." Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 167–68 (1995) (citation omitted).

through the use the marketing tools available when its product is classified as a trade secret. Or, it may seek the lengthy protection offered by copyright law. Finally, it may, and should, seek the potentially everlasting protection trademark law provides because spider diagrams eliminate all potential concerns with obtaining trademark registration; trademarks provide all of the benefits a company may desire when trying to protect a flavor.

APPENDIX A. SPIDER DIAGRAMS

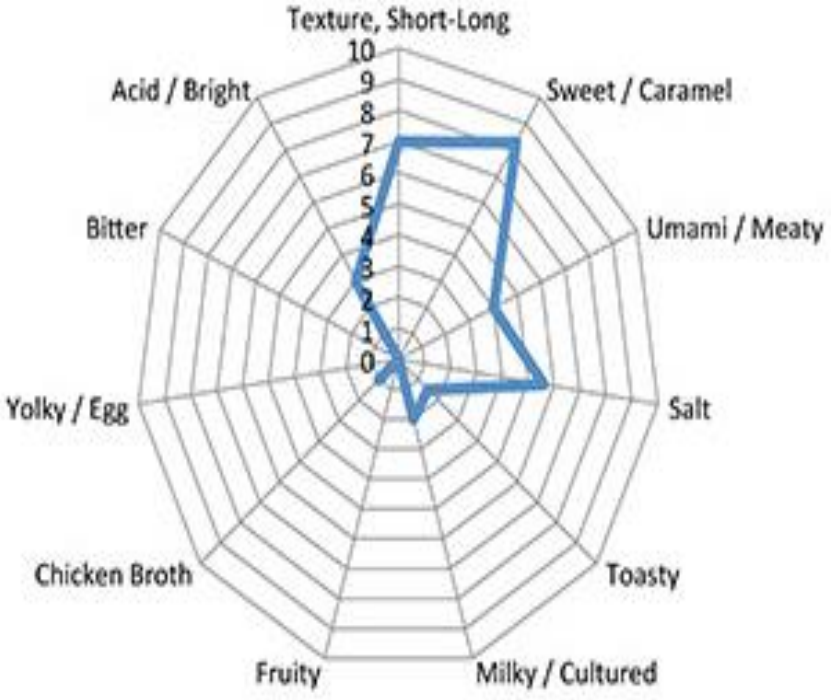

Figure 1. Spider Diagram for Cheese.[349]

349. *Black Label Select*, JASPER HILL FARM, https://www.jasperhillfarm.com/black-label (last visited Nov. 24, 2019).

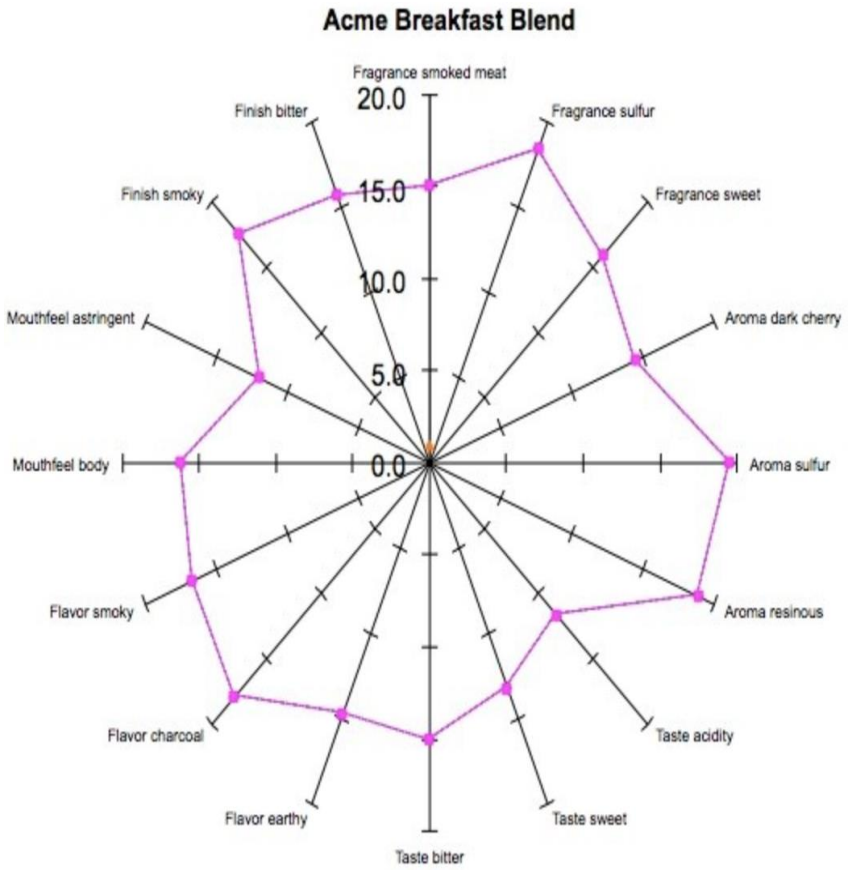

Figure 2. Spider Diagram for Coffee.[350]

350. *Coffee Spider Graphs Explained*, *supra* note 12.

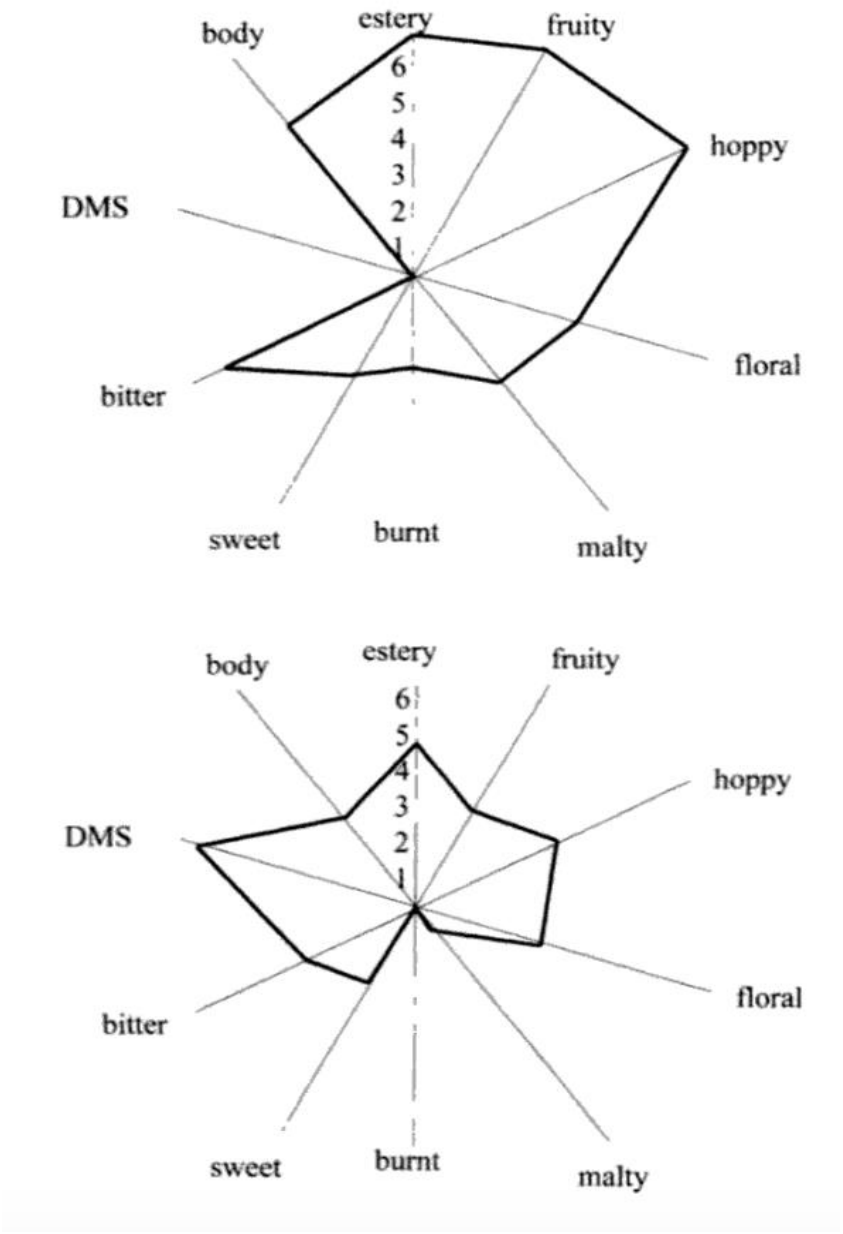

Figure 3. Spider Diagrams for Beer.[351]

351. BAMFORTH, *supra* note 40, at 185.