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ARTIFICIAL INTELLIGENCE ISSUE

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AI AND THE “DEATH OF TRADEMARK”

*Michael Grynberg*¹

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INTRODUCTION

How might improvements in artificial intelligence (AI) technology affect trademark law? This Article approaches the question by imagining trademark law in a world in which we can fully outsource our consuming decisions to AIs that know our preferences better than we do. Leaving aside whether the technology is possible, this thought experiment tells us something about today's trademark doctrine and its response to changes in online technology and culture.

Part I imagines a hypothetical AI capable of assuming responsibility for our lives as consumers. Part II argues that a sufficiently sophisticated technology would render trademarks superfluous in many cases. Trademarks function by simplifying information. We use them to stand in for a broad range of (sometimes contradictory) data assembled from a variety of sources. Because human cognition is limited, the ability of trademarks to serve as a shortcut is valuable, but it is a second-best solution. With unlimited time or enhanced capacities, we would be better able to find optimal products without relying on the simple information signals offered by trademarks. As it is, sifting through all the available data is not a wise use of our limited attention.

But the hypothetical AI is not similarly limited, and a sufficiently advanced AI "shopper" would exist to analyze the context that trademarks allow us to ignore. The role of trademarks in such a world is more limited—and consequently requires less protection—than what we see today.

Part III explains that the hypothetical AI also illuminates a tension between trademark law and the consumption of knowledge online. Before the internet, the relative scarcity of "space" for information—be it on library shelves, newspaper pages, or television channels—conferred authority on those—be they librarians, editors, or programmers—able to curate it. Not so online. Comparatively speaking, there is room enough for practically anything. We therefore rely on filtration, rather than curation, to find information; our filters leave the rejected data available for others to find and use as they see fit.² This facilitates the formation of communities that have mutually irreconcilable conceptions of truth. These disagreements could extend to trademark meaning, but the current model of trademark information reflects, to a large extent, the scarcity model that has proven ill-adapted to life online.

Of course, the hypothetical AI does not, and may never, exist. As Part IV explains, however, we can see its forerunners in web platforms like Amazon and Facebook. They are already changing trademark doctrine, and they illustrate why trademarks may be less important in the future. And of course, these technologies raise any number of troubling questions, but they are not the sort that trademark law is designed to address.

² DAVID WEINBERGER, *TOO BIG TO KNOW* 11 (2011).

I. AI SHOPPERS

A. Machine learning

Computers now surpass humans at any number of skills associated with cognition. Chess and checkers fell a long time ago,³ and computers now reign supreme at Go, a game once thought to be too complex for AI.⁴ Even poker, with the human element of bluff seemingly built into the rules of the game, is not immune.⁵ And a variety of tasks once thought to be the exclusive domain of trained professionals are ever increasingly open to automation.⁶

Many recent advances are popularly associated with machine learning. Rather than program a computer with predetermined algorithms that channel the machine’s processing power, this approach leaves it to computers to sort out methods for themselves.⁷ Computers can find patterns in the data they receive (or generate) and then apply derived rules to the assigned task, refining them iteratively.⁸ As a result, a computer may teach itself to, say, defeat a human at the game of Go, but its internal rules for selecting a good move may diverge from those used by human professionals.⁹ The results work, but the steps followed by the machine are opaque

³ Alexis C. Madrigal, *How Checkers Was Solved*, ATLANTIC (July 19, 2017), <https://www.theatlantic.com/technology/archive/2017/07/marion-tinsley-checkers/534111/> [<https://perma.cc/4FMA-RU27>]; see Olivia Solon, *Oh the Humanity! Poker Computer Trounces Humans in Big Step for AI*, GUARDIAN (Jan. 30, 2017, 17:00 EST), <https://www.theguardian.com/technology/2017/jan/30/libratus-poker-artificial-intelligence-professional-human-players-competition> [<https://perma.cc/ADD7-PHAV>].

⁴ See Christopher Moyer, *How Google’s AlphaGo Beat a Go World Champion*, ATLANTIC (Mar. 28, 2016), <https://www.theatlantic.com/technology/archive/2016/03/the-invisible-opponent/475611/> [<https://perma.cc/7XHR-KQKT>].

⁵ Solon, *supra* note 3. Similarly, an AI system prevailed against top players in the war strategy game StarCraft. Kelsey Piper, *StarCraft is a Deep, Complicated War Strategy Game. Google’s AlphaStar AI Crushed It.*, VOX (Jan. 24, 2019, 7:04 PM), <https://www.vox.com/future-perfect/2019/1/24/18196177/ai-artificial-intelligence-google-deepmind-starcraft-game> [<https://perma.cc/W4US-SA82>].

⁶ See, e.g., Steve Lohr, *A.I. is Doing Legal Work. But It Won’t Replace Lawyers, Yet.*, N.Y. TIMES (Mar. 19, 2017), <https://www.nytimes.com/2017/03/19/technology/lawyers-artificial-intelligence.html> [<https://perma.cc/C34X-ANSQ>]; Jessica Stillman, *An A.I. Just Outperformed 20 Top Lawyers (and the Lawyers Were Happy)*, INC. (Nov. 9, 2018), <https://www.inc.com/jessica-stillman/an-ai-just-outperformed-20-top-lawyers-and-lawyers-were-happy.html> [<https://perma.cc/GR9H-MJAC>].

⁷ See David Silver et al., *A General Reinforcement Learning Algorithm that Masters Chess, Shogi, and Go through Self-play*, SCI., Dec. 7, 2018, at 1140, 1140, <https://science.sciencemag.org/content/sci/362/6419/1140.full.pdf> [<https://perma.cc/M6NS-EU9A>] (“Our results demonstrate that a general-purpose reinforcement learning algorithm can learn, tabula rasa—without domain-specific human knowledge or data, as evidenced by the same algorithm succeeding in multiple domains—superhuman performance across multiple challenging games.”).

⁸ See *id.* (“A long-standing ambition of artificial intelligence has been to create programs that can instead learn for themselves from first principles. Recently, the AlphaGo Zero algorithm achieved superhuman performance in the game of Go, by representing Go knowledge using deep convolutional neural networks, trained solely by reinforcement learning from games of self-play.” (footnotes omitted)).

⁹ As when AlphaGo defeated the human champion Lee Sedol in the game of Go:

With the 37th move in the match’s second game, AlphaGo landed a surprise on the right-hand side of the 19-by-19 board that flummoxed even the world’s best Go players, including Lee Sedol. “That’s a very strange move,” said one commentator, himself a nine dan

to humans.¹⁰ Indeed, in some cases computers need only the rules of the game, and they can take it from there.¹¹

Though the precise line between hype and actual potential is unclear, machine learning technology can be put to any number of uses. Google famously used it to change its translation software, discarding years of effort that focused on algorithmic translation rules and dictionary databases.¹² The company found better results when it fed a program an extensive library of works and translations, letting the program discern translation rules of its own.¹³

It seems reasonable to assume that today's high-end AI technology will continue to develop and eventually find its way into consumer products, deployable to a range of ends. Suppose we use it to manage our purchasing decisions?

B. *The digital shopper*

Various forms of AI already mediate our lives as consumers,¹⁴ but thinking about potential future developments may provide interesting insights into trademark law. Imagine—no claims are made that this thought experiment is necessarily plausible in all its details—an AI far surpassing today's rudimentary digital assistance tools. This hypothetical digital shopper could fully manage your purchasing choices, as the AI can be delegated the task of researching, evaluating, and purchasing goods and services on your behalf. Your digital personal shopper will be trained in your preferences and possessions, supplemented as necessary by further input, and it will then extrapolate the nature of goods and services that are likely to please. It may err from time to time—just as you do—but soon enough it will know you well enough to outperform you in predicting what you'll like. The advantage will not simply be one of time saved—in which the AI delivers a second-best choice that satisfies because you could skip the effort of shopping—the machine will be better at figuring

Go player, the highest rank there is. "I thought it was a mistake," said the other. Lee Sedol, after leaving the match room, took nearly fifteen minutes to formulate a response. . . .

Indeed, the move turned the course of the game. AlphaGo went on to win Game Two, and at the post-game press conference, Lee Sedol was in shock. "Yesterday, I was surprised," he said through an interpreter, referring to his loss in Game One. "But today I am speechless. If you look at the way the game was played, I admit, it was a very clear loss on my part. From the very beginning of the game, there was not a moment in time when I felt that I was leading."

It was a heartbreaking moment. But at the same time, those of us who watched the match inside Seoul's Four Seasons hotel could feel the beauty of that one move. . . .

Cade Metz, *In Two Moves, AlphaGo and Lee Sedol Redefined the Future*, WIRED (Mar. 16, 2016, 7:00 AM), <https://www.wired.com/2016/03/two-moves-alpha-go-lee-sedol-redefined-future/> [<https://perma.cc/2QE9-K7J8>].

¹⁰ See Will Knight, *The Dark Secret at the Heart of AI*, MIT TECH. REV. (Apr. 11, 2017), <https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart-of-ai/> [<https://perma.cc/X8NH-6NGQ>].

¹¹ See, e.g., Silver et al., *supra* note 7, at 1140.

¹² See Gideon Lewis-Kraus, *The Great A.I. Awakening*, N.Y. TIMES (Dec. 14, 2016), <https://www.nytimes.com/2016/12/14/magazine/the-great-ai-awakening.html> [<https://perma.cc/79R8-VVHP>].

¹³ See *id.*

¹⁴ See *infra* Part IV.

out what you’ll like. The AI’s ability to sift through the flood of available data in tireless search of optimal results will further enhance its advantage.

Even though the AI knows your desires better than you do, you will not understand why. Maybe the suggestion to eat at the new creperie owes its origin to a political donation, a song on your playlist, your hometown, or some combination of these or other details. Who knows why? The AI sees a pattern, and it works.¹⁵

Imagine further that this experience is so typical as to be banal. Everyone takes for granted that their consumer avatars are as much a part of the fabric of life as smartphones are today. They take care of business and are given thought only on the rare occasion that something goes wrong, and the AI needs the gentle guidance of a thumbs down button (or its future equivalent).

C. Other than that, Mrs. Lincoln, how was the play?

There are any number of possible objections to the framing of the hypothetical. Some concern the various reasons that it may be unrealistic. For example, the hypothesized AI relies on an ability to understand language that contemporary AI lack and may never achieve. The response is simply that this is a thought experiment, not a prediction. As we say to our students, don’t fight the hypothetical.¹⁶

More importantly, the above account of a personal assistant AI will likely strike many as dystopic, perhaps because of the privacy implications for the user or for society at large—insofar as the technology might require considerable personal and third-party data to make effective predictions on behalf of its user.¹⁷ That data must be collected and assembled, creating a privacy security risk. Worse, getting individuals to generate and reveal the data necessary to feed the machine may require an unacceptable level of individual manipulation. That is, devices may be engineered to prod people into providing the data that may then be the basis of AI learning on a scale beyond what already generates alarm today.¹⁸ This is independent of other

¹⁵ As when Netflix recommends things I have already seen because I recently watched something else, but with greater accuracy and utility.

¹⁶ Though to this particular objection, perhaps full linguistic comprehension is unnecessary. If IBM Watson can understand Jeopardy questions well enough to answer them, it is not clear that non-comprehending, but advanced, AI would be incapable of shopping for goods.

¹⁷ Even then, that data may be too retrospective to provide useful predictions for novel situations. See CATHY O’NEIL, *WEAPONS OF MATH DESTRUCTION: HOW BIG DATA INCREASES INEQUALITY AND THREATENS DEMOCRACY* 204 (2016) (“Big Data processes codify the past. They do not invent the future.”).

¹⁸ See SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* 284–85 (2019) (“The new toolmakers do not intend to rob you of your inner life, only to surveil and exploit it. All they ask is to know more about you than you know about yourself.”); *id.* at 241 (“All that is moist and alive must hand over its facts. There can be no shadow, no darkness. The unknown is intolerable.”). Zuboff sees the development of digital assistants as part of this process. See *id.* at 255–60. The dynamic she describes applies, however, to a wide range of technology. In her account, the drive is to render an ever-greater amount of data as fodder for the prediction markets that depend on it. See, e.g., *id.* at 236–38 (describing data collected by Nest thermostat and mattress companies and the practical difficulty of preventing its collection). Furthermore, using devices engineered to encourage use creates potential psychological harm independent of the underlying goal. See generally ADAM ALTER, *IRRESISTIBLE: THE RISE OF ADDICTIVE TECHNOLOGY AND THE*

manipulation possibilities, such as the prospect that the AI might nudge consumers into particular purchases or other decisions.¹⁹

As important as these considerations are, they are largely outside the scope of this Article,²⁰ which is interested in the hypothetical AI as a tool for examining trademark law. It does not advocate for its development, nor does it take a position on how or whether consumer AI technology should develop more generally. My bracketing off certain policy questions is not to deny the prospect that the costs of an AI shopper might outweigh the benefits.

D. AIs and trademarks

Thinking about the implications for trademark law requires that we refine the hypothetical further. First, assume that an AI will encounter trademarks in ways analogous to life online today. Today, one encounters marks in content, including advertising, seller web pages, product reviews by professionals (e.g., a *New York Times* restaurant review) and fellow consumers (e.g., Yelp or Amazon.com reviews), blog and social media references, appearances in videos, etc. Trademarks also appear in information locators (e.g., URLs) and metadata. In the future, trademarks presumably will continue to be used for a variety of purposes, and some of these uses may be deceptive or confusing perhaps by intention, perhaps not. And as today, the trademarks will be surrounded by context that may limit or exacerbate the potential for confusion.

But AI shoppers will have the capability and patience to gather and process far more distinguishing context than humans. A trademark may just be one input among many considered by the AI, and these additional inputs will enable the AI to understand more easily than a human the meaning of a mark in a given context and its relevance, if any, to the AI's goal. This purpose is *not* to distinguish trademarks, but rather to satisfy the preferences of the human the AI serves (unless one of these preferences *is* for authentic trademarks).²¹

The next question then concerns the AI's capabilities. Can it be confused or gamed? We can imagine a range of possibilities here including, at the far end, the

BUSINESS OF KEEPING US HOOKED (2017) (exploring the rise of behavioral addiction by users of digital technology); *id.* at 93–233 (describing “ingredients” of behavioral addiction and how they appear in digital technologies).

¹⁹ See, e.g., Ryan Calo, *Digital Market Manipulation*, 82 GEO. WASH. L. REV. 995, 999 (2014) (“[T]he digitization of commerce dramatically alters the capacity of firms to influence consumers at a personal level.”). This is tied to the question of whom the machine serves, for the right kind of assistant might help us resist external manipulation. See *infra* note 177–178 and accompanying text.

²⁰ A growing body of scholarship addresses these and other implications of AI involvement in consumer decisions. See, e.g., Rory Van Loo, *Digital Market Perfection*, 117 MICH. L. REV. 815, 815 (2019) (“Advancing consumer welfare in the automated era requires not just consumer protection, but digital intermediary protection”); *id.* at 817–18 (collecting examples of scholarship on digital intermediaries); Calo, *supra* note 19. I return to some of these issues below, but with a focus on their interplay with trademark law. Though I do return to them below. See *infra* Parts IV–V.

²¹ As noted above, for now, I am avoiding the question of what the “true” preferences—if such exist—are of any given consumer. See *supra* note 19. I take consumer preferences to be constructed out of a mix of endogenous and exogenous inputs, and I assume they will continue to be so in the future. I am not speculating how a world of ubiquitous, advanced AI might change the mix. I return to the issue below.

prospect of an “omniscient” AI that cannot be misdirected by a false use of a trademark. But even short of that, we might picture lesser AIs with superhuman resistance to deception. An AI that outperforms humans generally may still deliver the occasional “wrong” result due to external manipulation, but its capacity to learn should make these errors unlikely to recur.²²

As this is a thought experiment, we can imagine any level of AI proficiency. We begin at one end of the spectrum. What are the implications of AIs so powerful that confusion as currently contemplated by trademark law becomes, for all practical purposes, impossible? And how does this speculated endpoint of technological development relate to issues in contemporary trademark law? Parts II and III suggest ways that the hypothetical AI may challenge fundamental premises of trademark law.²³ As it is, current technology reflects these challenges in an early form. In other words, as explored in Part IV, many underlying assumptions of trademark law are already undermined by improving digital technology.²⁴

II. THE “END” OF TRADEMARK LAW?

A sufficiently powerful AI could upend trademark law by radically reducing the relevance of trademarks. Today, trademarks simplify information by removing context. But the hypothesized AI’s advantage lies in its ability to sort through context. This capability reduces the importance of maintaining stable trademark meanings, which exist in large part to allow cognitively limited humans to simplify decisions by *ignoring* the context in which trademarks appear. But if our tools were able to put that context to use, trademarks would be left with less to do.

A. *The role of trademarks*

To see why, consider how trademarks function. They are defined by their ability to help consumers identify and distinguish goods and services in the marketplace.²⁵ Once in place, a valid mark conveys information via simplification, letting consumers make assumptions without asking deeper questions about marketplace context. So a buyer may ask for a COKE without wondering how the particular seller defines the term. COKE—vagaries of corporate ownership and licensing aside—designates a “single” source. Likewise, consumers may assume the relevance of their past experience with a mark.²⁶ For instance, eating at a MCDONALD’s in Connecticut provides relevant data about one in Oregon.

²² To be sure, consumer-serving AIs may end up in an arms race with parallel technologies designed to deceive, resulting in an equilibrium that still allows for deception in the marketplace.

²³ See *infra* Parts II–III.

²⁴ See *infra* Part IV.

²⁵ 15 U.S.C. § 1127 (2018).

²⁶ See *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 163–64 (1995) (“In principle, trademark law, by preventing others from copying a source-identifying mark, ‘reduce[s] 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

Trademarks also allow sellers to assume the expense of assembling product information. For example, those in the tablet market need not hunt around to learn about the product attributes of Apple's tablet. Apple is happy to gather the information and attach it to the recognizable iPad mark, enabling potential purchasers to find the information that interests them (e.g., how much memory does the iPad Air have?). And once the mark is at work, others may chime in with additional information in the form of product reviews and the like. In time, a mark may accumulate meanings having little to do with product attributes. Brands may, for example, evoke a personality independently of any underlying good or service (e.g., the tendency of fans to see themselves as part of a larger community, Red Sox Nation, for example). The process depends, nonetheless, on the mark's ability to communicate a simple signal of source.²⁷

This potential scope of information is both a cost and a benefit to consumers. Trademarks simplify a broad range of meanings; RED SOX, for example, evokes a team, a fandom, and a regional identity. Wearing a branded cap with the team logo may therefore communicate, "the American League baseball team that is based in Boston and plays in Fenway Park," just as it represents "the team for which Ted Williams and Pedro Martinez played" and "the traditional dominant regional sports team of New England." Depending on who wears it and the context, the logo on a cap might also communicate "I'm a Red Sox fan," "I'm from Boston," or even—depending on where I am—"I'm a liberal."

In all these cases, the mark reduces context to simple signals, each of which may have considerably more nuance if spelled out. This can create issues if a mark is not an "empty vessel" but rather brings meaning to the table.²⁸ For example, LOVEE LAMB could not be registered for seat covers because the term suggests a product made from animal skin when in fact it is not.²⁹ Though the seller accurately described the product in advertising, consumers are allowed to rely on the messages carried by the mark, without being expected to hunt for corrective information.³⁰ This simplification also occurs even when a mark is performing a purely source-identifying function. APPLE represents the source of many different kinds of computers in a variety of markets, but the single mark spans them all.

One could spell the meanings out more precisely. The mark is not strictly necessary, but it is helpful. We could imagine a world without enforceable trademark rights in which one sees a soda branded COCA-COLA and then must do the work to learn what precisely is meant by the term. Is it the well-known soft drink or something else? Likewise, those in the market for a tablet computer could gather product information themselves. But time and cognitive capacities are limited.

she liked (or disliked) in the past." (citation omitted) (quoting I J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION 2-3 (3d ed. 1994)); see also William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 269 (1987).

²⁷ Michael Grynberg, *Thick Marks, Thin Marks*, 67 CASE WESTERN RES. L. REV. 13, 20-22 (2016).

²⁸ See generally Michael Grynberg, *A Trademark Defense of the Disparagement Bar*, 126 YALE L.J. F. 178, 183-87 (2016).

²⁹ See generally *In re Budge Mfg. Co.*, 857 F.2d 773 (Fed. Cir. 1988).

³⁰ See *id.* at 775.

Trademark law therefore promotes useful transactions by limiting our need to sort through context for routine purchasing decisions.³¹

But this is necessarily a second-best solution. Using the trademark shortcut comes at the expense of delving more deeply into available information. Our limitations of time and cognition make this eminently rational.³² It nonetheless produces less optimal results than would be available in a world without these limitations; by economizing information we necessarily miss things.

This is a well-known problem in trademark law, reflected by the selling power possessed by many marks. Once a brand is the market leader (or sufficiently advertised and thrust before us), it can take advantage of consumer inertia (fed by cognitive shortcuts like the availability heuristic), making it harder for new entrants to acquire market share.³³ This may be so even when a newcomer offers a superior price/quality balance to the incumbent market leader.³⁴ Likewise, the owner of an established mark may seek to leverage its goodwill in one market to enter

³¹ Nicholas S. Economides, *The Economics of Trademarks*, 78 TRADEMARK REP. 523, 526–27 (1988) (“The economic role of the trademark is to help the consumer identify the unobservable features of the trademarked product. This information is not provided to the consumer in an analytic form, such as an indication of size or a listing of ingredients, but rather in summary form, through a symbol which the consumer identifies with a specific combination of features. Information in analytic form is a complement to, rather than a substitute for, trademarks.”).

³² *Cf. id.* at 524 (“The same symbols can mean different things to different individuals. But, by and large the convention which identifies symbols and words with some minimally defined mental images at a certain point in time for a certain group of people, allows communication and civilization to continue.” (footnote omitted)).

³³ Jeremy N. Sheff, *Biasing Brands*, 32 CARDOZO L. REV. 1245, 1288 (2011). See Amos Tversky & Daniel Kahneman, *Judgment under Uncertainty: Heuristics and Biases*, SCI., Sept. 27, 1974, at 1124, 1130, https://www.socsci.uci.edu/~bskyrms/bio/readings/tversky_k_heuristics_biases.pdf [<https://perma.cc/3KN8-6P9C>], for a discussion of the availability heuristic, which is our tendency to accord greater weight to information that comes immediately to mind. This issue was known before trademark scholars had the language of psychology to describe it. As Ralph Brown wrote decades ago:

With time, the symbol comes to be more than a conduit through which the persuasive power of the advertising is transmitted, and acquires a potency, a “commercial magnetism,” of its own. One of the oldest of advertising techniques, the simple reiteration of the brand name, contributes to this result. Early advertising artists aspired to deface every natural monument with such forgotten symbols as “Sapolio.” Their successors, no longer earthbound, write the bare syllables “Pepsi-Cola” in the sky. If those who crane their necks at the sky-writing are unable to blurt any name but Pepsi-Cola to the soda-clerk, the symbol obviously has commercial value. Even though its continued nurture requires continued outlays, the distillation of past displays and jingles and art exhibits into a word makes that word of great price, quite independently of the vats and alchemy that produce the drink.

Ralph S. Brown, Jr., *Advertising and the Public Interest: Legal Protection of Trade Symbols*, 57 YALE L.J. 1165, 1187–88 (1948) (footnotes omitted).

³⁴ As with the case of generic pain relievers like acetaminophen and naproxen sodium compared to the respective brands of TYLENOL and ALEVE. Sarah Kliff, *Shop like a Pharmacist: Don’t Buy Advil*, VOX (May 10, 2016), <https://www.vox.com/2014/7/25/5936739/shop-like-a-pharmacist-dont-buy-advil> [<https://perma.cc/L6BW-3JXZ>]; see also Julia Belluz, *Stop Wasting Money on Brand-name Drugs*, VOX (Feb. 16, 2016, 9:40 AM), <https://www.vox.com/2016/2/16/11008134/generic-drugs-safe-effective-cheaper> [<https://perma.cc/MGC9-UX3C>] (“The existing body of high-quality evidence suggests that generic drugs consistently meet [the FDA’s equivalence-to-branded-medicine] requirements. So there’s generally little downside to switching to generics. The only difference (in most cases) is that they’re less of a burden on the wallet.”).

another in which the seller lacks comparable expertise. Here too, the availability heuristic might lead consumers to a suboptimal result.³⁵

Another error emanates from the prospect that the trademark carries too much information to be interpreted properly.³⁶ It may be helpful to use a brand as a proxy, but at the end of the day, an APPLE MacBook is not an APPLE MacBook AIR is not an APPLE MacBook Pro is not an APPLE iPhone 7 (or 8 or 9 or X) is not an APPLE iPad, and so on. Strong marks may cause us to overlook distinctions of this sort.

Courts face similar challenges in adjudicating trademark cases. Judges routinely wrestle with the issue of whether to protect not only a mark's source-identifying function, but also its more extended meanings. Because a trademark (or a lookalike) conveys a range of potential meanings, courts sometimes worry about the possibility of harm from non-source messages that might be conveyed by a mark.³⁷ Even when these stories of harm are open to doubt, courts may feel pressure to credit them lest they undermine the overarching structure of trademark law.³⁸

But the AI of the thought experiment could address these concerns. It need not economize on search costs in the same way humans do, for the source of its utility is its superior ability to sift through the context that we seek to avoid. It would know the difference between the many different products sharing, say, the APPLE mark and base recommendations accordingly. Likewise, you may be nervous about trying a new brand when your current choice satisfies well enough, but an AI would be designed for the labor of calculating whether the risk is worth it.

An AI could also account for some of the issues that lead courts to grant strong trademark rights even in the absence of potential diverted sales. Consider *Maker's Mark Distillery, Inc. v. Diageo North America, Inc.*³⁹ *Maker's Mark*, which makes bourbon, sued a tequila producer for using a red wax seal purportedly similar to its own (which is registered as a trademark).⁴⁰ Notwithstanding differences in

³⁵ For example, if COCA-COLA were to release a beer, consumers might transfer their good feelings for the soda to the new product and try it. If the product is poor, they suffer a form of harm inflicted by the mark's selling power. The "error" arises from bounded rationality. It might not have been worth the trouble to thoroughly explore whether there was any reason to think that the soda maker is capable of making a quality beer. The trademark shortcut could blind us to more obvious contextual data, as when a consumer who enjoys COCA-COLA's sweet taste buys COCA-COLA beer without noting that it is marketed as a bitter beer. To be sure, there may be a market check on this kind of conduct. The data is unclear, however, as to whether consumers would actually punish a trademark holder in its home market. See Mark A. Lemley & Mark P. McKenna, *Owning Mark(ets)*, 109 MICH. L. REV. 137, 140-41 (2010) ("[T]he empirical evidence confirms both that third parties can benefit from uses of known marks in markets ancillary to the senior mark owner's and that those third-party uses can impair the senior user's ability to expand its own product lines. Put another way, the evidence suggests that third parties like Black & Decker might benefit from use of, or proximity to, SUM's trademarks, but not that SUM is harmed by such use." (footnotes omitted)).

³⁶ Cf. Brown, *supra* note 33, at 1189 (observing that marks may "be the vehicle of persuasion, either because of extensive repetition and embellishment apart from their use on goods, or because the advertiser has selected and somehow appropriated to his exclusive use a symbol which independently predisposes the customer to buy").

³⁷ See, e.g., *Maker's Mark Distillery, Inc. v. Diageo N. Am., Inc.*, 679 F.3d 410, 419 (6th Cir. 2012); *Anheuser-Busch, Inc. v. Balducci Publ'ns*, 28 F.3d 769, 772-73 (8th Cir. 1994).

³⁸ See Grynberg, *supra* note 27, at 46, 51-52.

³⁹ *Maker's Mark*, 679 F.3d at 410-25.

⁴⁰ *Id.* at 414, 417.

products,⁴¹ price points, and labels, all of which limited the risk of a mistaken purchase due to source confusion, Maker’s Mark prevailed.⁴² The court perceived an intolerable potential for affiliation confusion—the prospect that consumers might see a similar wax seal and muse about the prospect of a connection between the two products—noting that “many consumers are unaware of the affiliations between brands of distilled spirits, and that some companies produce multiple types of distilled spirits.”⁴³

There is much to criticize in the court’s speculations,⁴⁴ but let us assume *arguendo* that: a) consumers might indeed make this leap; *and* b) that the potential misperception of affiliation would be material to a purchasing decision.⁴⁵ Although information about the actual connection, if any, between the two producers is likely publicly available, we do not expect a potential purchaser to look for it while in the aisles of a liquor store. Even if everyone had a smart phone and data plan, web searches take time. We there allow reliance on a simple trademark signal. But sorting out these questions would be trivial for an AI.

An AI, moreover, could transcend the need for this information. To see why, we should ask why affiliation information might be relevant.⁴⁶ Why would a tequila consumer care if there were a connection between a potential purchase and a bourbon producer? After all, shouldn’t the question turn on the tequila’s qualities? One possible answer is that affiliation with a quality bourbon is a proxy for quality. On this logic, if Maker’s Mark makes a quality bourbon, it will protect its goodwill by being careful in entering into affiliation agreements. If so, all things being equal, a tequila affiliated with Maker’s Mark is likely to satisfy Maker’s Mark fans.

But there is typically much better evidence available from other sources—reviews, seller product information, message board discussions, etc. That data is, however, more expensive as a matter of a consumer’s search costs than drawing inferences by simply looking at a mark. Maybe it is easier to make assumptions based on bottle appearance. An AI would alter the equation. Because it could accumulate data at a low cost, it would have no need to rely on the trademark’s ability to convey affiliation information. In short, it would have immediate access to: (a) accurate affiliation information if relevant; and (b) superior information that might make affiliation data irrelevant.⁴⁷

⁴¹ Although tequila is a spirit, it is not distilled from a grain like bourbon, which must have a majority-corn base. 27 C.F.R. § 5.22(b)(1)(i), (g); *see also* *Maker’s Mark*, 679 F.3d at 415, 423.

⁴² *Maker’s Mark*, 679 F.3d at 414, 423–25.

⁴³ *Id.* at 422. For that reason, the court discounted the presence of the defendant’s entirely distinct house mark. *Id.* (agreeing with the lower court that “the presence of a house mark . . . is more significant in a palming off case than in an association case”).

⁴⁴ Grynberg, *supra* note 27, at 41–45.

⁴⁵ Though there is no materiality requirement in infringement litigation, materiality in this case would go a long way to justifying the outcome as a matter of policy.

⁴⁶ To be sure, I believe the relevance to be minimal outside of direct sponsorship settings—that is situations in which the markholder stands behind the quality of a third party’s goods—but I am assuming *arguendo* that it matters.

⁴⁷ This example shows a potential pitfall of a less advanced AI that might pay too much attention to trademarks rather than sorting through the more directly relevant context and specific information for

B. What's left?

The thought experiment thus highlights some of the tradeoffs underlying today's trademark system. Trademarks help organize information into simple signals that promote efficiency at the expense of nuance and context. The balance, coupled with the law that protects it, is likely helpful to consumers when calibrated to a given level of human cognition. But the proper scope of trademark law may change if new tools enhance our effective cognition. Change the assumptions enough, and much of what makes trademark attractive—information simplification—looks less like the solution to a problem and more like a problem to be solved.

What then happens to trademark law in a world of extremely sophisticated AI? What would be left for it to do?

i. Maintaining distributive fairness

Of course, an AI future may not (and if past is prologue, will not) be equitably distributed. The demands of distributive justice may therefore create a potential foothold for traditional trademark law to persist. Perhaps the hypothesized AIs will not be available to all or maybe a significant amount of commerce will persist in realms that the AI cannot easily operate (e.g., face-to-face interactions).⁴⁸ This could be seen as another issue of intermediate technology. Instead of addressing an AI that is advanced but imperfect, this question is of an AI that is perfect enough, but unevenly distributed.

Though distributive concerns may indeed preserve room for trademark law to operate, the amount of room may be less than might initially appear. First, if we are concerned with life online (or the future equivalent) then the wealth gap issue might at least be mitigated by the relative low cost of digital technology compared to physical goods (assuming that difference persists in the future).⁴⁹ And if life *offline* is the issue, trademark law could be calibrated to operate with greater scope offline than on.⁵⁰ This calibration could also attend to the interests of those for whom the act of shopping is a pleasure unto itself (though perhaps these are consumers for whom sifting through context is part of the fun).

Second, even if top-of-the-line AIs are imperfectly distributed, lesser and more available technologies may be good enough to justify weakening trademark law. This assumes that the weakening translates into an improved marketplace. From a welfare perspective any trademark costs to consumers must be weighed against potential

which the marks are an imprecise stand-in.

⁴⁸ But who knows what developments will arise with augmented reality technology.

⁴⁹ Though perhaps this opens the door to battles as sophisticated AIs seek to deceive other sophisticated AIs. Maybe this leaves room for trademark to operate, but the requisite judgments may be better suited to false advertising law. *See infra* Section II.B.3.

⁵⁰ The early experience with trademarks on the internet was, however, the opposite. *See generally* Eric Goldman, *Brand Spillovers*, 22 HARV. J.L. & TECH. 381, 383 (2009) (“[U]nluckily retailers’ use of brand spillovers, online brand spillover activities have been repeatedly attacked in courts and legislatures.”).

benefits in the actual marketplace (e.g., by lowering licensing costs and, therefore, prices).⁵¹

ii. Preserving a residual core

Another possibility is trademark law will still be needed to ensure that consumers get what their AIs order. But this residual core of trademark law, if necessary, is far narrower than today’s doctrine. The kind of meaning that would need protection—designation of source at the point of sale/delivery—is a faint shadow of what trademark law protects today. In the AI world, there is no need for brand personality, dilution protection, affiliation or sponsorship claims, or the like. Nor is there a need—outside of the prestige goods context discussed below⁵²—for attractive or memorable marks. To a computer, ZL3XC!7K4BV functions just as well as APPLE. But because the AI is able to find quality goods (however defined), the seller retains an incentive to invest in quality (and, indeed, might have more resources to do so if freed from a need to invest in the now irrelevant attribute of trademark attractiveness).⁵³ Or trademark law could be restricted to a smaller signifier. So anyone could brand their computer APPLE, but only one company could use the ®, or some like symbol, when it comes time to ship.

Nor is it entirely clear that an AI could not distinguish authentic from non-authentic goods even without a trademark residual. Imagine seeing luxury branded merchandise for sale on a street corner. No matter how authentic it looks, the context likely alerts you to the strong possibility that the products are counterfeits. The AI would likely have access to considerably more distinguishing context and the ability to sort it.

iii. Everything is false advertising

Perhaps there will be more work, relatively speaking, for the Lanham Act’s false advertising cause of action.⁵⁴ Presumably, advertising would continue to shape the consumer preferences that constitute an input to the AI’s work, leaving room for false advertising doctrine to operate.

One question is the relative balance of trademark and false advertising law in efforts by sellers to “game” imperfect AIs, perhaps by using powerful computers of

⁵¹ See *infra* Section II.C.

⁵² See *infra* Section II.B.4. Mark attractiveness might be an issue to the extent scarcity or cachet is the relevant “product,” but those attributes can be manufactured in other ways.

⁵³ To be sure, however, one consequence might be that marks may lose the placebo effect that comes from mark strength. See, e.g., Kate Faasse et al., *Impact of Brand or Generic Labeling on Medication Effectiveness and Side Effects*, 35 HEALTH PSYCH. 187, 187 (2016). While this is often seen as reflective of manipulation by marketing, a recent article sees the placebo effect of trademarks as potentially salutary. Jake Linford, *Placebo Marks*, 47 PEPP. L. REV. 45, 112–13 (2019) (“These studies suggest that in the market for high-performance goods, consumers may derive value from the branding myths they are sold. The Nike brand may work like Dumbo’s feather in the famous Disney film—it may not matter why consumers believe they can fly, so long as they believe it.”). In any case, the authority of the AI could well imbue its choices with a placebo effect of its own.

⁵⁴ See 15 U.S.C. § 1125(a) (2018).

their own. The differing foci of the two doctrines suggest that false advertising will have a greater role to play in an AI world—at least if the concern is with deception. Trademark law is oriented around simple signals that embody broader meanings. False advertising law, by contrast, looks to the message as a whole.⁵⁵ It is therefore more context sensitive.⁵⁶

This orientation would better serve efforts to police activities that mislead AIs. Because the hypothesized AIs focus on context and not trademarks alone, mere trademark use is comparatively unlikely to mislead an AI of sufficient sophistication. We might, however, posit circumstances in which surrounding context is fabricated in a way designed to game the AIs. False advertising law, with its demand that actionable communications be both perceived and material, is better positioned to respond to acts that might result in mistaken purchases.

iv. Everything is unfair competition and the problem of prestige goods

Or trademark law might discard any pretense of focusing on consumer protection and return to the unfair competition tradition.⁵⁷ Judges might adjudicate what is or is not acceptable behavior in the commercial marketplace without necessarily focusing on consumer confusion. This could be the mechanism by which they continue to police competition in status goods or promotional merchandise, with underlying views of what is “sporting” in the marketplace, substituting for today’s strained stories about possible consumer confusion.⁵⁸ But without confusion, these moral judgments will need a coherent theory if the resulting law is to be transparent and predictable.⁵⁹

⁵⁵ See *Church & Dwight Co. v. SPD Swiss Precision Diagnostics, GmbH*, 843 F.3d 48, 65 (2d Cir. 2016) (“To prevail on a Lanham Act false advertising claim, a plaintiff must establish that the challenged message is [] either literally or impliedly false . . .”).

⁵⁶ Moreover, the doctrine makes distinctions between explicit and implied falsehoods, requiring plaintiffs to establish that consumers actually perceive the implied falsehood. *E.g.*, *Time Warner Cable, Inc. v. DIRECTV, Inc.*, 497 F.3d 144, 153 (2d Cir. 2007). The doctrine further considers context by requiring materiality and excluding from liability statements that are mere puffery. *E.g.*, *Pizza Hut, Inc. v. Papa John’s Int’l, Inc.*, 227 F.3d 489, 495–96 (5th Cir. 2000).

⁵⁷ Passage of the Lanham Act in 1946 unified federal trademark protection in one body of law. See 1 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 4:3 (5th ed. 2019). Federal statutory protection was once restricted to “technical trademarks,” which would be called arbitrary and fanciful marks today. *Id.* The law of unfair competition covered what were then known as trade names but are now treated as trademarks. *Id.* Both types of marks are now protected by the Lanham Act. *Id.*

⁵⁸ As when the Ninth Circuit used trademark law to prevent the use of popular trademarks for automobiles as raw material for complementary goods such as keychains or license-plate frames. *Au-Tomotive Gold, Inc. v. Volkswagen of Am., Inc.*, 457 F.3d 1062, 1064 (9th Cir. 2006). Though the court undertook its analysis under the multifactor test, *id.* at 1078, the opinion seems more shaped by the reaction that the challenged use was “nothing more than naked appropriation of the marks,” *id.* at 1064.

⁵⁹ It is worth noting, however, that trademark law may be making room for explorations of this sort. The *Lexmark International, Inc. v. Static Control Components, Inc.* decision may breathe new power into the Lanham Act’s reference to the prevention of “unfair competition” as a statutory purpose. See *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 572 U.S. 118, 131–32, 136 (2014). Recent precedent from the Fourth Circuit, moreover, suggests that courts may be interested in exploring a law of unfair competition that is broader than trademark alone. See *Belmora LLC v. Bayer Consumer Care AG*, 819 F.3d 697, 701, 706–08 (4th Cir. 2016).

Judges already use trademark law to regulate competition in a variety of areas in which source confusion is unlikely. Courts have used the Lanham Act to give trademark holders control of the promotional goods/merchandising market (e.g., preventing third parties from selling baseball caps with professional team logos) and the market for prestige goods (e.g., using post-sale confusion theories to prevent the selling of knockoff products even when the buyer is aware that the product does not come from the trademark holder).⁶⁰

These extensions of trademark law are controversial for a number of reasons, and they rest doctrinally on confusion theories that generally fall outside of the source confusion model.⁶¹ In the hypothesized AI world, in which confusion is eliminated by automatic consideration of context, these theories would be less viable. Perhaps a result will be the lower prices for consumers that come with competition.

Alternatively, today’s prohibitions would remain, but they might be liberated from their strained confusion stories. Defenders of post-sale confusion and merchandising rights theories generally do not rely on confusion rationales. Rather, they focus on considerations of promoting incentives,⁶² deterring free riding,⁶³ and policing morality.⁶⁴ These rationales are simply unnecessary to a trademark law grounded in preventing passing off and source confusion, and they have always been an uneasy fit with trademark doctrine as a whole. But in a world in which source confusion is harder to come by, they may become the new core of trademark law. If the link to source confusion is severed, perhaps the resulting law of luxury and promotional markets could be founded on a non-confusion theory that offers greater clarity to future judges of what they are trying to accomplish.

C. *What’s gained?*

To say that an AI-enabled world of consumer consumption does not need trademark law is not the same as saying we would be better off without it. What then might be gained by scaling back trademark law as we know it today? Here, too, much depends on how one imagines the state of intermediate technologies and their distribution.

i. Legalizing competition

As suggested in the last subpart, a major potential benefit would be the legalization of products and services threatened or prohibited by current trademark law and lower prices in prestige or promotional merchandise.⁶⁵ As noted above, however, the intuition that these markets “belong” to trademark holders is powerful

⁶⁰ E.g., *Hermès Int’l v. Lederer de Paris Fifth Ave., Inc.*, 219 F.3d 104 (2d Cir. 2000); *Boston Prof’l Hockey Ass’n v. Dallas Cap & Emblem Mfg.*, 510 F.2d 1004 (5th Cir. 1975).

⁶¹ See, e.g., *Hermès*, 219 F.3d at 108; *Boston Prof’l Hockey*, 510 F.2d at 1012.

⁶² See, e.g., *Boston Prof’l Hockey*, 510 F.2d at 1011.

⁶³ See, e.g., *Au-Tomotive Gold*, 457 F.3d at 1064, 1067.

⁶⁴ See, e.g., *Hermès*, 219 F.3d at 108–09.

⁶⁵ See *supra* Section II.B.4.

and likely to generate another cause of action to replace the one that is lost.⁶⁶ Even this may be a gain, as a new cause of action would be liberated from incoherent theories of consumer confusion.

ii. Opening communications channels

Another potential benefit of weakening trademark in an AI world is that sellers would have the benefit of enhanced communication channels to consumers. A maker of acetaminophen could, for example, simply brand itself as *TYLENOL*, leaving it to consumer avatars to sort out which is the “authentic” brand for purchasers who actually care about the difference. Because the brand name conveys useful product information, weakened trademark law would enable an easy way of communicating a product attribute (as *TYLENOL* conveys non-brand information that “pain reliever” does not).

This point should not be oversold. A world in which AI confusion is impossible is one in which the AI would be alert to the prospect of generic brands. In today’s market, for example, a price-sensitive consumer who is indifferent to whether her acetaminophen is *TYLENOL* may or may not know of the availability of generic alternatives. Our hypothesized AI would not suffer this difficulty and would simply order the cheaper generic equivalent for its consumer (assuming that it would satisfy the consumer’s preference). An AI would not be put off by the comparative clunkiness of the term acetaminophen.⁶⁷

Another possible answer would be to focus not on the consumer-side AI but rather the seller’s advertising costs. So a seller may wish to use a trademarked term as the most efficient way to communicate the non-trademark information that the term embodies (in the drug example, “my product is like *TYLENOL*”). If forced to incur the costs of advertising without the trademarked term, the seller may have to raise prices. But again, if the AIs are good enough, the costs of marketing to them should likewise be limited.⁶⁸

Perhaps a more promising answer is to focus on trademark litigation’s potential as a weapon between market competitors. Even if sellers do not “need” plaintiff marks, many legitimate activities may nonetheless provoke trademark claims. A seller may, for example, design a product that looks similar to a claimed trade dress

⁶⁶ See *supra* Section II.B.4.

⁶⁷ But there is an effect in a world of intermediate AIs, which may be gamed on the one hand, or fail to seize opportunities on the other. Here, confusion costs would have to be weighed against benefits. See generally Michael Grynberg, *Trademark Litigation as Consumer Conflict*, 83 N.Y.U. L. REV. 60 (2008).

⁶⁸ We might also see the issue as one of speech protection. A “counterfeit” mark might provide relevant information to the AI. Suppose you are in the market for a cheap watch, and you see three \$15 options: A well-known discount brand, an unknown cheap brand, and an obviously fake *ROLEX*. The counterfeit use of *ROLEX* (which does not deceive you) conveys information about the product that bears it.

If the AI is incapable of confusion, then stopping “counterfeits” becomes another way of saying, “don’t tell the machine this,” rather than a means of preventing harmful deception. This raises First Amendment concerns. Cf. *United States v. Alvarez*, 567 U.S. 709, 734 (2012) (Breyer, J., concurring) (noting that statutes and doctrines that prohibit false statements “limit the scope of their application, sometimes by requiring proof of specific harm to identifiable victims; sometimes by specifying that the lies be made in contexts in which a tangible harm to others is especially likely to occur; and sometimes by limiting the prohibited lies to those that are particularly likely to produce harm”).

for functional reasons. Or a seller may use a trademarked term in a descriptive way. These legitimate activities create openings for trademark-based attacks.

Today, such cases require courts to sort through difficult questions, e.g., whether product designs have sufficient secondary meaning for trademark protection, whether designs are functional, whether consumers are likely to be confused by similar competitor designs, and so on. To the extent the underlying claims are fundamentally about preserving market share—rather than consumer protection—limiting them would promote competition.⁶⁹

iii. Protecting free expression

A final benefit of ending trademark law as we know it is eliminating infringement litigation (or its threat) as a tool of censorship of expressive trademark uses. The unauthorized use of trademark for expressive purposes may benefit the public by, for example, enriching culture or providing an avenue for commentary. For many of these uses—unlike the traditional passing off setting—the junior user is unable to adopt a non-confusing distinctive mark. Using an already-known trademark is part of the message.

Current trademark doctrine mediates the potential interference with free expression in a variety of ways.⁷⁰ Though generally effective when push comes to shove,⁷¹ trademark law’s safeguards for free expression may not be enough to blunt the *in terrorem* effect of a cease and desist letter for those with limited access to legal advice. And those without a taste for litigation may simply trim their sails in the face of a plausible sounding trademark claim.⁷² If courts can trust the AI, the technology would eliminate this tactic.

D. The “death of trademark” in a bespoke world

As the saying goes, predictions are hard, especially about the future,⁷³ but the thought experiment helps illuminate the functions of trademarks today. Trademarks exist in a world of limited cognition. They, and the law that protects them, are one way of addressing marketplace information problems. But they are not mandatory. Our use of trademarks is the product of a particular context. If and when our abilities improve, trademarks may become superfluous. At the least, the current equilibrium that justifies a particular scope for trademark law may reset at another level.

⁶⁹ See *Wal-Mart Stores, Inc. v. Samara Bros.*, 529 U.S. 205, 214 (2000) (noting the importance of providing an avenue “for summary disposition of an anticompetitive strike suit”).

⁷⁰ See, e.g., *New Kids on the Block v. News Am. Publ’g, Inc.*, 971 F.2d 302, 308 (9th Cir. 1992) (protecting nominative uses from liability); *Rogers v. Grimaldi*, 875 F.2d 994, 998–1000 (2d Cir. 1989) (protecting artistically relevant uses from liability).

⁷¹ *But see* *Gordon v. Drape Creative, Inc.*, 909 F.3d 257, 271–72 (9th Cir. 2018) (remanding trademark claim for further proceedings notwithstanding existence of an artistically relevant use by the defendant).

⁷² *Cf. Wal-Mart*, 529 U.S. at 213–14; see generally James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 *YALE L.J.* 882, 913 (2007).

⁷³ *It’s Difficult to Make Predictions, Especially About the Future*, QUOTE INVESTIGATOR (Oct. 20, 2013), <https://quoteinvestigator.com/2013/10/20/no-predict/> [<https://perma.cc/ZF8V-JKVJ>].

It turns out the current trademark equilibrium is already under pressure from artificial intelligence. Although the AI of the thought experiment is not at hand, its forerunners can be seen in the marketplace, and they already affect trademark law, as discussed in Part IV below.⁷⁴

But the thought experiment highlights another tension within modern trademark doctrine. The hypothetical AI is a digital creature at home on the internet. It acts not by relying on any particular source of information, but rather by filtering the mass of data available online. As the next Part explains, that model is at odds with how information—including trademark information—was managed prior to the advent of the internet.

III. KNOWLEDGE ONLINE AND TRADEMARKS

In our hypothetical, the AI avatar is a filter. It sorts and categorizes the myriad of resources available online and distills a message on behalf of its beneficiary consumer. This is a familiar way to gather information online. If interested in exploring a subject, we might rely on a filter (like Google) to narrow the range of possibilities before us. But the filtered out possibilities remain available to those using alternative screens or search terms.

Information gathering was different in a world of comparative information scarcity. No newspaper could contain all the stories of the day; no library all the books; no television channel all the shows. Choices had to be made, and with the necessity of choice came the requirement of authorities—the editors, librarians, and station managers—to curate what we could see.⁷⁵

The powerful forces unleashed by the internet changed that. In many ways, however, trademark law functions in a way akin to the old scarcity model, creating challenges for its accommodation to life online.

A. Knowledge Online and Trademarks

How do people come to rely on the opinions of others and find the information on which they rely? For many, the abundance of information online changes the answer to this question by altering the way knowledge is aggregated and curated. The role of gatekeepers used to be larger.⁷⁶ We once consumed information from a

⁷⁴ See *infra* Part IV.

⁷⁵ David Weinberger describes how the physical limits of communications media shaped the institutions that used them:

Traditional knowledge is what you get when paper is its medium. There is nothing mystical about this. For example, if your medium doesn't easily allow you to correct mistakes, knowledge will tend to be carefully vetted. If it's expensive to publish, then you will create mechanisms that winnow out contenders. If you're publishing on paper, you will create centralized locations where you amass books. . . . Traditional knowledge has been an accident of paper.

WEINBERGER, *supra* note 2, at 45.

⁷⁶ See *id.* at 3–4.

set of relatively constrained options, choosing what to view only after others had, by necessity, made a great many choices. As David Weinberger explains:

Our most basic strategy for understanding a world that far outruns our brain’s capacity has been to filter, winnow, and otherwise reduce it to something more manageable. We’ve managed the fire hose by reducing the flow. We’ve done this through an elaborate system of editorial filters that have prevented most of what’s written from being published, through an elaborate system of curatorial filters that has kept most of what’s been published from being shelved in our local libraries and bookstores, and through an elaborate system of professional filters that have kept many of us from being responsible for knowing most of what’s made it through the other filters. Knowledge has been about reducing what we need to know.⁷⁷

This is largely a byproduct of scarcity. There are only so many library shelves, pages in a newspaper, broadcast television channels, etc. Publishing houses could print only so many books. Radio and television broadcast networks were expensive to create, and the transmission spectrum was managed as a scarce resource.⁷⁸ And so on.

Enter the experts. Authorities (libraries, universities, newspapers, etc.) acted as curators of knowledge, effectively determining the bounds of the conventional wisdom.⁷⁹ One need not ascribe censorial motives to this arrangement. The existence of gatekeepers, of experts curating “correct” answers, was inherent to the prevailing technology—a world of limited shelf space requires choices.⁸⁰

On the internet, of course, things are different. Scarcity of supply is not a problem, as for all practical purposes the shelf space is infinite. The problem is finding one’s preferred signal amid the surrounding noise.⁸¹ We therefore need a different class of experts. Instead of depending on librarians and editors who select from the submissions of information providers and leave the rest unavailable, we rely on filters, algorithms, and social networks to predict what we want to see and leave the remaining mass intact and undifferentiated.⁸² But the “wrong” answers remain available for those who see them as correct. The internet in turn connects adherents to these alternative premises and forms communities that resist the ability of the old gatekeepers to make effective pronouncements on contested issues.⁸³

⁷⁷ *Id.* at 3–4.

⁷⁸ Gregory Staple & Kevin Werbach, *The End of Spectrum Scarcity*, SPECTRUM (Mar. 1, 2004, 15:16 GMT), <https://spectrum.ieee.org/telecom/wireless/the-end-of-spectrum-scarcity> [<https://perma.cc/D6BD-KQB8>].

⁷⁹ See WEINBERGER, *supra* note 2, at 3–4. This is a comparative point, as there has always been dissenting opinions and narratives.

⁸⁰ *See id.* at 5.

⁸¹ *See id.* at 45 (“The Internet is what you get when everyone is a curator and everything is linked.”). In some respects, this is nothing new, as “[t]here was always too much to know, but now that fact is thrown in our faces at every turn. Now we *know* there’s too much for us to know.” *Id.* at 11.

⁸² *See id.* at 11 (“Filters no longer filter out. They filter *forward*, bringing their results to the front. What doesn’t make it through a filter is still visible and available in the background.”).

⁸³ *See id.* at 45 (“The Internet simply doesn’t have what it takes to create a body of knowledge: No editors and curators who get to decide what is in or out. No agreed-upon walls to let us know that knowledge begins here, while outside uncertainty reigns—at least none that everyone accepts.”).

Democratizing knowledge in this way has not been an unalloyed good, as seen in the 2016 presidential election campaign.⁸⁴ Multiple parallel knowledge communities may develop world views from their own selected body of facts, selected in a filtering process by members of a network.⁸⁵ The all-too-familiar problem of ideological filter bubbles is one result. Partisan Democrats and Republicans perceive reality in very different ways as do those on opposite sides of debates over gun control or climate change. This is also true of smaller groups. Many communities organize and define themselves around premises that are fundamentally irreconcilable with those held by mainstream society. Some of these may seem harmless enough to just be fodder for ridicule (e.g., flat earthers).⁸⁶ Others carry higher emotional stakes (e.g., “9/11 ‘truthers’” and “birthers”)⁸⁷ and cause direct, real-world harm (e.g., disease outbreaks traceable to anti-vaccine misinformation).⁸⁸

Regardless of the consequences of online communities holding incompatible visions of truth, that reality seems here to stay.⁸⁹ No amount of argument, no matter the consensus in society at large, is going to convince the birther that President Obama was born in the United States. More data isn’t going to convince the anti-vaccine crusaders of the dangers of their cause no matter the costs to the rest of us.⁹⁰

But this is an article about trademarks. How does trademark law fit into the evolution described above? I have two points. First, trademark information has traditionally been managed in a manner consistent with the scarcity model. Second, the conflicting internet model of information abundance places pressure upon trademark law. Trademark law seeks to manage the shelf space, so to speak, by constraining meanings associated with a mark. The internet model would allow the proliferation of meanings, relying on filters to distinguish “authorized” views (i.e., those approved by trademark owners) from conflicting information, which remains available for those who want it. In this way, the internet model foreshadows the world of the AI hypothesized in the previous parts. The closer technology gets to making it a reality, the weaker trademark law may become.

⁸⁴ See generally, e.g., DAVID E. SANGER, *THE PERFECT WEAPON* 171–93 (1st ed. 2018).

⁸⁵ See WEINBERGER, *supra* note 2, at 10–12.

⁸⁶ See John Timmer, *Why Does Flat Earth Belief Still Exist?*, *ARS TECHNICA* (Dec. 28, 2018, 10:30 AM), <https://arstechnica.com/science/2018/12/why-does-flat-earth-belief-still-exist/> [<https://perma.cc/ZS56-7WYG>].

⁸⁷ See, e.g., Chris Bell, *The People Who Think 9/11 May Have Been an ‘Inside Job,’* *BBC: NEWS* (Feb. 1, 2018), <https://www.bbc.com/news/blogs-trending-42195513> [<https://perma.cc/FAS3-XCSB>]; Lily Rothman, *This is How the Whole Birther Thing Actually Started*, *TIME* (Sept. 16, 2016), <https://time.com/4496792/birther-rumor-started/> [<https://perma.cc/VAT2-KMAR>].

⁸⁸ See Elizabeth Cohen & John Bonifield, *Her Son Died. And then Anti-vaxers Attacked Her*, *CNN: HEALTH* (Mar. 21, 2019, 2:47 PM), <https://www.cnn.com/2019/03/19/health/anti-vax-harassment-eprise/index.html> [<https://perma.cc/QMF8-MXKR>]; cf. WEINBERGER, *supra* note 2, at 151 (“Science is not going to be able to reassert its old-style authority because it has lost the medium that enabled it to flourish: a one-way channel in which there were those who spoke and those who listened.”).

⁸⁹ See WEINBERGER, *supra* note 2, at xiii (“[W]e are in a crisis of knowledge at the same time that we are in an epochal exaltation of knowledge. We fear for the institutions on which we have relied for trustworthy knowledge, but there’s also a joy we can feel pulsing through our culture. It comes from a different place. It comes from *the networking of knowledge*.”).

⁹⁰ *Id.* at 181 (“There is nothing you can say to convince some people. The old Enlightenment ideal was far more plausible when what we saw of the nattering world came through filters that hid the vast, disagreeable bulk of disagreement.”).

This reflects a tension in trademark jurisprudence that began in the late 1990s. Some judges initially doubled down on the scarcity model, expanding the authority of trademark holders.⁹¹ As discussed below, however, the logic of the internet information model of abundance has proven too powerful for trademark doctrine to ignore.

B. Trademarks and the stability of meaning

To return to trademark basics, trademarks (and service marks) identify and distinguish goods (and services) in the marketplace and serve consumers by simplifying information.⁹² This function requires relative stability of meaning for the trademark itself. COCA-COLA does not work as a source identifier if the term delineates competing brands of soda. Stated another way, the “space” in the term for source-identifying meanings is limited if a trademark is to perform an information-economizing function.

In the brick-and-mortar world this traditionally meant that someone must define the mark. Trademark law therefore gives mark owners a favored position in curating trademark information by letting them police the use of confusingly similar marks.⁹³ This protects not only source information but also the marks’ ability to embody seller goodwill with consumers.⁹⁴ By being the only ones authorized to designate what the mark’s source meaning represents, sellers manage the goodwill attached to the mark by controlling product quality, planning advertising campaigns, interacting with customers, and the like.

Trademarks are also partially protected from accumulating multiple source meanings as a result of markholder conduct.⁹⁵ Trademarks lose protection when their owners license or assign them indiscriminately or fail to use them for extended periods of time.⁹⁶ So trademark law not only encourages active curation of meaning, it may be said to require it.⁹⁷

⁹¹ See, e.g., *Allard Enters. v. Advanced Programming Res., Inc.*, 249 F.3d 564, 575 (6th Cir. 2001) (vacating district court injunction that would have precluded a concurrent junior user from any internet use of contested mark).

⁹² See *supra* Section II.A.

⁹³ See 1 MCCARTHY, *supra* note 57, at § 2:10

⁹⁴ See *id.* § 2:17 (defining goodwill as “that which makes tomorrow’s business more than an accident. It is the reasonable expectation of future patronage based on past satisfactory dealings” (quoting EDWARD S. ROGERS, *GOOD WILL, TRADEMARKS AND UNFAIR TRADING* 13 (1914))).

⁹⁵ See *id.* § 3:12.

⁹⁶ 15 U.S.C. § 1127 (2018) (providing that a mark is deemed abandoned “[w]hen its use has been discontinued with intent not to resume such use. . . . Nonuse for 3 consecutive years shall be prima facie evidence of abandonment” and when “any course of conduct of the owner” causes the mark “to lose its significance as a mark”).

⁹⁷ Many traditional limits to trademark rights may also be understood as supporting stability of trademark meaning. See Grynberg, *supra* note 28, at 183–87. Marks deemed unlikely to perform a source-identifying function are harder to protect. That is, if a term is unlikely to maintain a discrete meaning in the marketplace, it is less likely to receive protection. Generic terms that identify product categories may never be trademarks while descriptive terms require secondary meaning, that is, consumers must have come to associate the term with a particular product source. *Id.* at 185. Even then, competitors may continue to use the word in its original, non-trademark sense. *Id.* at 187.

As discussed above, modern trademark law goes beyond the protection of source meanings.⁹⁸ This leads to the question of whether protection of non-source meanings is necessary to secure the positive externalities that come with the creation of a source-identifying mark.⁹⁹ For many judges, however, this leap is plausible. Trademark rights therefore now extend to uses that might cause consumer confusion with respect to a markholder's approval or sponsorship as well as activities that might dilute a famous trademark.¹⁰⁰ While there is much to criticize in this expansion, it may be described as upholding the one mark/one meaning view of trademarks.¹⁰¹

But though the scarcity model gives trademark holders ample power, it traditionally contained built-in limitations. Just as a newspaper editor selects articles only for her paper, so too were markholders limited to the geographic markets that had defined the marks.¹⁰² There is no meaning to stabilize where no one has heard of the mark. To hold otherwise, and force junior remote users to abandon their marks, would be to treat the senior user's trademark rights as simple property interests.

Accordingly, at common law, courts limited the scope of protection to the mark's area of use and reputation.¹⁰³ Many early cases took the principle of market definition quite far, limiting infringement actions to cases of direct competition between the trademark holder and the defendant. Today, of course, trademark rights reach beyond the mark's immediate market, but proximity still matters in assessing the likelihood of consumer confusion in an infringement suit,¹⁰⁴ and geographic scope of use still matters absent a registration (which confers nationwide priority).¹⁰⁵

The shift to a system granting nationwide priority for registered marks arguably made trademarks more like a property right, but it reflected a changing view of the national economy. The drafters of the Lanham Act understood this change to be

Likewise, many defensive doctrines that shield potential trademark defendants from liability are designed to insulate a trademark's meaning from distortion. The first-sale (or exhaustion) doctrine allows purchasers of genuine goods to dispose of them as they wish, including by resale. 4 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 25:41 (5th ed. 2019). In such cases, the trademark on the good retains its meaning—the holder of the mark remains the original source, and the resale does not distort that information. The caveat to the doctrine comes when the reseller undermines that expectation by altering or reconditioning the product. *Id.* Beyond a certain point, courts will declare that the retained trademark no longer designates source in a meaningful way, making its continued use deceptive. *Id.*

The various judicial approaches to protecting nominative trademark uses from liability are to the same effect. A nominative use is one that uses the trademark to refer to its owner, as in comparative advertising (e.g., PEPSI is better than COKE). *Id.* § 23:11. To avoid liability, such uses must not distort the mark's original meaning by making misrepresentations about its owner. So, for example, the Ninth Circuit, which formalizes protection of nominative uses in a "nominative fair use" test, asks whether the defendant "falsely suggested he was sponsored or endorsed by the trademark holder." *Adobe Sys. Inc. v. Christenson*, 809 F.3d 1071, 1081 (9th Cir. 2015).

⁹⁸ See *supra* Section II.A.

⁹⁹ Grynberg, *supra* note 27, at 64–65.

¹⁰⁰ See 15 U.S.C. § 1125(a), (c) (2018).

¹⁰¹ For example, Judge Posner has sought to justify dilution theory by arguing that even non-confusing uses of a mark might interfere with consumer associations with the original mark. See *Ty Inc. v. Perryman*, 306 F.3d 509, 511 (7th Cir. 2002).

¹⁰² *United Drug Co. v. Theodore Rectanus Co.*, 248 U.S. 90, 98 (1918).

¹⁰³ See, e.g., *id.* at 101.

¹⁰⁴ E.g., *Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961).

¹⁰⁵ See 15 U.S.C. § 1057(c) (2018).

necessary in light of the rise of nationwide markets.¹⁰⁶ Likewise, greater interstate travel made it more likely that consumers would encounter familiar marks outside of their home market.¹⁰⁷ Peaceful, remote coexistence between markholders seemed at risk, and the Lanham Act’s registration system created a mechanism to choose between remote claimants.¹⁰⁸ This logic has, however, troubling implications when applied to the internet.

C. *Stability of meaning online: Two views*

How does the internet affect a trademark’s information function? We might tell two stories—one justifying expanding trademark rights and one contracting them. Both find support in the case law.

i. The internet and the collapse of market barriers

I. *The story*

The internet facilitates the trend to more powerful marks by further breaking down barriers between markets. Just as the rise of national markets supported the Lanham Act’s establishment of nationwide priority for registered marks, the internet likewise combines previously discrete markets. On this logic, the internet makes stronger trademark rights more likely in four ways.

First, being online reduces the importance of spatial borders, uniting remote buyers and sellers irrespective of geography. This facilitates skepticism of a strong territoriality principle, weakening a key limitation to trademark rights. And indeed, some judges have argued that territoriality-based doctrines should have less room to operate in the modern age.¹⁰⁹

¹⁰⁶ See S. REP. NO. 79-1333, at 5 (1946) (“However, trade is no longer local, but is national. Marks used in interstate commerce are properly the subject of Federal regulation. It would seem as if national legislation along national lines securing to the owners of trade-marks in interstate commerce definite rights should be enacted and should be enacted now.”).

¹⁰⁷ See *id.*

¹⁰⁸ See 15 U.S.C. § 1057(c) (2018) (“Contingent on the registration of a mark on the principal register provided by this chapter, the filing of the application to register such mark shall constitute constructive use of the mark, conferring a right of priority, *nationwide in effect*, on or in connection with the goods or services specified in the registration against any other person except for a person [with prior use or registration rights].” (emphasis added)).

¹⁰⁹ For example, the *Dawn Donut* rule provides that even when a registered markholder has priority over a remote junior user, no infringement remedy is possible until there is an actual likelihood of confusion in the market. *Dawn Donut Co. v. Hart’s Food Stores, Inc.*, 267 F.2d 358, 364 (2d Cir. 1959). This requires the plaintiff to commence or be likely to commence activity in the junior user’s market; until then, the junior user may be on borrowed time, but may still operate. See *id.* at 364. This logic has been questioned in light of the growing ability for a mark to establish a reputation in an area absent actual sales. See *Circuit City Stores, Inc. v. CarMax, Inc.*, 165 F.3d 1047, 1057 (6th Cir. 1999) (Jones, J., concurring) (“The *Dawn Donut* Rule was enunciated in 1959. Entering the new millennium, our society is far more mobile than it was four decades ago. For this reason, and given that recent technological innovations such as the Internet are increasingly deconstructing geographical barriers for marketing purposes, it appears to me that a re-examination of precedents would be timely to determine whether the *Dawn Donut* Rule has

Second, the internet weakens conceptual barriers between markets, making it easier for buyers to move between proximate, but distinct, markets. One wanting an economy car is unlikely to wander into a MERCEDES showroom. But one searching for, say, a KIA online may well encounter mercedes.com. Similarly, internet merchants may use trademarks to unite even non-proximate markets from the consumer's perspective. Suppose a seller markets MERCEDES bubble gum. In the brick-and-mortar world, a buyer is relatively unlikely to encounter the product while shopping for a MERCEDES automobile. Online, however, that sort of encounter is far more likely thanks to search engines and other algorithm-driven devices that may direct traffic to related sites and advertisements.

It is also possible that the internet increases consumer exposure to confusing marks by increasing the velocity with which one moves between markets. A consumer walking through a mall will encounter a variety of stores and their affiliated marks. But the total range will be constrained both by the kinds of stores that tend to populate the malls and the speed with which the shopper can move around before needing to go elsewhere. Both constraints are reduced online, potentially increasing consumer contact with similar marks in different markets. One is more likely to bump into the marks for DELTA faucets and DELTA airlines online than when walking through a mall.

Third, as alluded to above, the internet has introduced new mechanisms for similar marks to come into contact. For example, a search for "pandora" has as its top two hits the page for the online radio station and jewelry store. Or, in the case of keyword advertising, use of a trademarked term may provoke the collision between competing marks in display advertising accompanying search results.

Fourth, and relatedly, the internet generated new ways to use trademarks, creating new avenues for the (alleged) weakening of mark meaning, like the use of trademarks in domain names and keywords discussed in greater detail below.

2. *The history*

At the turn of this century, lawmakers expanded trademark's domain in a manner consistent with the logic described above: If the internet exposes more consumers to potentially misleading mark uses, then trademark powers must be strengthened to protect the primacy of the trademark holder's version of the mark. In the late 1990s and early 2000s courts experimented with a range of doctrines to chase the novel trademark uses appearing online. Judges invoked dilution theories;¹¹⁰ they recalibrated the multifactor test for online cases;¹¹¹ and they invigorated the largely dormant doctrine of initial interest confusion.¹¹² In the domain name arena, public and private legislation stepped in to take some pressure off the courts. Congress passed the Anti-cybersquatting Consumer Protection Act ("ACPA"), and the Internet Corporation for Assigned Names and Numbers ("ICANN") instituted the Uniform

outlived its usefulness.").

¹¹⁰ See, e.g., *Panavision Int'l, L.P. v. Toeppen*, 141 F.3d 1316, 1319 (9th Cir. 1998).

¹¹¹ See, e.g., *GoTo.com, Inc. v. Walt Disney Co.*, 202 F.3d 1199, 1205 (9th Cir. 2000).

¹¹² See, e.g., *Brookfield Commc'ns, Inc. v. W. Coast Entm't Corp.*, 174 F.3d 1036, 1062-63 (9th Cir. 1999).

Domain Name Dispute Resolution Policy (“UDRP”), which funneled trademark-based domain name disputes into the private dispute resolution process.¹¹³

Many of these cases rested, in part, on the concern that consumers would encounter trademarks in unfamiliar settings without the distinguishing context consumers rely on in more familiar markets.¹¹⁴ Because the internet collapses market boundaries, this context could not be relied upon as it had been in the past.¹¹⁵

That logic seems to counsel continued growth for trademark rights if stability of meaning is what matters. The internet puts us on a slope whose endpoint is in essence powerful trademarks in one (global) market. But courts have not gone so far. Their reluctance fits another story we can tell about the relationship between the internet and trademark information.

ii. The internet and the retreat of trademark authority

I. The story

We might instead view the internet as a direct attack on the trademark model of authority. On this view, the internet’s ability to undermine expert gatekeepers and enable alternative communities of meaning, each with their own incompatible “truths,”¹¹⁶ extends to trademarks. For example, some trademarks have different owners in different nations. If the internet truly collapses markets in a way that requires trademark exclusivity, this should be untenable. But of course it isn’t. Hasbro owns the SCRABBLE mark in the United States and Canada; a subsidiary of Mattel owns it in the rest of the world.¹¹⁷ The internet lets consumers become aware of these incompatible uses and, with filtering, they may choose an extraterritorial definition of SCRABBLE. As it is, SCRABBLE-related web pages of both companies are accessible online.¹¹⁸ Life goes on. Internet users are capable of

¹¹³ Michael Grynberg, *More Than IP: Trademark Among the Consumer Information Laws*, 55 WM. & MARY L. REV. 1429, 1485–86 (2014).

¹¹⁴ See, e.g., *Playboy Enters., Inc. v. Netscape Commc’ns Corp.*, 354 F.3d 1020, 1025 (9th Cir. 2004) (arguing that online ads keyed to trademark terms might constitute infringement even if consumers immediately realize upon landing on the linked website that it is unrelated to the plaintiff); *GoTo.com, Inc.*, 202 F.3d at 1206 (“Whereas in the world of bricks and mortar, one may be able to distinguish easily between an expensive restaurant in New York and a mediocre one in Los Angeles, the Web is a very different world.” (citation omitted)).

¹¹⁵ See *GoTo.com, Inc.*, 202 F.3d at 1205 (“In the context of the Web in particular, the three most important *Sleekcraft* factors are (1) the similarity of the marks, (2) the relatedness of the goods or services, and (3) the ‘simultaneous use of the Web as a marketing channel.’” (citation omitted)).

¹¹⁶ See *supra* Section III.A.

¹¹⁷ *Welcome to the Official Worldwide SCRABBLE Home Page*, SCRABBLE, www.scrabble.com [<https://perma.cc/B2K2-UBD6>] (“SCRABBLE® is a registered trademark. All intellectual property rights in and to the game are owned in the U.S.A and Canada by Hasbro Inc., and throughout the rest of the world by J.W. Spear & Sons Limited of Maidenhead, Berkshire, England, a subsidiary of Mattel Inc. Mattel and Spear are not affiliated with Hasbro.”).

¹¹⁸ *Compare Scrabble*, MATEL GAMES, <http://www.mattelgames.com/en-my/scrabble> [<https://perma.cc/U8X2-KX5U>] (showing the Mattel Scrabble website for the game available outside of the United States and Canada), *with SCRABBLE*, <https://scrabble.hasbro.com/en-us> [<https://perma.cc/S6Z9-RGJZ>] (showing the Hasbro Scrabble website for the game available in the United States and Canada).

segmenting themselves into belief communities that dispute the curvature of the earth; the ability to vary trademark definitions seems trivial in comparison.¹¹⁹

Moreover, the accumulation and persistence of data online likely make this state of affairs inevitable. No amount of trademark policing will remove all references to alternative mark uses. Even if, for example, the European Union were to convince the United States to grant certification mark rights to “parmesan” cheese,¹²⁰ the existing generic uses of the term would likely linger online long after store shelves come into compliance. This would also be true of infringing uses, for stamping them out not only requires removing all directly infringing uses, which is difficult, but also any references to them, which is impossible if the referrals are not themselves actionable. To the extent nothing is forgotten online, fodder for alternative trademark narratives will likely always be present. While this may undermine trademark reliability in some cases, it also unlocks positive information externalities by allowing sellers to communicate brand similarity where such uses do not create a risk of source confusion at the point of sale.¹²¹

2. *The history*

Early online trademark cases were notorious for treating consumers as incapable of appreciating the context of certain novel trademark uses. For example, defendants faced liability for attempts to be listed in a search engine result for trademarked terms.¹²² The fact that the defendant website was clearly distinguishable from the plaintiffs’ often did not matter.¹²³ The harm, such as it was, was the potential errant click from a search results page.¹²⁴

Though the logic of these cases rested to a large extent on free-riding considerations, they treated the act of arriving on the “wrong” site as something beyond the consumer’s control and, therefore, responsibility.¹²⁵ Over time, however, courts have gradually become more appreciative of consumers’ ability to consider context.¹²⁶ They are increasingly likely to see internet users as more sophisticated as a normative matter, regardless of whether this is true empirically.¹²⁷

The shift can be seen in the Ninth Circuit’s treatment of *Amazon.com*,¹²⁸ which in some ways might be seen as a forerunner of the hypothesized AI of the thought

¹¹⁹ In the Scrabble case, of course, the companies are marketing a game that is largely, though not completely, identical. In other cases, a similar mark name might involve greater differences from nation to nation. *See generally, e.g.,* Harrods Ltd. v. Sixty Internet Domain Names, 302 F.3d 214 (4th Cir. 2002) (discussing two companies with the same rights to use “Harrods” in separate geographic regions).

¹²⁰ In the United States, many cheeses claim to be “parmesan” but the certification mark for the region-specific product is PARMIGIANO-REGGIANO. *See* PARMIGIANO-REGGIANO, Registration No. 1,896,683.

¹²¹ Grynberg, *supra* note 27, at 62 n.215, 62–63.

¹²² *See, e.g.,* Brookfield Commc’ns, Inc. v. W. Coast Entm’t Corp., 174 F.3d 1036, 1062–67 (9th Cir. 1999).

¹²³ *See, e.g., id.* at 1062.

¹²⁴ *See id.*

¹²⁵ *See generally* Michael Grynberg, *The Road Not Taken: Initial Interest Confusion, Consumer Search Costs, and the Challenge of the Internet*, 28 SEATTLE U. L. REV. 97 (2004) (providing an analysis of case law).

¹²⁶ *See, e.g.,* Toyota Motor Sales, U.S.A., Inc. v. Tabari, 610 F.3d 1171, 1178–79 (9th Cir. 2010).

¹²⁷ *Compare id.* at 1178 (contending that consumers who shop on the internet are generally sophisticated), *with id.* at 1185–86 (Fernandez, J., concurring) (disputing contention).

¹²⁸ *See* Multi Time Mach., Inc. v. Amazon.com, Inc., 804 F.3d 930, 933 (9th Cir. 2015) (issuing a

experiment. It is highly algorithmic; it functions in large part by “knowing” the consumer; and it limits the importance of traditional trademarks and brands. The next Part considers this claim in greater detail.

IV. NASCENT AIs

Various forms of artificial intelligence already influence consumer choices online.¹²⁹ We may be a long way off from the AI of the hypothetical, but trademark law is already addressing a world of machine-guided purchasing.

In this, Amazon.com provides a helpful illustration of many of the trademark issues described above. As Amazon customers know, the website guides consumer purchases by providing search suggestions that draw on a massive database of product information as well as individual consumer data, reflected by past purchases and browsing history. Amazon is also working hard to make its AI technology a more active participant in consumer purchasing decisions.¹³⁰

judgment in favor of Amazon.com upon finding that “no reasonably prudent consumer accustomed to shopping online would [] be confused as to the source of the products” in Amazon’s search results).

¹²⁹ See, e.g., Blake Morgan, *How Amazon has Reorganized Around Artificial Intelligence and Machine Learning*, FORBES (July 16, 2018, 2:37 PM), <https://www.forbes.com/sites/blakemorgan/2018/07/16/how-amazon-has-re-organized-around-artificial-intelligence-and-machine-learning/#252ad94d7361> [<https://perma.cc/M7WW-PPTE>] (“AI also plays a huge role in Amazon’s recommendation engine, which generates 35% of the company’s revenue. Using data from individual customer preferences and purchases, browsing history and items that are related and regularly bought together, Amazon can create a personalized list of products that customers actually want to buy.”). And there is no shortage of breathless predictions surrounding the purported benefits. See Paul Roetzer, *This AI Tool Gets Retail Customers to Buy More—and Get Smarter Over Time*, MARKETING ARTIFICIAL INTELLIGENCE INST. (July 12, 2018), <https://www.marketinginstitute.com/blog/this-ai-tool-gets-retail-customers-to-buy-more-and-get-smarter-over-time> [<https://perma.cc/E8BB-EQ5J>] (advertising a particular technology); see also *The Future of Artificial Intelligence in Consumer Experience: According to the AT&T Foundry*, ROCKETSPACE, <https://www.rocketSPACE.com/hubfs/accelerator/the-future-of-artificial-intelligence.pdf?hsLang=en-us> [<https://perma.cc/3S5C-MKXG>] (“Due to a deep comprehension of the customer, brands will provide sublime experiences catered to users’ behavioral patterns. Everything from shopping to driving will draw from user behavior to become highly pertinent and personalized to the end consumer. Intelligent prediction and optimization will allow the consumer to feel that each branded product or experience is made just for them.”).

¹³⁰ As Jeff Bezos stated in his 2017 letter to shareholders:

At Amazon, we’ve been engaged in the practical application of machine learning for many years now. Some of this work is highly visible: . . . [including] Alexa, our cloud-based AI assistant. . . .

But much of what we do with machine learning happens beneath the surface. Machine learning drives our algorithms for demand forecasting, product search ranking, product and deals recommendations, merchandising placements, fraud detection, translations, and much more. Though less visible, much of the impact of machine learning will be of this type – quietly but meaningfully improving core operations.

Taylor Soper, *Full Text: In Annual Shareholder Letter, Jeff Bezos Explains Why it will Never be Day 2 at Amazon*, GEEKWIRE (Apr. 12, 2017, 8:22 AM), <https://www.geekwire.com/2017/full-text-annual-letter-amazon-ceo-jeff-bezos-explains-avoid-becoming-day-2-company/> [<https://perma.cc/UVV9-UKM6>].

Consumers naturally use the site to search for specific trademarked goods.¹³¹ But as discussed in the following subparts, Amazon.com also shows three ways that the coming world may deemphasize trademarks and trademark law. First, the site uses trademark information to generate alternative options to searched-for products.¹³² This practice has survived a legal challenge, reflecting the increasing judicial comfort with limiting trademark holder authority online.¹³³ Second, the Amazon website limits the importance of trademarks.¹³⁴ For many, the Amazon platform matters more than the marks found on it. Those consumers who prefer the Amazon ecosystem to shopping elsewhere appear to pay less attention to trademark information than the traditional story of trademark law would suggest. Their actions are more in line with the world of the hypothesized AI. Third, the platform presents more than its share of problems as a model AI (particularly its lack of loyalty to its customers), but these problems are not trademark problems.¹³⁵

A. Amazon and trademark's online retreat

As discussed in Part II, developments in AI may reduce the importance of trademarks to ultimate purchasing decisions.¹³⁶ Doctrinally, this would mean that consumers (or their avatars) will be expected to assume a greater role in assessing the context of third-party trademark uses, rather than letting trademark holders control them.

*Multi Time Machine, Inc. v. Amazon.com, Inc.*¹³⁷ takes a large step in this direction. The watchmaker Multi Time Machine (“MTM”) objected to Amazon.com’s use of its marks to arrange information for site users.¹³⁸ Amazon does not carry MTM watches.¹³⁹ When Amazon received search queries for the “MTM special ops” brand, it still returned a results list that included competing brands.¹⁴⁰ Amazon did not simply advise the searcher of the brand’s absence from Amazon.¹⁴¹

All of the search results were labeled accurately, but MTM nonetheless alleged potential initial interest confusion.¹⁴² The purported danger was that consumers might speculate about a connection between the searched-for trademark and the

¹³¹ Amazon rivals Google with respect to use for product search. Krista Garcia, *More Product Searches Start on Amazon*, EMARKETER (Sept. 7, 2018), <https://www.emarketer.com/content/more-product-searches-start-on-amazon> [https://perma.cc/C9DQ-ZPXS] (“A number of consumer surveys have shown that more US digital shoppers now start their searches on Amazon. Nearly half (46.7%) of US internet users started product searches on Amazon compared with 34.6% who went to Google first, according to a May 2018 Adeptmind survey.”).

¹³² See *infra* Section IV.A.

¹³³ See *infra* Section IV.A.

¹³⁴ See *infra* Section IV.B.

¹³⁵ See *infra* Section IV.C.

¹³⁶ See *supra* Part II.

¹³⁷ 804 F.3d 930 (9th Cir. 2015).

¹³⁸ *Id.* at 932–33.

¹³⁹ *Id.* at 932.

¹⁴⁰ *Id.* at 932–33.

¹⁴¹ *Id.* at 936.

¹⁴² *Id.*

returned results.¹⁴³ The dissent treated the concern as plausible.¹⁴⁴ Nonetheless, the majority imputed a higher level of sophistication on the part of Amazon.com users:

MTM argues that initial interest confusion might occur because Amazon lists the search term used—here the trademarked phrase “mtm special ops”—three times at the top of the search page. MTM argues that because Amazon lists the search term “mtm special ops” at the top of the page, a consumer might conclude that the products displayed are types of MTM watches. But, merely looking at Amazon’s search results page shows that such consumer confusion is highly unlikely. None of these watches is labeled with the word “MTM” or the phrase “Special Ops,” let alone the specific phrase “MTM Special Ops.” . . . [N]o reasonably prudent consumer accustomed to shopping online would view Amazon’s search results page and conclude that the products offered are MTM watches. It is possible that someone, somewhere might be confused by the search results page. But, “[u]nreasonable, imprudent and inexperienced web-shoppers are not relevant.”¹⁴⁵

In the court’s view, internet users are capable of reading information in context. The majority trusted (and expected) consumers to understand that the returned results meant “these are results *similar* to the watch brand you entered” and not “these are results *sponsored by* (or affiliated with) the watch brand you entered.” In making this assumption, the court allowed Amazon and its users to take advantage of the information externalities of the MTM mark. These spillovers provided Amazon with an efficient mechanism for communicating the existence of alternatives to MTM’s product.

But what of the “costs” of the activity? Even if there is no risk of source confusion, given the accurate labeling of the search results, some consumers are looking for a particular brand and *only* that brand. Isn’t there a cost to making them cut through the clutter to find the branded result? Here, the opinion accepts that trademark law can only do so much. The nature of the internet means that there always will be clutter that accompanies any search. Consumers would still face the task of sorting results even if MTM had prevailed:

Further, some of the products listed are not even watches. The sixth result

¹⁴³ *Id.* at 933, 938. This purported danger finds some support in other cases. *See, e.g.*, *Maker’s Mark Distillery, Inc. v. Diageo North America, Inc.*, 679 F.3d 410, 424 (6th Cir. 2012); *Brookfield Commc’ns, Inc. v. W. Coast Entm’t Corp.*, 174 F.3d 1036, 1057 (9th Cir. 1999); *see also supra* text accompanying notes 39–46.

¹⁴⁴ *Multi Time Mach., Inc.*, 804 F.3d at 940 (Bea, J., dissenting) (“Because I believe that an Amazon shopper seeking an MTM watch might well initially think that the watches Amazon offers for sale when he searches ‘MTM Special Ops’ are affiliated with MTM, I must dissent.”). Indeed, Judge Bea initially authored a majority opinion in MTM’s favor, but it was superseded and replaced by the opinion discussed in the text. *Multi Time Mach., Inc. v. Amazon.com, Inc.*, 792 F.3d 1070 (9th Cir. 2015), *withdrawn and superseded on reh’g*, 804 F.3d 930 (9th Cir. 2015).

¹⁴⁵ *Multi Time Mach., Inc.*, 804 F.3d at 938 (majority opinion) (quoting *Toyota Motor Sales, U.S.A., Inc. v. Tabari*, 610 F.3d 1171, 1176 (9th Cir. 2010)).

is a book entitled “**Survive!: The Disaster, Crisis and Emergency Handbook** by Jerry Ahem.” The tenth result is a book entitled “**The Moses Expedition: A Novel** by Juan Gómez–Jurado.” No reasonably prudent consumer, accustomed to shopping online or not, would assume that a book entitled “The Moses Expedition” is a type of MTM watch or is in any way affiliated with MTM watches.¹⁴⁶

This is the filtration information model at work. All sorts of data are out there; this clutter requires the use of search tools to sift and categorize information. Our choices may or may not be compatible with the desires of trademark holders, but the markholders cannot dictate them. In essence, the majority accepts that “mtm special ops” is a term around which multiple communities of meaning may arise. Consumers have both the freedom to sort the data surrounding the term and the obligation to own the task. The trademark holder has no privileged authority beyond a very narrow class of meanings (in this case, watches specifically branded MTM SPECIAL OPS).

Multi Time Machine’s embrace of context echoes other cases. In *Network Automation, Inc. v. Advanced Systems Concepts, Inc.*, the Ninth Circuit considered the issue of trademark-triggered advertising, concluding that such advertising does not create liability unless the displayed advertisement *itself* creates likely confusion.¹⁴⁷ Specifically, the court modified the use of the multifactor test in keyword advertising cases:

[T]he most relevant factors to the analysis of the likelihood of confusion are: (1) the strength of the mark; (2) the evidence of actual confusion; (3) the type of goods and degree of care likely to be exercised by the purchaser; and (4) the labeling and appearance of the advertisements and the surrounding context on the screen displaying the results page.¹⁴⁸

This fourth factor, absent from the traditional multifactor test,¹⁴⁹ effectively brings false advertising thinking into the case.

The result echoes a point made above: False advertising doctrine is often a better option than trademark law for addressing certain allegedly misleading activities involving trademarks online.¹⁵⁰ And, as did *Multi Time Machine*, the opinion accepts that the online world requires consumers to sort through context without automatically making assumptions based on the mere presence of a trademark. If there is liability to be had by pairing information with a mark, there should be something actionable about that information as reflected by advertising and other “surrounding context.”¹⁵¹

Domain names provide a final example of the liberalization of online use of trademarks. *Toyota Motor Sales, U.S.A., Inc. v. Tabari* uses the nominative fair use

¹⁴⁶ *Id.*

¹⁴⁷ See *Network Automation, Inc. v. Advanced Sys. Concepts, Inc.*, 638 F.3d 1137, 1149, 1154 (9th Cir. 2011).

¹⁴⁸ *Id.* at 1154.

¹⁴⁹ See *id.* at 1153–54.

¹⁵⁰ See *supra* Section II.B.3.

¹⁵¹ See *Network Automation*, 638 F.3d at 1154.

doctrine to allow the unauthorized use of trademarks in third-party domain names.¹⁵² The opinion sees consumers as knowing better than to attach too much importance to the appearance of a trademark in a domain name when the URL contains other information:

[Consumers] fully expect to find some sites that aren't what they imagine based on a glance at the domain name or search engine summary. Outside the special case of trademark.com, or domains that actively claim affiliation with the trademark holder, consumers don't form any firm expectations about the sponsorship of a website until they've seen the landing page—if then. This is sensible agnosticism, not consumer confusion.¹⁵³

The opinion also appreciates the range of purposes that might surround the use of a mark within a domain name:

But the case where the URL consists of nothing but a trademark followed by a suffix like .com or .org is a special one indeed. The importance ascribed to trademark.com in fact suggests that far less confusion will result when a domain making nominative use of a trademark includes characters in addition to those making up the mark. Because the official Lexus site is almost certain to be found at lexus.com (as, in fact, it is), it's far less likely to be found at other sites containing the word Lexus. On the other hand, a number of sites make nominative use of trademarks in their domains but are not sponsored or endorsed by the trademark holder: You can preen about your Mercedes at mercedesforum.com and mercedestalk.net, read the latest about your double-skim-no-whip latte at starbucks gossip.com and find out what goodies the world's greatest electronics store has on sale this week at fryselectronics-ads.com. Consumers who use the internet for shopping are generally quite sophisticated about such matters and won't be fooled into thinking that the prestigious German car manufacturer sells boots at mercedesboots.com, or homes at mercedeshomes.com, or that comcastsucks.org is sponsored or endorsed by the TV cable company just because the string of letters making up its trademark appears in the domain.¹⁵⁴

In other words, different online communities of meaning may grow up around trademarks without harm to consumers.

B. One brand to rule them all?

As discussed above, the information-simplification offered by trademarks is a double-edged sword. When consumers shop for favored brands that satisfy

¹⁵² Toyota Motor Sales, U.S.A., Inc. v. Tabari, 610 F.3d 1171, 1175–77 (9th Cir. 2010).

¹⁵³ *Id.* at 1179 (citation omitted).

¹⁵⁴ *Id.* at 1178 (citations omitted).

established preferences, they avoid a costlier search process that might lead them to better results.¹⁵⁵ The hypothesized AI offers a way out by doing the work of compiling the data that would identify better products.¹⁵⁶ The resulting marketplace would deemphasize trademarks in important respects.¹⁵⁷

But today's second-best world shows another way AIs may deemphasize trademarks. As illustrated by *Multi Time Machine*, many Amazon users engage in another form of information simplification. By shopping at Amazon.com, they limit their search to the Amazon ecosystem. That choice sets the range of available trademarks. Rather than searching by selecting from among trademarks, many Amazon users select Amazon, relying on its algorithms to narrow the range of possibilities. To the extent particular brand names are not Amazon offerings, they are excluded.¹⁵⁸ They remain available elsewhere, but they are pre-filtered from consideration. Stated another way, there is trademark work going on, but it applies to platform competition (the selection of Amazon) and not necessarily purchasing decisions beyond that (what is bought on Amazon).¹⁵⁹

¹⁵⁵ See *supra* Section II.A.

¹⁵⁶ See *supra* Sections I.B, II.A.

¹⁵⁷ See *supra* Section II.A.

¹⁵⁸ Indeed, this selection effect is particularly strong for Amazon Prime users:

Amazon Prime users are both more likely to buy on its platform and less likely to shop elsewhere. “[Sixty-three percent] of Amazon Prime members carry out a paid transaction on the site in the same visit,” compared to 13% of non-Prime members. For Walmart and Target, those figures are 5% and 2% respectively. One study found that less than 1% of Amazon Prime members are likely to consider competitor retail sites in the same shopping session.

Lina M. Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710, 752 (2017) (footnotes omitted) (quoting Clare O'Connor, *Walmart and Target Being Crowded Out Online by Amazon Prime*, FORBES (Apr. 6, 2015, 12:59 PM), <http://www.forbes.com/sites/clareoconnor/2015/04/06/walmart-and-target-being-crowded-out-online-by-amazon-prime> [<https://perma.cc/X6WC-6C7J>]).

¹⁵⁹ To be sure, this kind of information masking exists in traditional offline purchase decisions, as when consumers choose to shop at a Wal-Mart or Target, and those choices allow consumers to offload some amount of search costs to the retailer:

Retailers also reduce manufacturer-consumer transaction costs by satisfying the needs of consumer niche markets more cheaply than manufacturers can. Determining consumer needs is costly; it includes costs to aggregate data, analyze it, and respond to identified needs. For manufacturers trying to cater to multiple, diverse, and far-flung consumer segments, it can be cost-prohibitive to learn and understand the needs of every consumer niche, especially small niches. In contrast, retailers can cater to consumer niches, such as specific geographies or industries.

Goldman, *supra* note 50, at 413. But online retailers may have features—the ability to mine data at the individual level, a greater breadth of possible offerings, and an ability to offer tailored nudges—that may make online retailers different in kind:

Retailers often leverage their power and custody of the consumer to swap out brands for their own private label. That's nothing new. Only we've never seen any retailer this good at it. Amazon, armed with infinite capital provided by eager investors, is leading a war on brands to starch the margin from brands and deliver it back to the consumer.

SCOTT GALLOWAY, *THE FOUR: THE HIDDEN DNA OF AMAZON, APPLE, FACEBOOK, AND GOOGLE* 51–52 (2017); cf. Khan, *supra* note 158, at 782 (noting that while traditional retailer stores sometimes use house brands to compete in vertical markets, such stores “are generally only able to collect information on actual sales, [while] Amazon tracks

Amazon’s power here is such that it has supplanted Google as the leading starting point for product search,¹⁶⁰ notwithstanding Google’s comparative neutrality with respect to product selection (as it is not involved with retail sales and fulfillment to the extent that Amazon is).¹⁶¹

The phenomenon of Amazon’s increased use of its own and affiliated brands suggests the vulnerability of trademarks to platform selection. Many Amazon.com searches direct users to affiliated brands with little renown or goodwill outside of Amazon.¹⁶² The success of the practice may illustrate an antitrust issue,¹⁶³ but it also highlights the ability of a consumer agent to negate the power of brands. In the case of Amazon, it allows affiliated brands to develop what looks like near-instantaneous goodwill. Indeed, Amazon’s power is so strong that many of these upstart marks break basic rules of brand attractiveness but nonetheless find their place in the Amazon universe. For example:

A search for “three piece suit” on Amazon returns a litany of budget brands like YFFUSHI, WULFUL and WEEN CHARM. Ungainly names aside, some of these labels have been positively reviewed, overcoming the considerable challenges of branding, and marketing, to an audience thousands of miles away, and sometimes relying on the Amazon seller marketplace and using the company to handle fulfillment — warehousing and shipping, basically.¹⁶⁴

For this to happen, trademarks cannot be performing as much work as the traditional trademark story would suggest. Traditional trademark uses (which brand of pants should I buy on Amazon.com?) are simply less important in the Amazon-mediated environment (which pants does Amazon suggest?).

It is entirely possible, of course, that in the near term, the net effect of online technology is to raise, rather than lower, the importance of strong trademarks. If the internet makes available more marks in a product category than could ever be found in a store, then looking to well-known marks is one way to manage the prospect of information overload.¹⁶⁵ Sure.¹⁶⁶ But there is no reason to assume that consumers

what shoppers are searching for but cannot find, as well as which products they repeatedly return to, what they keep in their shopping basket, and what their mouse hovers over on the screen”).

¹⁶⁰ Garcia, *supra* note 131.

¹⁶¹ Cf. John Herman, *Everything on Amazon is Amazon!*, N.Y. TIMES (Nov. 15, 2018), <https://www.nytimes.com/2018/11/15/style/this-is-also-amazon.html> [<https://perma.cc/T5DL-PDAD>].

¹⁶² See *id.* (“There are vanishingly few types of consumer goods that you can’t buy, in some form, on Amazon. But it is missing plenty of *brands*. In 2009, the company started selling products under its own name. It soon moved beyond the first AmazonBasics—items including budget electronics and batteries—to a wider range of Amazon-branded products. This was followed by an explosion of company-owned brands, including dozens with Amazon-free names.”).

¹⁶³ Khan, *supra* note 158, at 780–83.

¹⁶⁴ Herman, *supra* note 161.

¹⁶⁵ See Jacob Jacoby et al., *Brand Choice Behavior as a Function of Information Load*, 11 J. MARKETING RES. 63, 68 (1974); see also Goldman, *supra* note 50, at 414–16.

¹⁶⁶ But see *supra* note 159 and accompanying text (discussing online retailers’ ability to manage information for consumers); *infra* note 168 and accompanying text.

will forever be making the final decision themselves. Designating an agent to compile a list of options is just a step along the way to trusting it to choose from among the list or, as already happens, being open to its nudges.¹⁶⁷ And in any case, there is already evidence that brands occupy less of our mental space than they did in the past.¹⁶⁸

C. Controlling avatars

This Article uses a conception of AI to examine trademark law, not vice versa. That said, thinking of Amazon.com as an AI forerunner also illustrates some potential dangers of offloading decisions to our digital assistants.

First, of course, the Amazon AI is a far cry from the thought experiment in terms of capabilities. These limits may have trademark effects in simple ways. For example, Amazon programming often recommends products based on past purchases,¹⁶⁹ thus potentially exacerbating the problem of consumer inertia (where future, better technology might ameliorate it).¹⁷⁰

Second, Amazon's business practices raise concerns regarding the competitive marketplace. These exist with respect to its marketing and shipping infrastructure, but also the data Amazon has about its customers, which gives Amazon a competitive advantage.¹⁷¹ A similar issue exists with respect to whether consumer-focused AI needs access to data about general consumer preferences in order to be effective in assisting particular consumers. Competitive considerations aside, privacy concerns may complicate compiling such data.¹⁷²

Third, more powerful AIs may be used to manipulate consumers into suboptimal behavior,¹⁷³ be it purchasing second-best goods, engaging in needless transactions, or simply continuing to generate valuable data for the creation of other products.¹⁷⁴ Likewise, the AI may systematically direct consumers to purchases selected to serve someone else's needs. Rather than a bespoke world of goods and services tailored precisely to individual consumer preferences, the marketplace may simply be one of a few uber-brands using AI to serve their needs, manufacturing consumer preferences as necessary. Aspects of that problem already confront us, as the technologies that were touted as liberating or empowering individuals now manipulate them on a scale (in terms of the number of people receiving individually

¹⁶⁷ These nudges may be easier to implement when we order by voice rather than interacting with a screen. GALLOWAY, *supra* note 159, at 51 ("In key categories like batteries, Alexa will suggest Amazon Basics, their private label, and play dumb about other choices ("Sorry, that's all I found!") when there are several other brands on amazon.com.").

¹⁶⁸ *Id.* at 48 ("In 2004, 47 percent of affluent consumers could name a favorite retail brand; six years later that number dropped to 28 percent."); *id.* at 50 (noting a declining "percentage of affluents who can identify a 'favorite brand'" in the categories of fashion, jewelry, luxury hotels, and retailer).

¹⁶⁹ Morgan, *supra* note 129.

¹⁷⁰ See *supra* text accompanying notes 33–35.

¹⁷¹ See Khan, *supra* note 158, at 782–83.

¹⁷² See generally ZUBOFF, *supra* note 18.

¹⁷³ See, e.g., Calo, *supra* note 19, at 1021 ("[D]igital market manipulation combines, for the first time, a certain kind of *personalization* with the intense *systemization* made possible by mediated consumption.").

¹⁷⁴ ZUBOFF, *supra* note 18, at 377, 451.

calibrated nudges) never conceived of before the advent of the internet.¹⁷⁵ Engineering machines to do so is itself an academic discipline.¹⁷⁶

This problem is not, however, one of trademark, but rather loyalty.¹⁷⁷ The Amazon AI and those to follow in its footsteps are suspect because they serve someone other than the consumers they purport to assist.¹⁷⁸ The dilemma may not be

¹⁷⁵ See, e.g., ROGER MCNAMEE, ZUCKED: WAKING UP TO THE FACEBOOK CATASTROPHE 85 (2019) (“The artificial intelligences of companies like Facebook (and Google) now include behavioral prediction engines that anticipate our thoughts and emotions, based on patterns found in the reservoir of data they have accumulated about users. Years of Likes, posts, shares, comments, and Groups have taught Facebook’s AI how to monopolize our attention.”); O’NEIL, *supra* note 17, at 183–85 (describing experiments in how Facebook, Google, and other search engines may manipulate users); Jon Brooks, *Tech Insiders Call Out Facebook for Literally Manipulating Your Brain*, KQED (May 25, 2017), <https://www.kqed.org/futureofyou/379828/tech-insiders-call-out-facebook-for-literally-manipulating-your-brain> [<https://perma.cc/LBJ6-DHWX>]; Vinu Goel, *Facebook Tinkers with Users’ Emotions in News Feed Experiment, Stirring Outcry*, N.Y. TIMES (June 29, 2014), <https://www.nytimes.com/2014/06/30/technology/facebook-tinkers-with-users-emotions-in-news-feed-experiment-stirring-outcry.html> [<https://perma.cc/7T8X-CRE8>]; Trevor Haynes, *Dopamine, Smartphones & You: A Battle for Your Time*, HARVARD U.: SCI. NEWS (May 1, 2018), <http://sitn.hms.harvard.edu/flash/2018/dopamine-smartphones-battle-time/> [<https://perma.cc/NL23-5BN3>]; Hope Reese, *Break Up with Your Smartphone*, VOX (Feb. 9, 2018, 10:10 AM), <https://www.vox.com/conversations/2018/2/9/16994794/smartphone-tech-addiction> [<https://perma.cc/MJD4-NFVV>]; James Vincent, *Former Facebook Exec Says Social Media is Ripping Apart Society*, VERGE (Dec. 11, 2017, 6:07 AM), <https://www.theverge.com/2017/12/11/16761016/former-facebook-exec-ripping-apart-society> [<https://perma.cc/BJ2X-RB7H>].

¹⁷⁶ B.J. FOGG, PERSUASIVE TECHNOLOGY: USING COMPUTERS TO CHANGE WHAT WE THINK AND DO 5 (2003) (“[C]aptology focuses on the design, research, and analysis of interactive computing products created for the purpose of changing people’s attitudes or behaviors. It describes the area where technology and persuasion overlap.” (citation omitted)). For an account of how these techniques may be used, see NIR EYAL WITH RYAN HOOVER, HOOKED: HOW TO BUILD HABIT-FORMING PRODUCTS 179–80 (2014).

¹⁷⁷ Jack M. Balkin, *Information Fiduciaries and the First Amendment*, 49 U.C. DAVIS L. REV. 1183, 1227 (2016) (“[O]nline service providers present the familiar problems that generally give rise to fiduciary obligations. First, there are significant asymmetries of knowledge and information between online service providers and end-users. Second, it is very difficult for end-users to verify online companies’ representations about data collection, security, use, and dissemination. Third, it is very difficult for end-users to understand what online companies do with their data and how data analysis and use affects their interests. Fourth, even if end-users understood these information practices, it would be almost impossible for end-users to monitor them.”).

¹⁷⁸ As observed about the—now quaint—problems of targeted advertising, current technology is at odds with the promise of AIs that would serve consumer needs:

The idealists foresaw a day when ad platforms would be like a loyal valet who detected his master’s needs before he was aware of them, who suggested a new pair of shoes as a reasonably priced replacement for those you hadn’t noticed were wearing out. Perhaps he would remind you of your mother-in-law’s birthday while offering to send an appropriate gift at a one-day discount.

But the gap between this theory and its execution was wide enough to march Kitchener’s Army through it. Google’s CEO Eric Schmidt had once said that the ideal was to “get right up to the creepy line and not cross it.” Unfortunately, by the mid-2010s, that line was being crossed constantly. While promising to be “helpful” or “thoughtful,” what was delivered was often experienced as “intrusive” and worse. Some ads seemed more like stalkers than valets: if, say, you’d been looking at a pair of shoes on Amazon, an ad for just those shoes would begin following you around the web, prodding you to take another look at them.

TIM WU, THE ATTENTION MERCHANTS: THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS 323 (2016) (footnotes omitted). Whether the tailored ads are hidden manipulation or seem more like overt harassment may to some extent be a question of technical sophistication. As Wu observes, many ads:

satisfied by competition, particularly if top-of-the-line AI proves to be the product of a winner-take-all market or if the data necessary to make it effective is a byproduct of a dominant share of some other market. Perhaps the issue can be addressed by antitrust law, but it may be necessary to mandate a duty of loyalty for consumer digital avatars. This issue would be, to say the least, complex as it reintroduces the difficult question, ducked above, of what loyalty means given the difficulty of determining what consumer preferences actually are.¹⁷⁹

V. THE LARGER LIMITS OF TRADEMARK

Trademark law's inability to meet these challenges points the way to other doctrines. Perhaps false advertising, antitrust, or consumer protection laws will fill the necessary gaps. Perhaps entirely new doctrines and bodies of law will emerge to fetter AI and promote consumer interests.

Whatever fills the gap, before long the law will have to squarely face the question not only of what consumers want descriptively, but also—because the answer to this question is a byproduct of consumer interactions with AI technology—what they *should* want as a normative matter.

We already face the question in the much-bemoaned problem of online fake news. Fake news illustrates a number of this Article's themes. First, it illustrates the death of authority online.¹⁸⁰ There are no curators who might make these falsehoods hard to find. Instead, they are cheaply created and waiting online for anyone to find and use as they see fit.¹⁸¹

Second, fake news shows the limits of trademarks in the online world (and the increasing importance of platforms¹⁸²). We might have thought that trademark law would be the natural solution to fake news. Given the high volume of falsehoods online, reputable news sites should rise to the top of the information market, limiting the reach of false stories and conspiracy theories.¹⁸³

... turned out to be more of a studied exploitation of one's weaknesses. The overweight were presented with diet aids; the gadget-obsessed plied with the latest doodads; gamblers encouraged to bet; and so on. One man, after receiving a diagnosis of pancreatic cancer, found himself followed everywhere with "insensitive and tasteless" ads for funeral services. The theoretical idea that customers might welcome or enjoy such solicitations increasingly seemed like a bad joke.

Id. at 323–24.

¹⁷⁹ See *supra* note 21.

¹⁸⁰ See *supra* Part III.

¹⁸¹ See, e.g., SANGER, *supra* note 84, at 185 (describing activities of Russian fake news operations during the 2016 Presidential campaign, observing that for "a fraction of the cost for an evening of television advertising on a local American television station. . . . Putin's trolls reached up to 126 million Facebook users, while on Twitter they made 288 million impressions").

¹⁸² See *supra* Part IV.

¹⁸³ Some sites do not mimic any particular page, but rather strive simply to look like a news outlet, and that is enough in many cases. See Abby Ohlheiser, *This is how Facebook's Fake-news Writers Make Money*, WASH. POST (Nov. 18, 2016), https://www.washingtonpost.com/news/the-intersect/wp/2016/11/18/this-is-how-the-internets-fake-news-writers-make-money/?utm_term=.bda32a90ed2a [https://perma.cc/WG82-NFEW]. It is likewise easy to create the appearance of advocacy group activities. For example, during the 2016 campaign, the Internet Research Agency, a Russian organization operating in St. Petersburg, organized a "Stop Islamization of

But trademarks have simply proven to be unequal to the task. Part of the problem is the role of platforms. Sites like Facebook deliver algorithmically selected content, allowing many users to suture themselves into the filter bubble of their choosing,¹⁸⁴ assuming they can be said to be choosing to do so.¹⁸⁵ These sites thus far have little market or regulatory pressure to address the negative externalities of fake news consumption.¹⁸⁶ Moreover, channeling users into simple, extreme categories defined by Left and Right—rather than serving information that would reinforce more moderate tendencies—seems the path of least resistance with current algorithmic technology.¹⁸⁷

Worse, in many cases the problem is not that trademarks are not functioning, but rather that they *are*. In a world in which the president derides unfriendly press as fake, the avoidance of reputable news sites becomes just another form of political expression.¹⁸⁸ Many fake news consumers are getting exactly what they want. The law isn't the problem so much as the citizens it would protect.

That answer carries a tragic dimension for which there may not be law-based answers. In 2018 the *Washington Post* profiled a fake news creator who posts the

Texas” event sponsored by the made-up “Heart of Texas” group. SANGER, *supra* note 84, at 201–02. “Then, in a masterful stroke, the Russians created an opposing group, ‘United Muslims of America,’ which scheduled a counter-rally, under the banner of ‘Save Islamic Knowledge.’ The idea was to motivate actual Americans—who had joined each of the Facebook groups—to face off against each other and prompt a lot of name-calling and, perhaps, some violence.” *Id.* at 202.

¹⁸⁴ There has long been a debate about whether the net effect of the internet is to inform or fence people off into the echo chamber of their choosing. See, e.g., WEINBERGER, *supra* note 2, at 81–83. Both may be possible. Hunt Allcott et al., *The Welfare Effects of Social Media* 1–2 (Nat'l Bureau of Econ. Research, Working Paper No. 25514, 2019), <http://web.stanford.edu/~gentzkow/research/facebook.pdf> [<https://perma.cc/BM6R-35TC>] (study reporting that Facebook deactivation “reduced both factual news knowledge and political polarization” but “increased subjective well-being”).

¹⁸⁵ See MCNAMEE, *supra* note 175, at 92–93 (describing how platforms facilitate extreme views); cf. O'NEIL, *supra* note 17, at 194 (“Successful microtargeting, in part, explains why in 2015 more than 43 percent of Republicans, according to a survey, still believed the lie that President Obama is a Muslim.”).

¹⁸⁶ See, e.g., SANGER, *supra* note 84, at 253–55; see also GALLOWAY, *supra* note 159, at 118 (“[I]f [Facebook] figures out you lean Republican, it will feed you more Republican stuff, until you're ready for the heavy hitters, the GOP outrage: Breitbart, talk radio clips. You may even get to Alex Jones.”).

¹⁸⁷ See GALLOWAY, *supra* note 159, at 117–19; *id.* at 118 (“Marketing to moderates is like fracking for gas. You only do it if the easier alternatives aren't available.”).

¹⁸⁸ This is not to say that trademarks are never counterfeited to spread fake news. See, e.g., Ian Stewart, *Real Fake News: Activists Circulate Counterfeit Editions of 'The Washington Post'*, NPR (Jan. 16, 2019, 1:23 PM), <https://www.npr.org/2019/01/16/685857177/real-fake-news-activists-circulate-counterfeit-editions-of-the-washington-post> [<https://perma.cc/PT56-M2KL>]. But while trademark law can address the problem of sites designed to pass themselves off as a *specific* reputable source, see Joshua Humphrey, *The Plague of Fake News and the Intersection with Trademark Law*, 8 CYBARIS INTELL. PROP. L. REV. 126, 146 (2017) (contending that “trademark infringement can be a successful strategy in combating fake news if likelihood of confusion can be proved”), it has a harder time with those that merely try to look as though they are reputable. Trademark doctrine therefore struggles with activities that create noise that might mask the signal sent by marks that certify quality. See Margaret Chon, *Marks of Rectitude*, 77 FORDHAM L. REV. 2311, 2332, 2343–44 (2009); Grynberg, *supra* note 113, at 1457; cf. 15 U.S.C. § 1127 (2018) (providing that a mark can serve as a trademark “even if th[e] source is unknown”).

most outlandish stories possible as a form of political commentary.¹⁸⁹ His goal is to call attention to the propensity of some on the right wing to believe anything, sure enough:

In the last two years on his page, America's Last Line of Defense, Blair had made up stories about California instituting sharia, former president Bill Clinton becoming a serial killer, undocumented immigrants defacing Mount Rushmore, and former president Barack Obama dodging the Vietnam draft when he was 9. "Share if you're outraged!" his posts often read, and thousands of people on Facebook had clicked "like" and then "share," most of whom did not recognize his posts as satire. Instead, Blair's page had become one of the most popular on Facebook among Trump-supporting conservatives over 55.

"Nothing on this page is real," read one of the 14 disclaimers on Blair's site, and yet in the America of 2018 his stories had become real, reinforcing people's biases, spreading onto Macedonian and Russian fake news sites, amassing an audience of as many 6 million visitors each month who thought his posts were factual. What Blair had first conceived of as an elaborate joke was beginning to reveal something darker. "No matter how racist, how bigoted, how offensive, how obviously fake we get, people keep coming back," Blair once wrote, on his own personal Facebook page. "Where is the edge? Is there ever a point where people realize they're being fed garbage and decide to return to reality?"¹⁹⁰

The story goes on, however, to profile one such believer, and a sadder picture emerges, one less of political activism and more of loneliness and social isolation:

The house was empty and quiet except for the clicking of her computer mouse. She lived alone, and on many days her only personal interaction occurred here, on Facebook. Mixed into her morning news feed were photos and updates from some of her 300 friends, but most items came directly from political groups [she] had chosen to follow: "Free Speech Patriots," "Taking Back America," "Ban Islam," "Trump 2020" and "Rebel Life." Each political page published several posts each day directly into [her] feed, many of which claimed to be "BREAKING NEWS."

...

On display above [her] screen were needlepoints that had once occupied much of her free time, intricate pieces of artwork that took hundreds of hours to complete, but now she didn't have the patience. Out her window was a dead-end road of identical beige-and-brown rock gardens surrounding double-wide trailers that looked similar to her own, many of them occupied by neighbors whom she'd never met. Beyond that was nothing but cactuses and heat waves for as far as she could see — a stretch

¹⁸⁹ Eli Saslow, *'Nothing on this Page is Real': How Lies Become Truth in Online America*, WASH. POST (Nov. 17, 2018, 7:40 PM), https://www.washingtonpost.com/national/nothing-on-this-page-is-real-how-lies-become-truth-in-online-america/2018/11/17/edd44cc8-e85a-11e8-bbdb-72fdbf9d4fed_story.html?noredirect=on&utm_term=.97e60caefcc1 [https://perma.cc/RZG8-EAJB].

¹⁹⁰ *Id.*

of unincorporated land that continued from her backyard into the desert.

She'd spent almost a decade in Pahrump^[191] without really knowing why. The heat could be unbearable. She had no family in Nevada. She loved going to movies, and the town of 30,000 didn't have a theater. It seemed to her like a place in the business of luring people — into the air-conditioned casinos downtown, into the legal brothels on the edge of the desert, into the new developments of cheap housing available for no money down — and in some ways she'd become stuck, too.

...

[She] didn't believe everything she read online, but she was also distrustful of mainstream fact-checkers and reported news. It sometimes felt to her like real facts had become indiscernible — that the truth was often somewhere in between. What she trusted most was her own ability to think critically and discern the truth, and increasingly her instincts aligned with the online community where she spent most of her time. It had been months since she'd gone to a movie. It had been almost a year since she'd made the hour-long trip to Las Vegas. Her number of likes and shares on Facebook increased each year until she was sometimes awakening to check her news feed in the middle of the night, liking and commenting on dozens of posts each day. She felt as if she was being let in on a series of dark revelations about the United States, and it was her responsibility to see and to share them.¹⁹²

The underlying problems suggested by this passage are so complex as to seem intractable (in addition to being unrelated to the information problems of fake news). And in any case, on some level, this consumer of fake news is getting what she wants. But should she? And how much is this due to the engineering of the Facebook experience?¹⁹³ Deeply contested questions of paternalist policy-making and what is normatively best for people follow closely behind.¹⁹⁴

While the fake news debate is particularly charged, similar issues arise with more mundane consumer issues. Perhaps AIs will tend, for example, to make recommendations that rest on past consumer experience at the expense of novelty,

¹⁹¹ Pahrump is in Nevada, about an hour west of Las Vegas.

¹⁹² Saslow, *supra* note 189.

¹⁹³ See, e.g., MCNAMEE, *supra* note 175, at 166 (describing how changes to Facebook's News Feed to favor algorithmic over human moderation “had the effect of promoting the primary elements of filter bubbles—family, friends, and Groups—at the expense of the content most likely to pierce a filter bubble, journalism”).

¹⁹⁴ To the extent these issues are resolvable, there remains the question whether the state can meaningfully regulate in this area given the First Amendment. See, e.g., Marc Jonathan Blitz, *Lies, Line Drawing, and (Deep) Fake News*, 71 OKLA. L. REV. 59, 116 (2018) (“The question raised by deep fakes and similar technology, then, is whether First Amendment law can leave government with room to protect the social foundations that allow individuals to serve as their own ‘watchmen for truth’ without simultaneously inviting officials to control and restrict how they play that role.”).

reflecting consumer inertia (in other words, consumers at the margin may, as a descriptive matter, prefer familiarity to change even when the change would be an improvement). What then?

Maybe the law will still want to drive consumers to consider new things in order to promote innovation and competition. Doing so would move the law in the direction of regulating consumer behavior. Resolving the issue would require development of a theory to explain when non-incumbent competitors should get a shot before the consumer.

Perhaps these issues should be addressed at a higher level of generality. Maybe the argument will be that if in the world to come AIs will have the power to guide us in a non-reflective state, then the law must require that people have more than one voice in their ears. Whatever our ability to find the appropriate vocabulary to debate these questions, we won't locate it in trademark law.

CONCLUSION

To some extent, trademark law is about authority. Who gets to define a mark and how? What kinds of uses may a markholder control? Some of these questions are easy. The owner of the COCA-COLA mark gets to determine what kind of soda bears the brand. One cannot redefine the mark by counterfeiting it. But one is free to comment on the trademarked product in ways that may affect mark meaning (e.g., "High-sugar products like COCA-COLA are a menace to public health").

Other issues are harder, and trademark law must constantly mediate between the claims of markholders and third parties making novel uses of trademark meanings. Many recent battles concerned the internet, and future technological developments will naturally continue to test trademark law. Imagining a hypothetical technological endpoint for digital assistants suggests ways that innovation may upset the place of trademark law in the consumer information ecosystem as we know it today. On the one hand, trademarks may lose importance as it becomes easier to turn purchasing decisions over to digital assistants or similar tools that look beyond the comparatively simple signals embodied in brand names. At the same time, digital technology is making it easier for different groups to attach different meanings to trademarks without experiencing the harms associated with trademark infringement.

These changes open the door to a more pluralist vision of trademark meaning, one that shifts the balance of power between trademark holders and the rest of us. Though that vision was not shared by the courts in the first wave of cases involving online trademarks, more recent precedent shows a greater receptivity.

But they also point to deeper issues regarding information in the digital era. Whatever the ultimate equilibrium between pluralist and authoritarian visions of trademark law, neither perspective has much to say to these challenges even though they might appear to touch on trademark law's domain. The thought experiment of this Article therefore supports those who see a larger gap in our laws that society has to decide whether and how to fill.
