

LIKELIHOOD OF GENERIC CONFUSION

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Just as people are asking the government to resurrect a Progressive-Era stance on antitrust and consumer protection in the technology sector, we should ask the government to take on consumer protection efforts in agriculture. The growth of technology-driven food production for synthetic dairy, meat, and other foods, and for potential food substitutes, is part of a global market expected to reach \$162 billion in sales by 2030. Conflicts over whether a new product created in a lab or engineered to be a substitute can be called a “milk,” “meat,” or “grain” will persist and are likely to grow. This Article uses the conflict between the multibillion-dollar milk and plant-based beverage (PBB) industries as a lens to show how society can support both food production innovation and consumer protection.

New food production and marketing can improve food security, but it can also foster misinformation and create public harm. For example, PBB “milks” fail to meet the legal standard for milk, but the PBB industry wants to call its products “milk” to reach the dairy-consuming market. At the same time, medical research shows infants, toddlers, adolescents, and adults are harmed by confusion created when the PBB industry uses the term milk. Consumers are unaware that PBBs often lack the same nutrition as milk and so are not receiving the nutrition they need. Similar issues are appearing in other substitute and synthetic food sectors. Put simply, food innovation and marketing can often clash with public health and consumer protection.

The current caselaw offers unsatisfying analysis of and solutions for the problem. Caselaw to date is thin in part because the FDA’s tests for harm are underdeveloped and undertheorized. This Article fills this gap by developing a new test, the Likelihood of Generic Confusion Test, to address when advertising and branding use of a generic term may harm the public. The Test draws on several aspects of trademark law, including the deceptively misdescriptive marks test, the likelihood of confusion test, and the genericism doctrine. By combining these doctrines, the Test offers a path to allowing innovative food production and creative marketing to thrive while also protecting consumers from unnecessary and harmful business practices.

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INTRODUCTION

We shall escape the absurdity of growing a whole chicken in order to eat the breast or wing, by growing these parts separately under a suitable medium.

—Winston Churchill, 1931¹

[The food industry has . . . introduce[d] various milk beverages which are promoted as alternatives coming from plant sources which include almond milk and soy milk. Though they are popularly advertised as healthy and wholesome . . . [C]onsumers associate these alternatives to be a direct substitute of cow's milk which might not be true in all cases.

—Sai Kranthi Vanga & Vijaya Raghavan²

The current focus on the so-called Big Tech sector and how to tame it misses an equally important technology-driven sector—agriculture. What we eat and drink matters to everyone for daily and long-term health in ways more personal—and at times, literally more vital—than issues flowing from Silicon Valley-based technology companies. Recent innovations in food production force us to ask: What exactly is lab-made food? Is lab-made meat the same as meat from a cow or pig? Is fermented, lab-made dairy the same as dairy from a cow, sheep, or other mammal? Are plant-based foods true substitutes for meats or milk? Just as people are asking the government to resurrect a Progressive-era stance on antitrust and consumer protection in the technology sector,³ we should ask the government to take on consumer protection efforts in the rapidly changing, technology-driven agriculture sector. In a world where

1. WINSTON S. CHURCHILL, *Fifty Years Hence*, in *THOUGHTS AND ADVENTURES* 227, 234 (MacMillan & Co 1943) (1932).

2. Sai Kranthi Vanga & Vijaya Raghavan, *How Well Do Plant Based Alternatives Fare Nutritionally Compared to Cow's Milk?*, 55 *J. FOOD SCI. & TECH.* 10, 10 (2018).

3. As I have argued, modern legal reformists must understand the shift in competition law from the Progressive Era's protection of "small dealers and worthy men" to the modern idea of consumer welfare and offer a coherent alternative. See Deven R. Desai, *The Chicago School Trap in Trademark: The Co-Evolution of Corporate, Antitrust, and Trademark Law*, 37 *CARDOZO L. REV.* 551, 556 (2015) (quoting *United States v. Trans-Mo. Freight Ass'n*, 166 U.S. 290, 323 (1897)); see *id.* at 552–59 (tracing the history of competition law and the way in which consumer welfare as allocative efficiency emerged to drive competition law in favor of producers over consumers); cf. Cecilia Kang, *F.T.C. Chair Upends Antitrust Standards with Meta Lawsuit*, *N.Y. TIMES* (July 28, 2022), <https://www.nytimes.com/2022/07/28/technology/ftc-lina-khan-meta.html>.

misinformation, public health, and the power of large industries are under scrutiny, we need to use existing legal doctrines and this Article's new tool so that society can enjoy needed innovation in food production and sustainability, have access to nutritious food, and be protected from deceptive business practices.

The growth of technology-driven agribusiness shows why we need better ways to assess whether a food can be called milk, flour, jam, meat, or a range of other foods. The Biden Administration's ambitious goal of ending hunger by 2030 points to a need not only for better food access⁴ and education but also improved and innovative food production.⁵ An ongoing question is whether our current approach to agriculture can produce enough food for a growing population while not harming the environment.⁶ A steady flow of studies and opinions indicates that shifting to plant-based diets, especially vegan ones, reduces carbon emissions.⁷ Yet, other work shows that because of water usage, grains such as rice and wheat have similar environmental impacts as cow milk and chicken.⁸ Cooking oils such as palm and canola also rival meat

4. See, e.g., Deven. R. Desai & Mark A. Lemley, *Editorial: Scarcity, Regulation, and the Abundance Society*, FRONTIERS RSCH. METRICS & ANALYTICS, 7 (2023) (citing FOOD & AGRIC. ORG. OF THE U.N., STATISTICAL YEARBOOK: WORLD FOOD AND AGRICULTURE (2021), <https://openknowledge.fao.org/server/api/core/bitstreams/522c9fe3-0fe2-47ea-8aac-f85bb6507776/content> [<https://perma.cc/YT6D-L5VE>]) (noting studies showing an abundance of needed calories yet a lack of access to nutrition).

5. Alan Rappeport, *Biden Administration Unveils Plan To End Hunger in U.S. by 2030*, N.Y. TIMES (Sept. 28, 2022), <https://www.nytimes.com/2022/09/28/us/politics/biden-hunger-summit.html>.

6. See, e.g., Ben Halpern et al., *The Environmental Footprint of Global Food Production*, 5 NATURE SUSTAIN. 1027, 1035 (2022) (“Minimizing the environmental footprint of feeding nearly eight billion people is among the most important of societal challenges”); accord David Wallace-Wells, Opinion, *Food as You Know It Is About To Change*, N.Y. TIMES (July 28, 2024), <https://www.nytimes.com/2024/07/28/opinion/food-climate-crisis-prices.html> (detailing growing rates of undernourishment and slower growth of agricultural production and calling for “[a]daptation and innovation” to address the problems food supply will likely face).

7. See, e.g., Halpern et al., *supra* note 6 (estimating and mapping environmental pressures caused by food production); see generally TIM SEARCHINGER, RICHARD WAITE, CRAIG HANSON & JANET RANGANATHAN, CREATING A SUSTAINABLE FOOD FUTURE: A MENU OF SOLUTIONS TO FEED NEARLY 10 BILLION PEOPLE BY 2050 (Emily Matthews ed., 2019), <https://files.wri.org/d8/s3fs-public/wrr-food-full-report.pdf> [<https://perma.cc/A6TD-UV2E>]; Michael Grunwald, Opinion, *No One Wants To Say ‘Put Down that Burger’, But We Really Should*, N.Y. TIMES (Dec. 15, 2022), <https://www.nytimes.com/2022/12/15/opinion/food-diets-meat-biodiversity-cop15.html>; Sander van der Linden, Opinion, *Quiz: What’s the Best Way To Reduce Your Carbon Footprint?* N.Y. TIMES (Dec. 15, 2022), <https://www.nytimes.com/interactive/2022/12/15/opinion/how-reduce-carbon-footprint-climate-change.html>.

8. See Scott Dance, *Here’s Exactly How Your Diet Affects the Planet, a Landmark Study Finds*, WASH. POST (Oct. 24, 2022, 11:00 AM),

production for environmental impact.⁹ The tension between food and climate change occupied a full day at the United Nations Climate Change Conference held in Egypt in November 2022.¹⁰ If we want to preserve biodiversity and meet climate targets, we need to hold constant or reduce the amount of land we use to produce food.¹¹ This desire clashes with a reality: “[R]ising populations and incomes put the world on track to require 40–60% more crops and 70% more milk and meat in 2050 than in 2010.”¹² Put simply, technology and food innovation is vital for the future of sustainable food production.¹³

Industry is stepping up to meet the demands. The ongoing growth of the plant-based food industry offers great potential for innovative ways to feed people and reduce environmental harms. According to one account, “[t]he [overall] plant-based food market could make up to 7.7 percent of the global protein market by 2030.”¹⁴ That growth would mean a jump from \$29.4 billion in sales in 2020 to \$162 billion in 2030.¹⁵ This industry is no longer small scrappy start-ups; it is a technology- and marketing-driven multibillion-dollar industry pursuing profits just like any other sector of the economy.

In response to the claims from the plant-based food industry, one part of the meat industry is pursuing lab-grown meat—“edible tissue grown in vitro from animal stem cells, a process called cellular agriculture.”¹⁶ Cell technology is also behind a change in fish production, with one company pursuing lab-grown bluefin fatty tuna—an expensive

<https://www.washingtonpost.com/climate-solutions/2022/10/24/pork-beef-diet-climate-impact/>.

9. *Id.*

10. Evan Halper, *Climate Conference Serves Up Lab-Grown Meat – and a Clash over Food*, WASH. POST (Nov. 18, 2022, 1:32 PM), <https://www.washingtonpost.com/climate-environment/2022/11/18/cop27-food-agriculture-climate/>.

11. Timothy D. Searchinger, Oliver James, Patrice Dumas, Thomas Kastner & Stefan Wirsenius, *EU Climate Plan Boosts Bioenergy but Sacrifices Carbon Storage and Biodiversity*, 612 NATURE 27, 27 (2022).

12. *Id.*

13. Mario Herrero et al., *Innovation Can Accelerate the Transition Towards a Sustainable Food System*, 1 NATURE FOOD 266 (2020).

14. *Plant-Based Foods Market To Hit \$162 Billion in Next Decade, Projects Bloomberg Intelligence*, BLOOMBERG (Aug. 11, 2021), <https://www.bloomberg.com/company/press/plant-based-foods-market-to-hit-162-billion-in-next-decade-projects-bloomberg-intelligence/> [https://perma.cc/2GL6-YEQF].

15. *Id.*

16. See Jan Dutkiewicz & Gabriel N Rosenberg, *Man v. Food: Is Lab-Grown Meat Really Going To Solve Our Nasty Agriculture Problem?*, GUARDIAN (July 29, 2021, 1:00 AM), <https://www.theguardian.com/news/2021/jul/29/lab-grown-meat-factory-farms-industrial-agriculture-animals> [https://perma.cc/9DPZ-NW4U].

delicacy on a near-threatened watch list.¹⁷ The FDA has approved lab-grown chicken.¹⁸ California has invested five million dollars in lab-grown meat research, split between UC Berkeley, UC Davis, and UCLA.¹⁹ The dairy industry is also changing practices and innovating by introducing synthetic milk.²⁰ These pursuits are in line with President Biden's executive order on biotechnology and biomanufacturing, which includes a focus on food security, including "foods made with cultured animal cells."²¹

The growth of insect-based proteins offers another area of food innovation and production. Insects are a sustainable source of protein, healthy fats, and micronutrients.²² Some insects not only offer protein but can be made to taste like animal meat.²³ New research promises to use insect cells to grow protein that mimics "steak, chicken, lobster . . . or anything that pleases the palate."²⁴ Celebrity Robert Downey Jr.'s investment company has pledged to invest more than \$200 million in a French mealworm company.²⁵ Insect-based foods are on their way to

17. Kenny Torrella, *The First Lab-Grown Seafood Will Be Fancy*, VOX (Dec. 14, 2022, 6:30 AM), <https://www.vox.com/future-perfect/23507372/lab-grown-seafood-fish-bluenalu-wildtype-cultivated-cultured-meat> [<https://perma.cc/4RT3-Q5A6>].

18. Clare Toeniskoetter, *Lab-Grown Meat Receives Clearance from F.D.A.*, N.Y. TIMES (Nov. 17, 2022), <https://www.nytimes.com/2022/11/17/climate/fda-lab-grown-cultivated-meat.html>.

19. Victoria Namkung, *'Fishless Fish': The Next Big Trend in the Seafood Industry*, GUARDIAN (Oct. 22, 2022, 6:00 AM), <https://www.theguardian.com/environment/2022/oct/22/lab-grown-fish-cell-seafood-bluenalu-wildtype> [<https://perma.cc/R5L5-SZBK>].

20. Donna Lu, *Leading the Whey: The Synthetic Milk Startups Shaking Up the Dairy Industry*, GUARDIAN (Sept. 17, 2022, 4:00 PM), <https://www.theguardian.com/food/2022/sep/18/leading-the-whey-the-synthetic-milk-startups-shaking-up-the-dairy-industry> [<https://perma.cc/WA7C-3DFH>].

21. *Background Press Call on President Biden's Executive Order To Launch a National Biotechnology and Biomanufacturing Initiative*, WHITE HOUSE (Sept. 12, 2022, 4:01 PM), <https://www.whitehouse.gov/briefing-room/press-briefings/2022/09/12/background-press-call-on-president-bidens-executive-order-to-launch-a-national-biotechnology-and-biomanufacturing-initiative/> [<https://perma.cc/RJ4B-ZZL7>]; see also Exec. Order No. 14,081, 87 Fed. Reg. 56849 (Sept. 15, 2022).

22. XiaoZhi Lim, *Bugs and the Future of Meat*, CHEMMATTERS, Apr. 2022, at 5, 7.

23. Oliver Milman, *Insects Could Give Meaty Taste to Food – and Help Environment – Scientists Find*, GUARDIAN (Aug. 24, 2022, 5:00 AM), <https://www.theguardian.com/environment/2022/aug/24/insects-meat-flavor-mealworms-research> [<https://perma.cc/LW7P-SHC8>].

24. Marlene Cimons, *Steak Made from Insect Meat? Yum!*, POPULAR SCI. (June 10, 2019, 7:00 PM), <https://www.popsci.com/insect-protein-steak-meat-pork/> [<https://perma.cc/9RC8-U6SR>].

25. Lim, *supra*, note 22, at 5.

challenge cattle and other industries—and producers may want to call their products meat.

Whether these innovations will yield nutritionally equivalent foods to the ones they hope to imitate or substitute for is, however, a problem. Consider a new food protein made in a lab but having the same chemical structure as a naturally occurring protein. That lab protein is synthetic, which means human-made.²⁶ Identity of chemical structure, however, does not solve the question of whether all proteins, sugars, vitamins, etc. are equal when it comes to nutrition.

The new frontier of food production complicates this issue because synthetic and artificial alternatives may differ from their natural counterparts in ways that might not be immediately obvious to a consumer. For example, even when a synthetic food product has the same chemical structure as the natural product, whether and how that product is absorbed by the body—a concept known as bioavailability—differs depending on whether the substance is, for example, in the form of a juice or in a fortified drink.²⁷ The new approach to dairy involves a modern twist on an old technology (fermentation) and results in synthetic proteins identical to those found in milk²⁸—but whether it will have the same nutritional properties is unclear. Similarly, a recent study examined the nutritional value of plant-based meat substitutes and found that the substitutes were not nutritionally equivalent to meat because certain minerals such as iron, although present, were not absorbed into the consumer’s body.²⁹ Another familiar area of food technology raises questions for consumers in the substitution context: a class of sweeteners called sugar-alcohols, which are neither alcohols nor sugars and may be

26. See PENNY LE COUTEUR & JAY BURRESON, NAPOLEAN’S BUTTONS: 17 MOLECULES THAT CHANGED HISTORY 115 (2004) (explaining the term “synthetic” means a person made the substance and that, if it occurs in nature—like Vitamin C—the synthetic version “has exactly the same chemical structure” as the naturally occurring one). By contrast, an “artificial” compound has properties that mimic those of a natural substance but a different chemical structure. *Id.* For example, an artificial sweetener does not have the same chemical structure as sugar but nonetheless tastes sweet. *Id.*

27. See *infra* notes 152–62 and accompanying text. The FDA’s recent draft guidance on milk labeling mentions the bioavailability of calcium only once—and to explicitly exclude the issue from consideration. See FDA, LABELING OF PLANT-BASED MILK ALTERNATIVES AND VOLUNTARY NUTRIENT STATEMENTS: GUIDANCE FOR INDUSTRY 10–11 (2023) [hereinafter FDA DRAFT GUIDANCE], <https://www.fda.gov/media/165420/download> [<https://perma.cc/879R-7TWY>].

28. See Lu, *supra* note 20.

29. Inger-Cecilia Mayer Labba, Hannah Steinhausen, Linnéa Almius, Knud Erick Bach Knudsen & Ann-Sofie Sandberg, *Nutritional Composition and Estimated Iron and Zinc Bioavailability of Meat Substitutes Available on the Swedish Market*, 14 NUTRIENTS 3903 (2022).

naturally occurring or synthetic.³⁰ While these sweeteners are lower-calorie and can help consumers avoid tooth decay, they can also cause severe stomach issues, such as gas, bloating, and diarrhea, because the stomach does not digest them the same way it does sugar.³¹

The problem includes synthetic and substitute foods, as well as farm-grown foods. For example, whole grains are important; yet, what is a whole grain has become “murky.”³² The “lack of a standard definition” combined with “puzzling” packaging means consumers are confused about how much of this important nutrient they are consuming.³³ In addition, public attitudes about the names of new products matter for market success.³⁴ Although consumers are open to trying food made using a cell-based approach, calling them “cell-based” or “cell-cultured” deterred consumers from eating the foods more so than calling them “cultured” or “cultivated.”³⁵ And calling these foods “artificial” does not capture the danger they may still pose to those with allergies.³⁶ As these new products are not derived from meat cells, one can expect fights about whether plant-based products ought to be allowed to be called meat at all.³⁷ The incumbent meat industry has made a concerted effort at the state level to ban using the word “meat” on plant-based foods *and* using the term for lab-grown foods.³⁸ Two states have even banned lab-grown meat.³⁹ As product names evolve to capture consumer attention and

30. Hannah Seo, *Sugar Alcohols Are in Many Sugar-Free Foods. What Are They?*, N.Y. TIMES (Nov. 15, 2022), <https://www.nytimes.com/2022/11/15/well/eat/sugar-alcohols.html>.

31. *Id.*

32. Hannah Seo, *What Are Whole Grains, Anyway?*, N.Y. TIMES, <https://www.nytimes.com/2022/12/03/well/eat/whole-grains.html> (Mar. 9, 2023).

33. *Id.*

34. See Keri Szejda, Christopher J. Bryant & Tessa Urbanovich, *US and UK Consumer Adoption of Cultivated Meat: A Segmentation Study*, 10 FOODS 1050 (2021).

35. *Id.* at 11 fig.6.

36. Maxwell Rabb, *You're More Likely To Buy Lab-Grown Meat If It's Called This*, BEET, <https://thebeet.com/lab-grown-meat-terminology-report/> [<https://perma.cc/4ERX-5GVS>] (Dec. 19, 2022).

37. See Alina Selyukh, *What Gets To Be a 'Burger'? States Restrict Labels on Plant-Based Meat*, NPR (July 23, 2019, 3:57 PM), <https://www.npr.org/sections/thesalt/2019/07/23/744083270/what-gets-to-be-a-burger-states-restrict-labels-on-plant-based-meat> [<https://perma.cc/3TRZ-LNS8>].

38. *Id.*; see also *Cattlemen Press for USDA Oversight at Public Meeting on Lab-Grown Fake Meat*, CATTLE SITE (July 13, 2018), <https://www.thecattlesite.com/news/53150/cattlemen-press-for-usda-oversight-at-public-meeting-on-lab-grown-fake-meat> [<https://perma.cc/7Y6Z-GL2K>].

39. See Anthony Robledo, *Alabama Bans Lab-Grown Meat, Joining Florida Among US States Outlawing Alternative Proteins*, USA TODAY (May 13, 2024, 9:28 PM), <https://www.usatoday.com/story/news/nation/2024/05/13/lab-grown-meat-ban-alabama/73678952007/> [<https://perma.cc/TB9Z-XWJC>]. U.S. states are not alone in such actions; Italy and France are considering similar laws. See Koh Ewe, *France*

market share, marketing divisions have sought trademark protection for the names of these new foods and have tried to make the brand name quite close to the natural food.⁴⁰ For example, Silk, formerly a large player in the plant-based beverage sector, sought to call its products “NEXTMILK,” even though there was no milk in the product.⁴¹

In short, the growth of plant-based substitute foods, the drive to innovate food production methods, and marketing practices are exactly why the public and the agriculture industry will face ongoing issues around what to call new offerings and questions about their nutritional differences.⁴²

The Biden Administration’s recent moves to address health and nutrition by improving nutrition labels,⁴³ reworking what foods can be labelled as healthy,⁴⁴ and instituting a series of nutrition initiatives under the auspices of the FDA⁴⁵ are good starts, but there is more to be done. One area—the Standard of Identity (SOI) process—is particularly ripe for improvement.⁴⁶ The FDA’s plan to update the SOI process is laudable, but for the plan to succeed, the FDA needs to improve its analysis and more strongly enforce its standards. The agency needs better tools for both these tasks. This Article shows why such tools are needed and offers a new tool, the Likelihood of Generic Confusion Test, to aid the FDA.

Becomes Latest Government To Regulate “Meat” Labels for Plant-Based Foods, TIME (Feb. 28, 2024, 5:30 AM), <https://time.com/6835913/france-plant-based-meat-steak-label-global-regulations/> [https://perma.cc/2UGE-RAUR].

40. See, e.g., Danone North America, *How Silk Nextmilk® Is Inspiring the Next Generation of Milk Drinkers and Plant-Based Enthusiasts*, PR NEWswire (Feb. 22, 2023, 10:12 AM), <https://www.prnewswire.com/news-releases/how-silk-nextmilk-is-inspiring-the-next-generation-of-milk-drinkers-and-plant-based-enthusiasts-301753287.html> [https://perma.cc/4HAR-D23P]; see also U.S. Trademark Application Serial No. 9713234 (filed Dec. 15, 2021).

41. Danone North America, *supra* note 40.

42. See, e.g., Press Release, FDA, Statement from FDA Commissioner Scott Gottlieb, M.D., on the Process FDA Is Undertaking for Reviewing and Modernizing the Agency’s Standards of Identity for Dairy Products (July 26, 2018), <https://www.fda.gov/news-events/press-announcements/statement-fda-commissioner-scott-gottlieb-md-process-fda-undertaking-reviewing-and-modernizing> (noting growth of innovative food production and issues around public health and labeling).

43. The authority to set Standards of Identity (SOIs) comes from the Federal Food, Drug, and Cosmetic Act. 21 U.S.C. § 341; see also Zoë Richards, *Biden Admin To Propose Nutrition Labels on Front of Food Packaging in Push To Improve Health*, NBC NEWS (Sept. 27, 2022, 4:00 AM), <https://www.nbcnews.com/politics/white-house/biden-administration-propose-nutrition-labels-front-food-packaging-pus-rna49529>.

44. Richards, *supra* note 43.

45. *FDA’s Nutrition Initiatives*, FDA, <https://www.fda.gov/food/food-labeling-nutrition/fdas-nutrition-initiatives> (Oct. 1, 2024).

46. *Standards of Identity for Food*, FDA, <https://www.fda.gov/food/food-labeling-nutrition/standards-identity-food> (Mar. 14, 2024).

Although this Test applies broadly, this Article uses the clash between the milk and plant-based beverage industries to illustrate the problems of misinformation and public harm that new food production technologies and marketing strategies can pose, to reveal the shortcomings in the FDA's regulatory toolkit, and to offer new tools to allow the government to regulate harmful practices while supporting innovation and healthy market competition.

Part I compares the milk and PBB industries and develops the novel concept of the "Generic Brand." It shows that both industries are major, competing forces in a multibillion-dollar market.⁴⁷ Both make strong claims about the nutritional content and health benefits of their drinks. Both make cultural claims about their drinks. Both build Generic Brands as they seek to maintain or capture market share. No one is an angel here. But that does not mean all's fair in the marketplace.

Nutrition is central to both the debate between the milk and PBB industries and the branding used. Because of the number of PBB offerings and the vast nutritional differences amongst them, understanding the line between milk and non-milk is important. Part II dives into recent medical research to compare milk's nutritional content to that of PBBs, contrasting the PBB industry's nutritional claims with what the medical research shows. Part II also documents the severe negative health outcomes that occur when people mistake PBBs as nutritionally equivalent to milk.

Part III looks at how the FDA and the law have to date handled the issue. The cases and tests in place have not resolved the issue, in part because of poor judging and in part because the tests in the area are underdeveloped. Indeed, the recent draft nonbinding guidance on the labeling of PBBs that came out during the writing of this Article shows that the FDA needs help. To address the problem, Part III turns to trademark law by asking: What if milk were a trademarkable word? Part III blends trademark law's genericism doctrine, deception inquiries, and likelihood of confusion test to show why a new Likelihood of Generic Confusion Test is needed.

Part IV sets out the Likelihood of Generic Confusion Test, addresses potential challenges to the Test, and applies it to the issues of milk, hot dogs, and cell-based meats. It also offers other ways the FDA can

47. Data Bridge Mkt. Rsch., *Plant-Based Milk Market To Perceive Highest Growth of USD 50,066.21 Million by 2030, Size, Share, Trends, Key Drivers, Growth, Challenges and Opportunity Forecast*, GLOBE NEWSWIRE (Mar. 27, 2023, 3:30 PM), <https://www.globenewswire.com/en/news-release/2023/03/27/2635196/0/en/Plant-Based-Milk-Market-to-Perceive-Highest-Growth-of-USD-50-066-21-Million-by-2030-Size-Share-Trends-Key-Drivers-Growth-Challenges-and-Opportunity-Forecast.html> [https://perma.cc/5SDQ-B4P7].

improve its practices and provides guidance on free speech issues that arise when regulating commercial speech.

I. COMPARING THE MILK AND THE PLANT-BASED BEVERAGE INDUSTRIES

The milk and PBB industries are similar and different. These similarities and differences animate the tradeoffs between milk and PBBs and can obscure what is needed to develop sound policy. Both sides make claims about nutrition, economics, the environment, and more as they seek market share and argue about which one should be allowed to use the term milk. Put differently, both industries use branding to make claims about their offerings. Understanding their respective brand positions reveals facts and fictions around the debate, setting a baseline for the legal and policy analysis that follows.

A. Milk: A Generic Brand

Milk has no central producer, but it is what this Article calls a “Generic Brand.”⁴⁸ That is, the milk industry has employed and continues to employ branding strategies to build a reputation for milk based on facts and persuasion. These strategies explain why the word milk carries such specific meaning to the consuming public. Understanding this branding power allows us to see why plant-based beverage companies want to call their goods milk.

Milk is all-American, and there are intersecting reasons for milk’s special place in Americana.⁴⁹ Milk’s prominence likely emerged in the late 1800s.⁵⁰ Before people lived in cities in large numbers, they lived near where milk was produced, and issues of spoilage prevented large-scale production.⁵¹ Urbanization and technological advancements such as refrigeration and pasteurization converged to allow the commercial milk

48. Cf. 2 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 12.4 (5th ed. 2024) (discussing the concept of “generics” in trademark law).

49. Yet the United States is not the only place where dairy and milk culture thrive. See generally ANDREA S. WILEY, CULTURES OF MILK: THE BIOLOGY AND MEANING OF DAIRY PRODUCTS IN THE UNITED STATES AND INDIA (2014) [hereinafter WILEY, CULTURES OF MILK] (comparing the histories and cultural anthropologies of milk’s importance in the United States and India and noting milk’s importance in Europe).

50. *Id.* at 25.

51. Andrea S. Wiley, *Milk for “Growth”: Global and Local Meanings of Milk Consumption in China, India, and the United States*, 19 FOOD & FOODWAYS 11, 16 (2011) [hereinafter Wiley, *Milk and Growth*].

industry to come into existence.⁵² Milk consumption helped people drink newly available caffeinated but bitter drinks—tea and coffee—and eat chocolate.⁵³ The early twentieth century brought new knowledge about milk’s nutritional value, which led to its place as a key part of the American diet.⁵⁴ And as dairy farming scaled up, so too did government support; together these forces created the dairy cow industry as the source of milk.⁵⁵

Milk has a message: Drink milk and you will be healthy and strong. Around the same time that the branded, nonlocal manufacturing of soap and other commodities started to reach the American consumer market, the milk industry used “[m]ass advertisements” to “solidif[y] milk’s perfection and necessity.”⁵⁶ Even in this early era, new products and commodities included psychological and identity components, not just functional ones. These components gave products “essence[s]” that connected to “consumers’ psychological needs and lifestyle goals.”⁵⁷ Branding tactics also created links to national identity and belonging, especially for immigrants and formerly rural people who had moved to cities.⁵⁸ The milk industry used these tactics too.

The U.S. National Dairy Council (NDC), which formed in 1916, used the “special relationship between milk and child growth,” with the help of the U.S. Department of Agriculture (USDA), “to advance milk as the ideal health- and growth-promoting food for children.”⁵⁹ The claims were backed by scientific studies on milk’s ability to aid growth, which were extrapolated to explain height differentials stemming from calcium intake, which milk, of course, provides.⁶⁰ The functional

52. *Id.*

53. *See* WILEY, *CULTURES OF MILK*, *supra* note 49, at 25–26.

54. *Id.* at 26.

55. *Id.*

56. Evan Perrault, Book Review, 28 *AGRIC. & HUM. VALUES* 583, 583 (2011). Branding may be a given practice today, but branding across a range of commodity goods began only in 1880s, though it began as early as the first half of the century for alcohol. *See* MARCEL DANESI, *BRANDS* 13 (2006); Paul Duguid, *Developing the Brand: The Case of Alcohol, 1800–1880*, 4 *ENTER. & SOC’Y* 405 (2003). In this era, canned soup, which like milk we take for granted, was a food innovation and required marketing to gain consumer trust. *See* Deven R. Desai & Spencer Waller, *Brands, Competition, and the Law*, 2010 *BYU L. REV.* 1425, 1438 (2010). As mass consumption commodities such as soap and nails went from being locally made to remote, industrially made, producers engaged in massive advertising campaigns to educate people about their goods, their safety and freshness, and other reasons to buy them. *Id.* at 1436–38.

57. Desai & Waller, *supra* note 56, at 1443–44; *see also* CELIA LURY, *BRANDS: THE LOGOS OF THE GLOBAL ECONOMY* 24–25 (2004); DANESI, *supra* note 56, at 8.

58. *See* LIZ MOOR, *THE RISE OF BRANDS* 21 (2007).

59. Wiley, *Milk and Growth*, *supra* note 51, at 16.

60. *See id.*

component was then married to the identity component. As one author puts it, “th[e] prize child, pictured in endless milk advertisements, represented the product of good mothering.”⁶¹ These efforts worked and led mothers to buy milk, with some seeing “it [as] a necessary means to keep their children healthy and perfect.”⁶²

The NDC even managed to get a national partner, the USDA, to promote the claim that milk was vital for healthy children. This message persisted after World War I, as milk became part of school meals and people were “taught [not only] to brush their teeth daily and get plenty of sleep, but also to drink four glasses of milk a day.”⁶³ A 1947 advertisement touted milk as leading to taller female basketball players, because “younger folk have better foods to ‘grow on’ than their parents ever did.”⁶⁴ The same advertisement attributed the access to “better foods” to research done by National Dairy Laboratories and “that milk, nature’s most nearly perfect food, offers virtually all the raw materials of modern nutritional research.”⁶⁵ More recent efforts include using television host Carson Daly to assert that drinking milk allows teens to get the most out of the fifteen percent growth spurt that occurs at that age.⁶⁶ And the “Got Milk?” branding campaign continues the history of making milk a Generic Brand of health, strength, and being an American.⁶⁷ Over the years, milk the brand has built an image of health, cleanliness, purity, and Americana as powerful as branding efforts by major corporations.

Despite these efforts, milk consumption dropped as the year 2000 approached.⁶⁸ Several factors seem behind the shift, from increased consumption of soft drinks, juices, and bottled water to a social shift away from growth messages because of concerns about obesity.⁶⁹ Milk pivoted and began a campaign touting that drinking low- or nonfat milk would aid dieting. A key message was: “Milk your diet; lose weight! Including 24 ounces of lowfat or fat-free milk every 24 hours in a reduced-calorie diet provides calcium and protein to support healthy

61. E. MELANIE DUPUIS, NATURE’S PERFECT FOOD: HOW MILK BECAME AMERICA’S DRINK 104 (2002).

62. See Perrault, *supra* note 56, at 583.

63. *Id.*

64. Wiley, *Milk and Growth*, *supra* note 51, at 17 (emphasis omitted).

65. *Id.* (emphasis omitted).

66. *Id.*

67. See Jonathan Kauffman, *Why ‘Got Milk?’ Is One of the Greatest Ad Campaigns of All Time*, SAVEUR (Dec. 1, 2022), <https://www.saveur.com/culture/got-milk-greatest-ad-campaign/> [<https://perma.cc/J63A-UUWB>].

68. Wiley, *Milk and Growth*, *supra* note 51, at 17.

69. *Id.*

weight loss”⁷⁰ As before, the milk industry wanted to use nutrition science combined with American identity, but now with a focus on dieting as well, to encourage milk consumption as a healthy part of American diet and life.⁷¹ Unlike in the past, however, the milk industry lacked science to back up the claims. As a result, the Federal Trade Commission prohibited the industry from making such claims.⁷² Nonetheless, like any brand, the milk industry implied the idea as it employed winners of the TV show *The Biggest Loser* (focused on weight loss) to be part of the next iteration of the “Got Milk?” campaign.⁷³

B. The Plant-Based Brand Attack on Milk

Just as the source of plant-based beverages vary from soy to oats to rice to almond to quinoa⁷⁴ to even bananas,⁷⁵ so do the arguments the industry makes against the milk brand. One argument focuses on the history of milk consumption worldwide.⁷⁶ Another argument focuses on nutrition and whether milk is necessary.⁷⁷ Another draws on animal rights and the nature of industrial milk production (farming and bovine growth

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.* at 17–18.

74. See FDA DRAFT GUIDANCE, *supra* note 27, at 4–5.

75. Iselin Gambert, *Got Mylk?: The Disruptive Possibilities of Plant Milk*, 84 BROOK. L. REV. 801, 809 n.39 (2019) (listing plant-based beverages using the term “milk”).

76. See, e.g., Benjamin Kemper, *Nut Milks Are Milk, Says Almost Every Culture Across the Globe*, SMITHSONIAN MAG. (Aug. 15, 2018), <https://www.smithsonianmag.com/history/nut-milks-are-milk-says-almost-every-culture-across-globe-180970008/> [<https://perma.cc/YH9J-C8JW>] (“Even though the dairy industry may not like it, labeling the juice from almonds and soy beans ‘milk’ follows centuries of history.”); Veronika Charvatova, *A Brief History of Plant Milks*, VEGAN FOOD & LIVING (Apr. 23, 2018), <https://www.veganfoodandliving.com/features/a-brief-history-of-plant-milks/> [<https://perma.cc/QD29-9Z6L>] (arguing that because various cultures have consumed a range of plant-based beverages throughout history, including the modern bean-based mainstays of coffee and cocoa, the turn to PBBs is normal); Ceara Milligan, *Almond Milk Has Been Popular for Longer Than You Think*, MASHED (Dec. 8, 2021, 1:08 PM), <https://www.mashed.com/681299/almond-milk-has-been-popular-for-longer-than-you-think/> [<https://perma.cc/K5DZ-CKMC>] (“[E]ven though nut milk may seem like a wildly innovative category in the eyes of many American consumers, these products are nothing new.”).

77. Switch4Good, *The Twisted History of Milk in America*, PLANT BASED NEWS (Nov. 4, 2019), <https://plantbasednews.org/opinion/twisted-history-milk-america/> [<https://perma.cc/6K2U-EK37>].

hormones).⁷⁸ Yet another argument connects the sustainability movement and milk production's effect on the environment.⁷⁹ All these arguments fit within modern branding.

Because modern marketplaces are filled with informed and networked consumers,⁸⁰ companies position their products with both functional and social messages.⁸¹ The nature of production and the power of corporations “influence[s] the global marketplace and has political implications.”⁸² Consumers signal policy choices through their buying and often see their buying power “as their most appropriate mechanism for influencing the policies and conditions of a globalized world.”⁸³ As Margaret Chon identified, corporations position themselves as champions of “environmental, organic, fair-trade, fair-labor, or other positions as part of their overall image as corporate citizens” to offer “marks of rectitude”⁸⁴—marks that say the company is moral and righteous in its behavior.

The plant-based beverage industry is playing the rectitude game. The claims around milk consumption in history imply that milk is not normal for humans. For example, a media site called *Plant Based News*,

78. See Monika Evstatieva & Audie Cornish, *Why Are Americans Drinking Less Cow's Milk? Its Appeal Has Curdled*, NPR (May 16, 2017, 2:23 PM), <https://www.npr.org/transcripts/528460207> [<https://perma.cc/ZN54-N7MJ>] (noting “political debate over how dairy cows are raised,” including the use of growth hormones and the animal rights movement, as a factor in drop in milk consumption); WILEY, *CULTURES OF MILK*, *supra* note 49, at 111 (noting milk alternatives appeal to some consumers because they are “concerned about the human biological effects of recombinant bovine growth hormone (rBGH or rBST),” which milk alternatives do not use whereas some dairy farmers do).

79. See *infra* notes 94–95 and accompanying text.

80. C.K. Prahalad & Venkat Ramaswamy, *Co-Creation Experiences: The Next Practice in Value Creation*, J. INTERACTIVE MKTG., Aug. 2004, at 5, 10–13 (describing co-creation in interactive marketing).

81. See Deven R. Desai, *From Trademarks to Brands*, 64 FLA. L. REV. 981, 1004–06 (2012) (describing the rise of the cultural, networked brand) [hereinafter Desai, *Trademarks*].

82. Deven R. Desai, *Speech, Citizenry, and the Market: A Corporate Public Figure Doctrine*, 98 MINN. L. REV. 455, 471 (2013) (footnote omitted) [hereinafter Desai, *Speech & Citizenry*].

83. Douglas A. Kysar, *Preferences for Processes: The Process/Product Distinction and the Regulation of Consumer Choice*, 118 HARV. L. REV. 526, 535 (2004).

84. See Desai, *Speech & Citizenry*, *supra* note 82, at 472 n.88 (“[M]arks now express—whether implicitly or explicitly—environmental, human rights, and labor characteristics, as well as classic health and safety standards” (alterations in original) (quoting Margaret Chon, *Marks of Rectitude*, 77 FORDHAM L. REV. 2311, 2315 (2009))). As an example of the rectitude approach to marketing, the Locavore movement urges people to eat food grown within 100 miles of where one lives. *Id.* An older example is the way people and companies positioned themselves in the paper, plastic, or reusable shopping bags debate and related claims about the environment. *Id.* at 473.

backed by venture capital focused on sustainability and several portfolio companies in the alternative food space, offers that because humans have been on Earth for about 200,000 years but drinking cow's milk has only been known since about 8,000 to 10,000 years ago, "consuming the milk of another species isn't instinctual, and our bodies don't naturally 'crave' it."⁸⁵ This point suggests drinking milk is unnatural. The piece notes the intersection of the milk industry and the government programs discussed above and argues that "milk isn't a health food – it's just a very heavily funded and well-marketed product," and that "[w]e believe milk is healthy because that is what we have been told, and there has been little to question this – until now."⁸⁶ In this view, milk consumption is the result of a conspiracy.

PBBs are not just supported by seemingly independent activists; multibillion-dollar mega-corporations drive the PBB industry. Danone, an international conglomerate, is a good example of the resources of the industry. Danone is listed on the CAC 40—a list of the forty most important stocks out of the one hundred largest market caps on the Euronext Paris exchange.⁸⁷ Large institutional investors include Blackrock.⁸⁸ Danone asserts that it is number one in fresh dairy and plant-based beverages.⁸⁹ And the data demonstrate its size: Danone's 2023 annual report shows €27.6 billion in sales,⁹⁰ and the company's market capitalization as of late October 2024 was around €44 billion.⁹¹

85. Switch4Good, *supra* note 77; see *About Plant Based News*, PLANT BASED NEWS, <https://plantbasednews.org/about-us/> [<https://perma.cc/6FL9-SW88>] (listing ownership team including inter alia KBW Ventures and Eat Well Investment Group and offering "world-class advertising services to ethical and conscious consumer organizations").

86. Switch4Good, *supra* note 77.

87. *Stocks CAC 40*, BUS. INSIDER, https://markets.businessinsider.com/index/cac_40 [<https://perma.cc/HLG9-BPBL>].

88. DANONE, INTEGRATED ANNUAL REPORT 2023, at 59 (2024), <https://www.danone.com/content/dam/corp/global/danonecom/investors/en-all-publications/2023/integratedreports/integratedannualreport2023.pdf> [<https://perma.cc/2Q5L-PEAP>]. See also Amy McCarthy, *Pouring One Out for Oat Milk*, EATER (Oct. 6, 2022, 11:38 AM), <https://www.eater.com/23389111/oat-milk-oatly-popularity-rise-and-fall-environmental-health-concerns> [<https://perma.cc/JQ7Q-ULGC>] (noting backlash against oat beverages in part because of investments by Blackstone and findings in the United Kingdom that Oatly lacked research to support its environmental claims).

89. DANONE, *supra* note 88, at 7.

90. *Id.*

91. *Danone SA*, FIN. TIMES, <https://markets.ft.com/data/equities/tearsheet/summary?s=BN:PAR> [<https://perma.cc/7DAT-3K67>].

Just as the milk industry highlights science and culture that benefits its position, Danone uses science and culture strategically.⁹² Danone operates the Silk corporation.⁹³ Silk’s website has a page entitled “Silk vs. Milk” with this opening copy:

Pick up a carton of Silk[®], and you’re sharing in our passion to do some world good. Beyond amazing taste, here are two earth-lovin’ reasons to feel fab about choosing plant-based.⁹⁴

The implicit idea is that the company is somehow helping the world compared to milk producers. When Silk compares its product to milk, the company focuses on environmental claims while obscuring important nutritional aspects of milk. Silk’s page “Silk vs. Milk” readily offers claims about the environment.⁹⁵ But only with further clicking can one see exact numbers to compare its Unsweet Almondmilk (rather than Original Almondmilk, which has seven grams of added sugar) to dairy milk.⁹⁶ By combining environmental and particular nutritional facts, Danone embeds rectitude in its efforts to gain market share.

More broadly, the plant-based beverage industry wants to normalize its products as equivalent to milk for daily, nutritious consumption. Silk began in 1977 as a soy-based, not almond-based, product of WhiteWave Foods.⁹⁷ Dean Foods bought WhiteWave in 2002 and by 2011 was the largest soy drink producer, with net sales of more than \$13 billion—based in part on also being “the largest dairy processing company” in the United States.⁹⁸ Dean Foods was not a scrappy start-up fighting the big, bad dairy industry. It was a powerhouse using its position in both industries to nudge the USDA to include “fortified soy beverages” (the fortification focuses on

92. The implications of the nutrition claims are important and discussed in depth in Part II *infra*.

93. DANONE, *supra* note 88, at 9.

94. *Silk vs. Milk*, SILK, <https://silk.com/silk-vs-milk/> [<https://perma.cc/3NNT-PM33>].

95. *Id.* (asserting that it takes sixty-five percent less water to produce a half gallon of its liquid and generates sixty-seven percent less greenhouse gases).

96. Without a click, the website offers only that its product has “More Calcium; Less Calories; 0g Saturated Fat; 0g Sugar.” *Id.*

97. Our Story, SILK, <https://silk.com/about-us/> [<https://perma.cc/3BWU-Z2VB>].

98. See WILEY, CULTURES OF MILK, *supra* note 49, at 110–11; *White Wave Bought by Dean Foods*, DENV. BUS. J. (May 8, 2002, 8:55 AM), <https://www.bizjournals.com/denver/stories/2002/05/06/daily19.html> [<https://perma.cc/H3P4-T3QA>].

calcium, Vitamin A and Vitamin D) as milk substitutes.⁹⁹ Danone entered the soy-based drink market in 2016 when it bought WhiteWave from Dean Foods, which also gave it ownership of Alpro, a Belgian soy-based beverage company.¹⁰⁰

Alpro has continued the campaign to normalize plant-based beverages as viable, nutritious alternatives to milk by shunning and distancing itself from connections to animals and milk. Alpro leveraged the difference between PBBs and milk to market itself not as “a compromise” or “a substitute product,” but instead as “a brand of choice” that is “attractive due to health, lifestyle and flavor.”¹⁰¹ All of these points fit with Alpro’s overall strategy and branding, which extolls the virtues of its plant-based diets for the individual¹⁰² and the planet.¹⁰³ With that much investment and branding, one might think soy-based drinks would be where Danone put its main energy. That is incorrect.

Almond drinks have become the market leader for PBBs, and the industry has put its weight behind almond-based PBBs. In 2013, almond drinks first surpassed soy drinks in market share.¹⁰⁴ By 2020, almond drink sales were \$1.497 billion (or sixty-three percent of the PBB market), whereas soy drinks dropped to \$202.25 million in sales, placing them behind oat milk.¹⁰⁵ Thus, rather than an angelic, do-gooder producer, Silk is capitalizing not on *soy plus milk equals Silk*—a product that one of its corporate parents had argued was nutritionally similar to milk—but on its almond product, which is

99. See WILEY, *CULTURES OF MILK*, *supra* note 49, at 110–11. Other PBBs are not included most likely because of the lack of protein in the drinks. *Id.*

100. DANONE, *Danone: One Planet. One Health* 6, 23, 26 (2018), https://www.danone.com/content/dam/corp/global/danonecom/about-us-impact/publications/en/2018/Danone-RA2017-EN-PDF-e-accessible_03.pdf [<https://perma.cc/XE93-XPUD>]; Karin Bosteels, *Danone Acquires Alpro*, RETAIL DETAIL (July 7, 2016), <https://www.retaildetail.eu/news/food/danone-acquires-alpro/> [<https://perma.cc/D4JK-9678>].

101. *Alpro: Best Practice*, S. SCHESTOWITZ LTD. (Mar. 15, 2015), <https://www.sch.co.il/en/alpro-best-practice/> [<https://perma.cc/4M2F-EC9U>].

102. *Soya Organic*, ALPRO, <https://www.alpro.com/uk/products/drinks/soya-plain/organic-soya> [<https://perma.cc/5MAC-RYFX>].

103. *Doing Your Bit with a Simple Bite*, ALPRO, <https://www.alpro.com/sg/good-for-the-planet> [<https://perma.cc/T555-PPTG>]. The Alpro Foundation even offers a white paper called *The Plant-Based Plan*. ALPRO FOUND., *THE PLANT-BASED PLAN* 18–20 (2015), <https://a.storyblok.com/f/155293/x/9317c854ca/plant-based-plan-white-paper.pdf> [<https://perma.cc/9B2T-7M2V>].

104. Megan Poinski, *Oat Milk Surges to Second Most Popular in Plant-Based Dairy*, FOODDIVE (Sept. 30, 2020), <https://www.fooddive.com/news/oat-milk-surges-to-second-most-popular-in-plant-based-dairy/586010/> [<https://perma.cc/77K9-VESS>].

105. *Id.*

quite different.¹⁰⁶ Yet, even as almond-based drinks are leading the PBB market, oat-based drinks are making their play for PBB dominance.

Oatly, an oat drink giant that recently went public in 2021 at a \$10 billion valuation,¹⁰⁷ is even more direct on the brand attack against milk. Oatly says it makes “Milk, but made for humans.”¹⁰⁸ The campaign began in Sweden but was banned after a milk producer sued and won because the campaign “vilif[ied]” its product.¹⁰⁹ Oatly continued the campaign in the United Kingdom.¹¹⁰ Oatly’s CEO, Toni Petersson, defends the position: “[W]ho could argue with the fact: ‘It’s like milk, but made for humans?’ How can that be wrong?”¹¹¹ Oatly has a campaign offering twenty-two reasons plant-based drinks should be in the School Scheme—the European Union’s plan to “increase the consumption of fruit, vegetables, and milk products at a stage when children’s eating habits are being formed.”¹¹² Oatly’s tactics abroad are similar in the United States. For example, Oatly hosted what it called a “Dairy Deprogramming Zone” in Washington, D.C., to combat “decades of dairy propaganda.”¹¹³ Oatly’s U.S. mission is to create the “Post-Milk Generation”¹¹⁴ and “drive a food system shift.”¹¹⁵ The message is clear: Oatly wants to be included in the same program it criticizes for supporting milk because it wants to connect with kids early as part of their habits. Oatly’s drive to be seen as on

106. The FDA acknowledges this problem. See FDA DRAFT GUIDANCE, *supra* note 27, at 6 (noting consumers think of PBBs as “comparable in nutrition to milk,” especially when drinks such as almond beverages are called a “milk”).

107. Hanna Ziady, *Oatly Is Valued at \$10 Billion in New York IPO*, CNN BUS., <https://www.cnn.com/2021/05/19/investing/oatly-ipo-new-york/index.html> [https://perma.cc/9HYV-4X44] (May 20, 2021, 11:12 AM);

108. Tim Lewis, *How We Fell Out of Love with Milk*, GUARDIAN (Nov. 11, 2018, 3:00 PM), <https://www.theguardian.com/food/2018/nov/11/how-we-lost-our-love-milk-alt> [https://perma.cc/9UFR-R4Q4].

109. *Id.*

110. *Id.*

111. *Id.*

112. *Reason 1*, OATLY, <https://www.oatly.com/things-we-do/initiatives/schoolmilk/purpose-of-eu-school-scheme> [https://perma.cc/Q2DC-W65C]; see also *Normalize It: 22 Reasons Why You Should Sign the Petition To Include Plant-Based Drinks in the School Scheme*, OATLY, <https://www.oatly.com/things-we-do/initiatives/schoolmilk> [https://perma.cc/E2LU-8DVL].

113. *Enter the Dairy Deprogramming Zone*, OATLY, <https://www.oatly.com/en-us/things-we-do/stories/oatly-crash-capitol-hill-ice-cream-party> [https://perma.cc/UJ2J-YY9J].

114. *Welcome to the Post-Milk Generation*, OATLY, <https://www.oatly.com/en-us/oatly-who#welcome-to-the-post-milk-generation> [https://perma.cc/D8VP-ZBS7].

115. *Oatly’s To-Do-List*, OATLY, <https://www.oatly.com/en-us/oatly-who/sustainability-plan> [https://perma.cc/9WEV-R472].

par with ice cream and to change eating habits mirrors the way the milk industry built its place in people's minds. These are branding strategies.

Oatly also copies the milk industry's focus on nutrition by asserting health benefits of PBBs and at the same time attacking the way milk is produced. Oatly asks rhetorically: "[I]t would be smart to include the choice of nutritious and more sustainable fortified plant-based drinks. Right?"¹¹⁶ On the nutrition side, Oatly notes that plant-based drinks can be fortified with "minerals and vitamins of importance to children."¹¹⁷ And Oatly cites to studies on food production and greenhouse gases to support the claim that PBBs are more sustainable.¹¹⁸ Furthermore, Oatly sees the milk industry as having an unfair advantage through its placement in school food offerings, so Oatly wants in on reaching consumers as early as possible.¹¹⁹ Oatly's goal in its campaign is clear: It wants to normalize fortified PBBs and put them in schools so that children come to see the drinks as equivalent to milk.¹²⁰

Silk's trademark strategy further shows that the plan is to convince the public that all PBBs are substitutes for milk. Having moved beyond soy drinks, Silk (likely a blending of the words soy and milk) filed a trademark application for "NEXTMILK" on December 15, 2021.¹²¹ The filing lists plant-, nut-, vegetable-, and coconut-based beverages "used as dairy milk substitutes."¹²² The application includes "oat milk" (as if it is milk), as well as oat milk-

116. *Reason 1, supra* note 112 (footnotes omitted).

117. *Reason 7, OATLY*, <https://www.oatly.com/things-we-do/initiatives/schoolmilk/vegan-drinks-nutrition-for-children> [<https://perma.cc/WTL9-ZQEJ>] ("Fortified plant-based drinks can of course provide minerals and vitamins of importance to children. For example, we fortify our Oatly products with calcium which is needed for the maintenance of normal bones and teeth, as well as vitamin D, vitamin B12, [and] riboflavin.").

118. *Reason 1, supra* note 112; *Reason 2, OATLY*, <https://www.oatly.com/schoolmilk/food-and-global-warming> [<https://perma.cc/6FFF-S6TX>].

119. *Reason 10, OATLY*, <https://www.oatly.com/things-we-do/initiatives/schoolmilk/global-milk-and-dairy-consumption> [<https://perma.cc/4WXV-HYFY>].

120. *Reason 8, OATLY*, <https://www.oatly.com/schoolmilk/plant-based-drinks-in-school> [<https://perma.cc/MXD7-Z6AY>]. Oatly is not alone in this tactic. Impossible Foods is pursuing influence over children's understandings and perceptions of agriculture and food production through an emphasis in K-12 education on sustainability through plant-based foods. See Anna Starostinetskaya, *Impossible Foods' New Program Puts Sustainability on the K-12 Curriculum*, VEGNEWS (Nov. 1, 2022), <https://vegnews.com/2022/11/impossible-foods-program-sustainability-k-12> [<https://perma.cc/F2BY-NNHJ>].

121. U.S. Trademark Application Serial No. 97173234 (filed Dec. 15, 2021).

122. *Id.*

based beverages.¹²³ And the application also covers plant-based substitutes for yogurt and cheese.¹²⁴ The obvious conclusion is that just as Oatly wants to “normalize” oat drinks as part of daily nutrition on par with milk, Silk wants to take over the word milk for all its products.

C. Analysis: Both Industries Use Branding To Compete

Neither the milk nor PBB industries are small, scrappy, or saintly. Both industries earn billions of dollars annually.¹²⁵ Both industries have trade associations and lobby fiercely for government support and endorsement.¹²⁶ Both want to become default parts of what is considered healthy nutrition. Both use science to make claims about their products for health. And both make claims about their effect on the environment. In short, both industries use brand tactics to define markets and build market share.

Just because both industries make big claims about their products and compete does not, however, mean that all’s fair in brand war or that action is not required—far from it. The claims about nutrition and the evidence of harm caused by PBBs show that action is needed. Part II sets out why that is so. In addition, understanding the health claims and harms is vital to understanding the way health issues drive the reforms this Article offers later.

II. REALITIES OF PLANT-BASED BEVERAGES VERSUS MILK

The milk industry’s prior experience with government intervention when the industry exaggerated the health benefits of milk points to why action against PBBs is needed now. Regardless of

123. *Id.*

124. *Id.*

125. *See, e.g.*, Brian Berk, *Dairy and Plant-Based Milks Continue To See Strong Dollar Sales*, DAIRY FOODS (Feb. 8, 2023), <https://www.dairyfoods.com/articles/96153-dairy-and-plant-based-milks-continue-to-see-strong-dollar-sales> [<https://perma.cc/LQW6-NFDD>].

126. *See* Harshawn Ratanpal & Emily Kennard, *Deep-Pocketed Dairy Industry Continues War on Plant-Based Milk as FDA Hears Comments on New Draft Guidance*, OPEN SECRETS (Aug. 2, 2023, 5:50 PM), <https://www.opensecrets.org/news/2023/08/deep-pocketed-dairy-industry-continues-war-on-plant-based-milk-as-fda-hears-comments-on-new-draft-guidance> (detailing large lobbying efforts by the plant-based beverage and dairy industries respectively); Teodora Lyubomirova, *Dairy and Plant-Based Organizations Go Head-to-Head over FDA’s Plant-Based Milk Labeling Guidance*, DAIRY REP., <https://www.dairyreporter.com/Article/2023/08/03/dairy-and-plant-based-organizations-go-head-to-head-over-fda-s-plant-based-milk-labeling-guidance> [<https://perma.cc/M23V-B2LE>] (Aug. 3, 2023, 2:51 PM).

industry, the government can—and ought to—step in when consumers are confused, especially when public health claims are involved. Thus, this section sets out the health issues flowing from PBBs.

A. PBBs' Misleading Health Claims

Because there are so many plant-based beverages, the wide variety in nutritional content creates confusion and subsequent health problems.¹²⁷ Recall that both the milk and PBB industries make strong health claims. Milk's history of health claims is well-documented. PBB's claims are newer and tend to focus on trying to be a milk-equivalent or substitute. At least one major player in the PBB industry, Dean Foods, was able to use its dairy and soy power to have the FDA include fortified soy drinks as a milk substitute.¹²⁸ Soy drinks are, however, a shrinking part of the PBB market.¹²⁹ Cashew, rice, oat, banana, hazelnut, pea, and hemp are the newcomers.¹³⁰ Oat-based drinks, which once had an “explosive growth trajectory,” have stagnated.¹³¹ Today the dominant PBB is almond drink.¹³² Understanding what each PBB offers for nutrition requires breaking out which nutritional component is at stake.

127. Cf. Vanga & Raghavan, *supra* note 2, at 10–11 (noting soy, almond, rice, cashew, coconut, hemp, hazelnut, macadamia nut, flax, and oats as sources for PBBs, as well as the difficulty in identifying nutritional data for the different products needed to compare nutrition in PBBs and milk); Sarita Singhal, Robert D. Baker & Susan S. Baker, *A Comparison of the Nutritional Value of Cow's Milk and Nondairy Beverages*, 64 J. PEDIATRIC GASTROENT. & NUTRITION 799, 800 (2017) (“The quantity of several nutrients in cow's milk has been described in detail. Similar data for most of the nondairy beverages is, however, not available. Therefore, it is difficult to compare all the nutritional constituents with cow's milk.” (citation omitted)).

128. See *supra* note 99 and accompanying text.

129. Elaine Watson, *Plant-Based Milk by Numbers, US Retail: Oat Milk and Pea Milk Up Double Digits, Almond Milk and Soy Milk Flat*, FOOD NAVIGATOR USA, <https://www.foodnavigator-usa.com/Article/2022/07/25/Plant-based-milk-by-numbers-US-retail-Oat-milk-and-pea-milk-up-double-digits-almond-milk-and-soy-milk-flat> [https://perma.cc/Z4FJ-AVDU] (July 26, 2022, 3:42 PM) (noting change in soy sales from more than \$1 billion around 2012 to \$165 million in 2022).

130. Umair Irfan, “Fake Milk”: *Why the Dairy Industry Is Boiling over Plant-Based Milks*, VOX (Dec. 21, 2018, 2:25 PM), <https://www.vox.com/2018/8/31/17760738/almond-milk-dairy-soy-oat-labeling-fda> [https://perma.cc/A5KZ-HD67] (noting growth of a variety of PBBs calling themselves milk).

131. Elaine Watson, *US Retail Sales of Plant-Based Milk by Numbers: Coconut Is Up, Almond Is Down, Soy and Oat Are Flat*, AGFUNDERNEWS (Aug. 14, 2024), <https://agfundernews.com/us-retail-sales-of-plant-based-milk-by-numbers-coconut-is-up-almond-is-down-soy-and-oat-are-flat> [https://perma.cc/E4D5-N8RT].

132. *Id.*

Silk's claims about its almond drink show how the PBB industry compares a PBB to milk. The page offers numbers to compare Unsweet Almondmilk to milk and focuses on calcium, sugar, and calories but leaves out important information about protein and other vital nutrients such as potassium.¹³³

Comparing potassium content shows how stark the differences in even one nutrient can be. The recommended daily allowance for potassium is 3,500–4,700 milligrams, and most adults do not get enough potassium.¹³⁴ Silk's Unsweet Almondmilk has 170 milligrams of potassium per serving, whereas potassium in milk ranges from 320 milligrams for whole milk to 380 milligrams for 1% reduced fat milk.¹³⁵ "Potassium is an essential mineral . . . involved in muscle contractions, heart function, and regulating water balance."¹³⁶ In addition, proper potassium levels reduce the "risk of high blood pressure, kidney stones, and osteoporosis, among other benefits."¹³⁷ The almost 100% difference in potassium between Unsweet Almondmilk and milk is significant. It would take two servings of the former to reach ten percent of the low end of potassium's recommended daily amount, but just one serving for the latter. In short, comparing nutrition for even one PBB to milk is complicated.

Comparisons across PBBs, as opposed to comparisons between one PBB and milk, are even more difficult. On the one hand, PBBs have common features stemming from production techniques that make the end products look, feel, and taste like milk.¹³⁸ Thus a consumer may think the products are essentially equivalent. The similarity across PBBs stops, however, at processing. Because each PBB comes from a different source—*e.g.*, almond, cashew, coconut, flax, hazelnut, hemp, macadamia nut, oat, rice, and soy¹³⁹—PBBs are not all the same nutritionally.¹⁴⁰ Despite some similar steps across PBB manufacturing, "[t]he nutritional contents of these plant-based

133. *Silk vs. Milk*, *supra* note 94.

134. Ryan Raman, *How Much Potassium Do You Need Per Day?*, HEALTHLINE (June 13, 2024), <https://www.healthline.com/nutrition/how-much-potassium-per-day> [<https://perma.cc/JZB6-2ZT9>].

135. *Silk vs. Milk*, *supra* note 94.

136. Raman, *supra* note 134.

137. *Id.*

138. Singhal, Baker & Baker, *supra* note 127, at 799 (noting PBBs "are manufactured by extracting plant material, such as soy, nut, rice, and so on in water" such that the end product is homogenized for better shelf life and made to "visually resemble cow's milk").

139. *See* sources cited *supra* note 127.

140. FDA Draft Guidelines, *supra* note 27, at 10 ("The nutritional content of plant-based milk alternatives varies considerably across types . . .").

products depend on the source, methods of processing, and whether the products are fortified.”¹⁴¹ A soy drink will differ from a rice drink, both will differ from almond and oat drinks, and so on for other PBBs.

At least two studies examining PBBs’ and milk’s nutrition found them difficult to compare because of variance in PBBs for three reasons.¹⁴² First, even within a PBB vertical category (such as soy or almond drink), different manufacturers have different nutritional values. For example, a study of seven different almond drinks found calories ranged from 30 to 50 kilocalories, carbohydrates ranged from a “mere 0.25 to 3 grams,” and proteins from 1 to 5 grams.¹⁴³ Calcium ranged from 22 to 495 milligrams, with a median of 330 milligrams.¹⁴⁴ Almond drinks also have a broad range for Vitamins A and E.¹⁴⁵ Other PBBs exhibit similarly broad ranges.¹⁴⁶ For example, soy drinks range between 3 to 8 grams for carbohydrates, 7 to 12 grams for protein, and 2.5 to 6 grams for fat.¹⁴⁷

Second, the variance in nutrition across PBBs is even greater. Protein content in soy drinks is superior to almond, cashew, coconut, hazelnut, hemp, oat, and rice.¹⁴⁸ Only soy drinks compare favorably with milk for protein content.¹⁴⁹ Many PBBs are fortified with calcium and so exceed milk for raw calcium content.¹⁵⁰ Yet, rice drinks are an exception and fall far short in calcium as compared to milk.¹⁵¹

Third, the raw content or absolute value of a nutrient does not capture the importance of bioavailability, which refers to the body’s

141. Singhal, Baker & Baker, *supra* note 127, at 799.

142. *See id.* at 800, 805; Vanga & Raghavan, *supra* note 2, at 11–17.

143. Vanga & Raghavan, *supra* note 2, at 12–13.

144. *Id.* at 13.

145. *Id.* (noting ranges across different almond milk brands of 60–180 milligrams for Vitamin A and 1.2–6 milligrams for Vitamin E, fulfilling 10–30% and 10–50% of Estimated Average Requirements, respectively).

146. *Id.* at 13–17 (listing ranges for almond, soy, rice, and coconut drinks).

147. *Id.* at 14–15. For more comparisons between PBBs and milk, see generally Katharina E. Scholz-Ahrens, Frank Ahrens & Christian A. Barth, *Nutritional and Health Attributes of Milk and Milk Imitations*, 59 EUROPEAN J. NUTRITION 19 (2020) (evaluating nutritional differences between milk and PBBs).

148. Singhal, Baker & Baker, *supra* note 127, at 803.

149. Vanga & Raghavan, *supra* note 2, at 18 (“Cow’s milk is also a very important source of protein (8.11 g) in human diet and only soy milk is comparable in providing with same amount of proteins (8.71 g) to the human body.”).

150. Singhal, Baker & Baker, *supra* note 127, at 804.

151. *Id.*

ability to use nutrients.¹⁵² As one study explains, “[t]he physical state of the substance in the fortified beverage and its interaction with the food matrix are important determinants of absorbability.”¹⁵³ A study of calcium-fortified soy milk illustrates the issue. The study found that calcium from fortified soy milk “was absorbed at only 75% the efficiency of calcium from cow milk.”¹⁵⁴ Put differently, there was “a 50% overestimate of true absorbability.”¹⁵⁵ Just because a fluid has been fortified with calcium does not mean the body can absorb all the calcium.¹⁵⁶ Thus, to argue that a PBB is nutritionally equivalent to milk, one must know the bioavailability of the nutrient in question in the specific PBB, as compared to milk.¹⁵⁷

Consistent, quality data on bioavailability for PBBs is, however, lacking.¹⁵⁸ As one study explains, “nondairy beverages” can use fortification to achieve the same level of micronutrients and yet not “be considered as nutritionally equivalent to cow’s milk” because of differences in bioavailability.¹⁵⁹ For example, a study of fourteen calcium-fortified drinks—soy and rice drinks and orange juice—compared to unfortified fat-free milk concluded that the variance in fortification across drinks is “likely to [mislead consumers] with respect to the calcium benefit the beverage is presumed to confer.”¹⁶⁰ The study also found that the combination of high fortification and marketing PBBs “explicitly . . . against cow milk” increases the chance for “misinformation.”¹⁶¹ The calcium case connects to a larger point about PBBs and health.

Consumers are told that PBBs are equivalent to milk, but they are not. As a group of pediatric gastroenterologists summed up:

152. *Id.* at 800, 804–05; *see also* V. Srinivasan, *Bioavailability of Nutrients: A Practical Approach to In Vitro Demonstration of the Availability of Nutrients in Multivitamin-Mineral Combination Products*, 131 J. NUTRITION 1349S, 1349S (2001) (defining bioavailability).

153. Singhal, Baker & Baker, *supra* note 127, at 800.

154. Robert P Heaney, M Susan Dowell, Karen Rafferty & June Bierman, *Bioavailability of the Calcium in Fortified Soy Imitation Milk, with Some Observations on Method*, 71 AM. J. CLINICAL NUTRITION 1166, 1166 (2000).

155. *Id.*

156. *See also* Robert P. Heaney, Karen Rafferty & June Bierman, *Not All Calcium-Fortified Beverages Are Equal*, 40 NUTRITION TODAY 39 (2005).

157. *See* Heaney, Dowell, Rafferty & Bierman, *supra* note 154, at 1168 (noting possibility of different fortification methods producing different absorption rates).

158. Singhal, Baker & Baker, *supra* note 127, at 800.

159. *Id.*

160. Heaney, Rafferty & Bierman, *supra* note 156, at 39.

161. *Id.* at 42.

Nondairy milk beverages are perceived to be healthy but the products available vary remarkably in their nutritional profiles; most have low protein, mineral, and vitamin content and the quality of the protein is less than cow's milk. If these products are portrayed as substitutes for cow's milk in the diets of young children, then protein content and bioavailability of the nutritional additives need to be considered by manufacturers and consumers.¹⁶²

The potential harms from misunderstanding PBBs as nutritionally equivalent to milk are not theoretical. The next section documents the negative health outcomes that PBBs create.

B. PBBs and Negative Health Outcomes

Infants, toddlers, young children, children, girls, and the elderly suffer when PBBs are mistaken as nutritionally equivalent to milk.¹⁶³ The PBB industry continues, however, to brand its products as healthy, pure, and nutritionally equal to milk, and that strategy is paying off. A 2013 Mintel market report found that almost half of people surveyed purchased PBBs because they see them as “healthier” than milk and that forty-eight percent of people that were “curious but cautious” about PBBs bought them for the same reason.¹⁶⁴ Mintel's 2015 report similarly found that “[t]he primary reason consumers drink non-dairy milk is they think it is more nutritious” and “a good source of protein.”¹⁶⁵ In addition, nutrition for PBB consumers does not include calorie count; that is, buyers care less about calories as a matter of overall nutrition when deciding to buy PBBs.¹⁶⁶ The FDA's recent Draft Guidance acknowledges the confusion, stating that consumers of PBBs “do not understand the nutritional differences between milk and plant-based milk alternatives.”¹⁶⁷ The Draft Guidance also notes that research, including research by the FDA, shows that “a majority” of PBB consumers say they buy PBBs “because they believe [PBBs] are healthier than milk.”¹⁶⁸

162. Singhal, Baker & Baker, *supra* note 127, at 805.

163. See Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 28–30.

164. MINTEL, DAIRY AND NON-DAIRY MILK - US, APRIL 2013, at 130, 148 (2013) [hereinafter MINTEL 2013 REP.].

165. MINTEL, DAIRY AND NON-DAIRY MILK: SPOTLIGHT ON NON-DAIRY - US, APRIL 2015, at 8 (2015) [hereinafter MINTEL 2015 REP.].

166. *Id.* at 93–94.

167. FDA DRAFT GUIDANCE, *supra* note 27, at 6.

168. *Id.*

Given the rapid, continued growth of consumer shifts away from milk to PBBs, recent medical science has studied the nutritional effects of the differences and the implications of the shift.¹⁶⁹ This section explains the important nutritional and health aspects of milk and the difficulties of replicating these aspects in PBBs. It then documents the negative health outcomes of treating PBBs as a milk substitute.

1. Milk's Nutritional Contents

Milk is a complex food composed of many nutrients which is arguably impossible to duplicate through industrial processes. Trying to do so, and claiming that a substitute is equivalent, can lead to health harms.

Milk is important for infants, toddlers, young children, children, girls, and the elderly, but for different reasons.¹⁷⁰ Breast milk is important for newborns and infants because:

The composition of milk and the concentration of its nutrients is such to satisfy completely and ideally the energy and metabolic needs of the offspring of the respective species during early postnatal life. For maintenance and growth of the newborn about 40–50 indispensable nutrients must be provided steadily during the suckling period.¹⁷¹

It is thus a mistake to think of milk as only protein, carbohydrates, fat, calcium and one or two other vitamins.¹⁷² The nutrients in milk also include indispensable and semi-indispensable amino acids, which are “[p]articularly important essential nutrients.”¹⁷³

169. Scholz-Ahrens, Ahrens & Barth, *supra* note 147; Vanga & Raghavan, *supra* note 2, at 10 (“Though [PBBs] are popularly advertised as healthy and wholesome, little research has been done in understanding the nutritional implications of consuming these milk beverages in short term and long term.”); Singhal, Baker & Baker, *supra* note 127, at 799 (“If [the growth of PBB consumption] continues, it is important to understand how these beverages compare to cow milk, not only in product content, but also in bioavailability of the nutrients so children can be exposed to healthy food, grow optimally, and develop good eating behaviors.”).

170. See Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 28–30.

171. *Id.* at 20; Vanga & Raghavan, *supra* note 2, at 17 (“For example, human milk is a perfect source of nutrition to a newborn infant.”).

172. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 20 (noting the forty to fifty nutrients also include “minerals relevant for skeletal growth like calcium, phosphorous, magnesium, and several trace elements and vitamins like zinc, iodine, vitamins B2, B12, D, and A”).

173. *Id.* at 20; see also *id.* at 27 (“Hence, the absolute mineral content should not be the sole criterion for the selection of the appropriate drink. Attention should

It is also a mistake to think only the very young need these nutrients. Although the needs are “essentially important for infants and toddlers,” essentially “the same complement of nutrients” is needed throughout one’s life.¹⁷⁴ Moreover, cow’s milk provides many of the same benefits as human milk after infants are weaned.¹⁷⁵ In simplest terms, the nutritional benefits of milk are complex and nuanced, given the high number of nutrients in milk and depending on the drinker’s age.

Put differently, milk’s nutritional benefits are unique. As discussed in the previous section, bioavailability is a major part of assessing nutrition. Even when protein or a mineral is present, whether the nutrient will be absorbed, and thus available for the body to use, varies depending on whether the nutrient is naturally occurring or artificially added and on the presence of other chemicals that aid absorption.¹⁷⁶ Consider calcium: Milk does not just contain a high amount. It is the presence of “[o]ther milk constituents such as lactose and casein phosphopeptides” that allow calcium to be better absorbed in the intestine.¹⁷⁷ So as a matter of nutrition, when one sees calcium on a fortified drink, one must assess both the amount and the bioavailability.¹⁷⁸

As another example, not all protein is the same. Protein quality can be assessed by several measures.¹⁷⁹ Regardless of the measure, “[t]he protein quality . . . of animal proteins is considerably higher than that of plant proteins, nuts and cereals in particular due to the higher content of

therefore focus on the fortificants used and on their mineral bioavailability.” (footnote omitted)). Isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine are indispensable amino acids; arginine and histidine are semi-indispensable. *Id.*; see also Karen Steward, *Essential Amino Acids: Chart, Abbreviations and Structure*, TECH. NETWORKS APPLIED SCIS., <https://www.technologynetworks.com/applied-sciences/articles/essential-amino-acids-chart-abbreviations-and-structure-324357> [https://perma.cc/D8R7-MXSX] (Dec. 18, 2023).

174. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 20.

175. *Id.* (“Nearly half of these indispensable nutrients occur in cow’s milk at high concentrations (g/kg) and nutrient densities (g/MJ) to maintain a healthy metabolism.”). Similarly, one study points out that despite “the large portion of [the] population suffering from lactose intolerance, mammalian milk including cow’s milk is widely consumed due to its nutritional content.” Vanga & Raghavan, *supra* note 2, at 17.

176. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 26–27.

177. Singhal, Baker & Baker, *supra* note 127, at 805; see also Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 27 (“[B]ioavailability of calcium from different foods (legumes, grain or nuts) and sources often varies markedly depending on food matrix, presence or absence of absorption inhibitors (e.g., oxalate in almonds, phytate in grain), or enhancers (e.g., vitamin C, citrate, lactose, fructo-oligosaccharides), and on the solubility of the mineral salt in the gastro-intestinal tract.”).

178. See Singhal, Baker & Baker, *supra* note 127, at 804–05.

179. Outi Elina Mäkinen, Viivi Wanhalinna, Emanuele Zannini & Elke Karin Arendt, *Foods for Special Dietary Needs: Non-Dairy Plant-Based Milk Substitutes and Fermented Dairy-Type Products*, 56 CRITICAL REVIEWS. FOOD SCI. & NUTRITION 339, 344 (2016); Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 26.

most indispensable amino acids.”¹⁸⁰ Particularly noteworthy is that animal proteins, including milk protein, has better “ileal digestibility” and thus “significantly higher” bioavailability for “skeletal muscle anabolic response”—the process of binding muscle to bone—as compared to plant proteins.¹⁸¹

Micronutrients show yet more differences between milk and PBBs. One report identified nine “shortfall” micronutrients of concern because of potential negative health outcomes from underconsumption.¹⁸² Milk offers “30–40% of dietary calcium, iodine, vitamin B12, and riboflavin,” and groups that drink little to no milk tend not to get these nutrients from other sources.¹⁸³ As another example, milk has a good amount of zinc.¹⁸⁴ Zinc is vital in aiding certain enzymes to function and “plays a role in DNA repair, cell growth and replication, gene expression, and protein and lipid metabolism.”¹⁸⁵ Zinc in milk has better bioavailability than in PBBs.¹⁸⁶ Vitamin D is another important micronutrient in milk, albeit as a fortification¹⁸⁷—but one that PBBs often lack.¹⁸⁸

2. Health Problems with Milk Substitutes

Medical science is quite clear about the health benefits of breast milk and the problems that can flow from not drinking milk after breast feeding. The need for milk and the downsides of not drinking milk change with the age of the drinker in question. Nonetheless, “[v]irtually the same complement of nutrients must be provided during all periods of life.”¹⁸⁹ Put differently, milk is a particularly good source of the nutrients humans need throughout their lives, and milk provides those nutrients with high bioavailability.

180. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 26.

181. *Id.* (also noting that “leucine, which occurs to a high proportion in milk[,] warrants special emphasis because of its high anabolic property”).

182. Singhal, Baker & Baker, *supra* note 127, at 804 (listing “vitamin A, vitamin D, vitamin E, folate, calcium, magnesium, potassium, fiber, and iron for the premenopausal females” as the nine shortfall micronutrients and noting that calcium, Vitamin D, fiber and potassium especially are public health issues “because their under consumption is linked to adverse health outcomes”).

183. Mäkinen, Wanhalinna, Zannini & Arendt, *supra* note 179, at 345.

184. Singhal, Baker & Baker, *supra* note 127, at 805.

185. *Id.*

186. *Id.*

187. Grace J. Lee, Catherine S. Birken, Patricia C. Parkin, Gerald Lebovic, Yang Chen, Mary R. L’Abbé & Jonathon L. Maguire, *Consumption of Non-Cow’s Milk Beverages and Serum Vitamin D Levels in Early Childhood*, 186 CANADIAN MED. ASS’N J. 1287, 1287 (2014).

188. Mäkinen, Wanhalinna, Zannini & Arendt, *supra* note 179, at 345.

189. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 20.

The starting point is breast feeding. As the American Academy of Pediatrics (AAP) states: “Human milk has a unique composition, with antimicrobial, antiinflammatory, immunoregulatory agents, and living leukocytes, all of which contribute to the developing immune system of the child.”¹⁹⁰ Thus the AAP, World Health Organization, American College of Obstetricians and Gynecologists, American Academy of Family Physicians, and Canadian Pediatric Society all recommend six months of exclusive breastfeeding.¹⁹¹ After six months, the AAP recommends continuing breastfeeding along with “appropriate complementary foods” for two years or even longer.¹⁹² It may seem that a mother could and should start supplementing breastfeeding with a range of foods after six months and all would be well. That is incorrect.

A subtle point is that “complementary foods” is a term of art. Cow’s milk is not recommended until twelve months of age because the infant’s digestive system is not ready to handle it.¹⁹³ Up to twelve months old, when human milk is not available, the appropriate supplement is formula, which is usually based on cow’s milk.¹⁹⁴ Nonetheless, given the health benefits of breast feeding, reliance on formula, which is not identical or equivalent in all respects, is not recommended.¹⁹⁵ Despite the recommendation to breastfeed beyond six months, by twelve months “most infants are weaned to some form of ‘milk.’”¹⁹⁶

As infants age, their abilities to digest foods change, so the recommendation is to introduce complementary foods that are developmentally and nutritionally appropriate.¹⁹⁷ It is not just infants whose nutritional needs change. Children, teenagers, young adults, and

190. Joan Younger Meek & Lawrence Noble, *Policy Statement: Breastfeeding and the Use of Human Milk*, 150 PEDIATRICS e2022057988, at 3 (2022).

191. *Id.*

192. *Id.* at 4.

193. USDA, INFANT NUTRITION AND FEEDING 108, 115–16 (2019), <https://wicworks.fns.usda.gov/sites/default/files/media/document/infant-feeding-guide.pdf> [<https://perma.cc/78DX-5LN3>] (noting that developmental stages for infants vary but listing physical changes in kidney, digestive and other function occurring in general at six months of age that allow supplemental foods); see also Eve E. Stoody, Joanne M Spahn & Kellie O Casavale, *The Pregnancy and Birth to 24 Months Project: A Series of Systematic Reviews on Diet and Health*, 109 AM. J. CLINICAL NUTRITION 685S, 689S (2019).

194. USDA, *supra* note 193, at 93.

195. Younger & Meek, *supra* note 190, at 3 (“Human [breast]milk has a *unique* composition, with antimicrobial, antiinflammatory, immunoregulatory agents, and living leukocytes, all of which contribute to the developing immune system of the child.” (emphasis added)).

196. Russel J. Merritt et al., *North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition Position Paper: Plant-Based Milks*, 71 J. PEDIATRIC GASTROENT. & NUTRITION 276, 277 (2020).

197. USDA, *supra* note 193, at 115–16.

elderly people have different nutritional needs. Regardless of age, milk's absence in the diet can cause health harm.¹⁹⁸

Infants are the most vulnerable when a PBB is mistaken as a milk substitute. Studies have documented that with the increase in PBB consumption in place of milk, there has been a rise in poor health outcomes. Yet the phrase "poor health outcomes" is understated. One study put it bluntly: "If parents are not aware of the nutritional differences between milk and plant drinks or of nutritional deficits of unfortified drinks, their infant or child is at risk for acute life-threatening or chronic conditions."¹⁹⁹ The general problem with mistaking PBBs as nutritionally equivalent to milk can lead to "failure to thrive." More specific negative health outcomes are reports of "kwashiorkor, rickets, hyperoxaluria, hematuria, dysuria, hypocalcaemic tetany, kidney stones, ferropenic anemia or scurvy . . . after young children were fed with a rice-based, soy-based or almond based drink."²⁰⁰ Other issues include "slow linear growth, poor weight gain, and even overt protein calorie malnutrition . . . all of which may lead to compromise of future growth and development."²⁰¹ Micronutrient deficiencies included Vitamins A and D.²⁰² Ironically, depending on the almond or soy milk in question, too much of one added nutrient, sucrose, has been shown to lead to cavities.²⁰³

We should not underestimate what failure to thrive, kwashiorkor, rickets, hyperoxaluria, hematuria, dysuria, and so on indicate for infant health and public health in general. Failure to thrive (FTT) "describe[s] inadequate growth or the inability to maintain growth, usually in early childhood. It is a sign of undernutrition."²⁰⁴ One possible reason—important when considering the effect of PBBs—is inadequate calorie intake.²⁰⁵ Reasons for inadequate caloric intake include "inadequate nutritional knowledge" and poverty.²⁰⁶

If untreated, FTT has serious consequences. Medical science has found that long-term malnutrition can harm "a child's future growth and

198. See generally D. I. Givens, *MILK Symposium Review: The Importance of Milk and Dairy Foods in the Diets of Infants, Adolescents, Pregnant Women, Adults, and the Elderly*, 103 J. DAIRY SCI. 9681 (2020).

199. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 29.

200. *Id.*

201. See Merritt et al., *supra* note 196, at 278 (citation omitted).

202. *Id.*

203. *Id.*

204. Sara Z. Cole & Jason S. Lanham, *Failure to Thrive: An Update*, 83 AM. FAM. PHYSICIAN 829, 829 (2011).

205. *Id.* There are many factors that can lead to undernutrition, two of which are "inadequate caloric absorption" and "excessive caloric expenditure." *Id.* at 829, 831.

206. *Id.* at 831.

cognitive development.”²⁰⁷ Low birthweight preterm infants who develop FTT are by age eight “smaller, have lower cognitive scores, and have poorer overall academic performance” as compared to similar infants who did not have FTT.²⁰⁸ Studies on FTT in full-term infants show concern for cognitive development, especially in IQ and reading skills, unless early intensive home visits and nutrition education are in place.²⁰⁹

The implications of PBBs leading to FTT are dire and can be long-lasting. Drinking PBBs instead of milk has been shown to lead to FTT, at least for soy- and rice-based PBBs.²¹⁰ Identifying FTT, however, tells only part of the story.

The medical conditions that correspond with FTT or that occur even without explicit manifestation of FTT present an even starker picture of the health harms that can flow from PBBs. Kwashiorkor is “[a] form of protein-energy malnutrition.”²¹¹ The symptoms range from lethargy and irritability to skin disorders, delayed growth, “muscle wasting; vomiting; diarrhea; anorexia; edema; steatosis; anemia; and increased susceptibility to infection.”²¹² Extreme cases can cause coma and even death, if infection occurs.²¹³ The disease is mainly found where there is severe poverty or comorbid diseases that interfere with the absorption of nutrients.²¹⁴ Yet, cases are appearing in the United States and other developed countries—and switching from milk or milk-based formula to PBBs is the cause.²¹⁵

Rickets is another disease that had been in decline but is now on the rise, possibly due to increased PBB consumption. Rickets affects bone development, causing a child’s bones to hurt and making the bones easier to bend or break.²¹⁶ A low level of Vitamin D is a known cause.²¹⁷ At the

207. *Id.* at 832.

208. *Id.* at 832–33 (noting “consensus that severe, prolonged malnutrition” leads to these outcomes).

209. *Id.* at 833.

210. See Isidro Vitoria, *The Nutritional Limitations of Plant-Based Beverages in Infancy and Childhood*, 34 NUTRICIÓN HOSPITALARIA 1205, 1212 (2017).

211. Kenneth A. Katz, Matthew H. Mahlberg, Paul J. Honig & Albert C. Yan, *Rice Nightmare: Kwashiorkor in 2 Philadelphia-Area Infants Fed Rice Dream Beverage*, 52 J. AM. ACAD. DERMA. 52 (SUPPLEMENT) S69, S70 (2005).

212. *Id.*

213. *Id.*

214. Theodore Liu et al., *Kwashiorkor in the United States: Fad Diets, Perceived and True Milk Allergy, and Nutritional Ignorance*, 137 ARCHIVES DERMA. 630, 630 (2001).

215. *Id.*

216. *Rickets: What It Is and How It Is Treated*, 74 AM. FAM. PHYSICIAN 629 (2006). For a detailed medical explanation of how rickets affects the body, see Brian Wharton & Nick Bishop, *Rickets*, 362 LANCET 1389, 1389–90 (2003).

217. Givens, *supra* note 198, at 9683–84.

beginning of the twentieth century, eighty percent of children in the United States and Europe had rickets, but with the growth of food fortification, especially in milk, rickets “was essentially eradicated” by the 1930s.²¹⁸ But, as discussed above, many PBBs lack enough Vitamin D. As a study of more than 2,800 kids showed that children who drank only PBBs were “twice as likely” to have low Vitamin D levels as compared to children who drank only cow’s milk.²¹⁹ As the authors noted, there was an inverse relationship between Vitamin D levels and drinking more PBBs.²²⁰ Children are apparently drinking only so much fluid in a day, so if they drink PBBs, they are drinking less milk, and thus getting less Vitamin D.²²¹ Although this study looked only at Vitamin D, the inverse relationship and concomitant tradeoff would of course apply to all nutrients in milk that are not present in a given PBB.

In addition to FTT and rickets, PBB consumption can cause several kidney-related diseases. PBBs often have “anti-nutritive components,” such as oxalic acid, which “reduce the bioavailability of nutrients and may provoke unwanted side effects.”²²² High amounts of oxalic acid and related oxalates have been linked to several urinary disorders, including hyperoxaluria (excess oxalate in urine),²²³ hematuria, and dysuria (pain or irritation when urinating),²²⁴ as well as deposits in blood vessels, bones, and body organs.²²⁵ One case study describing three otherwise healthy children who had these conditions found that the cause was consumption of large quantities of almond beverages, and moreover, that the problems went away when they stopped drinking the almond beverages.²²⁶

Thanks to PBBs, some children are even getting scurvy.²²⁷ Vitamin C (ascorbic acid) is “an essential nutrient involved in many biological

218. *Id.*

219. *See* Lee et al., *supra* note 187, at 1291–92.

220. *Id.*

221. *Id.* at 1292.

222. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 29.

223. *Hyperoxaluria and Oxalosis*, MAYO CLINIC (May 11, 2023) <https://www.mayoclinic.org/diseases-conditions/hyperoxaluria/symptoms-causes/syc-20352254> [<https://perma.cc/A3NL-4J4X>].

224. *Id.*; Demetrius Ellis & Jessica Lieb, *Hyperoxaluria and Genitourinary Disorders in Children Ingesting Almond Milk Products*, 167 J. PEDIATRICS 1155, 1155 (2015).

225. *Hyperoxaluria and Oxalosis*, *supra* note 223.

226. Ellis & Lieb, *supra* note 224, at 1155–57.

227. Isidro Vitoria, Berta López, Jacinto Gómez, Carolina Torres, María Guasp, Inmaculada Calvo & Jaime Dalmau, *Improper Use of a Plant-Based Vitamin C–Deficient Beverage Causes Scurvy in an Infant*, 137 PEDIATRICS e20152781, at 4 (2016); *see also* COUTEUR & BURRESON, *supra* note 26, at 37–42 (tracing the history of scurvy’s devastating effects on humans and of detecting the need for Vitamin C to prevent scurvy).

and biochemical functions.”²²⁸ Scurvy is rare in developed countries.²²⁹ But it was found to be the diagnosis when an eleventh-month-old infant in Spain presented with a set of problems, including bone fractures, irritability, and failure to thrive, among other abnormalities.²³⁰ In lay terms: His bones were weak and not developing properly; he was in pain; he was not growing; he could not walk. From the age of two months he had been on an exclusive diet of almond beverage, almond flour, and a few other mix-ins.²³¹ The results could have been avoided with proper Vitamin C intake, and indeed his symptoms reversed once he started getting it.²³² The report concluded that “this case demonstrates that scurvy is a new and severe complication of improper use of almond drinks in the first year of life.”²³³ It also warned pediatricians and parents: “[PBBs] are not a complete food and they may not replace breastfeeding or infant formula.”²³⁴

The importance of milk persists during adolescence, middle, and older ages.²³⁵ Unlike infants and toddlers, people in these stages of life usually eat a varied diet, so the severe outcomes seen with infants and toddlers are not easily found. Nonetheless, medical science is quite clear that milk consumption matters at these stages of life.²³⁶ Adolescence is a vital time for bone development, yet milk consumption often drops off then.²³⁷ Adolescents who avoid milk have worse bone health, smaller bones, and more fractures.²³⁸ And poor bone building at this age “increases the risk of osteoporotic fractures in later life, particularly for postmenopausal women.”²³⁹ In addition, a study of vegetarian and vegan diets showed lower bone mineral density (BMD) in the neck, spine, and whole body.²⁴⁰ Moreover, even among non-meat eaters, vegans had lower BMD than vegetarians and fractured bones more often.²⁴¹

228. Vitoria et al., *supra* note 227, at 3.

229. *Id.* at 1.

230. *Id.* at 2–4.

231. *Id.* at 2.

232. *Id.* at 1.

233. *Id.*

234. *Id.* at 4.

235. See FDA DRAFT GUIDANCE, *supra* note 27, at 10 (“[FDA’s] Dietary Guidelines recommend three cup equivalents from the Dairy Group for individuals nine and older to support an increased requirement for calcium that is needed during these life stages.”).

236. See generally Givens, *supra* note 198.

237. *Id.* at 9684–85.

238. *Id.* at 9685.

239. *Id.*

240. *Id.* at 9686.

241. *Id.*

Milk can be important for the elderly too.²⁴² Rapidly digestible proteins like whey (found in milk) aid in preventing sarcopenia—the process by which we lose muscle mass and strength as we age.²⁴³ Protein content and bioavailability in milk thus make it a good source of protein for mitigating sarcopenia.²⁴⁴ Magnesium is also important to this process.²⁴⁵ Similar to the nature of milk protein and minerals and the way they are absorbed in infants, the nature of whey protein and mineral absorption in the elderly means that proteins and magnesium are better absorbed from milk than PBBs.²⁴⁶

In sum, milk and PBBs are not the same. As both industries argue, choosing one drink over another has consequences. This Part showed the harms that occur when people conflate milk and PBBs nutritionally. Based on health concerns and mistakes made by consumers, the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition, and the Council for Pediatric Nutritional Professionals have concluded that only products that are milk as defined by the FDA or have “comparable nutritional value” to milk should be labeled milk.²⁴⁷ The groups went further and recommended that PBBs that are “not substantially equivalent” to milk should be labelled as such for children under the age of two.²⁴⁸ Despite the evidence of harm and medical recommendations, the legal cases and administrative rules on whether consumers understand the difference and are harmed miss these points. The next Part addresses these shortcomings.

III. THE LEGAL STATUS OF MILK

Trademark is almost notorious for providing strong protection against minimal confusion,²⁴⁹ whereas the FDA’s approach goes the

242. *Id.* at 9682.

243. *Id.* at 9692–93.

244. *Id.*

245. *Id.* at 9693.

246. *Id.* at 9692–93 (noting “differential” effects of whey and soya protein).

247. Merritt, *supra* note 196, at 279.

248. *Id.*

249. *See, e.g.*, Ann Bartow, *Likelihood of Confusion*, 41 SAN DIEGO L. REV. 721, 723–24 (2004) (arguing that the malleability of the likelihood-of-confusion standard has “ma[de] trademarks normatively stronger, broader, and ever easier to ‘protect’ for mark holders”); Stacey L. Dogan & Mark A. Lemley, *Trademarks and Consumer Search Costs on the Internet*, 41 HOUS. L. REV. 777, 778–81 (2004) (describing how courts have stretched or ignored traditional trademark doctrine in favor of mark holders in Internet cases); Glynn S. Lunney, Jr., *Trademark Monopolies*, 48 EMORY L.J. 367, 486–87 (1999) (“[W]e have divorced trademark law from its historical and sensible policy focus on the probability of material confusion, and crafted an overbroad, ill-considered legal

opposite direction. The FDA regulations and related caselaw are key forces in understanding the problems with the current way we balance promoting innovation in food and nutrition with consumer protection. The FDA has the authority to set definitions and standards of identity (SOIs) for food.²⁵⁰ Any product that claims to be a food subject to an SOI “must conform to the definition and standard and their labels must bear the name specified therein.”²⁵¹ When the FDA has not set a standard, the FDA regulations require that a “statement of identity” is needed for any packaged food.²⁵² If a name is prescribed by federal law or regulation, the name must be used.²⁵³ If no such name is prescribed, “[t]he common or usual name of the food” must be listed, and if that does not exist, the packing must use “[a]n appropriately descriptive term, or when the nature of the food is obvious, a fanciful name commonly used by the public for such food.”²⁵⁴

Courts use the “reasonable consumer” test to determine whether a term is misleading.²⁵⁵ When courts have been asked to assess whether a PBB calling itself “milk” has violated the law, they have looked to the FDA for further guidance on whether milk should be limited to mammalian—or more specifically cow’s milk—and found the guidance lacking.²⁵⁶ Furthermore, courts have discounted the idea that consumers could be confused by the term soy milk but have offered little analysis beyond finding the idea absurd or unlikely.²⁵⁷ The medical evidence demonstrating confusion and harm is absent from the cases. Anyone familiar with trademark law should be astonished by these outcomes.

Both the statement of identity test and the reasonable consumer test bear a striking resemblance to trademark law *and yet* come to strikingly different conclusions than what trademark law would dictate. The FDA

regime that serves simply to enrich certain trademark owners at the expense of consumers, the market’s competitive structure, and the public interest more generally.”).

250. 21 U.S.C. § 341. The SOI system is focused on consumer protection but also seeks to allow innovations in food production. *Standards of Identity for Food*, *supra* note 45. The system began in 1939 to address food makers adulterating food content. SOIs can set detailed requirements for ingredients the food must contain, the amount or ratio of those ingredients, and even methods of production required for a product to be marketed as milk, milk chocolate, ketchup, et cetera. For example, one early SOI addressed the problem of companies offering fruit jams that actually contained very little fruit. *Id.*

251. FDA DRAFT GUIDANCE, *supra* note 27, at 6 (citing 21 U.S.C. § 343(g)).

252. 21 C.F.R. § 101.3(a) (2024).

253. § 101.3(b)(1); *accord Ang v. WhiteWave Foods Co.*, No. 13-cv-1953, 2013 WL 6492353, at *3 (N.D. Cal. Dec. 10, 2013).

254. § 101.3(b)(2)–(3); *accord WhiteWave*, 2013 WL 6492353, at *3.

255. *See WhiteWave*, 2013 WL 6492353, at *4.

256. *See infra* notes 283–84 and accompanying text.

257. *See infra* notes 289–92 and accompanying text.

caselaw has struggled to explain whether product names such as “plant+milk” (e.g., soy milk or oat milk) deceive consumers.²⁵⁸ In contrast, trademark law’s deceptively misdescriptive doctrine is designed to assess consumer understanding and determine whether a product name causes consumer harm by deceiving consumers as to its contents.²⁵⁹ As opposed to the FDA’s test on what a reasonable consumer understands, trademark law has a time-honored test, the likelihood of confusion test, that takes into account many factors to assess whether there is harmful confusion.²⁶⁰ Indeed, in trademark law, even the mildest hint of actual confusion weighs heavily on finding confusion and harm.²⁶¹ PBB companies’ success in Europe,²⁶² where they cannot use the word milk,²⁶³ shows that they do not need the word, and yet they demand to use it. While the FDA has no test regarding whether a term is needed in the marketplace, trademark law’s genericism doctrine assesses this idea.²⁶⁴ PBB companies have argued that free speech principles allow them to use

258. See *infra* note 464.

259. See *infra* notes 365–69 and accompanying text.

260. See *infra* notes 389–92 and accompanying text.

261. 3 MCCARTHY, *supra* note 48, § 23.13; see also Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CALIF. L. REV. 1581, 1640–42 (2006).

262. See, e.g., *Market Insights on European Plant-Based Sales 2020-2022*, GOOD FOOD INST. EUR., <https://gfieurope.org/market-insights-on-european-plant-based-sales-2020-2022/> [<https://perma.cc/VJ5V-MCRD>] (noting plant-based milk category grew to more than €2 billion by 2022); *European Plant-Based Food Sales Grow by 22%, Reaching a Record \$5.7Bn*, VEGCONOMIST (Apr. 3, 2023), <https://vegconomist.com/studies-and-numbers/european-plant-based-food-sales-grow> [<https://perma.cc/XFS3-D6BK>] (noting PBB milk alternatives are the leader in plant-based foods and make up eleven percent of the total “milk market” based on recent twenty percent growth).

263. Case C-422/16, *Verband Sozialer Wettbewerb eV v. TofuTown.com GmbH*, ECLI:EU:C:2017:458, ¶ 52 (June 14, 2017) (interpreting EU regulations to ban use of dairy names on plant-based products even if the plant name is clearly placed on the label); see also HILDE BRANS, USDA FOREIGN AGRIC. SERV., GAIN REP. NO. E17046, EUROPEAN COURT PROHIBITS USE OF DAIRY NAMES FOR NON-DAIRY PRODUCTS (2017), https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=European%20Court%20Prohibits%20Use%20of%20Dairy%20Names%20for%20Non-Dairy%20Products_Brussels%20USEU_EU-28_7-11-2017.pdf [<https://perma.cc/3UQ8-5AVP>] (“On June 14, 2017, the European Court of Justice (ECJ) ruled that plant-based products cannot be labeled with dairy names such as ‘milk’ or ‘butter’ even if the plant origin is clearly indicated on the label.”).

264. Sandra L. Rierson, *Toward a More Coherent Doctrine of Trademark Genericism and Functionality: Focusing on Fair Competition*, 27 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 691, 693 (2017).

the word milk,²⁶⁵ but trademark law readily shows that false statements in the commercial realm are not protected.²⁶⁶

Is there consumer confusion, harm to the public, a commercial need for the term, or a free speech issue? Trademark law has the tools for answering these questions, while current FDA rules and caselaw come up short. As a result, the public is harmed. If confusing a cola for Coca-Cola, or non-Gucci jeans with Gucci jeans can merit protecting the public,²⁶⁷ how can significant instances of clear, physical harm to infants and toddlers not demand the same?

This Part sets out the current law and its flaws. It then draws on trademark law to show how a better understanding of harm would operate. Part IV then offers a new Test, the Likelihood of Generic Confusion Test, to aid the FDA in better protecting consumers from these harms.

A. FDA Regulations and the Caselaw on Using Milk

Federal regulations about milk seem quite clear, yet aspects of the regulations have created some chaos. Milk is defined at 21 C.F.R. § 131.110 as “the lacteal secretion, practically free from colostrum, obtained by the complete milking of one or more healthy cows.”²⁶⁸ In addition, these regulations state that milk when finally packaged “shall contain not less than [8.25] percent milk solids not fat and not less than [3.25] percent milkfat.”²⁶⁹ From this definition it is difficult to tell how PBBs, which do not contain milk, explicitly reject cow’s milk as a brand strategy, and claim to offer a healthy and sustainable alternative product, could be milk. Nonetheless, courts have held that PBBs can use the term despite not meeting the regulatory definition.²⁷⁰ How did that happen?

265. Cf. Nellie Bowles, *Got Milk? Or Was That Really a Plant Beverage?*, N.Y. TIMES (Aug. 31, 2018), <https://www.nytimes.com/2018/08/31/business/milk-nut-juice-plant-beverage-label.html> (Plant Based Foods Association Executive Director Michele Simon: “No one owns the English language, and we’re not backing down.”).

266. See *infra* notes 512–15 and accompanying text.

267. See, e.g., *Coca-Cola Co. v. Koke Co. of Am.*, 254 U.S. 143 (1920) (enjoining sale of Koke cola as confusing the public); *Gucci Am., Inc. v. Guess?, Inc.*, 868 F. Supp. 2d 207, 249–50 (S.D.N.Y. 2012) (finding two designs on Guess jeans confused the public). Professor Lunney offers an extended investigation of the expansion of trademark law. As one example of that expansion, he notes confusion cases relating to jeans, watches, pens, and clocks. See Lunney, *supra* note 249, at 404–08, 405 nn.141–42.

268. 21 C.F.R. § 131.110(a) (2024).

269. *Id.*

270. See, e.g., *Ang v. WhiteWave Foods Co.*, No. 13-cv-1953, 2013 WL 6492353, at *4 (N.D. Cal. Dec. 10, 2013).

A few things converged and created the confusion around milk today. In the 1990s and 2000s, before PBBs were a large part of the American beverage market, the FDA used the term “soy milk” and so arguably put the government’s stamp of approval on the term.²⁷¹ As noted above, the actions of a major dairy producer that had entered the soy-based beverage market helped fortified soy drinks to be recognized as part of dairy intake.²⁷² As the soy-based plant industry grew, it lobbied to have “soymilk” recognized as the proper term for soy-based beverages.²⁷³ The dairy industry took note and began requesting the FDA to go after soy-based beverages calling themselves milk, because these beverages did not meet the standard set out in § 131.110.²⁷⁴ The dairy industry was, however, caught in a conundrum because it did not oppose the term milk when it came to other mammalian milk products, such as from sheep and goats.²⁷⁵

The FDA did not honor the soy-beverage industry’s request, but neither did it fully follow the dairy industry’s pleas.²⁷⁶ The FDA did, however, issue warning letters to soy-based beverage producers to cease using the term milk because soy drinks did not meet § 131.100 requirements, writing in one such letter: “[W]e do not consider ‘soy milk’ to be an appropriate common or usual name because your product does not contain ‘milk.’ We consider ‘soy drink’ or ‘soy beverage,’ however as acceptable common or usual names for such products.”²⁷⁷ The FDA muddied the water because of its vague section 133.110 provision, which asks whether something is the common or usual name for the drink, rather than relying on the identity standard alone. Furthermore, the FDA letters are advisory and nonbinding,²⁷⁸ which opened the door to lawsuits over this issue.

The caselaw on milk makes matters worse. Advocates arguing against PBB companies’ use of the word milk misunderstood the problem and stated claims that failed to engage the point about health harms.

271. Gambert, *supra* note 75, at 809–10.

272. See *supra* notes 97–99 and accompanying text.

273. Gambert, *supra* note 75, at 809–10.

274. *Id.* at 810.

275. *Id.*

276. *Id.* at 811.

277. *Id.* (alteration in original) (quoting FDA, WARNING LETTER TO LIFESOY, INC. (2008), <https://web.archive.org/web/20111230001302/http://www.fda.gov/ICECI/EnforcementActions/WarningLetters/2008/ucm1048184.htm>); see also *id.* (citing FDA., WARNING LETTER TO FONG KEE TOFU Co., INC. (2012), <https://web.archive.org/web/20171115101811/http://www.fda.gov/ICECI/EnforcementActions/WarningLetters/2012/ucm295239.htm>).

278. See *Holistic Candles & Consumers Ass’n v. FDA*, 664 F.3d 940, 944 (D.C. Cir. 2012) (explaining that FDA letters are “informal and advisory” statements of the agency’s views).

Judges lacked a record and were left with their intuition alone as they assessed whether people were confused or harmed by PBB companies calling their products milk.

The touchstone case is *Ang v. WhiteWave Foods Co.*²⁷⁹ The plaintiff wanted to bring a class action case under California law based in part on the fact that Silk products such as “soymilk,” “almond milk,” and “coconut milk” are plant-based and so violate the section 131.100 definition of milk.²⁸⁰ The district court boiled the claim down to the question of whether the products violated the “standard of identity” for milk.²⁸¹ The court granted WhiteWave’s motion to dismiss on two grounds. First, the claims were preempted by federal law.²⁸² According to the district court, although section 131.100 states what milk is, there are no FDA rules on what milk is not.²⁸³ And because the plaintiffs did not identify “any statutory or regulatory provision prescribing how the Silk Products must be labeled,” nothing prevented or at least dictated whether WhiteWave could use the word milk.²⁸⁴

Holding that a precise definition of what a food product is—including a requirement that it come from a specific animal and contain specific amounts of its constituent parts—somehow fails to exclude products that do not meet the standards is illogical. It suggests that if the FDA had said milk does not include soy, almond, or rice drinks, and then two years later banana-based beverages called themselves milk, banana-based drinks could be milk, but the other ones would be excluded. The FDA would be in a proverbial game of whack-a-mole, trying to keep up with companies wishing to claim milk status for their non-milk products. To quote the *WhiteWave* court, such a position “stretches the bounds of credulity.”²⁸⁵ Yet that outcome is precisely what the court reached.

Sadly, the FDA’s Draft Guidance shows that this absurd outcome and twisted logic is the state of things. The Draft Guidance explicitly states that “[s]tandards of identity have not been established for plant-based milk alternatives.”²⁸⁶ Because that is the case, the product “must be labeled with [its] common or usual names, or in the absence thereof, a statement of identity that accurately describes the food.”²⁸⁷ Thus, the

279. No. 13-cv-1953, 2013 WL 6492353 (N.D. Cal. Dec. 10, 2013).

280. *Id.* at *1, *3.

281. *Id.* at *3.

282. *Id.* at *4.

283. *Id.* at *3.

284. *Id.*

285. *Id.* at *4.

286. FDA DRAFT GUIDANCE, *supra* note 27, at 8.

287. *Id.*

current rules undercut the FDA's own efforts to set standards of identity. And it seems the FDA is instead required to state not just what a food is but also what it is not, lest a newcomer to the market decide to grab a word that has a standard of identity and use that word in confusing ways.

Second, the district court noted that the FDA is supposed to examine the "common or usual name[s]" for those foods, but the court chose to take on that task itself.²⁸⁸ In applying that standard, the district court simply did not believe that someone could mistake a PBB as equivalent to milk.²⁸⁹ On the contrary, the district court accepted WhiteWave's argument that "the names 'soymilk,' 'almond milk,' and 'coconut milk' accurately describe [its] products."²⁹⁰ To the court, the names alone tell someone what is in the drink, and so it was "simply implausible that a reasonable consumer would mistake a product like soymilk or almond milk with dairy milk from a cow."²⁹¹ The court went on to say the difference would be obvious "to even the least discerning of consumers."²⁹² The court's disdain, or at least error in understanding the issue, is clear when it writes that the allegation that "a reasonable consumer" would think that a PBB came from a cow "stretches the bounds of credulity."²⁹³ The court acknowledged that "whether a deceptive business practice is deceptive is generally a question of fact not amenable to determination on a motion to dismiss."²⁹⁴ But it did so anyway.

There are several errors that undermine the *WhiteWave* decision. The *WhiteWave* court invoked the doctrine of preemption but effectively ignored it.²⁹⁵ The court acknowledged the FDA's power and place in determining the issue and the fact that the FDA had not made a clear rule.²⁹⁶ The court identified the rule the FDA would apply but then applied the rule itself, instead of leaving that function to the FDA.²⁹⁷ And by granting the motion to dismiss at the pleading stage, the court never gave the plaintiff a chance to present the evidence of how WhiteWave

288. *WhiteWave*, 2013 WL 6492353, at *4 (alteration in original).

289. *Id.*

290. *Id.*

291. *Id.*

292. *Id.*

293. *Id.*

294. *Id.*

295. *Id.* at *3-4. As a recent decision notes, it is improper at the dismissal stage for a court to assess "the common or usual name of a food" because that requires the court to insert its judgement beyond "the four-corners of the [c]omplaint." *Feldman v. Wakefern Food Corp.*, 716 F. Supp. 3d 71, 84 (S.D.N.Y. 2024).

296. *WhiteWave*, 2013 WL 6492353, at *3-4.

297. *Id.*

has pressed the public to think of its products as nutritionally equivalent to milk.

A case about graham crackers and false advertising further reveals how the *WhiteWave* court erred. In *Valcarcel v. Ahold U.S.A., Inc.*,²⁹⁸ the court noted that because deference is given to the plaintiff at the pleading stage, factual questions about “common usage” of a term are usually beyond the allegations of the complaint.²⁹⁹ The defendant’s request to dismiss “invite[d] the Court to define a ‘graham cracker’ in terms of its shape and taste on the basis of what would essentially be speculation. This it cannot do.”³⁰⁰ In addition, the *Valcarcel* court pointed out that a court may not “substitut[e] its own understanding of what ‘reasonable consumers’ interpret” the term in question to be.³⁰¹ The court expressed sympathy for the impulse to make the determination because it seems people know what graham crackers are.³⁰² But it pointed out that when considering a motion to dismiss, “the Court may not resolve questions regarding the background knowledge, experience, and understanding of reasonable consumers as a matter of law.”³⁰³

If a court cannot discern what people understand about graham crackers—a snack known to many since childhood, and coincidentally often served with milk—it seems highly unlikely that a court can determine on its own what consumers know about PBBs, which are relatively new to a majority of the U.S. market. Indeed, as the PBB industry argues, it is cut out of the school-age market, compared to milk.³⁰⁴ It also happens to be improper for a court to make such a ruling at so early a stage of the proceeding. As such, although one may want to look to *Whitewave* to support the idea that PBBs can use the term milk,³⁰⁵

298. 577 F. Supp. 3d 268 (S.D.N.Y. 2021).

299. *Id.* at 277.

300. *Id.*

301. *Id.* at 279.

302. *See id.* at 279–80 (quoting *Campbell v. Whole Foods Mkt. Grp., Inc.*, 516 F. Supp. 3d 370, 383–84 (S.D.N.Y. 2021)).

303. *Id.* (cleaned up) (quoting *Cooper v. Anheuser-Busch, LLC*, 553 F. Supp. 3d 83, 104 (S.D.N.Y. 2021)). The court in *Valcarcel* explicitly rejected the path taken in the *Whitewave* ruling: “[I]n the absence of an FDA-promulgated regulation on the subject, the ‘common or usual name’ is defined by ‘common usage,’ not the court’s own judgment as to whether a term is accurate.” *Id.* at 277 n.11 (quoting 21 C.F.R. § 102.5(d) (2024)).

304. *See* Miranda Lipton & Jesse Hirsch, *The Fight for Dairy Diversity in Public Schools*, AMBROOK RSCH.: LEGIS. (Apr. 18, 2024), <https://ambrook.com/research/legislation/school-milk-soy-lactose-intolerance> [https://perma.cc/6HPK-3B3X] (noting advocates for nondairy beverages in schools argue the dairy industry and the FDA use law “to ensure that no other beverages are promoted over milk in schools”); *cf. supra* notes 119–20 and accompanying text.

305. *E.g.*, Gambert, *supra* note 75, at 812–14, 838.

the district court made several errors and never resolved the factual issues around about the harms and confusion that can occur when PBBs use the term.

Two other cases seem to solve the issue in favor of PBBs, but that is not so. In *Painter v. Blue Diamond Growers*,³⁰⁶ the plaintiff, like the one in *WhiteWave*, filed suit under California laws covering false advertising and unfair competition.³⁰⁷ The core claim addressed the defendant's marketing strategy for its almond beverages, which claimed that the drinks were "nutritionally superior to dairy milk."³⁰⁸ Like the *WhiteWave* court, the district court addressed a motion to dismiss, held that the claim was preempted, and found there was no plausible allegation that a reasonable consumer could be deceived.³⁰⁹ The district court here explicitly made the same error as the *WhiteWave* court, citing the case and following its logic regarding both preemption and whether a reasonable consumer would be deceived.³¹⁰ The court added an error when it addressed the question of whether almond milk is an imitation under the Food, Drug & Cosmetic Act ("FDCA"). Although the court correctly noted that under FDCA a label must accurately describe "the basic nature of the food or its characterizing properties or ingredients," it engaged in no analysis of what is required under the law.³¹¹ Instead, the court repeated the error in *WhiteWave* and concluded that "[a]lmond milk' accurately describes Defendant's product."³¹² Thus, the court inserted its assessment of what is an imitation in resolving the issue at the motion to dismiss stage. So, without a record to assess the issue, the court again overstepped its power.

The Ninth Circuit's unpublished, nonprecedential opinion affirming the district court's ruling is not instructive either.³¹³ The short opinion merely reasserted that the *complaint* did not make the case that a reasonable consumer would be deceived into thinking the almond milks "are nutritionally equivalent to dairy milk based on their package labels and advertising" and that "a reasonable jury could not conclude that almond milk is 'nutritionally inferior' to dairy milk" under 21 C.F.R.

306. No. 17-02235, 2017 WL 4766510 (C.D. Cal. May 24, 2017).

307. *Id.* at *1.

308. *Id.*

309. *Id.* at *1-3.

310. *Id.* at *2.

311. *Id.* (quoting 21 U.S.C. § 102.5(a) (2024)).

312. *Id.*

313. *Painter v. Blue Diamond Growers*, 757 F. App'x 517 (9th Cir. 2018) (unpublished). Another district court case, *Gitson v. Trader Joe's Co.*, No. 13-cv-01333, 2015 WL 9121232 (N.D. Cal. Dec. 1, 2015), is similarly unhelpful as it cites *WhiteWave* by rote and so propagates that decision's errors. *Id.* at *1.

§ 101.3(e)(4), because they are different products.³¹⁴ The court thus ignored the need to develop a record before making such a determination and also seemed to misunderstand the issues around what is an imitation.

The question of what constitutes an imitation involves nutritional content and whether that content is “inferior,” not just what a reasonable consumer understands.³¹⁵ In 21 C.F.R. § 101.3(e)(4), nutritional inferiority is defined in the context of imitation as reductions of “an essential nutrient that is present in a measurable amount,” except for reductions in caloric or fat content as long as those reductions comply with the rules governing caloric content.³¹⁶ The definition of “measurable amount” is complex,³¹⁷ but as the Second Circuit summed up, “[b]asically, if the substitute contains less of any essential nutrient present to a measurable degree in the food substituted for, the substitute must be labeled with the word ‘imitation.’”³¹⁸

In that sense, the FDA Draft Guidance explicitly undermines the conclusory approach taken by several courts. The Draft Guidance explains that under the FDCA, a food “that substitutes for and resembles another food and is nutritionally inferior to that food” is an imitation.³¹⁹ Because not all PBBs are nutritionally the same, a blanket rule that they all must be labelled as imitations is not viable.³²⁰ This position is directly contrary to the *WhiteWave* court’s position that the FDA must state not only what milk is, but also what it is not, for the milk standard of identity to be enforceable against PBBs.³²¹ Nonetheless, the FDA has stated that when a PBB meets the definition of an imitation, the FDA “intend[s] to exercise enforcement discretion.”³²² Given the evidence about nutritional inferiority for almond PBBs, *WhiteWave* and related cases are not only wrong but dangerous insofar as they ignore the public health aspect of the nutrition-imitation question.

Nor is it too late for the FDA to change course. Even when the FDA has mistakenly approved a label for a product that should have been labeled as an imitation but lacked the term, courts have required that the term imitation be included on the label going forward. In *Swift & Co. v.*

314. *Painter*, 757 F. App’x at 519.

315. *See Grocery Mfrs. of Am., Inc. v. Gerace*, 755 F.2d 993, 997 (2d Cir. 1985) (addressing imitation in the context of imitation cheese).

316. 21 C.F.R. § 101.3(e)(4)(i) (2024).

317. § 101.3(e)(4)(ii).

318. *Gerace*, 755 F.2d at 997.

319. FDA DRAFT GUIDANCE, *supra* note 27, at 14.

320. *See id.*

321. *Ang v. WhiteWave Foods Co.*, No. 13-cv-1953, 2013 WL 6492353, at *3 (N.D. Cal. Dec. 10, 2013).

322. FDA DRAFT GUIDANCE, *supra* note 27, at 14.

Walkley,³²³ the FDA had approved a label for All American Funlinks, at first without containing the word imitation, which the State of New York demanded the manufacturer add.³²⁴ The Funlinks were a mix of meat and soy protein made to “look[] and taste[] like a frankfurter” and sold in a “transparent package as are frankfurters.”³²⁵ The manufacturer even advertised that their products “look and taste just like regular hot dogs.”³²⁶ The products did not, however, comply with the law on the composition of frankfurters.³²⁷ The court found the products to be imitations that were improperly labeled and so violated the regulation.³²⁸ As such, the court allowed the State to require the label to include the imitation designation.³²⁹

Unfortunately, the recent the FDA Draft Guidance steps away from sound policy as implemented in *Swift*. The Draft Guidance not only illustrates odd logic regarding naming procedures and enforcement, but it also shows that the FDA does not take confusion and public health harm seriously. A key issue is the idea of the reasonable consumer under FDA law. The courts seem wedded to a model of the “reasonable consumer” that assumes consumers are rational, read labels, and cannot be confused. The support for that view is lacking in the Draft Guidance itself. The Draft Guidance acknowledges that a study by Consumer Reports indicates that “more than a third of respondents . . . purposely used [PBBs] as a substitute for milk.”³³⁰ But relying on a report commissioned by Danone—recall that Danone is a major player in the PBB industry—the Draft Guidance notes that “fewer than [ten] percent of consumers thought [PBBs] do contain milk.”³³¹ But that same study also found that between twelve to twenty percent were unsure.³³² Thus, it seems that somewhere close to a third of consumers are misinformed or clueless about whether PBBs contains milk. In other words, contrary to assumptions made by courts, even a PBB industry report admits that a large number of consumers do not know what is in their products.

323. 369 F. Supp. 1198 (S.D.N.Y. 1973).

324. *Id.* at 1198–99.

325. *Id.* at 1199.

326. *Id.*

327. *Id.* (“[F]ederal regulations . . . require that the product contain no more than 2% isolated soy protein and no more than 10% added water. [But] Plaintiff’s product contains 6.8% soy protein and 23.2% water.”).

328. *Id.* at 1200.

329. *Id.*

330. FDA DRAFT GUIDANCE, *supra* note 27, at 5.

331. *Id.*

332. FDA, CFSAN CONSUMER STUDIES MEMORANDUM 9 (2023), <https://www.regulations.gov/document/FDA-2023-D-0451-0004> [<https://perma.cc/R54P-83AC>].

Furthermore, the Draft Guidance notes that “several” studies show that consumers, including those seeking to buy PBBs, “do not understand the nutritional differences between milk and plant-based milk alternatives.”³³³ The Draft Guidance understates the evidence with a soft sentence on numbers about people mistaking PBBs for milk and an endnote.³³⁴ The reference it cites, however, comes from the FDA’s Center for Food Safety and Applied Nutrition and offers a litany of consumer misperceptions and confusion about PBBs and nutrition supported by a range of studies:

- (1) “Many consumers do not know how the nutrients in plant-based milk alternatives compare to that in milk.”
- (2) “Particularly exclusive plant-based milk alternative buyers agree that plant-based milk alternatives and milk have the same nutritional content, but there is also a large share of them who neither agree nor disagree.”
- (3) “Most respondents do not know how the number of essential nutrients and vitamins compares between plant-based milk alternatives and milk or think it depends on the source of the plant-based milk alternative.”
- (4) “Fifty-three percent of respondents think the term ‘milk’ is used on plant-based milk alternatives because these products and milk are nutritionally similar.”
- (5) “Plant-based milk alternative users believe these products are nutritionally equivalent to milk because they are made from nutrient-dense ingredients (e.g., almonds, cashews, etc.).”
- (6) “Plant-based milk alternatives may be seen as healthier than milk because they are lower in fat and cholesterol and do not contain animal ingredients.”³³⁵

In addition, the FDA Draft Guidance asserts that despite PBBs being marketed in ways quite similar to milk, “comments and information we reviewed indicate that consumers, generally, do not mistake plant-based milk alternatives for milk.”³³⁶ That view fits the courts’ (premature) analysis, yet it makes no sense—the Draft Guidance contradicts itself.

Somehow the FDA misses the points it makes. On the one hand, under the subsection “Consumer Understanding of Plant-based Milk

333. FDA DRAFT GUIDANCE, *supra* note 27, at 6.

334. *Id.* at 5.

335. CFSAN CONSUMER STUDIES MEMORANDUM, *supra* note 332, at 3–4 (cleaned up).

336. FDA DRAFT GUIDANCE, *supra* note 27, at 8.

Alternatives: Composition and Naming,” the FDA relies on a PBB industry giant to support the view that “fewer than [ten] percent” of consumers think that PBBs contain milk and some twelve to twenty percent simply don’t know.³³⁷ The passage reads as if these percentages are minor. Yet the subsection immediately following, “Consumer Understanding of Plant-based Milk Alternatives: Nutritional Content” offers quite a bit of evidence that consumers are indeed confused about an important issue: specifically, whether PBBs are nutritionally equivalent.³³⁸ As the FDA admits, a large percentage of consumers think PBBs are nutritionally similar, if not healthier, or have no idea about what nutrients they contain.³³⁹ And the FDA admits that “consistently consuming” PBBs without replacement of “nutrients of public health concern” through other sources could “pose a special public health challenge.”³⁴⁰ So even if “consumers, generally, do not mistake plant-based milk alternatives for milk”—again leaving aside the scant evidence of that point—that position utterly ignores that consumers are making other significant mistakes, in particular thinking of PBBs as nutritionally equivalent to milk, with significant potential harms flowing from that error.

More puzzling is the FDA’s decision to allow the PBB industry to self-regulate, especially given its history of overstating health benefits and obscuring nutrition gaps.³⁴¹ Allowing PBB producers to create “voluntary nutrient statements” explaining the nutritional differences between their products and milk, as the FDA recommends,³⁴² is a weak response. It sets up further gaming of the system. Worst of all, the approach uses the American consumer as a guinea pig for marketing.

FDA regulations, caselaw, and the Draft Guidance reveal the need to improve this area of law. The cases are not helpful, in part because the California judges seem to think everyone understands the difference between milk and PBBs—so they dismissed cases before plaintiffs could develop a record about mistakes, advertising, and consumer perception.³⁴³ The cases nonetheless highlight the question of whether consumers are being deceived, the problems with the reasonable consumer standard, and the lack of investigation about the social harms that PBBs cause. The FDA needs more tools to assess the public health

337. See sources cited *supra* notes 331–32.

338. FDA DRAFT GUIDANCE, *supra* note 27, at 5–6.

339. *Id.* at 6, 12.

340. *Id.* at 11.

341. See *supra* Section II.A.

342. FDA DRAFT GUIDANCE, *supra* note 27, at 12.

343. I was raised in California and note the geography in part because of my familiarity with Californians’ potential biases and in part because assumptions in certain cities or states may not hold up in other parts of the country.

and consumer protection aspects of its role. The next section addresses these points.

B. What Questions Would Trademark Law Ask?

What if milk were a trademark? Milk is in fact a generic word, which means it cannot be registered and protected as a trademark.³⁴⁴ But that is only part of the story.

Trademark and food regulation law share core goals, but trademark law has a longer history of confronting issues around language in the marketplace. As the D.C. Circuit has explained, the FDA regulations at issue advance “the twin goals of ‘better informing consumers so that they may exercise a knowledgeable choice of differing foods within general categories’ and ‘encouraging manufacture of nutritional food products.’”³⁴⁵ These goals fit well within trademark law’s search costs and consumer protection model.³⁴⁶ Trademark law is supposed to foster a system where the mark in question is a sign of “consistent source and quality.”³⁴⁷ This consistency should lead to lower search costs for consumers because they can rely on the mark and not have to reinvestigate the nature of the product to know whether it is the same as it was in the past.³⁴⁸ Trademark law prohibits a competitor from using a trademarked term in a way that causes confusion.³⁴⁹ Trademark law also recognizes associational harm.³⁵⁰ And at its strongest, trademark law

344. See Deven R. Desai & Sandra L. Rierson, *Confronting the Genericism Conundrum*, 28 CARDOZO L. REV. 1789, 1789–90 (2007).

345. See *Grocery Mfrs. of America, Inc. v. Gerace*, 755 F.2d 993, 1001 (2d Cir. 1985) (quoting *Fed’n of Homemakers v. Schmidt*, 539 F.2d 740, 744 (D.C. Cir. 1976)).

346. See, e.g., Stephen L. Carter, *The Trouble with Trademark*, 99 YALE L.J. 759, 762 (1990) (“The economic argument for protecting marks is straightforward and quite forceful. The principal benefit of trademark protection is that it lowers consumer search costs.” (footnote omitted)). *But see* Deven R. Desai, *The Chicago School Trap in Trademark: The Co-Evolution of Corporate, Antitrust, and Trademark Law*, 37 CARDOZO L. REV. 551 (2015) (documenting the nature of the Search Costs School and critiquing the overbroad application of these goals).

347. Robert N. Klieger, *Trademark Dilution: The Whittling Away of the Rational Basis for Trademark Protection*, 58 U. PITT. L. REV. 789, 790 (1997).

348. See William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 270 (1987); *see also* *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163–64 (1995) (“Trademark law . . . reduces the customer’s costs of shopping and making purchasing decisions, for it quickly and easily assures a potential customer that *this* item—the item with this mark—is made by the same producer as other similarly marked items that he or she liked (or disliked) in the past.” (cleaned up)).

349. 15 U.S.C. § 1114(1)(a).

350. § 1125(a)(1)(A).

protects against dilution—the situation where a consumer is not confused and the word at issue is “nationally or ‘widely’ known like . . . a ‘household’ name, and its recognition and influence—what dilution law calls ‘fame’—is easily applied to many realms.”³⁵¹ Beyond confusion, trademark looks at two different ways a mark may be deceptive and bans registration if it will violate either test.³⁵² Put simply, trademark law offers insights on the best way for the FDA to manage language.

If milk is a brand signifying a history and communicating lifestyle choices, as the PBB industry argues, we should consider what questions trademark law would ask if it were to treat milk as a protected brand.³⁵³ This tack allows us to use trademark law as a guide for creating a better tool to assess potential confusion and harm from both PBBs and the ever-iterating and ever-clever market for new foods with new names.

1. Trademark Law’s View of the Consumer

Unlike the FDA and the courts, which assume a “reasonable consumer” and give tremendous deference to consumer understanding even in the face of data showing clear confusion, trademark law tends to take a dimmer view of the consumer.³⁵⁴ Whether that view is correct has been debated.³⁵⁵ And whether the consumer should be seen as sophisticated or unsophisticated will shift depending on the interest at stake. If you are protecting a big, powerful brand, and by extension its related trademark, you will argue that the consumer is “unsophisticated, [and] less informed.”³⁵⁶ This position supports greater protection of your mark, lest a consumer is harmed by buying someone else’s goods thinking that they are yours.³⁵⁷ If you are defending the use of a brand or mark that might confuse consumers, you will argue that the consumer is

351. Desai, *Speech & Citizenry*, *supra* note 82, at 483.

352. *See infra* Section III.B.2.

353. *See* Desai, *Trademarks*, *supra* note 81 (explaining the difference between a trademark and a brand).

354. Graeme W. Austin, *Trademarks and the Burdened Imagination*, 69 BROOK. L. REV. 827, 886–88 (2004) (“Some strands of case law, particularly from the early decades of the twentieth century, emphasized that ‘the public must be credited with a minimum capacity for discrimination.’ More recently, however, ordinarily prudent consumers have also been characterized as ‘credulous,’ ‘inexperienced,’ and ‘gullible.’”).

355. *See* Barton Beebe, *Search and Persuasion in Trademark Law*, 103 MICH. L. REV. 2020, 2022–25 (2005) (identifying the law’s idealized view of the consumer as “impossibly utilitarian” and the debate around the capacities of consumers to think for themselves); Desai, *Trademarks*, *supra* note 81, at 1029–31.

356. Desai, *Trademarks*, *supra* note 81, at 1030.

357. *See id.*

“a sophisticated, informed” one and so “is less likely to be confused.”³⁵⁸ That position means “the scope of protection for the trademark would be commensurately less.”³⁵⁹ These positions also apply to the issues around Generic Brands.

Knowing whether consumers are sophisticated enough to understand that PBBs do not contain milk *and* that PBBs are often not nutritionally equivalent to milk will turn on how courts and regulators assess consumers’ ability to understand products and their labels. The PBB industry consistently argues that their labels are enough.³⁶⁰ The FDA and the courts have assumed that the PBB industry is correct and disregarded evidence to the contrary.³⁶¹ In contrast, in the trademark context, consumers are assumed to be unsophisticated, even if there is contrary evidence, mainly because that allows for greater protection of the corporate mark holder, rather than a consumer.³⁶²

Ironically, the trademark critique and the problems in the Generic Brand context converge. In both cases, mistaken assumptions about consumers arguably lead to consumer harm and essentially defer to possibly subpar market solutions. On the one hand, overbroad trademark protection can reduce competition and harm speech, under serving and under protecting consumers. On the other hand, lax protection of Generic Brands increases confusion and causes health harms, thereby also under serving and under protecting consumers. The best option is, nonetheless, to ask what evidence about consumer sophistication is available. And at the very least, because food and nutrition is at stake, we should assume, as trademark often does, that the average consumer is “credulous,” “inexperienced,” and “gullible.”³⁶³ After all, the idea that consumers will stop to read labels with hopefully accurate statements about nutrition science—or easily understand the differences between milk and the wide range of PBBs if they do so—stretches credulity. In addition, the FDA Draft Guidance admits that in fact a decent percentage of consumers think PBBs contain milk (or have no idea whether they do or not) and that a large percentage make mistakes about PBB’s nutritional content.³⁶⁴ In short, PBB consumers are not sophisticated, and they need protection from Generic Brand confusion.

358. *Id.*

359. *Id.*

360. *See supra* Section III.A.

361. *See supra* Section III.A; FDA DRAFT GUIDANCE, *supra* note 27, at 4, 12 (recommending voluntary nutrition labeling to address confusion in the PBB market).

362. *See Austin, supra* note 354, at 886–88.

363. Graeme Austin, *Trademark and the Burdened Imagination*, 69 BROOK. L. REV. 827, 866–71, 887–88 (2004).

364. FDA DRAFT GUIDANCE, *supra* note 27, at 5–6.

The problems flowing from this conclusion can be cut off by looking to trademark doctrines that by their nature assess deception and confusion harm. The next sections show how the doctrines work and offer more useful analysis than the current approach of the FDA and the courts.

2. Trademark Law's First Questions: Deceptive or Deceptively Misdescriptive?

If the PBB industry had to face trademark law, the first hurdle would be trademark law's deception inquiries. Trademark law prohibits registration for deceptive or deceptively misdescriptive marks as part of its consumer protection function.³⁶⁵ A deceptive mark can never be registered.³⁶⁶ The test for deceptive marks is "(i) whether the mark misdescribes the goods to which it applies; and (ii) whether consumers are likely to believe the misdescription."³⁶⁷ The misdescription does not have to "be material to the consumer's decision to purchase the goods, nor result in consumer confusion as to the source of the goods."³⁶⁸ A mark may not be deceptive where there is some "untruth" if the deception is "perfectly innocent, harmless or negligible."³⁶⁹

A straightforward application of the deceptiveness doctrine came in *In re White Jasmine LLC*.³⁷⁰ The company sought registration of a trademark for its product, "White Jasmine," which was not, in fact, white tea.³⁷¹ The Trademark Trial and Appeal Board ("Board") began by looking at the generic word, white, in the context of tea, noting that websites touted potential health benefits of white tea, and consumers cared considerably about whether the tea they bought was white tea.³⁷² As such, the Board found that the mark was deceptive and ineligible for registration.³⁷³

Even if a potential mark is not deceptive, a trademark can still be denied on the grounds that it is deceptively misdescriptive. Under this

365. 1 MCCARTHY, *supra* note 48, § 11.55. A deceptive mark can never be registered, but a deceptively misdescriptive one can be if shown to have a "secondary meaning." *Id.*

366. *Id.*; 15 U.S.C. § 1052(e)(1).

367. *Glendale Int'l Corp. v. USPTO*, 374 F. Supp. 2d 479, 485 (E.D. Va. 2005).

368. *Id.* at 485–86 (footnote omitted).

369. 1 MCCARTHY, *supra* note 48, § 11.55.

370. 106 U.S.P.Q.2d 1385 (T.T.A.B. 2013).

371. *Id.* at 1386, 1394.

372. *Id.* at 1392–94.

373. *Id.* at 1394 ("The word 'White,' which describes applicant's tea as believably being a white tea, is therefore deceptive within the meaning of Section 2(a) of the Trademark Act.").

rule, a mark which “conveys an immediate idea of an ingredient, quality, characteristic, function, feature, purpose, or use of the good[]” is deceptively misdescriptive if that idea is “false, although plausible.”³⁷⁴ A key difference here is that while deceptive marks can never be registered, deceptively misdescriptive marks can be if they have acquired secondary meaning.³⁷⁵

The touchstone case is *In re Budge*,³⁷⁶ in which the Federal Circuit set out a three-part test:

- (1) Is the term misdescriptive of the character, quality, function, composition or use of the goods?
- (2) If so, are prospective purchasers likely to believe that the misdescription actually describes the goods?
- (3) If so, is the misdescription likely to affect the decision to purchase?³⁷⁷

The company, which made car seat covers, had sought trademark registration for “LOVEE LAMB.”³⁷⁸ On each element, the court found: (1) the company conceded that its product was not made from lamb; (2) other covers (including some made by the same company) were made from lamb; and (3) “natural and synthetic skins have different characteristics,” and the former were more expensive.³⁷⁹ Thus, the court held that “the misrepresentation [was] likely to affect the decision to purchase.”³⁸⁰ The company tried to argue that its advertising and labelling of the product negated the problem, but the court rejected that position because the mark was the issue.³⁸¹ The words seeking registration, irrespective of any “extraneous explanatory statements,” must not be deceptively misdescriptive.³⁸² And extensive sales going back well over a decade did not matter because “it is too well established for argument that a mark which includes deceptive matter is barred from registration and cannot acquire distinctiveness.”³⁸³

Given that the deception tests overlap, facts that support ruling that a potential mark is deceptive likely also support finding the terms to be deceptively misdescriptive. For example, in *White Jasmine*, although the court found the term “White” deceptive, the Board went on to examine

374. TMEP §1209.04 (May 2024 ed.).

375. 1 MCCARTHY, *supra* note 48, § 11.55; 15 U.S.C. § 1052(e)(1).

376. *In re Budge Mfg. Co.*, 857 F.2d 773 (Fed. Cir. 1988).

377. *Id.* at 775.

378. *Id.* at 774.

379. *Id.* at 775–76.

380. *Id.* at 776.

381. *Id.* at 776–77.

382. *Id.* at 774–76.

383. *Id.* at 777.

the deceptively misdescriptive criteria.³⁸⁴ The Board thus answered the third question above, also known as the materiality factor,³⁸⁵ and decided that the same set of facts supported finding the term deceptively misdescriptive.³⁸⁶

As discussed below, the nature of the deception inquiry must be adapted to fit the FDA's particular needs and the fact that often the term in question will not be one capable of trademark protection. Nonetheless, the deception questions are more precise than the FDA's current approach. Rather than oddly constrained interpretations of FDA definitions or requirements that the FDA set out a definition of every type of PBB, the deception inquiry asks broader questions that ought to prevent facile analysis. The first question is whether the term is misdescriptive of the "character, quality, function, composition or use of the goods."³⁸⁷ And, because a deceptive mark "need not be material" to consumer purchasing decisions or "result in consumer confusion as to the source of the goods,"³⁸⁸ the inquiry sharpens the issue to diagnosing whether the mark is misdescriptive. The second and third deception questions, regarding purchasers' understanding and the effect on purchasing choices, are better addressed by trademark law's likelihood of confusion test, discussed next.

3. Trademark Law's Next Question: Is There a Likelihood of Confusion?

If milk were a registered trademark, the first claim would be that PBBs are infringing the mark. Courts would apply the likelihood of confusion test,³⁸⁹ which varies across circuits.³⁹⁰ As Professor Barton

384. *In re White Jasmine LLC*, 106 U.S.P.Q.2d 1385, 1394 (T.T.A.B. 2013).

385. *Id.* at 1392; 1 MCCARTHY, *supra* note 48, at § 11.55.

386. *In re White Jasmine LLC*, 106 U.S.P.Q.2d at 1394–95. The Board also addressed the merits of the secondary meaning question and found the evidence of several years of use to be unpersuasive. *Id.* at 1395–96.

387. *In re Budge Mfg. Co.*, 857 F.2d 773, 775 (Fed. Cir. 1988).

388. *Glendale Intern. Corp. v. USPTO*, 374 F. Supp. 2d 475, 485–86 (E.D. Va. 2005).

389. *See* Desai & Rierson, *supra* note 344, at 1801 ("[T]he trademark holder's right to prohibit others' use of the mark is limited to circumstances in which that use harms consumers, as determined via the 'likelihood of confusion' standard.").

390. *See* Beebe, *supra* note 261, at 1582–84 (summarizing a fractured circuit split). As one example, the Ninth Circuit examines the following factors:

[1] strength of the mark; [2] proximity [relatedness] of the goods; [3] similarity of the marks; (4) evidence of actual confusion; (5) marketing channels used; (6) type of goods and the degree of care likely to be exercised by the purchaser; (7) defendant's intent in selecting the mark; and (8) likelihood of expansion of the product lines.

Beebe has shown, however, four factors are common to all circuits: “the similarity of the marks, the proximity of the goods, evidence of actual confusion, and the strength of the plaintiff’s mark.”³⁹¹ All circuits except the Federal Circuit also include the intent of the defendant as a factor.³⁹² For our purposes we can look to the four common factors.

a. Similarity

Similarity of the marks has been called “dispositive.”³⁹³ Beebe’s empirical study on the approaches of all circuits supports this outlook. Marks need not be identical, but plaintiffs’ win rate when the marks were identical was slightly higher but not significantly different from when the marks were merely similar.³⁹⁴ This finding persisted regardless of whether the marks were on competing goods. Courts evaluate similarity by looking at the “sight, sound, and meaning” trilogy.³⁹⁵ But similarity of one of these factors can be enough to find that the marks are confusingly similar.³⁹⁶ As the Second Circuit has explained, even different words with similar meaning may confuse consumers.³⁹⁷ When words “convey a very similar impression,” that too is enough to find confusion.³⁹⁸

For example, the Federal Circuit said that “PLAY-DOH” and “FUNDOUGH” were similar enough to create actionable confusion.³⁹⁹ The court found that PLAY and FUN were close enough in meaning in the toy context to cause confusion. The court analogized to a recent dispute over the words TREE, VALLEY, and ISLAND in marks named “SPICE TREE,” “SPICE VALLEY,” and “SPICE ISLAND.”⁴⁰⁰ And the court noted that despite the change in spelling, the suffixes DOH and

AMF Inc. v. Sleekcraft Boats, 599 F.2d 341, 348–49 (9th Cir. 1979).

391. Beebe, *supra* note 261, at 1589.

392. *Id.* at 1589–90. Beebe’s work notes that all circuits except the Federal Circuit consider intent of the defendant, but that the intent factor tends to herd decisions into penalizing bad faith even if no one is confused. *Id.* at 1627. The FDA or a court may nonetheless want to consider intent, as the food and public health context may require asking about more than confusion.

393. *Id.* at 1623.

394. *Id.* at 1624.

395. 3 MCCARTHY, *supra* note 48, § 23.21.

396. *Id.*

397. *See Am. Home Prods. Corp. v. Johnson Chem. Co.*, 589 F.2d 103, 107 (2d Cir. 1978) (“The use of different words with similar meaning may tend to confuse.”).

398. *Kenner Parker Toys Inc. v. Rose Art Indus.*, 963 F.2d 350, 354–55 (Fed. Cir. 1992).

399. *Id.* at 354–56.

400. *Id.* at 354–55.

DOUGH sound identical.⁴⁰¹ The Federal Circuit went on to say the Board erred in discounting similarity because of PLAY-DOH's famousness: Instead, that fame and general knowledge "should have magnified the significance of these similarities."⁴⁰²

Trademark is also sensitive to public health as it assesses similarity and confusion. As a leading treatise on trademarks explains, for drugs and medicinal products, confusion over the source *or* the identity or nature of the product "may produce physically harmful results."⁴⁰³ Thus, "[g]reater protection is required than in the ordinary trademark dispute."⁴⁰⁴ In such cases courts require "a lesser than usual quantum of proof of confusing similarity."⁴⁰⁵ This policy acknowledges "that confusion as to the identity or nature of the product itself could have dire effects on public health."⁴⁰⁶

For example, in *Eli Lilly & Co. v. Natural Answers, Inc.*,⁴⁰⁷ the court faced a dispute between Natural Answers, Inc., a company offering an herbal "mood elevator" called Herbrozac, and Eli Lilly, the maker of the well-known antidepressant, Prozac.⁴⁰⁸ Natural Answers positioned its products as over-the-counter alternatives to pharmaceuticals that consumers should turn to first before seeing a physician.⁴⁰⁹ The company's website pushed the idea that herbs are better than drugs, including admonitions like, "Think Herbs - not drugs!" and "Don't get your prescriptions filled with drugs . . . Get your Herbscriptions filled with Nature!"⁴¹⁰ The website also offered a table comparing "Herbs v. Drugs" that "contrast[ed] Natural Answers' products with a generic 'Drug Alternative.'"⁴¹¹ The site also asserted that Herbrozac was "a powerful, and effective all-natural and herbal formula alternative to the prescription drug Prozac."⁴¹² Although one might think Natural Answers could bank on the obvious fact that herbals products are not the same as pharmaceuticals, that is not the whole story.

The court pointed out that the question is not whether the products are the same; the question is whether they are *similar*.⁴¹³ Natural Answers

401. *Id.* at 355.

402. *Id.* at 354–55.

403. 3 MCCARTHY, *supra* note 48, § 23.32.

404. *Id.*

405. *Id.*

406. *Id.*

407. 233 F.3d 456 (7th Cir. 2000).

408. *Id.* at 459–60.

409. *Id.* at 460.

410. *Id.* (alteration in original).

411. *Id.*

412. *Id.*

413. *Id.* at 463.

tried to argue that the products were not, but the court saw through that argument.⁴¹⁴ Based on the company's marketing and website, Natural Answers "would certainly have consumers believe" the products were similar and offered similar health benefits.⁴¹⁵ As the court summed up, claiming that a product is a similar "alternative for marketing purposes, but a dissimilar product for legal purposes—is disingenuous."⁴¹⁶ The court also clarified another important point: The inquiry is not whether the products are "interchangeable" but whether the public might attribute them to the same source.⁴¹⁷

b. Proximity

The proximity inquiry looks at whether "buyers and users of each parties' goods are likely to encounter the goods of the other, creating an assumption of common source affiliation or sponsorship."⁴¹⁸ The issue is not whether the uses are the same or in competition with each other, but whether they "are related so that they are likely to be connected in the mind of a prospective purchaser."⁴¹⁹ Thus, the Ninth Circuit found that using the name "Black & White" for beer, after it had been established as a whiskey brand, was an infringing use because both are alcoholic drinks and could presumably be sold in the same stores, thereby confusing the unwitting consumer "who starts for home on a hot evening" and stops at a liquor store for refreshment.⁴²⁰ The products were so close that allowing the use would "fall within the mischief which equity should prevent."⁴²¹ In doing so, the court rejected the district court's reliance on findings that the products were not in competition because they were different types of alcohol and that the labels and packaging were not identical, characterizing this reliance as misunderstanding the law.⁴²²

414. *Id.*

415. *Id.*

416. *Id.*

417. *Id.*

418. *Checkpoint Sys., Inc. v. Check Point Software Techs., Inc.*, 269 F.3d 270, 286 (3d Cir. 2001).

419. *Fleischmann Distilling Corp. v. Maier Brewing Co.*, 314 F.2d 149, 159 (9th Cir.), *cert. denied*, 374 U.S. 830 (1963).

420. *Id.* at 154–55.

421. *Id.* at 159–60.

422. *Id.* at 151, 161.

c. Actual confusion

Proof of actual confusion is not required but is given great weight by the courts.⁴²³ Courts recognize that part of the problem is that “it is difficult to find evidence of actual confusion because many instances are unreported.”⁴²⁴ Some consumers may be so confused that they never learn of the deception.⁴²⁵

Evidence of actual confusion is potent: “There can be no more positive or substantial proof of the likelihood of confusion than proof of actual confusion.”⁴²⁶ Just a few emails to one company seeking the other’s product are not enough proof of actual confusion, yet courts have found that as little as “four bona fide examples of actual confusion” were enough.⁴²⁷ Such evidence is even more powerful with inexpensive goods because consumers are less likely to complain.⁴²⁸

d. Strength of the mark

The strength of the mark analysis involves placing a mark on the trademark spectrum of distinctiveness⁴²⁹ and then figuring out “its degree of recognition in the minds of the relevant customer class.”⁴³⁰ The spectrum covers fanciful or made-up words (*e.g.*, Xerox or Google); arbitrary or common words applied to unusual or random things (*e.g.*, Apple computers or Apple records); suggestive words that “do[] not directly describe the attributes of the goods or services” and instead take some imagination to connect the word to the offering (*e.g.*, Coppertone for suntan lotion); descriptive words that “‘convey[] an immediate idea of the ingredients, qualities or characteristics of the goods or services’ to which [they are] attached” (*e.g.*, Teddy Graham for teddy bear shaped graham crackers); and generic words that are not protectable because

423. 3 MCCARTHY, *supra* note 48, § 23.12. *But see* Beebe, *supra* note 261, at 1640–42 (discussing courts’ reluctance to credit survey evidence).

424. *Checkpoint Sys., Inc. v. Check Point Software Techs., Inc.*, 269 F.3d 270, 291 (3d Cir. 2001).

425. These points fit with this Article’s earlier discussion of teenage and later stages of physical development. When children become adolescents and their diets broaden, it is more difficult to detect when confusion over nutrition affects health. *Cf.* Givens, *supra* note 198, at 9684–85. But that is not so for infants and toddlers. *See id.* at 9682.

426. 3 MCCARTHY, *supra* note 48, § 23.13 (quoting *World Carpets, Inc. v. Dick Littrell’s New World Carpets*, 438 F.2d 482, 489 (5th Cir. 1971)).

427. *Id.* § 23.14.

428. *Id.* n.11.

429. *See Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 768 (1992) (citing *Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4, 9 (2d Cir. 1976)).

430. 1 MCCARTHY, *supra* note 48, § 11.2.

they do not indicate source (*e.g.*, if one marketed an apple peeling device as an “Apple Peeler” one could not obtain a trademark registration).⁴³¹

As discussed below, because milk is generic, the standard strength of mark analysis would not help the confusion inquiry. Nonetheless, because this inquiry asks what is the “degree of recognition in the minds of the relevant customer class,”⁴³² it offers a glimmer of what is needed. The question helps see how the generic word, milk, has a brand function that needs protection and points to what is needed to build the Likelihood of Generic Confusion Test.

4. Synthesis: Lessons from Trademark Law

Neither the deceptive nor deceptively misdescriptive tests, nor the likelihood of confusion test, comprehensively solve our issue, and for good reason. As stated at the start, this section posits scenarios that are not perfect fits. Instead, the goal has been to see where the tests might reveal a path forward. The deception tests are instructive but not usable because in most cases the PBB companies are not registering the terms they use, like plant+milk, or similar variations. Nonetheless, as discussed below, the analysis should help understand whether the move by Silk to try and register NEXTMILK should fail.

The likelihood of confusion test is not directly useful either, because milk is generic. There is also no classic corporate entity to assert confusion over source. Yet, as the PBB industry argues, the dairy industry has tried to protect milk.⁴³³ Most important, the issue can be seen as one of confusion about the source of the drink—a cow as opposed to a plant. Once we take that view, the confusion lens shows there is a problem, even though trademark law cannot solve it.

Nonetheless, the deception tests and likelihood of confusion tests can aid in seeing whether the way the terms are used cause harm. The trademark tests and caselaw are richer than the ones used by the FDA and better reasoned than the court cases on the topic to date. And that is the point.

The FDA needs better tools to assess the issues. The foray into trademark law reveals that there are good tests that can be adapted to address what happens when a generic word may cause confusion, especially in the light of public health harm. The next Part sets out what the Likelihood of Generic Confusion Test could look like.

431. Desai & Rierson, *supra* note 344, at 1806–09.

432. 1 MCCARTHY, *supra* note 48, § 11.2.

433. *See supra* Section I.B.

IV. THE LIKELIHOOD OF GENERIC CONFUSION TEST

The FDA needs a Likelihood of Generic Confusion Test. The cases to date show that the current tools are inadequate. Trademark law doctrines provide insights on ways to manage the PBB issue, but they do not directly apply unless a PBB producer seeks a trademark with the term milk in the registration. As such, this section sets out a proposed Likelihood of Generic Confusion Test, demonstrates both where it would work and its limits, and shows why the potential speech challenges ought to fail.

A. Setting Out the Test

The FDA's statement of identity rules provide the baseline structure for the Likelihood of Generic Confusion Test. The first inquiry asks whether the FDA has prescribed the name for a particular food label. Here the FDA could make a clear determination about whether PBBs can call themselves milk. The current definition of milk should allow a clear determination that PBBs do not meet the standard. The FDA has not, however, explicitly stated in its regulations that PBBs cannot call themselves milk.⁴³⁴ Although one might think the clear statement of identity for milk might suffice, courts are instead ignoring it and waiting for the FDA to act.⁴³⁵ These assessments have been cursory, unguided, and ill-conceived.

Greater depth is required. When the prescribed name inquiry is not dispositive, the inquiry turns to assessing "(2) [t]he common or usual name of the food; or, in the absence thereof, (3) [a]n appropriately descriptive term, or when the nature of the food is obvious, a fanciful name commonly used by the public for such food."⁴³⁶ Yet, as courts have noted, the problem in making these determinations is that there is a lack of context and that the regulations do not instruct courts how to do so.⁴³⁷ This situation drew the attention of the famed satirical newspaper *The*

434. See FDA DRAFT GUIDANCE, *supra* note 27, at 12–13 (discussing nutrition labels and allowing, but not requiring, the use of the term milk on PBBs).

435. See *supra* notes 279–94 and accompanying text.

436. 21 C.F.R. § 101.3(b)(2)–(3) (2024).

437. *Lever Bros. v. Maurer*, 712 F. Supp. 645, 651 (S.D. Ohio 1989) (“What constitutes an ‘appropriately descriptive term’ has not yet been addressed by the courts, and the court suspects that whether a statement of identity which does not include one of the product’s ingredients is ‘appropriately descriptive’ may depend on the particular circumstances of each case.”); *Coe v. Gen. Mills, Inc.*, No. 15-cv-05112, 2016 WL 4208287, at *3 (N.D. Cal. Aug. 10, 2016) (“[T]he regulation does not purport to define how to determine a product’s common or usual name.”).

Onion, which quipped in a headline: “FDA Rules Any White Liquid Can Be Called Milk.”⁴³⁸ Yet this hardly even seems like a joke.

Providing a way to assess statement of identity issues and the follow-up questions is where the Likelihood of Generic Confusion Test can aid the FDA. The inquiries should be replaced with factors borrowing from trademark law’s deception and likelihood of confusion tests, and consider whether confusion over a term causes harm.

Misdescription. The first factor should assess misdescription and use trademark’s deception doctrines to aid the statement of identity inquiry. Given that trademark law’s test for deceptively misdescriptive marks includes the same inquiry as its test for a deceptive mark, we can look at the deceptively misdescriptive test and see which of the three questions is needed. The first question—“Is the term misdescriptive of the character, quality, function, composition or use of the goods?”—is the key one for statement of identity. The second and third questions—“If so, are prospective purchasers likely to believe that the misdescription actually describes the goods; [and i]s the misdescription likely to affect the decision to purchase?”⁴³⁹—are important but better addressed as part of other factors set out below.

The main point about this factor is the question of diagnosis. As trademark law notes, the misdescription does not have to “be material to the consumer’s decision to purchase the goods, nor result in consumer confusion.”⁴⁴⁰ The goal is to assess whether misdescription is at hand. Assessing the effects of misdescription is where adapting trademark’s likelihood of confusion factors aids the overall analysis.

Similarity. The second factor should be similarity. The inquiry should ask not only whether the terms are identical, but similar. The inquiry can look to the sight, sound, and meaning trilogy to begin its assessment of whether there is a problem.⁴⁴¹ Rather than assuming consumers understand misspellings or added words around the word in question, the inquiry would account for the impression of a word or words when seen (read) and heard. The inquiry is sensitive to the way different words with similar meanings, or even words that “convey a

438. *FDA Rules Any White Liquid Can Be Called Milk*, ONION (Feb. 23, 2023), <https://theonion.com/fda-rules-any-white-liquid-can-be-called-milk-1850150950> [<https://perma.cc/E7MU-DZJ8>].

439. *In re Budge Mfg. Co.*, 857 F.2d 773, 775 (Fed. Cir. 1988).

440. *Glendale Int’l Corp. v. USPTO*, 374 F. Supp. 2d 479, 485–86 (E.D. Va. 2005).

441. 3 MCCARTHY, *supra* note 48, § 23.21.

very similar impression,” can confuse consumers.⁴⁴² Thus the inquiry would probe the meaning and understanding of the words.

Unlike current caselaw that simply assumes consumers understand that a product named plant+milk is not milk, the similarity inquiry would require assessing what happens when a consumer sees plant+milk, hears the sound of plant+milk, and considers the meaning of plant+milk, and assessing the ways the phrase may give a similar impression to milk. This question would ensure that courts looked at the way PBB producers market their goods in comparison to milk.

Furthermore, given that some FDA decisions—such as ones addressing nutrition—affect public health, the Test can borrow from trademark law’s standard for confusion of drugs and medicinal products. That standard requires “a lesser than usual quantum of proof of confusing similarity” and recognizes that mistakes about a product’s identity can have “dire effects on public health.”⁴⁴³ The FDA would thus be more likely to deny use of the potentially confusing term when a potential harm to public health exists.

Proximity. The third factor should be proximity. The inquiry in this context should not ask whether the uses are the same or even “in competition with the original use.”⁴⁴⁴ It asks a better question: “[A]re the uses related so that they are likely to be connected in the mind of a prospective purchaser?”⁴⁴⁵

Actual confusion. The fourth factor should be actual confusion. As with trademark law, proof of actual confusion should not be required, but it should be given great weight.⁴⁴⁶ This inquiry would also allow courts to address the problems of underreported confusion and mistakes.⁴⁴⁷

Strength of the mark. The fifth factor, strength of the mark, should examine the term’s “degree of recognition in the minds of the relevant customer class.”⁴⁴⁸ This factor presents a paradox as compared to traditional trademark doctrine. Traditional doctrine does not allow protection for a generic word. In the Test, however, it is precisely the

442. *Kenner Parker Toys Inc. v. Rose Art Indus.*, 963 F.2d 350, 354 (Fed. Cir. 1992); see also *Am. Home Prods. Corp. v. Johnson Chem. Co.*, 589 F.2d 103, 107 & n.4 (2d Cir. 1978).

443. 3 MCCARTHY, *supra* note 48, § 23.32.

444. *Fleischmann Distilling Corp. v. Maier Brewing Co.*, 314 F.2d 149, 159 (9th Cir.), *cert. denied*, 374 U.S. 830 (1963).

445. *Id.*

446. 3 MCCARTHY, *supra* note 48, § 23.13.

447. See *Checkpoint Sys., Inc. v. Check Point Software Techs., Inc.*, 269 F.3d 270, 291 (3d Cir. 2001).

448. 1 MCCARTHY, *supra* note 48, § 11.2.

power of the generic term—its strength of identifying a type of good—that may require limits on its use.⁴⁴⁹

Necessity. The sixth factor should be necessity. The approach blends strength of mark analysis with genericism analysis. In trademark law, the core question is whether the mark identifies the source of the good or service. For our purposes this question makes no sense because there is no single commercial producer behind all milk production. Furthermore, because the words in question will likely be descriptive and under trademark doctrine could fall into the generic category, trademark doctrine can inform the factor, but it will follow a unique logic.

Following trademark's standard genericism analysis is tempting, but that would be a mistake. Genericism tries to determine how a word functions. Classic genericism doctrine would ask whether a word is a genus or species of a product.⁴⁵⁰ If the word maps directly to a product class, it would not be protected, but if the word is a species of a product class, it can acquire protection by gaining a secondary meaning.⁴⁵¹ The problem with this test is that the boundaries "are infinitely malleable."⁴⁵² As Judge Edward R. Becker (writing for the Third Circuit) has pointed out, different arbitrary line-drawing choices can resolve cases in very different ways.⁴⁵³ Faced with arcane and elusive issues from this inquiry, courts have turned to dictionaries and media reporting to try and pin down what the public understands about a word.⁴⁵⁴ This approach fails to understand that the way people speak in general may not map onto how

449. See *infra* text accompanying note 483 (applying the factor to milk).

450. Desai & Rierson, *supra* note 344, at 1826.

451. *Id.*

452. *Id.* at 1829; see also Arthur J. Greenbaum, Jane C. Ginsburg & Steven M. Weinberg, *A Proposal for Evaluating Genericism After "Anti-Monopoly,"* 73 TRADEMARK REP. 101, 109–10 (1983) (criticizing the "long-standing, widely-embraced fallacy that genericism may be determined by dividing the relevant world of goods into genres and species").

453. See *A.J. Canfield Co. v. Honickman*, 808 F.2d 291, 301 n.12 (3d Cir. 1986) ("For example, in *Kellogg*, if wheat cereals were the relevant product class, then Shredded Wheat would be merely a brand. But once it was decided that cereals containing pillow-shaped forms of wheat shreds was the relevant product class, the term 'shredded wheat' was obviously generic.").

454. Desai & Rierson, *supra* note 344, at 1833. Professor Gambert engages in similar analysis. She concedes that dictionaries (a common way for courts to determine the primary significance of a word) identify milk as coming from an animal, but argues that somehow this does not reflect "prevailing cultural" uses of the word. To support this position, Gambert touts a thirteenth-century cookbook from modern-day Iraq, various sources from Medieval Europe, etymologies of East Asian words, and contemporary non-English dictionaries. Gambert, *supra* note 75, at 805–08. These sources suggest little about how people in the United States today use the word, milk, and thus shows the problem of relying on cherry-picked pieces of media to answer these questions.

they speak when buying.⁴⁵⁵ And it misses the core question, which is how the term affects consumers in the marketplace.⁴⁵⁶

Given that the debate is between two major industries—dairy and plant-based beverages—the effect on competition is a key part of the sixth factor. The question is whether the newcomer needs the word to compete. In trademark doctrine this question balances producer and consumer interests. When a word is the only one that consumers understand for a good, or there is no alternative word that allows a competitor to reach consumers, courts have deemed a mark generic and open for all to use.⁴⁵⁷ But when there are suitable alternatives, courts tend to protect a word that a competitor seeks to appropriate for its own goods. For example, “KLEENEX” is arguably a generic term, because people will ask for a KLEENEX when all they want is a tissue.⁴⁵⁸ But people do care about whether a tissue is a KLEENEX when shopping in a store, and competitors can use the word tissue for their competing products, so only Kimberly-Clark can make KLEENEX.⁴⁵⁹ Similarly, only XEROX can make a XEROX, but anyone can make a photocopier.⁴⁶⁰

In sum, the Likelihood of Generic Confusion Test involves six factors: (1) misdescription; (2) similarity; (3) proximity of the goods; (4) actual confusion; (5) strength of the mark; and (6) necessity. The next section applies the Test.

B. The Test in Action and Its Limits

This section applies the Test to the use of the word milk by the PBB industry. To further illustrate the contours of the Test, it then addresses how the Test would work for hot dogs and cell-based meat and fish.

455. Desai & Rierson, *supra* note 344, at 1836 (“Dictionary entries and media uses certainly may *reflect* some of the ways in which a term is used. . . . [They] are, however, poor barometers of the consumer’s perception of the mark in *commercial* contexts and—unlike competitive misuse of the mark—they do not necessarily *affect* consumer perceptions in commercial settings.”).

456. *Id.*

457. *Id.* at 1811 & n.94 (citing several cases).

458. *Id.* at 1846–48.

459. Emilio Tovilla, *Don’t Say “Kleenex”: The Consequences of Genericized Trademarks*, UNIV. CIN. INTELL. PROP. & COMPUT. L.J. (May 22, 2024), <https://uciplj.org/2024/05/22/dont-say-kleenex-the-consequences-of-genericized-trademarks/> [<https://perma.cc/HX8B-Z2JX>] (“The mark ‘Kleenex’ has been used generically for some time; however, [Kimberly-Clark] has managed to avoid genericization.”).

460. *Id.* at 1851–52.

1. The Test Applied to Milk

Returning to the question of milk, we can now see what would happen if courts used the Likelihood of Generic Confusion Test. For the first factor, misdescription, the court would look at the statement of identity and apply trademark law's deception doctrines. Applying the deceptiveness doctrine would require a court to ask whether the word "misdescribes the goods to which it applies."⁴⁶¹ Drawing on trademark law informs the court that this assessment is not about whether the misdescription is material to the buying decision or whether the consumer is confused.⁴⁶²

The inquiry into misdescription instead focuses on whether there is an inaccurate statement. If a PBB called itself milk without more, the use would be misdescriptive. PBBs, however, usually add additional words to the word, milk, which has in the past thrown courts off. But trademark law provides guidance for assessing misdescription when other words are present. If just one word "conveys an immediate idea of an ingredient, quality, characteristic, function, or feature of the goods or services" and that "idea is false, although plausible," then the term is deceptively misdescriptive."⁴⁶³ A PBB calling itself *almond* milk or *pea* milk does not negate the misdescription of the term milk and thus would fail under this analysis.

Similarity is assessed next. Comparing oat, almond, or soy milk (among others) to milk involves comparison of identical words. And the sight, sound, and meaning trilogy aids in other potential issues. PBBs use the term milk, fitting squarely within sight and sound. But PBB producers also often market their products as nutritionally equivalent to milk, even to the point of arguing that their products should be part of school nutrition programs, indicating that the meaning too is confusingly similar. In addition, rather than assuming consumers understand that intentional misspellings such as MYLK or NEXTMILK mean a PBB is not milk, the inquiry would account for the impression of these words when seen and heard.⁴⁶⁴ Using the trademark similarity doctrine would

461. *Glendale Int'l Corp. v. USPTO*, 374 F. Supp. 2d 479, 485 (E.D. Va. 2005).

462. *Id.* at 485–86.

463. TMEP § 1209.04 (May 2024 ed.).

464. Professor Gambert has argued that it is "absurdity" to think that "consumers may be confused or misled" by using the word milk to refer to PBBs (what Gambert calls "plant milks") because Organic Valley, a large organic dairy producer, offers a product called Grassmilk. Gambert, *supra* note 75, at 838–39. The argument is that because Grassmilk does not come directly from grass, people might be just as confused about whether the drink is from a cow or grass as they would be with plant milks. Part of the claim relies on the "long-established tradition of using the '___ milk'

also help resolve whether a given PBB modifier is enough to prevent confusion because the inquiry asks whether the words “convey a very similar impression” and so confuse consumers.⁴⁶⁵

Contrary to the facile analysis of the PBB cases above, adding soy, almond, hemp, or other words does not help. Extending the Federal Circuit’s point that people can confuse SPICE TREE, SPICE VALLEY, and SPICE ISLAND,⁴⁶⁶ people could also easily confuse PBBs for milk, even with the extra word in front. Even before one applies the relaxed standard for confusing similarity in the medical and health context, the inquiry favors not allowing PBBs to use the word milk.

The case for finding PBBs’ use of milk to be confusingly similar becomes even stronger once we consider the relaxed standard for the medical and health context. Recall that like Natural Answers, PBB’s marketing relies heavily on the idea that their products are similar to milk as matter of taste, texture, *and* nutrition.⁴⁶⁷ Silk and Oatly aggressively compare their products to milk, including through webpage articles, a table comparing nutritional values, and a campaign for their products to be part of school food programs based on the idea that they are nutritionally similar and good alternatives to milk.⁴⁶⁸ These are the same sort of tactics Natural Answers used.⁴⁶⁹ As for potential “dire public health outcomes” pointing to extra care in medical and health contexts, the evidence is clear: Instead of just potential issues, we have documented cases of severe malnutrition, failure to thrive, kwashiorkor, rickets, scurvy, and other diseases connected to “young children [who] were fed” PBBs.⁴⁷⁰ And the FDA Draft Guidance concedes that as many as fifty-three percent of consumers mistake PBBs as nutritionally similar to milk.⁴⁷¹ Thus, even if one argues that confusing similarity of PBBs to milk would be an edge case in an ordinary context, the health context requires “a lesser than usual quantum of proof of confusing similarity,”⁴⁷² which supports finding confusing similarity between milk and PBB industries’ use of the word.

structure to denote an alternative to cow’s milk.” *Id.* at 839. The logic misses a potent possibility: People may not think Grassmilk is from grass precisely because they *do not* assume that blank+milk refers to the source of the milk.

465. *Kenner Parker Toys Inc. v. Rose Art Indus.*, 963 F.2d 350, 354 (Fed. Cir. 1992); *see also Am. Home Prods. Corp. v. Johnson Chem. Co.*, 589 F.2d 103, 107 & n.4 (2d Cir. 1978).

466. *Kenner Parker Toys*, 963 F.2d at 354–55.

467. *See supra* notes 407–16 and accompanying text.

468. *See supra* notes 96, 116–20, 133–37 and accompanying text.

469. *See supra* notes 407–16 and accompanying text.

470. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 29.

471. FDA DRAFT GUIDANCE, *supra* note 27, at 6.

472. 3 MCCARTHY, *supra* note 48, § 23.21.

Proximity also favors finding harmful confusion. It does not matter that the products are not the same. Nor do they have to be in competition. The question is whether “the uses [are] related so that they are likely to be connected in the mind of a prospective purchaser.”⁴⁷³ The PBB industry has made a concerted and continuous effort to make consumers think of PBBs when they think of milk.⁴⁷⁴ And in stores, PBBs are sold in the same area and often directly next to milk.

Investigating proximity would have required courts to look at the way consumers connect products. Given the marketing, where the products are sold, and the way PBBs position themselves as milk-substitutes or equivalents, the inquiry could not end with the court pronouncing the products are “of distinctly different properties”⁴⁷⁵ such that no one could be confused.

Unlike the courts’ premature decisions that assumed consumers could rely on labels and distinguish seemingly quite different products, trademark law would reject labelling as a sufficient remedial measure and dismiss the idea that milk and PBBs are so different that a mistake could not be made. Furthermore, if the courts had allowed the cases to go forward, they would have had to address evidence. The PBB industry’s efforts to market their products as “healthy,” “pure,” and nutritionally equivalent to milk has led to nearly half of consumers thinking PBBs are “healthier” than milk and forty-eight percent of “curious but cautious” consumers considering buying PBBs for the same reason.⁴⁷⁶ These results indicate that people are thinking of PBBs as they think of milk. Other market research noting that “the primary reason” consumers drink PBBs is that they think PBBs are “more nutritious” and a “good source of protein”⁴⁷⁷ reinforces this connection. Again, the FDA Draft Guidance and its referenced reports fully agree that consumers are making such mistakes.⁴⁷⁸ Thus, this factor favors finding confusion.

The next factor, actual confusion, is present. The medical evidence supports finding actual confusion. Recall that even a handful of letters or calls about confusion over a product support finding actual confusion.⁴⁷⁹ There is strong evidence from consumer researchers that people are making choices based on confusing PBBs as having the same properties

473. *Fleischmann Distilling Corp. v. Maier Brewing Co.*, 314 F.2d 149, 159 (9th Cir.), *cert. denied*, 374 U.S. 830 (1963).

474. *See supra* Section I.B.

475. *See Fleischmann*, 314 F.2d at 152.

476. *See* MINTEL 2013 REP., *supra* note 164, at 130, 148.

477. MINTEL 2015 REP., *supra* note 165, at 8.

478. FDA DRAFT GUIDANCE, *supra* note 27, at 6; *see supra* notes 333–36 and accompanying text.

479. *See supra* note 427 and accompanying text.

as milk. Furthermore, the medical community is weighing in too. As one study by doctors explained: “Nondairy milk beverages are perceived to be healthy but the products available vary remarkably in their nutritional profiles.”⁴⁸⁰ The numerous studies showing problems with protein, calcium, potassium, and other nutrient disparities and deficiencies leading to negative health outcomes when people drink PBBs⁴⁸¹ demonstrate not just the risk of confusion, but actual confusion. Perhaps most damning, even a study backed by the PBB industry shows significant percentages of consumers—eight percent who buy soy or almond PBBs, seven percent who buy cashew PBBs, and six percent who buy rice PBBs—think those PBBs contain actual dairy milk, and a further twelve to fifteen percent are unsure.⁴⁸² This factor favors finding confusion when PBB companies use milk in the name of their products.

To understand milk in the context of mark strength requires a conceptual leap. Milk is generic and so unprotectable under trademark law. Recall, however, the point for our analysis—as the PBB industry cedes—is that milk is a powerful brand. Assuming milk could be trademarked, we would move past the categorization question to assess strength in the marketplace.⁴⁸³ The question asks about the “degree or amount of marketplace recognition” among the relevant consumer class.⁴⁸⁴ Under this inquiry, even a mark that is strong on the spectrum of distinctiveness can be weak simply because consumers do not know it.⁴⁸⁵ For example, imagine it is 1995. Google has barely launched. The word is fanciful—as of yet it means nothing—and as such strong on the spectrum of marks. But because almost no one would know the name, Google would be weak on the market inquiry.

Milk, in contrast, is the inverse of Google in 1995. Milk is weak on the spectrum of distinctiveness, but it has tremendous market strength. Indeed, a core PBB industry critique is that milk has long and deep meaning for consumers. It is that strength that the PBB industry wishes to appropriate for itself. Thus, strength likely favors preventing PBBs from using the term milk.

In addition, strength of the mark analysis is relevant to the sixth factor, which tempers the analysis by asking whether a company or industry needs the word to compete. Necessity presents another reason why PBB companies should not be allowed to use the word milk in their

480. Singhal, Baker & Baker, *supra* note 127, at 805.

481. *See supra* Section I.B.

482. CFSAN CONSUMER STUDIES MEMORANDUM, *supra* note 332, at 9.

483. 1 MCCARTHY, *supra* note 48, § 11.82.

484. *Id.*

485. *Id.*

products. As with genericism analysis, a court or agency can get lost in line-drawing about whether milk is a general category or genus or whether milk is a species of drinks. Claims about dictionary definitions, news reporting, media coverage, and historical uses of the term do not reach how the use of the word affects competition. If a company has no other way to name a product and reach consumers, courts tend to deem the term generic and open for all to use. But when a suitable alternative is available, there is no need to allow such use. In our context, the question is whether other words allow PBBs to reach the consumer.⁴⁸⁶ The evidence from Europe is clear: European PBBs are called drinks or beverages, not milk,⁴⁸⁷ and they nonetheless are commercially successful.⁴⁸⁸ The PBB industry has no competitive need for the word.⁴⁸⁹

Given that misdescription, similarity, proximity, actual confusion, strength, and necessity disfavor allowing PBBs to use the term milk, PBBs would not be allowed to use the term milk. Nonetheless, there are some additional issues to address. This Article now turns to hot dogs and cell-based meat and fish, as examples of a term currently in widespread use and forthcoming problem, respectively, to show where policy may need to change.

2. The Test Applied to Hot Dogs

Would the Test require that a company not offer a veggie hot dog or burger? Let's start with hot dog.⁴⁹⁰ As the court in *Swift & Co. v. Walkley*⁴⁹¹ held, when there is already an SOI in place and the product does not meet the standard, it must be labelled an imitation.⁴⁹² The FDA's lax enforcement has, however, made it seem that what was a clear-cut case in the 1970s may not be one today. The legal definition is specific and yet broad enough to cause a problem. The specificity comes from exact details about the product being cooked, ground, semisolids prepared from muscle meat or poultry meat, and seasoned and cured.⁴⁹³ The breadth comes from the words covered by the regulation—"Frankfurter, frank, furter, hotdog, weiner, vienna, bologna, garlic bologna, knockwurst, and similar products."⁴⁹⁴

486. Cf. Desai & Rierson, *supra* note 344, at 1854.

487. Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 19–21.

488. See *supra* note 262.

489. Cf. Gambert, *supra* note 75, at 841 (questioning whether the PBB industry should even want to use the term milk).

490. I thank Professor Rebecca Tushnet for pressing me to answer this question.

491. 369 F. Supp. 1198 (S.D.N.Y. 1973).

492. *Id.* at 1200.

493. 9 C.F.R. § 319.180 (2024).

494. *Id.*

Applying our Test, just as it was in *Swift*, hot dog is a misdescription when a product has more than three-and-a-half percent nonmeat binders or two percent isolated soy protein.⁴⁹⁵ Similarity is not an issue because the words are the same. The public health analysis would likely require more studies—and insofar as the issue is about protein and other nutrient content, the focus would be on bioavailability and not just whether the listed amounts of protein and other nutrients are similar.⁴⁹⁶ Whether the goods are marketed in a separate plant-based section of the grocery store or right next to other hot dogs will matter as well. Actual confusion will also require evidence. Despite the need for these bits of evidence, the strength and necessity factors can be examined. Although sausages trace to Germany and hot dogs to nineteenth-century German immigrants to the United States, like milk, hot dog is quite all-American. By 1939, President Roosevelt served hot dogs to King George VI of England.⁴⁹⁷ A non-meat-based food producer would want to grab some of that brand power. But unlike milk, consumers are not likely to see hot dogs as a great source of nutrition. This tension leads to necessity.

The FDA regulations cover almost all words that describe a casing stuffed with food. If we banned a nonmeat food producer from using hot dog or other sausage terms for a casing stuffed with whatever nonmeat substance they wish to offer, the producer would have no way to reach consumers. Assuming a lack of public health evidence sufficient to show nutritional harm, the Test indicates that the FDA would need to update its regulations to clarify what can or cannot be called a hot dog.⁴⁹⁸ This change would allow nonmeat hot dogs to compete while also protecting consumers from adulterated or low nutrition content nonmeat products.

3. The Future: Cell-Based Chicken, Meat, and Fish

With the advent of cell-based and lab-grown chickens, meat, fish, and other foods, the current SOI system will have to address whether the

495. *Hot Dogs and Food Safety*, USDA, <https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/meat-fish/hot-dogs-food-safety> [https://perma.cc/294K-PRUX].

496. Cf. Singhal, Baker & Baker, *supra* note 127, at 800; Scholz-Ahrens, Ahrens & Barth, *supra* note 147, at 30.

497. Stephanie Butler, *The Extra-Long History of the Hot Dog*, HISTORY <https://www.history.com/news/break-out-the-buns-the-history-of-the-hot-dog> [https://perma.cc/4Z2Z-U2WW] (Mar. 31, 2021).

498. See generally Shannon Armstrong, Note, *What Is at Steak If a New Standard of Identity Is Not Created for Plant-Based Meat?*, 71 SYRACUSE L. REV. 1429 (2021).

way a food is grown matters.⁴⁹⁹ The FDA has approved lab-grown chicken,⁵⁰⁰ which soon started being sold in celebrity Chef José Andrés's restaurants in Washington, D.C.⁵⁰¹ Yet the definition for chicken falls under the term poultry, which is defined as “any species of chickens, turkeys, swans, partridges, guinea fowl, and pea fowl; ducks, geese, pigeons, and doves; grouse, pheasants, and quail.”⁵⁰² Lab-grown and cell-based meats and fish are so new that the current definition that meat comes from “part of the muscle of any cattle, sheep, swine, or goats which is skeletal or which is found in the tongue, diaphragm, heart, or esophagus”⁵⁰³ does not embrace them. Whether protein grown from cattle, sheep, or other hooved animal cells should qualify as meat is unclear. Indeed, the scientific analysis of the products has barely begun.⁵⁰⁴ It seems that such meat falls outside the current definitions, yet the FDA explicitly wishes to encourage production of meat from such innovations.⁵⁰⁵

Fish pose a similar conundrum. The FDA offers the “Seafood List,” which provides suggested, acceptable market names for fish and lists when certain names are required if selling a particular species of fish.⁵⁰⁶ For example, a search for tuna indicates that a regulation requires the use of “tuna” for fifteen species of fish and distinguishes those fish from bonito, escolar, and amberjack, which are also required names for certain species.⁵⁰⁷ The new approach to producing blue-fin tuna—“growing fish cells in large stainless steel tanks, known as bioreactors”—promises to

499. This point shows how technology can disrupt not only industries but also assumptions behind legal rules. Cf. Deven R. Desai & Gerard Magillocca, *Patents, Meet Napster: 3D Printing and the Digitization of Things*, 102 GEO. L.J. 1691 (2014) (noting 3-D printing technology challenges the assumption that the cost to infringe many patents is prohibitively high).

500. Toeniskoetter, *supra* note 18.

501. Anna Werner, *Lab-Grown Chicken Coming to Restaurant Tables and, Eventually, Stores*, CBS NEWS, <https://www.cbsnews.com/news/cultivated-chicken-good-meat-jose-andres-china-chilcano/> [<https://perma.cc/EE4A-GKGF>] (July 31, 2023, 7:37 PM).

502. 9 C.F.R. § 1.1 (2024).

503. § 301.2.

504. See, e.g., Labba, Steinhausen, Almius, Knudsen & Sandberg, *supra* note 29, at 2 (“There are, therefore, substantial knowledge gaps in the nutritional composition and quality of meat substitutes.”).

505. See Laura Reiley, *Lab-Grown Meat Is Safe To Eat, Says FDA*, WASH. POST (Nov. 16, 2022, 5:04 PM), <https://www.washingtonpost.com/business/2022/11/16/fda-lab-meat-approval/>.

506. See *The Seafood List*, FDA, <https://www.hfpappexternal.fda.gov/scripts/fdcc/index.cfm?set=SeafoodList> [<https://perma.cc/7MEP-4RWC>] (July 2024).

507. *Id.* (search for “tuna”; then click “Show Items”).

meet the market demand while protecting a threatened species.⁵⁰⁸ But whether the fact that a lab-grown blue-fin comes from a particular species of blue-fin means that the flesh should be called blue-fin tuna will need to be addressed.

These examples show the need for the FDA to use science combined with the logic of the Likelihood of Generic Confusion Test to update its process for determining what an industry can call new foods. For example, as people age, they need greater protein intake to maintain health.⁵⁰⁹ As with milk, the quality and method of ingestion matters because not all protein is the same.⁵¹⁰ By looking at the nutritional issues for new foods, especially bioavailability, the FDA can ensure that people are consuming food that is both ecologically efficient and nutritionally sound. By examining competition issues, the FDA can examine whether a word is needed to communicate with the public and whether labels should have to include words like artificial, imitation, lab-grown, cell-based, and so on to distinguish products that come from living animals from those created in laboratories.

C. Caveats and Questions About Speech

Even if the FDA uses the Likelihood of Generic Confusion Test, two issues require further discussion. First, critiques about the FDA's standard of identity creation and lax enforcement have some merit. Second, concerns about how food regulation affects speech need to be addressed.

The FDA should tighten SOI creation and enforcement procedures. In the milk context, the critique that the FDA narrowly defines milk as coming from a cow, and yet allows other mammalian-based beverages to call themselves milk, is sound. The FDA should borrow from Europe and craft a better definition to include other mammalian milks. And the FDA should get ahead of deciding whether synthetic or lab-based milk qualifies under the current SOI. Alternatively, the FDA could prevent both non-bovine mammalian milks and synthetic products from being

508. Kenny Torella, *The First Lab-Grown Seafood Will Be Fancy*, Vox (Dec. 14, 2022, 6:30 AM), <https://www.vox.com/future-perfect/23507372/lab-grown-seafood-fish-bluelu-wildtype-cultivated-cultured-meat> [<https://perma.cc/XF9H-G786>].

509. *E.g.*, Barbara Stepko, *Should You Get More Protein?*, AARP (Dec. 16, 2019), <https://www.aarp.org/health/healthy-living/info-2019/how-much-protein-do-you-need.html> [<https://perma.cc/6CV5-UYNU>].

510. *Cf.* Jamie L. Baum, Il-Young Kim & Robert R. Wolfe, *Protein Consumption and the Elderly: What Is the Optimal Level of Intake?* 8 NUTRIENTS 359, at 6 (2016) (“The consumption of high-quality proteins that are easily digestible and contain a high proportion of [essential amino acids] lessens the urgency of consuming diets with an extremely high protein content.”).

called milk. Either path shores up the FDA's approach to the issue and signals consistency in enforcement. And even if a PBB is deemed nutritionally sufficient to be included in recommend daily diets, it ought not be called milk because that step undermines the power of the statement of identity. For example, even when someone has an allergy to milk proteins, doctors recommend PBBs but *also counsel* patients on the nutritional differences between milk and soy beverages and the supplements patients need, precisely because soy beverages are not the same as milk.⁵¹¹

Assertions that preventing PBBs from calling themselves milk violates the First Amendment miss an important part of free speech doctrine. The practice at issue is between two major industries. Both use the word milk to propose a commercial transaction, making that act commercial speech.⁵¹² A core tenet of commercial speech doctrine is that, unlike with political speech, society can act to maintain accurate and true statements, because that enhances the marketplace and, *arguendo*, consumer welfare.⁵¹³ In this context, "[t]he First Amendment . . . does not prohibit the State from insuring that the stream of commercial information flows cleanly as well as freely."⁵¹⁴ As the Supreme Court said in the touchstone case on commercial speech:

The First Amendment's concern for commercial speech is based on the informational function of advertising. Consequently, there can be no constitutional objection to the suppression of commercial messages that do not accurately inform the public about lawful activity. The government may ban forms of communication more likely to deceive the public than to inform it.⁵¹⁵

When the FDA addresses deception and confusion and regulates how an entity or industry uses certain words, it protects the public from inaccurate information that is more likely to deceive than to inform. As

511. See, e.g., Isabel Fructoso et al., *An Overview on Nutritional Aspects of Plant-Based Beverages Used as Substitutes for Cow's Milk*, 13 NUTRIENTS 2650, at 26 (2021).

512. See *Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc.*, 425 U.S. 748, 762 (1976).

513. Desai, *Speech & Citizenry*, *supra* note 82, at 481–82; see generally Jonathan Weinberg, *On Commercial—and Corporate—Speech*, 99 MARQ. L. REV. 559 (2016); cf. *United States v. Alvarez*, 567 U.S. 709, 718 (2012) (plurality opinion).

514. *Va. State Bd. of Pharmacy*, 425 U.S. at 771–72; see also Rebecca Tushnet, *Trademark Law as Commercial Speech Regulation*, 58 S.C. L. REV. 737, 740–41 (2007).

515. *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n*, 447 U.S. 557, 563 (1980) (citation omitted).

the Supreme Court has said, “[m]isleading advertising may be prohibited entirely.”⁵¹⁶

The Likelihood of Generic Confusion Test fits within this logic. By asking whether the word is misdescriptive, the Test assesses accuracy. By analyzing similarity, proximity of goods, and actual confusion, the Test addresses in greater depth and sensitivity whether the use is misleading and how likely it is that consumers are confused in ways that harm the marketplace and the public in general. By addressing necessity, the Test accounts for the idea of regulating narrowly to allow speech, innovation, and commerce to operate.⁵¹⁷

CONCLUSION

Food insecurity, public health, and the environment are paramount and interconnected issues now and for the foreseeable future. Improving the supply of healthy foods while reducing negative environmental spillovers is a laudable goal. Neither goal, however, mandates deferring to a particular industry about how to set nutritional standards and how to protect consumers as they face an ever-increasing range of new foods. Whether new lab-created meat and dairy products should be called meat and dairy is an open question. Will these new products have the same nutritional content and function as meats and dairy that come from animals? Will consumers be harmed if new food products are called something they are not? We do not know all the answers, but as the food industry continues to innovate and market new foods, we will need answers. Unfortunately, our current approach lacks the tools needed to find the answers. This Article has offered a way forward.

By examining the problems around the dairy and plant-based beverage industries’ use of the word milk, this Article has shown the flaws in the current approach and offered a solution. The FDA’s standards for setting a food’s statement of identity must be more precise, and its enforcement more vigorous. Lax enforcement has opened the door to mischief and entrenched ideas about what to call PBBs.

At the same time, the FDA needs better tools to analyze what to call a given food. That is a language and commerce question, yet language and commerce are not part of the FDA’s expertise. Trademark law, in contrast, could be called the law of language and commerce. Trademark law has a long history of parsing how industries and companies use language in ways that enhance the marketplace. But trademark law is not a perfect fit for understanding whether a product should be called meat,

516. *In re R. M. J.*, 455 U.S. 191, 203 (1982).

517. *See Cent. Hudson*, 447 U.S. at 564 (“The State must assert a substantial interest to be achieved by restrictions on commercial speech.”).

milk, flour, jam, et cetera, because such words are the generic, non-trademarkable words for products. Nonetheless, by thinking of a word like milk as a Generic Brand, a thing with historic, powerful meaning combined with scientifically backed nutritional standards, this Article has drawn on trademark law to fashion the Likelihood of Generic Confusion Test. This Test offers detailed questions that demand evidence, rather than letting judges assume they know how consumers understand language and assess nutrition. Thus, the Test allows the FDA and courts to assess whether a food meets the technical standards of a given statement of identity, whether the product name is deceptive as to the content of the food, and whether there is consumer and public health harm.

In short, the Likelihood of Generic Confusion Test promises to provide a way to handle the challenges of new food production and marketing that lie ahead. The plant-based and lab-grown food industries are booming and offering interesting and powerful economic and social challenges to incumbent food industries. That holds a good—if not a great—promise, but these industries do not need false words to succeed. Embracing the Likelihood of Generic Confusion Test means we tackle the problems of misinformation and public harm that can arise when new food production and marketing emerges, *and* we embrace science, innovation, and healthy market competition.