



Trademarks in the Age of Automated Commerce: Consumer Choice and Autonomy

Vera N. Sevastianova 

Accepted: 26 October 2023 / Published online: 27 November 2023

© The Author(s) 2023

Abstract In the age of automated commerce, powered by artificial intelligence and machine learning (AI/ML) tools, the role of trademarks in shopping may be diminishing. For instance, the Alexa voice assistant will announce only a couple of purchase options under specific trademarks, concealing the plenitude of other products on its interface. Another example is that Amazon will pursue the shipping-then-shopping scenario, with trademarks being perceived by consumers only upon delivery. Moreover, it has been predicted that, in some cases, the new AI/ML tools will search for products irrespective of trademarks and will do so faster than any human being. Under those circumstances, consumer search costs will be lower, not because of trademarks but because of the new shopping architecture based on those tools. While lowering consumer search costs has traditionally been the role of trademarks, the availability of other tools for the same purpose may be a positive development. However, another trend is that the new AI/ML tools are constantly taking part in consumer decision-making, possibly reducing consumers' freedom of choice and personal autonomy. In attempting to tackle this issue, it is worth approaching trademarks from the perspective of choice and autonomy. Seen from this angle, it may be possible to learn specific lessons from European Union (EU) trademark law that will assist in reshaping the automated – and autonomous – shopping architecture for the benefit of consumer well-being. In this exercise, close attention will be paid to the case-law of the Court of Justice of the European Union, with its discourse on product alternatives, while due regard will be shown to the new legislation on the platform economy in the EU. In the end, this paper will demonstrate that trademarks are valuable not only because they help reduce search

The author is grateful to the Hanken School of Economics, Hanken Foundation, Paulo Foundation, and Academy of Finland (“Fairness, Morality and Equality in International and European Intellectual Property Law” or “FAME-IP” project) for supporting this research.

V. N. Sevastianova (✉)

PhD Researcher, Hanken School of Economics (Commercial Law), Helsinki, Finland
e-mail: vera.sevastianova@hanken.fi

costs but also because they promote alternatives and, thus, improve consumers' general autonomy.

Keywords Trademarks · Artificial intelligence · Autonomy · Freedom of choice

1 Introduction

In 2012, a group of intellectual property (IP) organizations objected to plain packaging laws that would limit trademarks on products to words, written in simple fonts and colors, and exclude any brand-related figurative elements. Concerns about these rules included the fact that the essential function of a trademark – that of identifying product origin – could not be fulfilled if the trademark were “not noticeable, or unavailable”, and goodwill in the trademark might thus be diminished. Moreover, “the inability to call for or recognize a brand also takes away a consumer’s freedom of choice”.¹ At that time, a case was brought before the World Trade Organization (WTO), concerning Australia’s Tobacco Plain Packaging Act; one of the complainants underlined the role that trademarks play in enabling consumers to make informed choices.² The WTO did not find any negative impact on the essential function of trademarks or any violation of the international provisions at issue.³ Today, over a dozen of countries have enacted similar tobacco-related laws,⁴ for strong health-related reasons,⁵ but concerns about choice have not disappeared.⁶

The arguments about choice may have a point. While not all trademarks are “not noticeable” on tobacco products, word signs are written in a less distinguishable manner. This therefore affects the basic information function of trademarks,⁷ as no additional elements like graphic design are used to help consumers navigate among brands. Regarding the persuasion function of trademarks,⁸ right holders are not allowed to even engage in building trademark goodwill in order to convey a different kind of information – on values, traditions, and styles. Thus, a less informed consumer may make less informed choices. Something similar is

¹ Marques (2012).

² Panel Reports, Australia: Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging, WT/DS435/R, WT/DS441/R, WT/DS458/R, WT/DS467/R (28 June 2018), para 7.2539 (Panel Reports, Australia).

³ Panel Reports, Australia.

⁴ Moodie et al. (2022), p. 263.

⁵ Moodie et al. (2022), Hastings and Moodie (2015), Greenhalgh and Scollo (2022), Gravely et al. (2023).

⁶ E.g. INTA (2019). See also Consumer Choice Center (2018) Federal Government Plain Packaging Regulations Completely Disregard Consumers and Limit Product Choice. <https://consumerchoicecenter.org/federal-government-plain-packaging-regulations-completely-disregard-consumers-and-limit-product-choice>. Accessed 15 March 2023.

⁷ See Sect. 3.

⁸ *Ibid.*

happening today with the use of new tools based on artificial intelligence (AI) and its subdomain of machine learning (ML).⁹

The AI/ML tools automate processes to reduce time- and effort-related costs,¹⁰ but they also exercise part of the decision-making process by analyzing information, deducing patterns therefrom, and adapting behaviors according to the dependencies revealed.¹¹ As a result, AI is changing shopping by creating a new type of agent between buyers and sellers. It is in this process that trademarks are becoming “not noticeable”. Indeed, retailers can now offer product recommendations based on algorithms, regardless of consumer input, including trademarks;¹² similarly, a virtual assistant may announce only a couple of purchase options rather than the larger set of trademarked alternatives available.¹³ A powerful filter behind AI/ML tools¹⁴ will compare lots of goods by their characteristics, not their brands – something a human being is not capable of doing. With the help of big data’s insight into past behaviors, AI/ML tools will suggest what are likely the most relevant options, or perfect “predictions”,¹⁵ without the need to consider any information that the relevant trademarks convey. Therefore, it is these technologies, not trademarks, that may reduce the search costs associated with shopping,¹⁶ while it is trademark protection that is traditionally justified by the search costs theory.¹⁷

Some may conclude that trademarks will cease to play a role in shopping when AI/ML tools may deal better with choosing and buying. The “death of trademarks”¹⁸ should, however, be treated with caution. This is because a trademark not only embodies a product choice, just like a personal name symbolizes a human being, but also helps promote alternatives when third parties refer to it to market their products, as in comparative advertising. Moreover, trademarks themselves may become product characteristics, information about which is crucial in decision-making (e.g. consumers buy “Apple” products because of the status conveyed by the bitten apple logo). Thus, when trademarks get concealed by the AI/

⁹ WIPO (2019), Drexl et al. (2019).

¹⁰ E.g. Morgan B (2019) The 20 Best Examples of Using Artificial Intelligence for Retail Experiences. Forbes 4 March. www.forbes.com/sites/blakemorgan/2019/03/04/the-20-best-examples-of-using-artificial-intelligence-for-retail-experiences. Accessed 27 March 2023; McKinsey (2019) Automation in Retail: An Executive Overview for Getting Ready. www.mckinsey.com/industries/retail/our-insights/automation-in-retail-an-executive-overview-for-getting-ready. Accessed 27 March 2023.

¹¹ E.g. Gal (2018), pp. 66–70.

¹² E.g. Loten A (2020) Retailers Use AI to Improve Online Recommendations for Shoppers. WSJ 2 November. www.wsj.com/articles/retailers-use-ai-to-improve-online-recommendations-for-shoppers-11604330308. Accessed 27 March 2023.

¹³ Mari and Algesheimer 2021a.

¹⁴ Grynberg 2019, p. 216 *et seq.*

¹⁵ E.g. Beckett and Summerfield (2021) Retail Partner Conversations: How Innovative Retailers Are Embracing AI-Based Decision Making with Peak. Amazon 13 August. <https://aws.amazon.com/blogs/industries/retail-partner-conversations-how-innovative-retailers-are-embracing-ai-based-decision-making-with-peak>. Accessed 23 March 2023.

¹⁶ E.g. Davenport et al. (2020), p. 37; André et al. (2018), p. 35.

¹⁷ Trademarks serve as shortcuts to products and, hence, reduce consumer search costs (Landes and Posner 1987).

¹⁸ Grynberg (2019).

ML tools' interfaces, there is less information available to consumers, and their choices may be constrained. Because of interconnections between choice and autonomy,¹⁹ the latter may also be undermined.²⁰ With the biases, manipulations, and non-transparency of AI/ML tools,²¹ the situation with regard to these values becomes an even greater concern, as is the case with the increase in online platforms that function as gatekeepers in commerce.²² When only one actor defines how a consumer behaves in all purchases, and the private interests of that actor and the opaqueness of AI/ML tools are operating in the background, the implications that limiting trademarks have for choice and autonomy – the building blocks of human well-being – need to be discussed.²³

IP scholars have started exploring the role of AI/ML tools in mimicking human creators and inventors and have already appealed for the new tools to be reframed as supporters, not substitutes, for humans.²⁴ There has also been an increase in research on trademarks and AI because of growing challenges to trademark concepts related to decision-making.²⁵ This article, drawing on lessons learned from European Union (EU) trademark law, intends to contribute to this field by advocating for trademarks to protect consumer autonomy where consumer choice is led by AI. I will start (part 2) with an overview of how AI/ML tools confront consumer choice and autonomy. For this, I will use research by scholars in the marketing discipline – an important field for understanding consumer perceptions and behaviors. Next (part 3), I will explore the informational discourse of trademark law in the EU and the role of trademarks from the point of view of freedom of choice and autonomy. Using United States (US) scholarship, my goal will be to demonstrate that trademarks exist not only to reduce search costs but also to generally improve consumer choice on the market. Finally (part 4), I will try to explain how trademarks can be made “noticeable”, or “visible”, again to promote choice and autonomy in the new environment. I will analyze what instruments we can use to apply lessons learned from trademark law to the current setting, paying particular attention to the new digital services legislation in the EU that deals with the conduct of large online platforms, including those with gatekeeper status.²⁶

¹⁹ Dan-Cohen (1992).

²⁰ Autonomy is “a second-order capacity to reflect critically upon one’s first-order preferences and desires, and the ability either to identify with these or to change them in light of higher-order preferences and values. By exercising such a capacity we define our nature, give meaning and coherence to our lives, and take responsibility for the kind of person we are” (Dworkin 1988, p. 108).

²¹ See Sect. 2.

²² *Ibid.*

²³ Irrespective of views on autonomy, the process of defining one’s own path under the notion of autonomy is always tied to some higher ideal and virtue (e.g. Young 2017).

²⁴ Regarding copyright, see e.g. Craig and Kerr (2021); with respect to patents, see e.g. Kim et al. (2021).

²⁵ E.g. Grynberg (2019), Senftleben (2022), Moerland and Kafrouni (2021), Randakevičiūtė-Alpman (2021), Batty (2021). For the stream of research on the administrative angle of how trademarks are intertwined with AI, see e.g. Moerland and Freitas (2021), Gangjee (2020), Katyal and Kesari (2020).

²⁶ European Commission (2022) The Digital Services Act Package. <https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package>. Accessed 16 May 2023.

The Tobacco Plain Packaging case demonstrates that, while there are situations in which limiting trademarks may negatively affect choice and autonomy, such constraints may be justified in very specific conditions, where authorized by the state in the face of a challenge to health. In this AI age, the overall architecture is making brands less available without any justification. If we see worth in choice and autonomy per se,²⁷ no private structure will be able to replace them unconditionally and generally, even where the “predictions” for consumers are assumed to be perfect. Lessons learned from trademark law, emphasizing consumer well-being, will help explain why.

2 Threats to Freedom of Choice and Autonomy in the New Shopping Architecture

If this paper is to achieve its goals, it must explain from the outset what the new shopping – or choice – architecture entails for consumers, particularly with regard to the use of AI/ML tools in commerce, paying attention to the role of trademarks.²⁸

2.1 Characteristics of the New Shopping Architecture

Depending on the extent to which they are involved in consumer decision-making, the AI/ML tools that shape the new commercial environment may be less or more autonomous. The former include product recommendation systems, chatbots, and voice assistants. For instance, Amazon’s voice assistant Alexa²⁹ may participate in all stages of the purchasing process except for the approval of the product – consumers do not have to manually compare options but still have the final say in buying a product, which is typically announced by its trademark.³⁰ It can well be imagined that, given the rise of conversational AI, such assistants may be able to react to prompts to buy a product based on parameters other than trademarks (“Alexa, buy a kettle under EUR 30 made of glass with reviews over 4.8”) or irrespective of most parameters or trademarks (“Alexa, buy any paper towels, pack of two”). In these cases, there might be no brand-related content before delivery.

²⁷ Intrinsically, having a choice means living a good life as a creature who can make a choice and who is recognized and respected for that (Dworkin 1988, pp. 78–80). *See also* Gal 2018, pp. 90–91.

²⁸ *E.g.* Grochowski et al. 2021, p. 46 (on “a new infrastructure for addressing and managing consumers”).

²⁹ It is possible to “voiceshop” via Alexa. The interaction flows include buying in a new or in the same product category, with or without naming a specific brand while making a shopping request—“exact match” and “broad match” search, respectively (Mari et al. 2020).

³⁰ This AI/ML tool may determine needs and preferences, compare options to make a purchasing decision, and complete the transaction (Moerland and Kafrouni 2021, pp. 4–5). *See also* Steponénaité (2019).

The more autonomous tools include predictive shopping or restocking.³¹ These can function independently of consumers, once launched.³² Predictive shopping is tied to the shipping-then-shopping model: in regular shopping, such as, for instance, Amazon hopes to achieve,³³ once consumers allow a retailer or intermediation service to shop for them, it is AI predictive systems that might choose and buy products of any brand before consumers decide to place an order; the final products and their trademarks then cannot be observed until delivery. Restocking, for its part, is connected to the Internet of Things (IoT) in the way that devices, such as printers, are authorized by their human owners to order replenishments when due.³⁴ Substituting brands if the previous brand is not available may become a regular autonomous feature of these tools, including by default.

Thus, the new architecture involves machines choosing from a multitude of options. Already, fewer products (hence trademarks) are reaching consumers. However, unlike in the brick-and-mortar stores or regular e-commerce, this arrangement seems to have a more pervasive effect on consumers.³⁵ This is because the key owners of the new AI/ML tools are tied to the platform economy, including the intermediation services that operate between consumers and sellers (e.g. Amazon and its AI-based Alexa). The platform economy is characterized by network effects, economies of scale and scope, data-driven advantages, etc. that cause concerns in the new EU legislation on digital services.³⁶ In using big data to presume to satisfy people's needs and desires and solve the choice paradox,³⁷ platforms maintain consumer-seller information asymmetry and create consumer-platform and seller-platform asymmetries.³⁸ In doing so, these actors themselves (whether retailers, intermediation services, or both) aim to control all consumer touchpoints.³⁹ They utilize AI/ML tools, use virtual/augmented reality, and incorporate the IoT to converge offline and online shopping into one smooth experience and nudge people to shop in this controlled environment.⁴⁰

³¹ Bellis and Johar (2020), p. 75.

³² These tools can be named "algorithmic consumers", for they participate in the decision-making process, leading to consumption by real individuals (Gal and Elkin-Koren 2017, pp. 313 *et seq.*)

³³ Berg and Knights (2022).

³⁴ Siggelkow and Terwiesch (2019), p. 71.

³⁵ Gal and Elkin-Koren (2017). *See also* Burk (2021), p. 1169 (AI/ML tools "extend, instantiate, and perpetuate the processes of commensuration that are at work in society generally").

³⁶ Definitions of the platform economy and online platforms as well as challenges that they pose can be found in Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market for Digital Services and amending Directive 2000/31/EC [2022] OJ L 277/1 (Digital Services Act or "DSA"); Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending directives (EU) 2019/1937 and (EU) 2020/1828 [2022] OJ L 265/1 (Digital Markets Act or "DMA"). *See also* Podszun (2019).

³⁷ *E.g.* Schwartz (2009).

³⁸ *See generally* Grochowski et al. (2021), Jabłonowska et al. (2018).

³⁹ *See generally* Berg and Knights (2022), Stucke and Ezrachi (2017).

⁴⁰ *E.g.* Boerman et al. (2017), p. 374 (on the merge of online and offline worlds); Jabłonowska et al. (2018), p. 40 (on blurred boundaries between mere informing and advertising).

This brings us to the notion of gatekeepers as another, related, reason for the more pervasive effect of the new architecture:⁴¹ a specific AI-based tool of a particular platform may become the only instrument that millions of people use in daily shopping. They may think it provides them with the best choices, especially if it has anthropomorphic traits and is promoted as a data-driven solution to all shopping tasks.⁴² If it constitutes the only “window” to shopping, it has to be trustworthy if we are concerned with consumers’ well-being, including their ability to choose and act autonomously.⁴³ A shop assistant behind the counter in a small store does not have this kind of power or burden. Unlike gatekeepers or large online platforms, he/she alone cannot be expected to guarantee a safe and transparent environment incorporating general EU principles and values.^{44,45} Unfortunately, the new shopping architecture cannot be characterized today as a trustworthy place that contributes to consumer welfare.

2.2 Negative Aspects of the New Architecture from the Marketing Viewpoint

Marketing researchers study how consumers perceive this new environment and conduct themselves in it. Despite AI’s having advantages,⁴⁶ including empowering consumers,⁴⁷ the researchers conclude that the increased role of AI/ML tools and the growing market position of online platforms threaten consumers’ freedom of choice and personal autonomy. More precisely, they emphasize that delegating decision-making to AI⁴⁸ produces what is known as “replaced consumers”.⁴⁹ This means that the process of choosing when shopping may not be personal anymore, and its results do not help build one’s identity by attributing consumption outcomes to efforts.⁵⁰ For example, a “real-time recommender system can push a potential solution to the user”,⁵¹ or default options from AI/ML tools may serve as nudges

⁴¹ DSA and DMA. See also Sect. 4.

⁴² Gal and Elkin-Koren (2017).

⁴³ In *Google Shopping*, Google was seen as a *window to results* from third parties and not as an entity valued for its ability to exclude others. Case T-612/17 *Google Shopping* [2021] ECLI:EU:T:2021:763. See also Persch (2021) *Google Shopping: The General Court Takes Its Position*. Kluwer Competition Law Blog 15 November. <http://competitionlawblog.kluwercompetitionlaw.com/2021/11/15/google-shopping-the-general-court-takes-its-position>. Accessed 18 March 2023.

⁴⁴ Cole (2021).

⁴⁵ Jabłonowska et al. (2018), p. 49 (on the online choice architecture being “radically more effective compared to their offline counterparts”); Pasquale and Cockfield (2018), p. 861 (“individual vulnerabilities are amplified within the digital biosphere”); Lippi et al. (2020), pp. 171 *et seq* (on amplification of risks with AI). More generally on platforms trying to make customers stick to these tools, see Stucke and Ezrahi (2017).

⁴⁶ E.g. Puntoni et al. (2021), Leung et al. (2018), Chen et al. (2019).

⁴⁷ E.g. Contissa et al. (2018).

⁴⁸ Delegation concerns the AI capability of performing tasks. Other capabilities are: listening through data capture, predicting by way of classifying data, and interacting with the help of social features of machines (Puntoni et al. 2021).

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ Chen et al. (2019).

and easy choices in situations of choice overload,⁵² dependency on simple heuristics,⁵³ and decreased motivation to search for alternatives.⁵⁴ Another example is with voice assistants that only announce a couple of pre-filtered options⁵⁵ or make “predictions”, significantly limiting the range of alternatives. In short, control over choice may be lost and autonomy weakened when tasks are delegated.⁵⁶ At the same time, these values are important elements of people’s self-determination and of functioning liberal societies.⁵⁷

With regard to “predictions”, which are based on past experiences, consumers may find themselves bound by products they bought earlier – there is a lock-in effect with limited opportunities for second-order desires, or “preferences over preferences”, which are key elements of autonomy⁵⁸ (e.g. AI will buy the consumer’s favorite chips again, not “understanding” that the consumer wants to start a healthier diet).⁵⁹ However, the issue with “predictions” seems to be more troubling than just lock-ins: when consumers’ shopping behavior is “predicted” by machines (more correctly “pre-empted”), people are not even given a chance to start a process of deliberation in their minds, and thus fail to exercise their autonomy.⁶⁰ A more independently exercised, even if suboptimal, choice may be better than an optimal choice by a machine, because the former strengthens the human “muscle” of decision-making, allowing for better choices and greater autonomy in the future.⁶¹

It has been proven that, when freedom of choice and autonomy are undermined, consumers may exhibit reactance and compensatory behaviors, such as making less relevant choices in order to restore agency,⁶² exercising aggression towards new tools, and even experiencing learned helplessness.⁶³ However, this effect, and possible responses to it, will vary depending on whether the product at issue and the

⁵² E.g. Schwartz (2009).

⁵³ Kahneman (2011), Thaler and Sunstein (2009).

⁵⁴ “When users shop on Alexa using generic terms like toilet paper or razor, they may construct preferences on-the-go, relying on the [voice assistants’] recommendations more” (Mari and Algesheimer 2021a).

⁵⁵ *Ibid.*

⁵⁶ Puntoni et al. (2021).

⁵⁷ Dworkin (1988), p. 4; Manheim and Kaplan (2019).

⁵⁸ Dworkin (1988), p. 108.

⁵⁹ André et al. (2018).

⁶⁰ Technology cannot truly predict: AI/ML tools can borrow insights from patterns that they discover through the statistical analyses of data and suggest a choice that fits well into the patterns revealed, but this has nothing to do with real intentions that people themselves cannot always define (Hildebrandt 2016). See also Burk (2021), pp. 1161, 1170 (underlining that algorithms recreate, not predict, social structures).

⁶¹ Gal (2018).

⁶² Puntoni et al. (2021), Davenport et al. (2020), André et al. (2018), Boerman et al. (2017).

⁶³ André et al. (2018).

decision-making process as a whole are identity-related or not (e.g. utilitarian versus hedonic goods that play different roles for self-determination).⁶⁴ The more identity-related context there is, the more self-signalling utility will be undermined by AI/ML tools, despite any increase in outcome utility.⁶⁵ Cultural, individual, and other views on autonomy must also be considered.⁶⁶ And the perception of AI by consumers depends on their trust in the new tools, especially the anthropomorphized machines like voice assistants and robots.⁶⁷ However, overall, despite its many facets, the issue boils down to the existence of architecture-led constraints of choice and autonomy and the inclination of various consumers to react more acutely to these limitations.

Marketing scholars also underline the opaqueness of AI/ML tools and the data used⁶⁸ as well as the manipulation and promotion of suboptimal choices by the tool owners.⁶⁹ Asymmetry between consumers and third parties, while always present to some extent, is amplified in the new architecture.⁷⁰ For instance, in the case of online platforms as “windows” to shopping, consumer autonomy may be even more affected when people do not understand how AI systems operate and what data is used to recommend options. Asymmetry in the sense of how commercial parties knowingly target consumers’ psychological biases and heuristics⁷¹ is also exacerbated in the technology-led shopping architecture. For example, retailers and intermediation services may use their systems, powered by AI/ML tools, to endorse products that they are interested in selling (e.g. private-label goods),⁷² while the initial sellers lose opportunities to develop their brands and become closer to consumers’ needs and wants.⁷³

As shown above, choices and autonomy have become refrains in marketing studies, and they are constantly addressed by scholars. Against this background, it is obvious that there is reduced visibility of trademarks in the new architecture, with certain options and presumably perfect “predictions” being pushed. Not

⁶⁴ For instance, when identity-related tasks, such as cooking, are performed by machines, the self-signalling utility is undermined (e.g. it is harder to attribute the results to oneself), though the outcome utility may increase (e.g. a cake may be cooked faster). People use products to say something about themselves, and with automation they lose this opportunity and may feel frustrated—their freedom to exercise control over themselves and their autonomy is affected. See e.g. Leung et al. (2018), Davenport et al. (2020).

⁶⁵ See previous footnote.

⁶⁶ André et al. (2018), Puntoni et al. (2021), Davenport et al. (2020), Schweitzer et al. (2019).

⁶⁷ Consumers with more trust in voice assistants are less likely to review alternatives, and they stick to what the assistant proposes (Mari and Algesheimer 2021b).

⁶⁸ E.g. Puntoni et al. (2021), Grochowski et al. (2021).

⁶⁹ Contissa et al. (2018).

⁷⁰ Pasquale and Cockfield (2018), Lippi et al. (2020), Jabłonowska et al. (2018), Stucke and Ezrachi (2017).

⁷¹ There is not just information asymmetry regarding products, but also regarding decision-making: Sellers develop knowledge about consumer behavior and use this knowledge to promote their goods and services. See e.g. Sheff (2011), Dogan (2018).

⁷² “[B]usinesses may intentionally exploit the reflexivity effects [...] in order to strategically restructure consumer preferences” (Burk 2021, p. 1178).

⁷³ Mari et al. (2020).

surprisingly, one marketing paper poses the question: Will these changes kill brands?⁷⁴ Now we will turn to trademark law.

3 Trademarks as Promoters of Choice and Autonomy

In this section, I will demonstrate that the key value of trademarks lies in providing valuable information to consumers to help them in their decision-making; as such, trademarks may be seen, first and foremost, as agents of choice and autonomy.

3.1 Discourse on Information in Trademark Law

As with all signs,⁷⁵ trademarks involve signifiers (perceivable matter like words) that convey messages about the signified (product origin/goodwill⁷⁶) with respect to a referent (the product itself).⁷⁷ Thus, in conveying messages, all trademarks provide information. In doing so, they perform two functions: (i) the information function of identifying product origin and quality,⁷⁸ and (ii) the persuasion function that acts through goodwill associated with products and their sellers. In the first case, consumers receive objective⁷⁹ information on products of particular origin with specific characteristics; here, trademarks serve as concise *descriptors* of reality.⁸⁰ In the second case, a different kind of information is conveyed; new meanings, relating to luxury, exclusivity, sports style, youthfulness, etc., are *invented* by trademark owners (and the public⁸¹) to persuade people when making decisions.⁸² While the information function is what is protected absolutely in the event of confusion between trademarks, the persuasion function has traditionally been protected only for reputed trademarks. In the EU, this has been done through provisions against dilution and unfair advantage.⁸³

⁷⁴ Bellis and Johar (2020).

⁷⁵ Trademarks are any signs used in trade to distinguish products of one undertaking from those of another. See Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks [2015] OJ L 336/1 (TMD), Art. 3; Regulation (EU) 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union trade mark [2017] OJ L 154/1 (EUTMR), Art. 4.

⁷⁶ For a definition of goodwill, see e.g. Dornis (2017), pp. 95–96.

⁷⁷ Beebe (2008).

⁷⁸ On connections between origin and quality, see Senftleben (2016), Katz (2010).

⁷⁹ Trademark proprietors might manipulate the level of quality of products under a certain trademark; besides, real quality may sometimes be hard to reveal because of the nature of certain products (Sheff 2011; Katz 2010). All these make the notion of objectivity conditional.

⁸⁰ Landes and Posner (1987). See also Gangjee and Burrell (2010), p. 288 (on the two trademark functions – one signalling “objective information about product quality” and the other signalling “attributes such as *style* and *luxury*” (emphasis added)).

⁸¹ E.g. Sakulin (2010), pp. 40–42. See also Gangjee (2013).

⁸² Sakulin (2010), Beebe (2005), Schechter (1927).

⁸³ Art. 10(2) TMD; Art. 9(2) EUTMR. For criticism of anti-dilution protection, see e.g. Katz (2010); Sakulin (2010); Heymann (2009). For criticism of unfair advantage, see e.g. Gangjee and Burrell (2010).

The main⁸⁴ justification for protecting all functions is the search costs theory from the US. This claims that trademarks help to reduce the costs incurred by consumers when searching for a product, and that this in turn encourages sellers to maintain product quality and invest in goodwill.⁸⁵ The Court of Justice of the European Union (CJEU) does not discuss search costs⁸⁶ but has embedded the function approach to trademarks in its case-law: there is the essential function of identifying origin, which is tied to the quality function (the information function above), and there are the functions of investment, communication, and advertising (the persuasion function above); the list of functions is not exhaustive.⁸⁷ However, just like in the US, where search costs are not seen as an end in themselves,⁸⁸ the EU system sees the value of trademarks in improving consumer decision-making and the overall functioning of the market.

Indeed, the EU Trademark Directive (TMD) stipulates that trademarks “fulfil their purpose of distinguishing goods or services and allowing consumers to make *informed choices*”.⁸⁹ Advocate General (AG) Jääskinen in an important trademark case underlined “the need to promote *undistorted competition* and the possibilities of consumers to *seek information* about goods and services”.⁹⁰ In *Google France*, the CJEU concluded that “in most cases an internet user entering the name of a trade mark as a search term is looking for *information or offers on the goods or services covered by that trade mark*”.⁹¹ The role of information permeates trademark law, and clear and truthful information about the origin of a product in the form of a trademark with uninterrupted use (i.e. the information function) is

⁸⁴ Dornis (2017), p. 329; McKenna (2012), p. 73.

⁸⁵ Landes and Posner (1987); *Ty Inc v Perryman*, 306 F 3d 509 (7th Cir 2002) (regarding non-reputed trademarks: cost in terms of both time and effort is reduced when a convenient shortcut is used by only one undertaking for specific goods and services; regarding reputed trademarks: cost in terms of imagination decreases when only one undertaking is using a reputed sign, with others not applying it to any goods and services). For criticism of the theory, see e.g. McKenna (2012), Gangjee (2013), Sakulin (2010), Janis and Dinwoodie (2007), Tushnet (2008).

⁸⁶ Sakulin (2010).

⁸⁷ Recital 16 TMD; Recital 11 EUTMR; Case C-102/77, *Hoffmann-La Roche* [1978] ECR I-1139; Case C-10/89 *HAG* [1990] ECR I-03711; Case C-206/01 *Arsenal* [2002] ECR I-10273; Case C-487/07 *L'Oréal Bellure* [2009] ECR I-05185; Case C-323/09 *Interflora* [2011] ECR I-08625; Joined Cases C-236/08 to C-238/08 *Google France* [2010] ECR I-02417; Case C-129/17 *Mitsubishi* [2018] ECLI:EU:C:2018:594. See also Joined Cases C-236/08 to C-238/08 *Google France and Google* [2009] ECR I-02417, Opinion of AG Maduro. The criticism is that, by the function theory, applicable to both confusion and dilution scenarios, the Court extended protection for non-reputed trademarks for the benefit of right holders without sufficient justification or clear definitions. However, broad concepts may also help provide flexibility in limiting protection. See Kur (2019), Senftleben (2014), Sakulin (2010).

⁸⁸ Landes and Posner (1987); Dogan and Lemley (2004), pp. 11, 32 (“[trademark law has] generally maintained its emphasis on [...] preventing [...] misinformation in the sales process”); Dogan (2021), p. 373 (on trademarks “improving informational accuracy in markets”).

⁸⁹ Recital 31 TMD (emphasis added).

⁹⁰ *Interflora* (emphasis added). See also Joined Cases C-414/99, C-415/99, and C-416/99 *Zino Davidoff and Levi Strauss* [2001] ECR I-08691, Opinion of AG Stix-Hackl (quoting the AG in Joined cases C-427/93, C-429/93 and C-436/93 *Bristol-Myers Squibb and Others v Paranova* [1995] ECR I-03457, Opinion of AG Jacobs).

⁹¹ *Google France* (emphasis added). See also *Interflora*.

protected in order to help consumers reliably orientate themselves in the world of brands. Even the persuasion function can in the end be “tied to the ability of the mark to [...] communicate clear and concise *information* to consumers”.⁹² Therefore, the purpose of trademarks is to provide valuable market *information* and contribute to the system of *undistorted competition*.⁹³

The discourse on information is built into specific concepts of EU trademark law. First, in the absolute grounds for refusal of trademark rights: descriptive and customary signs as well as non-distinctive signs are not eligible for protection (unless acquired distinctiveness is established).⁹⁴ This is because the legislator wants to prevent one competitor from monopolizing the information flow between it and its consumers by using a sign that is needed by everyone for providing and receiving full details of products. No protection is granted to deceptive signs either, for they may prevent consumers from perceiving information correctly.⁹⁵ Second, regarding limitations of trademark rights, no infringement will be found in cases of referential use, non-distinctive and descriptive use, or comparative advertising where third parties directly apply right holders’ trademarks in line with honest commercial practices and other rules.⁹⁶ Again, these limitations are necessary to ensure that consumers are provided with full details of products in order to be able to make informed choices.⁹⁷ Additionally, such open trademark concepts as “use in the course of trade”,⁹⁸ “use in relation to goods and services”,⁹⁹ and the aforementioned function theory,¹⁰⁰ when interpreted narrowly,¹⁰¹ may help avoid finding infringements by third parties that decide to use protected trademarks in political criticism, social commentary, artistic expression or new commercial instances, without harming the information flow between sellers and their consumers. A similar logic may apply to interpreting the concepts of “unfairness”¹⁰² and “due cause”¹⁰³ in respect of trademarks with a reputation, when third parties that use such trademarks do not affect the initial information flow between right holders and their target audiences.

⁹² Gangjee and Burrell (2010), pp. 294–295 (emphasis added).

⁹³ Max Planck (2011).

⁹⁴ These are valuable signs that competitors need to use to provide accurate information to consumers (descriptive and customary signs) and that consumers need to perceive to be able to distinguish products (non-distinctive signs in general). See Art. 4(1)(b)–(d) TMD; Art. 7(1)(b)–(d) EUTMR; Joined cases C-108/97 and C-109/97 *Windsurfing Chiemsee* [1999] ECR I-02779; Joined Cases C-90/11 and C-91/11 *Alfred Strigl* [2012] ECLI:EU:C:2012:147; Case C-517/99 *Merz & Krell* [2001] ECR I-06959.

⁹⁵ Art. 4(1)(g) TMD; Art. 7(1)(g) EUTMR; Case C-259/04 *Elizabeth Emanuel* [2006] ECR I-03089.

⁹⁶ Arts. 14 and 10(3)(f) TMD; Arts. 14 and 9(3)(f) EUTMR.

⁹⁷ Case C-102/07 *Adidas* [2008] ECR I-02439 (on descriptive uses); Case C-558/08 *Portakabin* [2010] ECR I-06963 (on referential uses); Case C-533/06 *O2* [2008] ECR I-04231 (on comparative advertising).

⁹⁸ E.g. Case C-772/18 *A (infringement by importing ball bearings)* [2020] ECLI:EU:C:2020:341.

⁹⁹ E.g. *Google France*; Case C-690/17 *Öko-Test* [2019] ECLI:EU:C:2019:317.

¹⁰⁰ E.g. Case C-48/05 *Adam Opel* [2007] ECR I-01017; *Google France*; *Interflora*.

¹⁰¹ Sakulin (2010); Bohaczewski (2020).

¹⁰² With respect to fairness, see Recital 27 TMD; Recital 21 EUTMR.

¹⁰³ E.g. *Interflora*; Case C-65/12 *Leidseplein Beheer* [2014] ECLI:EU:C:2014:49.

Given the above, discourse on information is paramount to any discussion of search costs. If we are concerned only with the information function of trademarks, it is more important that there is no confusion about product origin than that there is no cost reduction. It is also more important that consumers can receive full details of the products and any connections among them, even if there are costs in terms of imagination in respect of reputed trademarks and their persuasion function. In the end, when clear information plays the principal role, a more transparent market emerges. Additionally, when products are easily defined and connected to each other, consumers will have more choice: they will have a clearer view of offline/online product shelves, with trademarks as tags, and will be able to decide for themselves what to pick. Their autonomy will thrive.

3.2 Applying the Choice and Autonomy Perspective to Trademark Law

The elaborations above lead us to the choice and autonomy theory of trademark law applied by Laura Heymann.¹⁰⁴ Heymann focused on Kant's approach to autonomy in how the ability to make personal choices that direct one's life is valuable per se, irrespective of results. Heymann also utilized the "'ascriptive' – or aspirational – view" on human autonomy: the law must guarantee a certain level of autonomy in order to help people grow.¹⁰⁵ Heymann therefore believes that provisions in trademark law for preventing confusion are justified, because their goal is to ensure a clear communication channel between consumers and sellers. This channel helps provide *factual* information about a product (e.g. its origin), prohibiting false statements by third parties and maintaining the information function of trademarks. For example, the sign "Marila" would not be allowed for similar products because of the prior registration of "Marilan".¹⁰⁶ However, anti-dilution protection of the persuasion function deprives consumers of the possibility of deciding for themselves whether to believe any *non-factual* information invented by right holders (or built upon by the public) and referred to by third parties. For instance, if there is a reputed trademark "SO ..." for cosmetic products and a third party uses the "SO'BiO ëtic" sign for laundry substances, dilution by tarnishment will be found.¹⁰⁷ In such a scenario, consumers are not given a chance to decide for themselves whether to be guided by any link between the signs or not.¹⁰⁸ At the same time, allowing consumers to construct their own associations with brands and the way those brands are used by others could help people learn to interpret persuasive messages and become more

¹⁰⁴ Heymann (2009).

¹⁰⁵ *Ibid.*

¹⁰⁶ EUIPO Opposition Division *Antinari Anstalt v Marilan Alimentos SA* [2010] B 193 309. This decision was taken within the framework of the application/registration procedure at the EUIPO, in which the likelihood of confusion test is also relevant. The reasoning behind the likelihood of confusion is that consumers may believe that products with similar signs come from the same or economically linked undertakings. See e.g. Case C-39/97 *Canon* [1998] ECR I-5507.

¹⁰⁷ Case T-341/13 *RENV Groupe Léa Nature* [2017] ECLI:EU:T:2017:381. The example given is from the application/registration procedure, in which the tarnishment test is also relevant. Based on the logic described, the results in *L'Oréal Bellure* may also need rethinking.

¹⁰⁸ Case C-408/01 *Adidas-Solomon* [2003] ECR I-12537.

autonomous, irrespective of how (sub)optimal their choices are in the end.¹⁰⁹ Thus, Heymann calls for anti-dilution laws to be rejected, so that the trademark system can enhance consumer choice and autonomy.¹¹⁰

The choice and autonomy perspective can be applied to trademarks beyond what was mentioned above. First, if we return to the discourse on information in EU law, we can see that each trademark, as a carrier of information, symbolizes a choice, or alternative, in the purchasing process and, therefore, deserves protection against confusion.¹¹¹ From the choice and autonomy perspective, when consumers can perceive a genuine buying option under a certain sign, an informed choice can be made.¹¹² To make this happen, a trademarked option must, first and foremost, be visible. Second, when several trademarked products are offered, people obtain a set of alternatives, each of which is protected by anti-confusion laws against corruption. Thus, apart from when more choice devaluates the only option that existed earlier or when too much choice causes a choice overload,¹¹³ having a set of alternatives (as well as being in control of what is in that set) empowers consumers with more freedom to choose and, hence, autonomy (“[d]oing x and choosing to do x are, in general, not equivalent”).¹¹⁴ Perceiving a set of alternatives also implies their visibility. Third, as seen from trademark limitations and broad concepts of EU law, a trademark can be used by third parties to provide information about their products, which in many cases constitute alternatives to the trademarked goods or services. In the case of computer technology, the CJEU has underlined that competitors are entitled to want their alternatives to be promoted by using trademarks as keywords in search engines without misleading or confusing consumers;¹¹⁵ the mere provision of alternatives online is still “fair competition”.^{116,117} So, again, promoting

¹⁰⁹ Heymann (2009), pp. 661, 668, 687.

¹¹⁰ Heymann (2009), p. 663 (“intervention is more appropriate when it serves to maximize choice”).

¹¹¹ *E.g. Google France*.

¹¹² Trademarks do not limit competition by prohibiting the use of some innovative features of products, but they do assist with consumer choices (Gangjee 2021).

¹¹³ “More choice, hence more freedom and autonomy, hence more well-being” is a choice syllogism which is challenged by the paradox of choice: too many buying options may lead to less satisfaction, higher expectations, and even self-blame for consumers. These discussions are important, particularly when proponents of using AI in commerce specify the technological ability to finally solve the choice paradox, which is questionable given the imperfections of AI/ML tools (*see Sect. 2; on the choice paradox, see Schwartz 2009*).

¹¹⁴ Sen (1988), pp. 290, 292 (the author continues: “[I]f all alternatives except the chosen one were to become unavailable, the chosen alternative will not, of course, change, but the extent of freedom would be diminished, and if freedom to choose is of intrinsic importance, then there would be a corresponding reduction of the person’s advantage”).

¹¹⁵ *Google France*.

¹¹⁶ *Interflora*.

¹¹⁷ The role of alternatives has already become a catchphrase in trademark scholarship: from specific cases in which merchandising rights claimed by trademark owners are at odds with the interest of consumers in having alternatives to more general conclusions on the importance for consumers of perceiving alternatives for the benefit of choice and social welfare (*e.g. Dogan and Lemley 2004; Heymann 2009*). *See also Grynberg (2021)* (on social welfare in how the scope of a trademark is limited to allow useful information).

alternatives means that consumers can see, or at least understand, links, for instance, between trademarks Y and Z, and trademark X.

With regard to the persuasion function in particular, which Heyman does not consider worth protecting, additional lenses may be borrowed from the philosophical view of the two models of choice: (i) the rational model, with a set of choices, preferences, an act of selection, and opportunity costs, and (ii) the “willing” model, with no set of choices but one object of attention, no preferences but values, no selection but election as an application of values to the object, and no opportunity costs owing to the lack of comparison. Rational choosing can be illustrated by the act of choosing a dish in a restaurant, and “willing” by the act of falling in love with a particular person or following one’s moral path. A set of choices is constitutive of the rational model, but not of the “willing” model. However, even in the latter, knowledge about the existence of other options reinforces the election by assigning it the trait of being one’s own choice, even if the result is the same.¹¹⁸ Thus, a set of alternatives is core to one’s freedom to choose in any model. This division is important for trademarks, because the information function involves choice, while the persuasion function involves will. So, directly perceiving not only the famous trademark chosen but also other famous or regular trademarks that are potential alternatives may be another essential element of a consumer’s choice and autonomy.

One more argument with regard to persuasion is that the line between information and persuasion functions may be hard to draw. Stephen Carter, in his article on reforming trademark law in the US, stressed that trademarks function *only* when they have goodwill.¹¹⁹ If we follow this statement and one of the definitions of goodwill,¹²⁰ we may conclude that there is always some additional meaning behind a trademark, and that this meaning cannot exist without the basic information function (e.g. if a trademark is not visible, goodwill is hard to convey).¹²¹ In this age that highlights sustainability goals and public adherence to certain values, more and more consumers are starting to think about images that are created by right holders and possibly even supported by genuine (or greenwashing) business practices.¹²² It is trademarks that may embody these details, which are also information but of a persuasive, not descriptive, nature – though it is often not easy to distinguish between the two (a persuasive feature may become descriptive if it starts constituting the core of a product). So, again, it will be trademarks that will convey messages to consumers and assist them in making not only an informed but also a value-based choice. For consumers to make such a choice, it is crucial that they see the trademarks.

¹¹⁸ Dan-Cohen (1992). *See also* Sen (1988).

¹¹⁹ Carter (1990).

¹²⁰ Dornis (2017), pp. 95–96.

¹²¹ Sheff (2021) (on the identification function being less important today, because the source is unknown: it is the brand that gets identified). Sheff’s deliberations hint that people want to see brands and receive all the meanings behind them; to do that, a brand must be visible.

¹²² E.g. Gielens et al. (2021), pp. 103, 104 (on Gen Z’s belief system regarding shopping). *See also* Kotler et al. (2021).

Thus, consumers may be much better off if they can see trademarks in their variety and, consequently, be in charge of the choice process, including the perception and selection/election of meanings. Besides, in the choice and autonomy approach, the use of those meanings by third parties to promote alternatives with similar or other meanings without confusion would only be welcome. The issue of the scope of protection of the persuasion function is of secondary importance, but with the choice and autonomy ideas in mind, it may be argued that the persuasion function could exist without protection, so that consumers could determine whether they accept or interfere with meanings that trademarks convey. Many scholars emphasize the importance of training autonomous thinking and decision-making. Thus, if a human consumer is given more freedom to make his/her own decisions, even if this results in suboptimal choices, he/she may grow in the end as an individual and become the ascriptive person that some of us would like him/her to be.¹²³

4 Harnessing AI with Trademarks

Because the choice and autonomy perspective puts consumer well-being at the heart of the discussion, this view may be justified in an age when large platforms use AI/ML tools not only to reduce search costs but also to partially replace human decision-making. As shown above,¹²⁴ such substitution may occur through more limited use and display of trademarks on the new product “shelf”.¹²⁵ Since trademarks are valuable for providing information, they may help restore the ideals of choice and autonomy in the AI environment. The key solution may be to make trademarks visible (noticeable and available) again. This can be done by technological changes alone within the new shopping architecture or by legal changes that make certain technological settings in those architectures binding. It will be demonstrated below that the latter option is more suitable; however, it has not yet been incorporated into the current legal framework in the EU.

4.1 Suggestions to Reshape the New Shopping Environment

As one of the views suggests,¹²⁶ choice and autonomy are valuable per se; thus, developing the decision-making muscle is also valuable per se. Decisions, particularly those that are constitutive of people’s identities, must be made by people, not machines (unless people make a conscious decision not to choose). Therefore, even in perfect conditions, allegedly perfect “predictions” of AI/ML tools in a highly constrained choice infrastructure will undermine self-development. It is difficult to say a priori what kinds of decision are more crucial for self-

¹²³ On ascriptive consumer theory, see Heymann (2009).

¹²⁴ See Sect. 2.

¹²⁵ Trademark professionals already accept that some products can be bought with no regard to trademarks. See e.g. Hemel and Ouellette (2021), p. 1072.

¹²⁶ Dworkin (1988), Gal (2018).

determination, what kind of person this particularly applies to, and when a certain person will make a second-order decision to re-consider his/her first-order decision.¹²⁷ Hence, to be on the safe side, it is better to assume that all decisions may be valuable for people. With these considerations, the new choice architecture seems abnormal and even an act of paternalism or intrusion into choice and autonomy on the part of such actors as intermediation services and large retailers.¹²⁸ The mention of abnormality may ring particularly true if one adds deliberate manipulation by platforms based on people's cognitive deficiencies.

To tackle such interference with choice and autonomy, it may be necessary to add some assistive mechanisms, irrespective of whether people are rational "econs" or irrational humans, so that we again cover everyone from the outset.¹²⁹ [Consumer vulnerability is not an exception but a general rule: "Every consumer has a persuasion profile".¹³⁰] This approach resembles libertarian paternalism, as promoted by Richard Thaler and Cass Sunstein¹³¹ and supported by researchers in the marketing discipline¹³² as well as scholars in the field of trademarks.¹³³ It tells us that private and public institutions may help humans make better decisions through nudges, typical examples of which include thoroughly constructing a default option in a list of alternatives (given how rarely the default option is changed owing to the status quo bias) and forcing people to make their choice explicit.¹³⁴ These nudges represent a choice architecture that minimizes the consciousness traps of people's minds, while preserving freedom of choice. Thus, consumers are not treated as fools, and their autonomy is supported.¹³⁵

These considerations and approaches point to the conclusion that, in the new shopping environment, trademarks must be kept accessible to consumers by default. This will be the main nudge, made possible by technological settings. For instance, by default, recommender systems and voice assistants will deliver information on any brands to consumers, and the number of options announced or displayed that show trademarks will not be limited (particularly not to just one or two options) until the customer interrupts the search process. If a consumer is ready to delegate their choice of spaghetti or detergent to the machine, irrespective of brand, they could change the parameters of the AI/ML tool accordingly and enjoy other tasks

¹²⁷ See *e.g.* discussions in Sect. 2 regarding identity-based consumption.

¹²⁸ On paternalism in the choice and autonomy context, see *e.g.* Dworkin (1988). The idea is that one's autonomy is denied and paternalism arises when there is "usurpation of decision-making" and "substitution of one person's judgment for another" (Dworkin 1988, pp. 90, 107).

¹²⁹ Thaler and Sunstein (2009).

¹³⁰ Helberger et al. (2021a).

¹³¹ Thaler and Sunstein (2009).

¹³² Marketing scholars, referring also to Thaler, suggest using design to promote choices and input from consumers, embedding ethics through technological nudges, and encouraging consumers to change settings (*e.g.* Puntoni et al. 2021; Davenport et al. 2020; Schweitzer et al. 2019; Burr et al. 2020).

¹³³ See *e.g.* Dogan (2018).

¹³⁴ Thaler and Sunstein (2003).

¹³⁵ This approach is close to the value of aspirational consumers endorsed by Heymann, who defends the choice of ascriptive, not descriptive, personality by the necessity to give people opportunities to learn to make choices so that their decision-making improves (Heymann 2009).

that contribute to their autonomy (opt-in mechanism of AI/ML tools for more autonomy). With this solution at hand, people will be able to consider the multitude of trademarks, along with their meanings, even for such simple products as napkins. The solution concerns regular trademarks and those with a reputation, for both convey information to consumers.

Next, the power of trademarks to promote information and choice (a set of alternatives) must also be built into the technologically driven environment by allowing connections between products, similarly to using keywords in search engines (for both regular trademarks and those with a reputation). If, when looking at a product of interest on a supermarket shelf, a person also sees products with other trademarks; if, in Google search results based on the request “trademark X + product type”, a person also sees products with other brands that in no way pretend to be related to trademark X’s origin; then, given the conversational nature of voice search, consumers shall be provided with the possibility to ask voice assistants to search for “something like trademark X” and hear about relevant alternatives linked to trademark X behind the user interface, again as long as there is no confusion.¹³⁶

There are already those who think that the information function of trademarks may become less relevant in the AI age. Consumers can now voice-shop by asking their voice assistants to “buy paper towels”, although the voice assistant will announce trademarks when making suggestions based on that request. In the future, AI/ML tools, when processing such “broad match” requests, may be able to filter options with no regard to brand at all. At the same time, the persuasion function may become even more important.¹³⁷ With a minimal choice interface, consumers for whom certain brands play a commodity-like role will make sure they ask the AI/ML tool to search and buy products with those brands. It is also possible to imagine consumers making requests like “Alexa, find me something similar to a Birkin bag under EUR 1,000”. Still, in the new age, even Veblen brands¹³⁸ will not belittle the role of the discourse on alternatives in trademark law: connections between products, especially where reputed trademarks are involved, are important for consumer decision-making; such connections enrich people’s choices and help build more autonomous lives. The benefit of having a set of alternatives based on a famous sign, with this set reinforcing one’s choice or selection, will overshadow any alleged harm to a reputed trademark, especially from Heymann’s autonomy perspective on the consumer-seller communication channel.

¹³⁶ Gangjee and Burrell (2010); Dogan and Lemley (2007) (on how products are placed together on one shelf).

¹³⁷ Randakevičiūtė-Alpman (2021).

¹³⁸ These are “luxury trademarks that serve [the] socially expressive function (by virtue of the artificial scarcity that trademark law permits their owners to maintain)” (Sheff 2012).

Since the current shopping architecture was built by large technological companies that simultaneously represent such actors as online intermediation services and retailers, an external legal constraint may be required to change the present platform-oriented system of nudges into a human-centered environment. It would be the law, backed by lessons from the trademark field on how trademarks convey important meanings, how alternatives are valuable, and how trademarks become product characteristics, that would demand the elimination of detrimental nudges and the introduction of helpful architecture designs. Such assistance to consumers, giving them freedom of choice, makes the libertarian paternalism approach seem an attractive option for handling challenges posed by the technological environment and maintaining innovation potential. However, if we return to the thought that the new architecture may be considered abnormal, the suggestions described may not be (libertarian) paternalistic at all: as it was platforms that were attempting to be paternalistic by imposing allegedly better choices, removing those attempts may simply mean a return to the status quo.

4.2 Limited Tools in the Legislation on the New Platform Economy

Are there any provisions in the EU laws or legislative proposals that may help realize this paper's ideas for solving the problem of lack of trademark visibility? In answering this question, one may immediately think of the recent Digital Services Act (DSA), which introduced due diligence obligations and established exemptions from liability for providers of intermediary services, and of the Digital Markets Act (DMA), which, through *ex ante* provisions, targeted the exploitative nature of the new digital environment and the power of gatekeepers that provide core platform services, like intermediation services, search engines, and voice assistants.¹³⁹ However, this legislative package must be looked at from a more systematic viewpoint, keeping in mind previous directives and regulations in consumer and competition law: the Unfair Commercial Terms Directive (UCTD),¹⁴⁰ which restored the buyer-seller balance in contracts; the Misleading and Comparative Advertising Directive (MCAD),¹⁴¹ which addressed deceptive advertising; the Unfair Commercial Practices Directive (UCPD),¹⁴² which targeted unfair practices

¹³⁹ Digital Services Act and Digital Markets Act.

¹⁴⁰ Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts [1993] OJ L 95/29 (UCTD).

¹⁴¹ Directive 2006/114/EC of the European Parliament and of the Council of 12 December 2006 concerning misleading and comparative advertising [2006] OJ L 376/21 (MCAD).

¹⁴² Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) 2006/2004 of the European Parliament and of the Council [2005] OJ L 149/22 (UCPD).

that affect informed choice for consumers;¹⁴³ the Platform-to-Business (P2B) Regulation¹⁴⁴ and the Omnibus Directive,¹⁴⁵ which tried to tackle some challenges of the platform economy. All these pieces of legislation, together with the DSA and DMA, tie the well-being of consumers and the protection of traders to a truly competitive market that is antithetical to choice limitation.

For how to incorporate the proposal to show trademarks (and connections among them) by default, Art. 25(1) DSA looks promising: it provides that platforms must not design interfaces in a way that materially distorts the ability of the recipients of their services (business and end users) to make free and informed choices. Indeed, it is the platforms that define the design of their systems, including how signs are made visible. However, the provision is quite broad, just like the notions of choice and autonomy, and while trademark visibility advocates may interpret it as providing for the full range of relevant trademarked products to be displayed/announced by default or at least offered in the same manner as other options, a platform may hide this option in its settings or argue that it is already in place: it is difficult to draw a line between what is a sufficient and a non-sufficient number of alternatives to be shown.

Another approach would be to apply Arts. 27 and 38 DSA: the former obliges platforms to explain the main parameters of their recommender systems and the options for changing and influencing those parameters,¹⁴⁶ while the latter requires very large platforms/search engines to provide also an option not based on profiling. The issue here is that “main parameters” are not clearly defined: who decides what “main” means and whether trademark-related information is included?¹⁴⁷ Setting

¹⁴³ Such practices in particular concern misleading actions, including deception about the main characteristics of products and the traders’ identity, or the omission of such details (Arts. 6 and 7 UCPD), and aggressive practices, including the exploitation of power vis-à-vis consumers (Art. 8 UCPD). The trader’s identity and product characteristics are essential elements in a sales contract. According to Arts. 5(1) and 6(1) of the Consumer Rights Directive, the main characteristics of the goods or services and the identity of the trader, such as its trading name, constitute some of the information that must be provided by traders to consumers in a clear and comprehensible manner, if it is not already apparent from the context (Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council [2011] OJ L 304/64). As for information society services, a person behind a commercial communication via such services must be clearly identifiable according to Art. 6(b) of the e-Commerce Directive (Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market [2000] OJ L 178/1).

¹⁴⁴ Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services [2019] OJ L 186/57 (P2B Regulation).

¹⁴⁵ Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules [2019] OJ L 328/7 (Omnibus Directive).

¹⁴⁶ A recommender system is a fully or partially automated system used by a platform to suggest or prioritize information (Art. 3(s) DSA) that may play a significant role in influencing online behavior (Recital 70 DSA).

¹⁴⁷ Bury and Hoboken (2021), pp. 38–39.

this information out in the platforms' terms and conditions, as prescribed by Art. 27, again means hiding such details from the weaker party (recipients of the services).¹⁴⁸ Also, while Art. 27 discusses the functionality that allows recipients of the service to easily change the settings of a recommender system,¹⁴⁹ the focus is on the mere availability of alternative settings: no pro-consumer default is set.¹⁵⁰ The same applies to the non-profiling-based option in Art. 38: there is no obligation to make this a default setting, while it would be in line with this paper's proposal to promote the neutral option, which involves trademark-related content, as the basic one.¹⁵¹

Lastly, let us take a look at how Art. 31(1) and (2) DSA require platforms to use design to help traders provide pre-contractual details to consumers, including information that "identifies" the product and the trader.¹⁵² The provision explicitly mentions trademarks, but only for identifying traders; this wording is incorrect, as trademarks are signs that identify and distinguish traders' *goods or services* (e.g. Recital 11 and Art. 4 EUTMR), not the traders themselves. The information for identifying products may sound like it includes trademarks with their information function (identification of origin). Yet, interpreting this piece of legislation against the background of previous legislation¹⁵³ and the DSA itself suggests that this piece of legislation discusses product information without including trademarks: Art. 31(3) DSA refers to platforms' actions to police their environments to check whether such information has been provided by the trader, while it is not obligatory to include a trademark in a commercial communication. Even if one interprets the provision as covering trademarks, the rule only concerns information about certain products, with no regard to displaying a range of trademarked products side by side.

To summarize, one cannot infer from the new DSA provisions that they, for instance, oblige marketplaces by default to make their voice assistants announce as many trademarked options as a consumer wishes to hear, or that they require recommender systems to consider trademarks and their messages. Important aspects of the new shopping architecture, including the "main parameters" and the default options, are still decided by online players,¹⁵⁴ though they must now provide more information to users for the sake of transparency. However, this extra information is

¹⁴⁸ *Ibid.*, p. 39.

¹⁴⁹ Earlier, the P2B Regulation had obliged intermediation services and search engines to ensure transparency in respect of the main parameters that defined the ranking of products/websites and the importance of those parameters compared to one another, as well as to help business users understand how the ranking mechanism took account of product characteristics (Art. 5). Later, the Omnibus Directive added Art. 6a into the Consumer Rights Directive with a similar provision regarding relations between online marketplaces and consumers. Art. 7(4)(a) UCPD, also introduced by the Omnibus Directive, made such information material in the context of misleading omissions in relations between traders and consumers.

¹⁵⁰ Bury and Hoboken (2021), p. 38.

¹⁵¹ *Ibid.*, p. 39; Helberger et al. (2021b), p. 33.

¹⁵² Earlier, the P2B Regulation had obliged intermediation services to guarantee the visibility of business users' identity as part of the latter's offering (Art. 3(5)).

¹⁵³ See Sect. 4 above.

¹⁵⁴ Helberger et al. (2021b), p. 9.

not enough, and design changes from the outset may be needed to restore the balance between consumers and undertakings (e.g. an SME selling products on a marketplace or the marketplace itself) and to compensate for the vulnerability that all consumers experience.¹⁵⁵ However, the fact that the DSA provides for constant risk assessment, including with respect to freedom of information (Art. 34(1)(b)),¹⁵⁶ and the development of such instruments as codes of conduct is a positive step, establishing that, in the digital environment, the legislative process must be dynamic.

It may be recommended that the DSA list specific dark patterns or nudge-related practices (referred to in Recital 67 DSA), as the UCPD does for unfair commercial practices, and even that it include trademark-related cases for greater clarity. Besides, with respect to the discourse on alternatives in trademark law, the DSA's provisions on the liability of intermediaries, as well as the transparency obligations relating to advertising, must be interpreted as incorporating the idea that tying different trademarks together in a neutral way is not a violation but the new choice architecture. Focusing on the latter and underlining the need to bring "the diversity of offers" to consumers, Martin Senftleben gave one example: [i]f "a search for brand A has taken place", "[t]his information can then trigger marketing messages relating not only to brand A products but also to brand B and C alternatives".¹⁵⁷ Such a setting may even be deemed necessary in this new age when the DSA itself refers to human autonomy and choice,¹⁵⁸ and transparency and human agency are reference points for keeping AI/ML tools trustworthy.¹⁵⁹

What the DSA stipulates is, after all, not entirely new.¹⁶⁰ In this regard, the DSA states that it should be without prejudice to the UCPD (Recital 10 DSA), to which it also refers in Art. 25(2) DSA. The UCPD remains relevant, as it targets unfair commercial practices. However, the current version is not without its deficiencies. The UCPD prohibits unfair practices from the point of view of the average consumer (Art. 5 UCPD). However, in the new architecture, with its built-it asymmetries, anyone may be vulnerable. Therefore, consumer law scholars suggest amending the UCPD to consider the "universal state of susceptibility" (i.e. the universal, not average, vulnerability) of people.¹⁶¹ This paper's approach of incorporating libertarian paternalism into the shopping infrastructure in order to address all consumers and all their decisions from the outset is in line with this suggestion.

¹⁵⁵ Helberger et al. (2021a), pp. 51–52 (on how we cannot address digital asymmetry, i.e. architectural peculiarities that lead to the universal vulnerability of consumers, by merely providing more information: the asymmetry, or the structure, itself must be fixed).

¹⁵⁶ Trademarks convey commercial information that consumers must receive if they are to make informed choices.

¹⁵⁷ Senftleben (2022).

¹⁵⁸ E.g. Recital 67 DSA.

¹⁵⁹ European Commission (2019).

¹⁶⁰ Cauffman and Goanta (2021), p. 760.

¹⁶¹ BEUC (2022), pp. 4, 5, 8.

The DMA, for its part, discusses choice and the role of defaults, and even incorporates the pro-consumer opt-in and ex-ante mechanisms. As commentators point out, positive aspects of the DMA are its mentions of “minimum standard of choice”, “neutrality standards with respect to the choice architecture”, and “non-biased choice architecture that avoids ‘dark pattern’ effects”.¹⁶² Looking for a provision that might relate to this paper, we see that Art. 6(3) DMA stipulates that a gatekeeper must enable end users to easily change the default settings on the gatekeeper’s virtual assistant that direct or steer end users to products or services provided by the gatekeeper (which includes prompting end users on first use of the voice assistant to choose the assistant from a list of providers). This provision and the DMA as a whole are very welcome but are hardly bound to ensure default settings that will provide consumers with a wide range of trademarked products. Overall, however, the DMA makes provision for updating its clauses on the basis of market investigations (Art. 12); thus, it also reflects the fast-changing nature of the digital environment and the challenges posed for market actors and legislators.

To conclude, the new legal framework still does not focus on helping all consumers overcome design-based interference in their decision-making from the start. Commentators mention the failure of both the DSA and the DMA to address “digital vulnerability/digital asymmetry as a structural and relational phenomenon that is universal”. Scholars underline that the DMA in particular does not systematically address behavioral manipulations.¹⁶³ Similar criticism is levelled at the proposal for an AI Act currently under discussion. As of the moment of writing, this would prohibit specific AI systems, including those using subliminal techniques that distort people’s behavior, and would mainly regulate high-risk AI systems, like those used for recruitment or for evaluating creditworthiness.¹⁶⁴ However, the level of protection given to consumers in the AI Act proposal is very low.¹⁶⁵ Interestingly, one of the points that concerns the AI Act’s criticism is that the document does not target non-subliminal techniques that also distort people’s behavior. Nor does it include “harm to one’s autonomy” in the list of harms.¹⁶⁶

Thus, the EU legislator has managed to develop more rules that target the platform economy, which is powered by automated and autonomous tools, and has even changed the approach by focusing on such issues as the choice architecture. This is a very positive step forward, though the highly specific issue of trademark visibility remains unaddressed.

¹⁶² Kerber and Specht-Riemenschneider 2021, pp. 72, 76, 78.

¹⁶³ *Ibid.*, p. 88.

¹⁶⁴ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence and Amending Certain Union Legislative Acts COM(2021) 206 final (AI Act).

¹⁶⁵ Helberger et al. (2021b), pp. 29, 32.

¹⁶⁶ Franklin et al. (2023).

5 Conclusion

This paper began by discussing the Tobacco Plain Packaging case in which trademarks became “not noticeable, or unavailable”. It is possible to think of other examples from a more traditional shopping environment that illustrate the lack of visibility of trademarks. For example, the *Mitsubishi* case concerned de-branding and re-branding, i.e. the removal of the right holders’ trademarks from its products and the placement of a third party’s signs on the same goods.¹⁶⁷ In that case, the CJEU was criticized for applying trademark rules in the area of unfair competition.¹⁶⁸ However, it can also be concluded that the CJEU had a point when it addressed the elimination of the owner’s trademarks from genuine products: this deprived consumers of completeness of information. With less information, concerns arise regarding consumer choice and autonomy as important aspects of consumer well-being; these concerns become more justified with the involvement of AI in shopping – a technological “nail into the coffin of human choice”,¹⁶⁹ as one commentator wrote.

Trademarks have always been important informational and persuasive commercial instruments that simultaneously help reduce search costs. AI/ML tools can easily replace trademarks in terms of search cost reduction: it is possible to imagine the “death of trademarks”. However, given the broader role of trademarks, consumers will lose more than they gain in terms of cost savings. Even in a perfect world with no algorithm biases and no manipulation on the part of the platforms, the disappearance of trademarks for some products may diminish consumer choice (examples with plain packaging and de-branding/re-branding may confirm that). In this age of AI advancements, and given the goal of platforms to become “one-window” stops for any commercial activity under their control, we are losing choice and autonomy on an unprecedented level. Following what has been achieved by philosophical thought in the area of autonomy, one cannot help but recall that there are cases where a new choice may sometimes devalue a previous choice, especially if the former seems easier and makes use of people’s cognitive weaknesses:¹⁷⁰ translating using Google Translate may seem more productive than using a dictionary in book format; shopping via Amazon’s Alexa may seem more efficient than shopping in a local grocery store. In the end, though, it is through our own efforts of opening a book and applying grammar rules to word combinations or looking at a shelf and comparing options that the human brain and one’s personal autonomy develop.

Making trademarks visible again in order to promote choice as well as alternatives may restore some autonomy to modern consumers. Meanings conveyed by trademarks make our lives richer. So it may be better to think of limiting the

¹⁶⁷ *Mitsubishi*.

¹⁶⁸ E.g. Kur (2019), Parimalam (2021).

¹⁶⁹ Gal (2018). See also Gal and Elkin-Koren (2017), p. 311 (on choices by “algorithmic consumers” being formally wider (since a powerful filter can process lots of options and rely on big data) but less subjective (with machines, the choice is not informed but conducted *for* consumers, not *by* them)).

¹⁷⁰ Dworkin (1988).

persuasion function of trademark protection but not limiting trademark functions altogether. Simplifying life with new technologies, especially AI, may not be the best move, given the imperfections of such tools. They have their place, but, by default, consumer choice must come before choice by machines. As for the best purpose for AI, it can indeed empower consumers to, for instance, distinguish between similar product names in this age of trademark depletion and congestion, and equip marketers with tools to reduce the cost of searching for an attractive new name.¹⁷¹ Assisting with decision-making, rather than decision-making itself, must be the role of AI. We must speak not about the death of trademarks,¹⁷² but about the death of AI as a decision-maker.¹⁷³

Funding Open Access funding provided by Hanken School of Economics.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- André Q et al (2018) Consumer choice and autonomy in the age of artificial intelligence and big data. *CNS* 5:28–37. <https://doi.org/10.1007/s40547-017-0085-8>
- Batty R (2021) Trade mark infringement and artificial intelligence. SSRN. <https://doi.org/10.2139/ssrn.3978248>
- Beebe B (2005) Search and persuasion in trademark law. *Mich L Rev* 103:2020–2072

¹⁷¹ *E.g.* Beebe and Fromer (2018); Katyal and Kesari (2020).

¹⁷² As mentioned in section 1, scholars conclude that AI cannot replace people and that AI/ML tools must be seen as mere assistants to human beings. Besides in IP law, similar voices are also heard in law-and-technology studies, in narrower research, such as on digital assistants, and in consumer and privacy law. There are appeals for opt-in, not opt-out, models when using technological tools, and invitations to use ex-ante, not ex-post, interventions to guarantee people's freedom and autonomy, both of which are tied to citizens' well-being and even to a healthy democracy (*e.g.* Gal 2018; Lippi et al. 2020; Manheim and Kaplan 2019; Stucke and Ezrachi 2017). In trademark law, Lisa Ouellette and Daniel Hemel have urged for investigation into other dimensions of product search, including with the help of technologies, not in order to replace trademarks but to obtain assistance in solving social problems (Hemel and Ouellette 2021). *See also* Ouellette 2018; Katyal and Kesari 2020. This paper's proposal to make trademarks visible by default seems to be in line with all these suggestions, as well as with earlier cited marketing research that also focused on committing to consumer well-being and human excellence (*e.g.* Davenport et al. 2020; André et al. 2018; Burr et al. 2020). With consumers better off, the market will be more trusted and will hence improve (*e.g.* Grochowski et al. 2021).

¹⁷³ In other fields, there are similar voices to that expressed in this paper. For instance, marketing scholars press not for data-driven, but decision-driven, thinking, which considers the real purpose and values of businesses (Langhe and Puntoni 2020).

- Beebe B (2008) The semiotic account of trademark doctrine and trademark culture. In: Dinwoodie GB, Janis MD (eds) *Trademark law and theory*. Edward Elgar, Cheltenham, pp 42–64. <https://doi.org/10.4337/9781848441316.00008>
- Beebe S, Fromer JC (2018) Are we running out of trademarks? An empirical study of trademark depletion and congestion. *Harv L Rev* 131:945–1045
- de Bellis E, Johar GV (2020) Autonomous shopping systems: identifying and overcoming barriers to consumer adoption. *J Retail* 96(1):74–87. <https://doi.org/10.1016/j.jretai.2019.12.004>
- Berg N, Knights M (2022) *Amazon: how the world's most relentless retailer will continue to revolutionize commerce*, 2nd edn. Kogan Page, London and New York
- BEUC (The European Consumer Organisation) (2022) EU consumer protection 2.0: protecting fairness and consumer choice in a digital economy. <https://www.beuc.eu/position-papers/eu-consumer-protection-20-protecting-fairness-and-consumer-choice-digital-economy>. Accessed 30 March 2023
- Boerman SC, Kruikemeier S, Zuiderveen Borgesius FJ (2017) Online behavioral advertising: a literature review and research agenda. *J Advert* 46(3):363–376. <https://doi.org/10.1080/00913367.2017.1339368>
- Bohaczewski M (2020) Conflicts between trade mark rights and freedom of expression under EU trade mark law: reality or illusion? *IIC* 51:856–877. <https://doi.org/10.1007/s40319-020-00964-5>
- Burk DL (2021) Algorithmic legal metrics. *Norte Dame L Rev* 96(3):1147–1204
- Burr C, Taddeo M, Floridi L (2020) The ethics of digital well-being: a thematic review. *Sci Eng Ethics* 26:2313–2343. <https://doi.org/10.1007/s11948-020-00175-8>
- Bury I, van Hoboken J (2021) The digital services act (DSA) proposal: a critical overview. DSA Observatory. https://dsa-observatory.eu/wp-content/uploads/2021/11/Buri-Van-Hoboken-DSA-discussion-paper-Version-28_10_21.pdf. Accessed 5 April 2023
- Carter S (1990) The trouble with trademark. *YLJ* 99(4):759–800. <https://doi.org/10.2307/796637>
- Cauffman C, Goanta C (2021) A new order: the digital services act and consumer protection. *Eur J Risk Regul* 12(4):758–774. <https://doi.org/10.1017/err.2021.8>
- Chen G, Xie P, Dong J, Wang T (2019) Understanding programmatic creative: the role of AI. *J Advert* 48(4):347–355. <https://doi.org/10.1080/00913367.2019.1654421>
- Cole MD (2021) The proposal for a digital markets act (DMA): on gatekeepers, fairness and transparency in the online environment. In: Nikoltchev S et al (eds) *Unravelling the Digital Services Act Package*. European Audiovisual Observatory, Strasbourg, pp 76–92. <https://su.diva-portal.org/smash/get/diva2:1605131/FULLTEXT01.pdf>. Accessed 27 March 2023
- Contissa G et al (2018) Towards Consumer-Empowering Artificial Intelligence. In: *Proceedings of the Twenty-Seventh International Joint Conference on Artificial Intelligence 2018*:5150–5157. <https://doi.org/10.24963/ijcai.2018/714>
- Craig C, Kerr I (2021) The death of the AI author. *Ottawa Law Rev* 52(1):33–86
- Dan-Cohen M (1992) Conceptions of choice and conceptions of autonomy. *Ethics* 102(2):221–243
- Davenport T, Guha A, Grewal D, Bressgott T (2020) How artificial intelligence will change the future of marketing. *JAMS* 48:24–42. <https://doi.org/10.1007/s11747-019-00696-0>
- de Langhe B, Puntoni S (2020) Leading with decision-driven data analytics. *MIT Sloan Manag Rev*. <https://sloanreview.mit.edu/article/leading-with-decision-driven-data-analytics>. Accessed 27 March 2023
- Dogan SL (2018) Bounded rationality, paternalism, and trademark law. *Houst Law Rev* 56(2):269–294
- Dogan SL (2021) Reforming trademark law's approach to intermediary liability. In: Dinwoodie GB, Janis MD (eds) *Research handbook on trademark law reform*. Edward Elgar, Cheltenham, pp 370–395. <https://doi.org/10.4337/9781785366215>
- Dogan SL, Lemley MA (2004) The merchandising right: fragile theory of fait accompli. *Stanford Public Law Working Paper* 105. <https://doi.org/10.2139/ssrn.636872>
- Dogan SL, Lemley MA (2007) Grounding trademark law through trademark use. *Iowa law Rev* 92:1669–1701
- Dornis TW (2017) *Trademark and unfair competition conflicts*. CUP, Cambridge
- Drexl J et al (2019) Technical aspects of artificial intelligence: an understanding from an intellectual property perspective. In: *Max Planck Institute for Innovation and Competition Research Paper* 19–13. <https://doi.org/10.2139/ssrn.3465577>
- Dworkin G (1988) *The theory and practice of autonomy*. CUP, Cambridge
- European Commission (2019) *Ethics guidelines for trustworthy AI*. <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>. Accessed 30 March 2023

- Franklin M, Ashton H, Gorman R, Armstrong S (2023) The EU's AI Act needs to address critical manipulation methods. OECD.ai. <https://oecd.ai/en/wonk/ai-act-manipulation-methods>. Accessed 5 April 2023
- Gal MS (2018) Algorithmic challenges to autonomous choice. *MTLR* 25(1):59–104
- Gal MS, Elkin-Koren N (2017) Algorithmic consumers. *Harv J L & Tech* 30(2):309–353
- Gangjee DS (2013) Property in brands: the commodification of conversation. In: Howe HR, Griffiths J (eds) *Concepts of property in intellectual property law*. CUP, Cambridge, pp 29–59. <https://doi.org/10.1017/CBO9781107300880>
- Gangjee DS (2020) Eye, robot: artificial intelligence and trade mark registers. In: Bruun N et al (eds) *Transition and coherence in intellectual property law*. CUP, Cambridge, pp 174–190. <https://doi.org/10.1017/9781108688529.020>
- Gangjee DS (2021) Trade marks and innovation. In: Dinwoodie GB, Janis MD (eds) *Research handbook on trademark law reform*. Edward Elgar, Cheltenham, pp 192–224. <https://doi.org/10.4337/9781785366215>
- Gangjee DS, Burrell R (2010) Because you're worth it: L'Oréal and the prohibition of free riding. *Mod L Rev* 73(2):282–295
- Gielens K et al (2021) The future of private labels: towards a smart private label strategy. *J Retail* 97(1):99–115. <https://doi.org/10.1016/j.jretai.2020.10.007>
- Gravelly S et al (2023) Evaluating the impact of plain packaging among Canadian smokers: findings from 2018 and 2020 ITC Smoking and Vaping Surveys. *Tob Control* 32:153–162. <https://doi.org/10.1136/tobaccocontrol-2021-056635>
- Greenhalgh EM, Scollo MM (2022) InDepth 11A.9 real-world research on the effects of plain packaging. In: Greenhalgh EM, Scollo MM, Winstanley MH (eds) *Tobacco in Australia: facts and issues*. Cancer Council Victoria, Melbourne. <https://www.tobaccoinustralia.org.au/chapter-11-advertising/indepth-11a-packaging-as-promotion/11a-9-real-world-research-on-the-effects-of-plain->. Accessed 15 March 2023
- Grochowski M, Jabłonowska A, Lagioia F, Sartor G (2021) Algorithmic transparency and explainability for EU consumer protection: unwrapping the regulatory premises. In: *Max Planck Private Law Research Paper* 21/7. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3826415. Accessed 17 March 2023
- Grynberg M (2019) AI and the “death of trademark.” *KY L J* 108(2):199–238
- Grynberg M (2021) The consumer's duty of care in trademark law. In: Dinwoodie GB, Janis MD (eds) *Research handbook on trademark law reform*. Edward Elgar, Cheltenham, pp 326–350. <https://doi.org/10.4337/9781785366215>
- Hastings GB, Moodie C (2015) Death of a salesman. *Tob control* 24:ii1–ii2. <https://doi.org/10.1136/tobaccocontrol-2015-052285>
- Helberger N et al (2021a) EU consumer protection 2.0: structural asymmetries in digital consumer markets. BEUC. http://www.beuc.eu/sites/default/files/publications/beuc-x-2021-018_eu_consumer_protection_2.0.pdf. Accessed 5 April 2023
- Helberger N, Micklitz H-W, Rott P (2021b) The regulatory gap: consumer protection in the digital economy. BEUC. http://www.beuc.eu/sites/default/files/publications/beuc-x-2021-116_the_regulatory_gap-consumer_protection_in_the_digital_economy.pdf. Accessed 5 April 2023
- Hemel DJ, Ouellette LL (2021) Trademark law pluralism. *U Chi L Rev* 88:1025–1080
- Heymann LA (2009) The public's domain in trademark law: a first amendment theory of the consumer. *Ga L Rev* 43(3):651–715
- Hildebrandt M (2016) *Smart technologies and the end(s) of law*. Edward Elgar, Cheltenham
- INTA (International Trademark Association) (2019) Comments on the Dutch proposal to amend the tobacco and related products decree in connection with the introduction of plain packaging for cigarettes and RYO tobacco. https://www.inta.org/wp-content/uploads/public-files/advocacy/testimony-submissions/2019-05_INTA_comments_on_the-Netherlands-Intention-to-Introduce-Plain-Packaging.pdf. Accessed 14 March 2023
- Jabłonowska A, et al. (2018) Consumer law and artificial intelligence. In: *EUI Department of Law Research Paper* 2018/11. <https://doi.org/10.2139/ssrn.3228051>
- Janis MD, Dinwoodie GB (2007) Confusion over use: contextualism in trademark law. *Iowa Law Rev* 92:1597–1667
- Kahneman D (2011) *Thinking, fast and slow*. Farrar, Straus and Giroux, New York
- Katay S, Kesari A (2020) Trademark search, artificial intelligence and the role of the private sector. *BTLJ* 35:501–588. <https://doi.org/10.15779/Z380V89H87>

- Katz A (2010) Beyond search costs: the linguistic and trust functions of trademarks. *BYU L Rev*: 1555–1608
- Kerber W, Specht-Riemenschneider L (2021) Synergies between data protection law and competition law. SSRN. <https://doi.org/10.2139/ssrn.3977039>
- Kim D, Drexl J, Hilty RM, Slowinski PR (2021) Artificial intelligence systems as inventors? A position statement of 7 September 2021 in view of the evolving case-law worldwide. In: Max Planck Institute for Innovation and Competition Research Paper 21-20. <https://doi.org/10.2139/ssrn.3919588>
- Kotler P, Kartajaya H, Setiawan I (2021) *Marketing 5.0*. Wiley, Hoboken
- Kur A (2019) Trademark functions in European Union Law—also containing a comment on CJEU Case C-129/17, *Mitsubishi v. Duma*. Max Planck Institute for Innovation and Competition Research Paper 19-06. <https://doi.org/10.2139/ssrn.3425839>
- Landes WM, Posner RA (1987) Trademark law: an economic perspective. *J Law Econ* 30(2):265–309
- Leung E, Paolacci G, Puntoni S (2018) Man versus machine: resisting automation in identity-based consumer behavior. *J Mark Res* 55(6):818–831. <https://doi.org/10.1177/0022243718818423>
- Lippi M et al (2020) The force awakens: artificial intelligence for consumer law. *JAIR* 67:169–190. <https://doi.org/10.1613/jair.1.11519>
- Manheim K, Kaplan L (2019) Artificial intelligence: risks to privacy and democracy. *Yale J L & Tech* 21:106–188
- Mari A, Mandelli A, Algesheimer R (2020) The evolution of marketing in the context of voice commerce: a managerial perspective. In: Nah FH, Siau K (eds) *HCI in business, government and organizations*. HCII 2020. Lecture Notes in Computer Science, Vol 12204. Springer, Cham, pp 405–425. https://doi.org/10.1007/978-3-030-50341-3_32
- Mari A, Algesheimer R (2021a) AI-based voice assistants for digital marketing: preparing for voice marketing and commerce. In: Niininen O (ed) *Contemporary issues in digital marketing*. Routledge, London, pp 72–82. <https://doi.org/10.4324/9781003093909-9>
- Mari A, Algesheimer R (2021b) The role of trusting beliefs in voice assistants during voice shopping. In: *Proceedings of the 54th Hawaii International Conference on System Sciences*:4073–4082. <https://doi.org/10.24251/HICSS.2021.495>
- Marques (2012) Joint statement on plain packaging. www.marques.org/Newsletters/Newsletter/Default.asp?NewsletterID=6&art=0. Accessed 14 March 2023
- Max Planck Institute for Intellectual Property and Competition Law (2011) Study on the overall functioning of the European trade mark system. In: Publication Office of the European Union. <https://op.europa.eu/en/publication-detail/-/publication/5f878564-9b8d-4624-ba68-72531215967e>. Accessed 9 March 2023
- McKenna MP (2012) A consumer decision-making theory of trademark law. *Va L Rev* 98:67–142
- Moerland A, Freitas C (2021) Artificial intelligence and trade mark assessment. In: Lee JA et al (eds) *Artificial intelligence and intellectual property*. OUP, Oxford, pp 266–291
- Moerland A, Kafrouni C (2021) Online shopping with artificial intelligence: what role to play for trade marks? SSRN. <https://doi.org/10.2139/ssrn.3942770>
- Moodie C et al (2022) Plain tobacco packaging: progress, challenges, learning and opportunities. *Tob Control* 31:263–271. <https://doi.org/10.1136/tobaccocontrol-2021-056559>
- Ouellette LL (2018) Does running out of (some) trademarks matter? *Harv L Rev* 131:116–126
- Parimalam S (2021) Trade mark infringement or unfair commercial conduct? The complications of case C-129/17 “Mitsubishi.” *QMLJ* 2:184–197
- Pasquale FA, Cockfield AJ (2018) Beyond instrumentalism: a substantivist perspective on law, technology, and the digital persona. *Mich St L Rev* 2018:821–868
- Podszun R (2019) Digital ecosystems, decision-making, competition and consumers – on the value of autonomy for competition. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3420692. Accessed 16 March 2023
- Puntoni S, Reczek RW, Giesler M, Botti S (2021) Consumers and artificial intelligence: an experimental perspective. *J Mark* 85(1):131–151. <https://doi.org/10.1177/0022242920953847>
- Randakevičiūtė-Alpman J (2021) The role of trademarks on online retail platforms: EU trademark law perspective. *GRUR Int* 70(7):633–643. <https://doi.org/10.1093/grurint/ikab010>
- Sakulin W (2010) Trademark protection and freedom of expression: an inquiry into the conflict between trademark rights and freedom of expression under European, German, and Dutch Law (DPhil Thesis). University of Amsterdam. <https://dare.uva.nl/search?identifier=e7c497fc-4281-4d2e-b2b4-d15588ac972a>. Accessed 9 March 2023

- Schechter F (1927) Rational basis for trademark protection. *Harv Law Rev* 40(6):813–833. <https://doi.org/10.2307/1330367>
- Schwartz B (2009) *The paradox of choice*. HarperCollins, New York
- Schweitzer FM, Belk R, Jordan W, Ortner M (2019) Servant, friend or master? the relationships users build with voice-controlled smart devices. *J Mark Manage* 35(7–8):693–715. <https://doi.org/10.1080/0267257X.2019.1596970>
- Sen A (1988) Freedom of choice: concept and content. *Eur Econ Rev* 32(2–3):269–294
- Senftleben M (2014) Function theory and international exhaustion—why it is wise to confine the double identity rule to cases affecting the origin function. *EIPR* 36(8):518–524
- Senftleben M (2016) Trademark transactions in EU Law—refining the approach to selective distribution networks and national unfair competition law. In: Werra J de, Calboli I (eds) *Law and practice of trademark transactions*. Edward Elgar, Cheltenham, pp 327–357. <https://doi.org/10.4337/9781783472130.00032>
- Senftleben M (2022) Trademark law, AI-driven behavioral advertising and the Digital Services Act—towards source and parameter transparency for consumers, brand owners and competitors. In: Abbott R (ed) *Research handbook on intellectual property and artificial intelligence*. Edward Elgar, Cheltenham, pp 309–324
- Sheff JN (2011) The ethics of unbranding. *Fordham Intell Prop Media & Ent L J* 21:983–1006
- Sheff JN (2012) Veblen brands. *Minn L Rev* 96:769–832
- Sheff J (2021) Finding dilution. In: Dinwoodie GB, Janis MD (eds) *Research handbook on trademark law reform*. Edward Elgar, Cheltenham, pp 351–369. <https://doi.org/10.4337/9781785366215>
- Siggelkow N, Terwiesch C (2019) The age of continuous connection. *HBR* May-June:64–73
- Steponėnaitė VK (2019) Alexa, are you confused? unravelling the interplay between AI and (European) trademark law. *KU Leuven CITIP*. www.law.kuleuven.be/citip/blog/alexa-are-you-confused-unravelling-the-interplay-between-ai-and-european-trademark-law. Accessed 18 March 2023
- Stucke ME, Ezrachi A (2017) How digital assistants can harm our economy, privacy, and democracy. *BTLJ* 32(3):1239–1300
- Thaler RH, Sunstein CR (2003) *Libertarian paternalism*. *Am Econ Rev* 93(2):175–179
- Thaler RH, Sunstein CR (2009) *Nudge: improving decisions about health, wealth, and happiness*. Penguin Publishing, New York
- Tushnet R (2008) Gone in sixty milliseconds: trademark law and cognitive science. *Tex Law Rev* 86:507–568
- WIPO (World Intellectual Property Organization) (2019) *WIPO Technology Trends 2019: Artificial Intelligence*. www.wipo.int/edocs/pubdocs/en/wipo_pub_1055.pdf. Accessed 17 March 2023
- Young R (2017) *Personal autonomy: beyond negative and positive liberty*. Routledge, London and New York

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.