

ARTICLES

CONFRONTING PRODUCT OBSOLESCENCE

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Abstract

Firms frequently employ various strategies to render products obsolete after a relatively short time or limited usage. This phenomenon of “product obsolescence” harms consumers, undermines market efficiency, and increases the waste the throw-away economy generates. While instances of suspected planned obsolescence have recently led to public outcry, the existing law and policy framework that addresses product obsolescence is incomplete, underdeveloped, and ineffective.

This Article offers a principled and holistic approach to the regulation of product obsolescence. Part I presents the different forms of product obsolescence. The typology we offer in this Part highlights some forms of obsolescence that have escaped legal scrutiny. Thereafter, Part II reviews the harms that product obsolescence causes to consumers, competitors, the environment, and society at large. In doing so, we demonstrate how product obsolescence is at odds with two key European Union commitments: a high level of consumer protection, and a shift towards more ambitious environmental regulation. Next, Part III critically assesses the existing legal framework and its (in)ability to effectively tackle the problem of product obsolescence. Finally, Part IV offers policy recommendations aimed at better utilizing existing regulatory tools and employing novel tools to cope with product obsolescence.

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Abbreviations:

AGCM	Autorità Garante della Concorrenza e del Mercato
BEUC	Bureau Européen des Unions de Consommateurs
CRD	Consumer Rights Directive
EPR	Extended Producer Responsibility
EC	European Commission
EESC	European Economic & Social Committee
EP	European Parliament
HOP	Halte à l'Obsolescence Programmée
ICA	Italian Competition Authority
PPP	Polluter Pays Principle
UCPD	Unfair Commercial Practices Directive

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INTRODUCTION

In 1932, Bernard London famously wrote a pamphlet entitled *Ending the Depression Through Planned Obsolescence*.¹ In this text, aimed at boosting the American economy, London advocated for deliberately manufacturing goods so they would fail after a short period of time. The logic seemed simple enough: If products failed after a short time, consumers would have to buy new ones. Consumer spending, in turn, would spur a growing economy.

Almost ninety years after London published his essay, policymakers generally agree that his logic was fundamentally flawed. Product obsolescence is a problem, not a solution. While the durability of some products has undoubtedly increased over time, we now experience smartphones that fail to function properly after updating their operating system; printers that are disabled after a limited number of printed pages or a specific time; washing machines, dishwashers, and dryers that last for only a few years; shaving razors that require constant replacements; and garments that feel out of style after just one season.² Indeed, firms continue to employ multiple strategies that make their products prematurely obsolete. These strategies lead to excessive consumer

¹ BERNARD LONDON, *ENDING THE DEPRESSION THROUGH PLANNED OBSOLESCENCE* (1932), reprinted in 44 *REVUE DU MAUSS* 47 (2014), available at <https://hdl.handle.net/2027/wu.89097035273>.

² See *infra* Part I (discussing these, and many other, examples).

spending and waste, unreasonably harming consumers, competitors, and the environment.³

Product obsolescence raises thorny questions: Is it legitimate for firms to deliberately design and plan products that fail after a specific period? Do firms exploit consumers' vulnerabilities when employing premature obsolescence? How should policymakers respond to firms' profit-incentive to manipulate customers into incorrectly believing that their products are outdated? Can consumer law and environmental law work in tandem to advance a more ethical and sustainable society that offers more durable products?

Despite these important questions, legal scholarship has only recently begun to explore how the law needs to change to accelerate change.⁴ In tackling the topic of product obsolescence, this Article makes three key contributions. First, it illustrates that the law addressing obsolescence is underdeveloped and partial in scope. Here, the Article demonstrates that current law and policy fail to address important forms of product obsolescence and the various harms they impose.⁵ Second, this Article critically evaluates current policy tools, highlighting much-needed changes. Finally, by weaving together insights from various disciplines and bodies of law, the Article proposes a novel regulatory framework that better tackles the problem of product obsolescence.⁶

The remainder of this Article proceeds as follows. Part I describes the process of product obsolescence and details the tools and strategies that firms employ to provoke premature product obsolescence. Part II then explains consumers' concerns and attitudes towards product obsolescence. It further places the problem of product obsolescence in its broader context, integrating economic, behavioral, and psychological insights.⁷ Subsequently, Part III critically examines the law and policy

³ See *infra* Part II (discussing, among other things, environmental externalities). See also ANNIE LEONARD, *THE STORY OF STUFF: THE IMPACT OF OVERCONSUMPTION ON THE PLANET, OUR COMMUNITIES, AND OUR HEALTH-AND HOW WE CAN MAKE IT BETTER* (2010) (illustrating how overconsumption pressures the planet and harms humanity). Interestingly, the issue of planned obsolescence relates to the Sustainable Development Goals (SDGs) promoted by the United Nations, and, in particular, SDG 12 (Ensure Sustainable Consumption and Production Patterns).

⁴ There is a paucity of research on this topic in American legal scholarship. The one exception we are aware of is Larry A. DiMatteo & Stefan Wrbka, *Planned Obsolescence and Consumer Protection: The Unregulated Extended Warranty and Service Contract Industry*, 28 CORNELL J.L. & PUB. POL'Y 483 (2019) (discussing only one type of product obsolescence strategy from a different perspective). In European scholarship, the topic is gaining prominence in the wake of the European Green Deal. See generally Éléonore Maitre-Ekern & Carl Dalhammar, *Regulating Planned Obsolescence: A Review of Legal Approaches to Increase Product Durability and Reparability in Europe*, 25 REV. EUR. COMP. & INT'L ENVTL. L. 378 (2016); Tobias Brönneke, *Premature Obsolescence: Suggestions for Legislative Counter-measures in German and European Sales & Consumer Law*, 14 J. EUR. ENVTL. & PLANNING L. 361 (2017); CONSUMER PROTECTION IN A CIRCULAR ECONOMY (Bert Keirsbilck & Evelyne Terryn eds., 2019).

⁵ See Maitre-Ekern & Dalhammar, *supra* note 4, at 394 (discussing some of these failures and concluding that there are "manifold strategies that can be applied to... promote product durability and reparability"). See also Alberto De Franceschi, *Planned Obsolescence Challenging the Effectiveness of Consumer Law and the Achievement of a Sustainable Economy*, 6 J. EUR. CONSUMER & MKT. L. 217, 217 (2018) (opining that "the approach of the EU legislator... shows a lack of effectiveness, leaving open some fundamental questions.").

⁶ See *infra* Parts III-IV.

⁷ See, e.g., Geneviève Helleringer & Anne-Lise Sibony, *EU Consumer Protection Through the Behavioral Lens*, 23 COLUM. J. EUR. L. 607 (2017) (advocating the integration of behavioral economics

landscape of product obsolescence. Against this background, Part IV proposes policy reforms. Concluding remarks follow.

I. WHAT IS PRODUCT OBSOLESCENCE?

Product obsolescence consists of various strategies that firms utilize to render their products obsolete after a relatively short time or limited usage. This Part provides the conceptual framework and a typology of premature obsolescence strategies.⁸ To that end, we delineate five categories of obsolescence techniques. These categories may overlap, and one should not regard them as being set in stone or exhaustive.⁹ Nevertheless, they help clarify what types of obsolescence practices may merit legal scrutiny.

A. *Planned Obsolescence*

”Our whole economy is based on planned obsolescence, and everybody who can read without moving his lips should know it by now. We make good products, we induce people to buy them, and then next year we deliberately introduce something that will make those products old fashioned, out of date, obsolete.”¹⁰

Planned obsolescence, which is perhaps the best-known type of premature obsolescence, refers to situations in which firms deliberately plan for their product to become objectively useless after a certain period of time or usage. This strategy enables firms to shorten the product’s lifecycle, thus forcing the customer to buy their next product. Planned obsolescence can, therefore, be defined as the “production of goods with uneconomically short useful lives so that customers will have to make repeat purchases.”¹¹

To illustrate, consider the following two examples. The first relates to the Phoebus lightbulb cartel, formed in the 1920s.¹² Until then, lightbulb manufacturers designed their products to last as long as possible. At the time, producers could make lightbulbs

into EU consumer law and policy generally); Bert Keirbilck & Sandra Rousseau, *The Marketing Stage: Fostering Sustainable Consumption Choices in a “Circular” and “Functional” Economy*, in CONSUMER PROTECTION IN A CIRCULAR ECONOMY, *supra* note 4, at 93 (integrating behavioral factors into legal analysis on a related theme).

⁸ There are different legitimate ways to categorize the strategies concerning premature obsolescence. For one review see Viviane Monteiro, *Does the Planned Obsolescence Influence Consumer Purchase Decisions? The Effects of Cognitive Biases: Bandwagon Effect, Optimism Bias and Present Bias on Consumer Behavior*, 29-34 (2018).

⁹ Vance Packard had distinguished three categories of product obsolescence: “obsolescence of function,” “obsolescence of desirability,” and “obsolescence of quality.” VANCE PACKARD, *THE WASTE MAKERS* 55, 66 (1960). Indeed, the term “planned obsolescence” is considered to be “remarkably ambiguous.” See, e.g., DiMatteo & Wrba, *supra* note 4, at 490. Brönneke opines that the more neutral term is “avoidable obsolescence.” Brönneke, *supra* note 4, at 363. Similarly, the Commission uses the generic term “early obsolescence;” see *Commission Communication on a New Consumer Agenda – Strengthening Consumer Resilience for Sustainable Recovery*, at 5, COM (2020) 696 final (Nov. 13, 2020) [hereinafter *New Consumer Agenda*]. We refer to additional typologies below.

¹⁰ GILES SLADE, *MADE TO BREAK: TECHNOLOGY AND OBSOLESCENCE IN AMERICA* 153 (2006).

¹¹ Jeremy Bulow, *An Economic Theory of Planned Obsolescence*, 101 Q. J. ECON. 729 (1986).

¹² For a comprehensive account, see Markus Krajewski, *The Great Lightbulb Conspiracy*, IEEE SPECTRUM (Sept. 24, 2014).

that could burn for 1,500 to 2,500 hours. However, the Phoebus cartel decided to limit the life of lightbulbs to 1,000 hours.¹³ The second illustration pertains to printers that include chips that disable the device after a certain number of printed pages, even if the cartridges contain ink and remain functional, or if cartridges have been refilled by third parties.¹⁴

In both cases, manufacturers deliberately chose to cap the lifespan of their product. To be sure, there are more subtle ways to reach obsolescence. Think, for instance, of a mobile phone whose default settings prevent received emails from being wholly deleted and that automatically adds every picture and video received in a message to the photo library. Such settings will ensure that the storage capacity of the phone will fill up quickly. Though still potentially functional (if one would only take the trouble of freeing up some memory), the phone is more likely to appear inadequate and, in turn, to be replaced for another model with a larger storage capacity.

B. *Functional Obsolescence*

With functional obsolescence, manufacturers use materials or fixtures of less-than-optimal quality. This causes products to wear out quickly or not function properly after a relatively short time. Unlike planned obsolescence, however, the producer here does not manipulate the product's life for the worse by disabling it. Rather, the manufacturer uses poorer components or fittings to shorten the product's functionality. Alternatively, a manufacturer may discontinue the production of spare parts and make the good impossible to repair,¹⁵ discontinue security updates, or force a software update that reduces functionality.¹⁶

By way of example, assume a furniture or car producer obliged to provide its customers with a two-year product guarantee.¹⁷ Such a producer may deliberately manufacture a chair or a car that will become obsolete—e.g., will need frequent repairs

¹³ On the history of the lightbulb cartel, see the film *THE LIGHT BULB CONSPIRACY* (Media 3.14 2010).

¹⁴ These scenarios of planned obsolescence have been carefully documented by HALTE À L'OBSOLESCENCE PROGRAMMÉE (HOP), IMPRIMANTES: CAS D'ÉCOLE D'OBSOLESCENCE PROGRAMMÉE? RAPPORT D'ENQUÊTE SUR LES ENJEUX ET SOLUTIONS EN MATIÈRE D'IMPRIMANTES ET CARTOUCHES 12-13 (2019), <https://www.halteobsolescence.org/wp-content/uploads/2019/02/Rapport-imprimantes-HOP.pdf> (explaining how cartridges became less transparent with time, with current printers "estimating" for how long cartridges can be used). A somewhat similar scenario of planned cartridge obsolescence was litigated in the US, see *Impression Products, Inc. v. Lexmark International, Inc.* 137 S.Ct. 1523 (2017) (chips disabling the printer if the cartridges had been refilled by third parties).

¹⁵ This is sometimes called technical obsolescence or indirect obsolescence. See HOP, WHITE PAPER DURABLE AND REPAIRABLE PRODUCTS: 20 STEPS TO A SUSTAINABLE EUROPE 6 (2020), <https://www.halteobsolescence.org/wp-content/uploads/2020/11/Livre-Blanc-europeen.pdf>; EESC Opinion CCMI/112-EESC-2013-1904, Towards More Sustainable Consumption: Industrial Product Lifetimes and Restoring Trust Through Consumer Information, at 5, 2014 O.J. C 67/23 (Oct. 17, 2013) (respectively).

¹⁶ This is sometimes called software obsolescence (see HOP, *supra* note 15, at 6 and 12), or incompatibility obsolescence (see EESC Opinion, *supra* note 15, at 5).

¹⁷ Parliament and Council Directive 1999/44/EC, On certain aspects of the sale of consumer goods and associated guarantees, art. 5, 1999 O.J. (L 171) 12, [hereinafter Sales and Guarantees Directive] replaced by Parliament and Council Directive 2019/771, On certain aspects concerning contracts for the sale of goods, art. 10(1) 2019 O.J. (L 136) 28 (to be applied by Member States as of 1 January 2022) [hereinafter Sales of Goods Directive] (making sellers liable for "any lack of conformity" existing at the time the goods are delivered and discovered within two years of that time).

and in many cases would better be replaced—shortly after the guarantee is over.¹⁸ Alternatively, consider the manufacturing of stockings with poorer components that will tear after being worn only a few times. Limited reparability feeds into this form of obsolescence and, indeed, aggravates it.

Both planned and functional obsolescence lead to similar results, yet they entail different routes. Planned obsolescence is characterized by a *deliberate* design that makes products fail before their “normal” end of life.¹⁹ With functional obsolescence, however, manufacturers do not introduce a failure that will unduly limit a product’s life. Instead, they use inferior quality components, production techniques, or fixtures—knowing this will *generally* result in a shorter lifespan.

Thus, functional obsolescence is potentially less malevolent than planned obsolescence. Theoretically, firms may manufacture products with varying degrees of durability, which the product’s price will presumably reflect. Following this logic, if durability is signaled properly—a big if, as we will see—consumers will be able to choose the option that best suits their preferences within their budget constraints.

C. *Technological Obsolescence*

Technological obsolescence occurs when a product becomes outdated due to technological innovation. Technological obsolescence makes an otherwise working product undesired. It generally occurs when technology brings about a new product that can replace the previous version of the product, and which consumers typically view as superior. Consider, for instance, an audio cassette player, an icebox, gas lights, an analog TV, a video cassette player, or a typewriter. The near-constant progression of technology has made these (and many other) products obsolete. However, note the fundamental difference between this type of obsolescence and the previous ones. In contrast to the foregoing forms, technological obsolescence does not require any ill intention, planning, or malice to be *a priori* attributed to the producer. Obsolescence here is but a consequence of technological progress.

D. *Postponement Obsolescence*

Postponement obsolescence transpires when a company selectively adds technology (or other features) to only some of its products. That is, postponement obsolescence occurs when a company can apply a technological improvement to all of its products, but chooses to add the improvement only to its flagship or leading products.

A paradigmatic example of this is a car manufacturer that chooses to add a newly developed component, such as a rearview camera, to some of its models but not to others. In such cases, consumers have a wider choice. They can move with the times and buy the expensive, full-of-technology, flagship product. Alternatively, they can purchase the low-end, less technologically developed model. On its face, it seems that such a practice does not harm consumers. From an economic perspective,

¹⁸ DiMatteo & Wrбка, *supra* note 4.

¹⁹ See Maitre-Ekern & Dalhammar, *supra* note 4, at 380.

postponement obsolescence increases consumer choice. Nonetheless, it has negative impacts, generating more wants and more waste.

E. Psychological Obsolescence

The previous four obsolescence types share an important common theme: They all reflect instances where the product becomes *objectively* obsolete. In addition to these types of obsolescence, there is also “psychological obsolescence.” Psychological obsolescence occurs when a product becomes less fashionable and unwanted due to newer trends.²⁰ Unlike the previous instances, in the case of psychological obsolescence, the product is essentially fully functional. Slightly restated, psychological obsolescence stems from consumers’ *subjective* perception; i.e., it is aesthetically dissatisfying.

It is no secret that marketers aspire to instill in consumers “the desire to own something a little newer, a little better, a little sooner than is necessary.”²¹ Psychological obsolescence induces consumers to purchase the “in style” product rather than be seen or associated with less attractive ones.²² Therefore, psychological obsolescence is sometimes termed “subjective obsolescence,” “style obsolescence,” “perceived obsolescence,” or “obsolescence of desirability.”²³ It arises when consumers are discontented with the product and are no longer attracted to it.²⁴

This type of obsolescence exploits the fact that consumers who follow trends may base their purchasing decisions on design, social trends, and emotions. In this respect, part of the psychological obsolescence may be attributed to, and explained by, the bandwagon effect.²⁵ The bandwagon effect leads people to behave in a certain way—for example, make certain decisions or hold certain beliefs—mainly because others are behaving that way.²⁶ In short, the bandwagon effect reflects herd behavior. It is a mental shortcut that leads people to follow others’ preferences and beliefs rather than their own.

The perception that personal identity, social acceptance, and status depend on material possessions—held by many consumers—may aggravate the effects of psychological obsolescence. Generally speaking, the literature confirms that young consumers are more likely to be swayed by social trends and experience more pressure due to the bandwagon effect than their older counterparts.²⁷ While psychological

²⁰ Such trends may include technological ones, which illustrates the potential overlap between the different types of obsolescence.

²¹ GLEN ADAMSON, *INDUSTRIAL STRENGTH DESIGN: HOW BROOKS STEVENS SHAPED YOUR WORLD* 129 (2003).

²² Tim Cooper, *Inadequate Life? Evidence of Consumer Attitudes to Product Obsolescence*, 27 J. CONSUMER POL’Y 421, 443 (2004).

²³ See, e.g., Jana Valant, *Planned obsolescence: Exploring the Issue*, European Parliamentary Research Service 2 (2016) (referring to “style obsolescence”).

²⁴ *Id.*

²⁵ See, e.g., Richard Nadeau et al., *New Evidence About the Existence of a Bandwagon Effect in the Opinion Formation Process*, 14 INT’L POL. SCI. REV. 203 (1993).

²⁶ Examples may include dining in a popular restaurant, investing in the stock market, visiting a popular destination, shopping at fashionable stores, and following a well-known celebrity on social media.

²⁷ For empirical results along these lines, see Monteiro, *supra* note 8.

obsolescence is not a new phenomenon, its impact is becoming increasingly significant and further explored.²⁸

Examples of psychological obsolescence include a five-year-old car, a two-year-old backpack, and a one-year-old garment. The car might still be perfectly safe and operational, the backpack fit for purpose, and the garment absolutely fine to wear. Yet, the consumer, who now comes across newer models and fashions, may view these items as out of style or aesthetically displeasing. At times, the consumer may experience disappointment or depreciation vis-à-vis the obsolete product or feel shame when seen using it. In the examples detailed above, the consumer might be embarrassed to drive the (five-year-old) car, use the (two-year-old) backpack or wear the (previous season's) clothing item. In these scenarios, physical durability is not at stake; "emotional durability" is.²⁹

Of course, both societies and consumers are heterogeneous. Group pressure is more potent in some settings than in others. Within a given society, some consumers will be prone to fall victim to psychological obsolescence, while others may be less influenced by it.³⁰ It may also be the case that psychological obsolescence will influence an individual consumer's views on some products but not on others.³¹ This heterogeneity implies that the impact of psychological obsolescence varies across consumer groups and markets.

* * * * *

Product obsolescence refers to an array of production and marketing strategies that make a product appear to be—or actually be—obsolete. Premature product obsolescence can result from limited usability, outright failure, fashion trends, or social pressure.³² Frequently, though not always, businesses can foresee product obsolescence. Firms may even plan and intentionally build obsolescence into products from their conception. Conversely, firms can also try to avoid it. When they do not, consumers are more likely to feel a need to purchase a new product that replaces the old one, thereby increasing firms' sales volumes³³ and, problematically, society's

²⁸ For early recognition of the issue see, e.g., JOSEPH W. NEWMAN, MOTIVATION RESEARCH AND MARKETING MANAGEMENT 237 (1957) (describing psychological obsolescence as a strategy aimed at persuading consumers that style and fashion is a central component in the desirability of products).

²⁹ The phrase is used in LE EUROPE, VVA EUROPE, IPSOS, CONPOLICY & TRINOMICS, BEHAVIOURAL STUDY ON CONSUMERS' ENGAGEMENT IN THE CIRCULAR ECONOMY 76 (2018), https://ec.europa.eu/info/sites/default/files/ec_circular_economy_final_report_0.pdf [hereinafter *Engagement in the Circular Economy*]. See also Jonathan Chapman, *Design for (Emotional) Durability*, 25 DESIGN ISSUES 29 (2009); Anders Haug, *Psychologically Durable Design – Definitions and Approaches*, 22 DESIGN J. 1 (2019).

³⁰ See, e.g., ÉQUITERRE, OBSOLESCENCE OF HOME APPLIANCES AND ELECTRONICS: WHAT IS THE ROLE OF THE CONSUMER? 20-27 (2018), <https://www.recyc-quebec.gouv.qc.ca/sites/default/files/Obsolescence-rapport-EN.pdf> (surveying consumer behavior with respect to product obsolescence). See also Cooper, *supra* note 22, at 422.

³¹ ÉQUITERRE, *supra* note 30.

³² Justine Cueto, *Planned Obsolescence: An Economic and Cultural Anxiety* (July 2019) (unpublished paper at 1), https://www.researchgate.net/publication/334612533_Planned_Obsolescence_An_Economic_and_Cultural_Anxiety.

³³ EESC Opinion CCMI/112-EESC-2013-1904, *supra* note 15.

waste.³⁴ Indeed, humans generated more than fifty million tons of electronic waste in 2019 alone, due in no small part to planned obsolescence.³⁵

Various terms are being used to describe premature obsolescence,³⁶ and the different strategies delineated in this Part may overlap and exacerbate one another. For instance, frequent new product launches in the mobile phone industry may respond to planned, functional or technological obsolescence. At the same time, frequent launches of new products may provoke psychological obsolescence. These launches then signal to consumers that it is time to get rid of their old product (regardless of its functionality) and purchase a new one.³⁷ Failure to properly dispose of replaced products exacerbates the resulting waste. Cell phones, for their part, are seldom properly disposed of and recycled upon replacement. Rather, phones are left to “hibernate” in a drawer—preventing reuse or recycling and worsening the environmental consequences of obsolescence.³⁸

II. IS PRODUCT OBSOLESCENCE A PROBLEM?

Against this background, this Part explains consumers’ concerns and attitudes towards product obsolescence and places it in its broader context. Section A demonstrates that consumers view product obsolescence as a serious and growing problem. Next, Sections B and C offer economic and behavioral analyses, demonstrating that product obsolescence causes several types of consumer harm. Finally, Section D discusses the impact of product obsolescence on societal well-being, placing the issue in the context of consumer culture.

A. Consumer Perception and Market Realities

Consumers take a broadly negative view of product obsolescence. Studies report consumers’ complaints that “in the past, things used to last longer,” that many current products “are not made to be used a lot,” and that firms “cut corners trying to cut costs,” thus feeding premature obsolescence.³⁹ A 2013 survey of 800 Austrian consumers found that 55 percent of respondents “believed that manufacturers

³⁴ In 2020, European consumers were expected to produce 12 million tons of electric and electronic waste. See *Waste Electrical & Electronic Equipment (WEEE)*, EUROPEAN COMMISSION (Nov. 18, 2020, 10:29 AM), https://ec.europa.eu/environment/waste/weee/index_en.htm [<https://perma.cc/S9DS-9PF2>]; Evelyne Terryn, *A Right to Repair? Towards Sustainable Remedies in Consumer Law*, 27 EUR. REV. PRIV. L. 851, 851 (2019).

³⁵ VANESSA FORTI, CORNELIS PETER BALDÉ, RUEDIGER KUEHR & GARAM BEL, U.N. UNIV., *THE GLOBAL E-WASTE MONITOR 2020: QUANTITIES, FLOWS AND THE CIRCULAR ECONOMY POTENTIAL* 23 (2020), https://collections.unu.edu/eserv/UNU:7737/GEM_2020_def_july1.pdf.

³⁶ See, e.g., Rob Lawlor, *Delaying Obsolescence*, 21 SCI. & ENGINEERING ETHICS 401 (2015) (“planned obsolescence [is] “a policy of producing consumer goods that rapidly become obsolete and so require replacing, achieved by frequent changes in design, termination of the supply of spare parts, and the use of non-durable materials”); Maitre-Ekern & Dalhammar, *supra* note 4, at 380.

³⁷ Derrick S. Boone et al., *The Impact of Firm Introductory Strategies on Consumers’ Perceptions of Future Product Introductions and Purchase Decisions*, 18 J. PRODUCT INNOVATION MGMT. 96 (2001).

³⁸ Dmitry Zhilyaeva et al., *The Living, the Dead, and the Obsolete: A Characterization of Lifetime and Stock of ICT Products in Denmark*, 164 RESOURCES, CONSERVATION & RECYCLING (2021) (finding that 30% of the stock of phones are not in use).

³⁹ Cooper, *supra* note 22, at 431.

intentionally and systematically shorten the lifetime of products.”⁴⁰ The French seem even more convinced. Ninety percent of French respondents to a 2014 survey held the belief that “programmed obsolescence is real,”⁴¹ and 92 percent of respondents believed that electrical or high-tech products are deliberately designed not to last.⁴² The Belgian consumer organization Test Achats/Test Aankoop established a platform to flag products that break too quickly. Despite consumers’ general tendency not to take legal action or otherwise insist on their rights,⁴³ consumers contributed thousands of reports within a few months.⁴⁴ Likewise, the Swiss consumer organization, SKS, received hundreds of complaints related to possible premature obsolescence in various product markets.⁴⁵

The blogosphere and mass media have also reported various cases of suspected planned obsolescence concerning miscellaneous goods.⁴⁶ These range from gaming consoles⁴⁷ to tractors,⁴⁸ phones,⁴⁹ and even self-cleaning litter boxes.⁵⁰ Such accounts further shape the public’s perception of premature obsolescence as a serious problem and a common practice.⁵¹ Studies and anecdotal evidence further indicate that some

⁴⁰ See *Premature Obsolescence: When Products Fail Too Quickly*, BEUC (June 2018), https://www.beuc.eu/publications/beuc-x-2018-057_premature_obsolescence.pdf.

⁴¹ *Pour des produits qui durent plus longtemps*, MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE ET SOLIDAIRE (Apr. 23, 2018), https://www.ecologie.gouv.fr/sites/default/files/2018.04.23_duree_de_vie.pdf (citing 2014 Survey for Institut National de la Consommation, in *Les nouveaux pièges de la conso*, 173 60 MILLIONS DE CONSOMMATEURS (2014)).

⁴² EP, *Report on a Longer Lifetime for Products* (*infra* note 86), Explanatory Statement, 14. This is consistent with the findings reported in Annick Girard et al., *Obsolescence of Home Appliances and Electronics: What Is the Role of the Consumer?*, EQUITERRE (2018), http://equiterre.org/sites/fichiers/en_obsolescencereport_equiterremay2018.pdf, at 19.

⁴³ See, e.g., Monique Goyens, *Using Behavioural Economics for Rather than Against Consumers – A Practitioner’s Perspective*, 53 INTERECONOMICS 12, 15 (2018).

⁴⁴ See BEUC, *supra* note 40.

⁴⁵ See BEUC, *Planned Obsolescence – the Point of View of Consumer Organisations* (Oct. 16, 2014), slide 8, https://www.eesc.europa.eu/sites/default/files/resources/docs/sylvia_maurer.pdf.

⁴⁶ See, e.g., *Planned Obsolescence*, THE ECONOMIST, Mar. 23, 2009 (noting that products are designed to fail quickly in order that the “consumer feels a need to purchase new products... as replacements for the old ones.”).

⁴⁷ Brian Clark Howard, *Planned Obsolescence: 8 Products Designed to Fail*, POPULAR MECHANICS (Feb. 22, 2010), <https://www.popularmechanics.com/technology/g202/planned-obsolescence-460210> (Videogame consoles designed to prevent backward compatibility).

⁴⁸ Kyle Weins, *We Let John Deere Destroy the Very Idea of Ownership*, WIRED (Apr. 24, 2015), <https://www.wired.com/2015/04/dmca-ownership-john-deere/> [<https://perma.cc/EEP7-3YEJ>] (Customer could not repair his broken tractor because the company said the purchaser benefits from an “implied software license for the life of the vehicle to operate the vehicle” but not ownership of the software).

⁴⁹ Kyke Weins, *Apple’s Diabolical Plan to Screw Your iPhone*, IFIXIT.COM (Jan. 1, 2011), <https://www.ifixit.com/News/apples-diabolical-plan-to-screw-your-iphone> [<https://perma.cc/GQJ3-WKEP>] (Apple uses tamper-resistant screws (of non-standard sizes) to make it more difficult to open the device and repair it or change the battery).

⁵⁰ Bart Perkins, *Fight for Your Right to Repair*, COMPUTER WORLD (Nov. 23, 2015), <https://www.computerworld.com/article/3007804/fight-for-your-right-to-repair.html> [<https://perma.cc/EB2U-FQB8>] (Self-cleaning litter box contains a chip that refuses to operate if the cartridge has been used more than a factory-determined number of times).

⁵¹ See, e.g., Secret Engineer, *Planned Obsolescence Versus Saving the Planet*, ENGINEER (Sept. 18, 2019), <https://www.theengineer.co.uk/planned-obsolescence-saving-planet/>; Antonio Pacheco, *The Battle Against Planned Obsolescence Takes a Step Forward in Europe*, ARCHINECT (Oct. 1, 2019), <https://archinect.com/news/article/150162319/the-battle-against-planned-obsolescence-takes-a-step-forward-in-europe>; David Schriberg, *Landmark French Lawsuit Attacks Epson, HP, Canon and Brother For ‘Planned Obsolescence’*, FORBES (Sep. 26, 2017),

consumers feel manipulated by strategies that force them to buy upgrades lest they face incompatibility.⁵² Notably, this phenomenon is not limited to goods incorporating complex technology; consider the blue strip on some disposable razor blades that nudges consumers to change the blades though they may still be sharp. Some cases spark such outrage in consumers that they can challenge the brand's reputation, forcing companies to respond.⁵³

Of course, the mere fact that consumers *believe* there is a problem with planned obsolescence does not prove its existence. To be sure, it is often challenging to go beyond suspicion and prove firms' engagement in planned obsolescence. However, serious accounts of various types of obsolescence abound. Moreover, even if people misperceive product obsolescence, the public's perception still matters.

The various forms of product obsolescence and the logic that underpins them are not merely figments of the public's imagination and have been substantiated by significant scholarly research. Economists have long observed premature obsolescence. For instance, Galbraith argues that "the annual model changes of automobile manufacturers are socially wasteful."⁵⁴ Other economists, such as Fisher, Griliches & Kaysen, empirically estimate the costs of such changes.⁵⁵ In another paper, Waldman analyzes planned obsolescence from the firm's perspective.⁵⁶ He shows that "the man in the street is in fact correct": In many settings, firms have a profit-incentive "to introduce new products that make old units obsolete" in a socially wasteful way.⁵⁷ Other studies tackle the issue from different economic perspectives.⁵⁸ These writings suggest that product obsolescence is neither a recent nor mere fanciful phenomenon.

Other strands of literature detail frequent occurrences of planned obsolescence. Maitre-Ekern and Dalhammar, for example, submit that "[m]any products are not designed in a way that makes it possible to repair them."⁵⁹ This finding is in line with another study, which found that the lifespan of electronic devices is continuously

<https://www.forbes.com/sites/davidschrieberg/2017/09/26/landmark-french-lawsuit-attacks-epson-hp-canon-and-brother-for-planned-obsolescence/?sh=54cebd721b36>.

⁵² Volker G. Kuppelwieser et al., *Consumer Responses to Planned Obsolescence*, 47 J. RETAILING & CONSUMER SERVICES 157, 159 (2019) (citing Roland Strausz, *Planned Obsolescence as an Incentive Device for Unobservable Quality*, 119 ECON. J. 1405 (2009)).

⁵³ See, e.g., Matthew Panzarino, *Apple Addresses Why People Are Saying Their iPhones with Older Batteries Are Running 'Slower,'* TECHCRUNCH (Dec. 1, 2017), <https://techcrunch.com/2017/12/20/apple-addresses-why-people-are-saying-their-iphones-with-older-batteries-are-running-slower/>.

⁵⁴ Michael Waldman, *A New Perspective on Planned Obsolescence*, 108 Q. J. ECON. 273, 273 (1993) (citing JOHN GALBRAITH, *THE AFFLUENT SOCIETY* (1958)).

⁵⁵ Franklin M. Fisher et al., *The Costs of Automobile Model Changes Since 1949*, 70 J. POL. ECON. 433 (1962).

⁵⁶ Waldman, *supra* note 54.

⁵⁷ *Id.*

⁵⁸ For various economic and industry approaches see, e.g., Arthur Fishman et al., *Planned Obsolescence as an Engine of Technological Progress*, 41 J. INDUS. ECON. 361 (1993); Jay Pil Choi, *Network Externalities, Compatibility Choice, and Planned Obsolescence*, 42 J. INDUS. ECON. 167 (1994); Michael Waldman, *Planned Obsolescence and the R&D Decision*, 27 RAND J. ECON. 583 (1996); Atsuo Utaka, *Planned Obsolescence and Marketing Strategy*, 21 MANAGERIAL & DECISION ECON. 339 (2000); Roland Strausz, *Planned Obsolescence as an Incentive Device for Unobservable Quality*, 119 (540) ECON. J. 1405 (2009); Chun-Hui Miao, *Tying, Compatibility and Planned Obsolescence*, 58 J. INDUS. ECON. 579 (2010).

⁵⁹ Maitre-Ekern & Dalhammar, *supra* note 4, at 378.

shrinking.⁶⁰ In particular, the latter study found that “the proportion of large household appliances which were replaced within less than five years due to a defect increased from 3.5% to 8.3% between 2004 and 2013.”⁶¹ In another study, Iizuka found evidence of planned obsolescence in the textbook industry.⁶² Iizuka’s empirical analysis indicates that textbook publishers “introduce new editions to kill off used units.”⁶³ According to Iizuka, this practice happens “more frequently when the share of used textbooks increases,”⁶⁴ which confirms the strategic nature of new product releases. Along these lines, scholars also cite General Motors’ marketing strategy dating back to the 1920s. This strategy involved design advances meant to encourage the purchase of cars “based solely on improved design” rather than functionality and reparability.⁶⁵ Similarly, Maitre-Ekern and Dalhammar identify the clothing industry as an example of psychological obsolescence: Consumers are encouraged through various sales and marketing tactics “to renew their wardrobe regularly to stay ‘in fashion.’”⁶⁶

Guiltinan describes other examples of physical, technological, and psychological obsolescence.⁶⁷ As to physical (planned) obsolescence, Guiltinan mentions the practice of “death dating” in portable radios—that is, the practice of designing the radios to last for merely three years.⁶⁸ Guiltinan notes that this practice became standard for many appliances in the 1950s and 1960s.⁶⁹ He further notes producers’ practice of allowing only limited or no repair, as was historically the case with the design of nonrepairable, single-use cameras.

Guiltinan also cites Cooper,⁷⁰ who shows how aesthetic characteristics can induce premature disposal. An interesting example is the introduction of “faultless forms and surfaces,” which “leave a pristine and polished appearance.” With everyday use, the products become damaged and lose their polished appearance. Consumers’ dissatisfaction with the aesthetic prompted early disposal and replacement.⁷¹ Additional examples of the victory of design over durability include applying fashion thinking to watches and many electronic devices, such as smartphones and laptops.⁷²

⁶⁰ See SIDDHARTH PRAKASH ET AL., EINFLUSS DER NUTZUNGSDAUER VON PRODUKTEN AUF IHRE UMWELTWIRKUNG: SCHAFFUNG EINER INFORMATIONSGRUNDLAGE UND ENTWICKLUNG VON STRATEGIEN GEGEN „OBSOLESZENZ“ (German Environment Ministry 2016), <https://www.umweltbundesamt.de/en/publikationen/einfluss-der-nutzungsdauer-von-produkten-auf-ihre-1> [<https://perma.cc/6CF4-4PMJ>]. While the study did not find evidence of planned obsolescence, it did cite lack of transparency as a problem for consumers.

⁶¹ See *id.* at 24 ; see also CENTRE EUROPÉEN DE LA CONSOMMATION / ZENTRUM FÜR EUROPÄISCHEN VERBRAUCHERSCHUTZ, L’OBSOLESCEANCE PROGRAMMÉE OU LES DÉRIVES DE LA SOCIÉTÉ DE CONSOMMATION 8-11 (2013) (mentioning examples with television sets, washing machines, mobile phones, cars, game consoles).

⁶² Toshiaki Iizuka, *An Empirical Analysis of Planned Obsolescence*, 16 J. ECON. & MGMT. STRATEGY 191 (2007).

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ Maitre-Ekern & Dalhammar, *supra* note 4, at 381.

⁶⁶ *Id.*

⁶⁷ Joseph Guiltinan, *Creative Destruction and Destructive Creations: Environmental Ethics and Planned Obsolescence*, 89 J. BUS. ETHICS 19 (2009).

⁶⁸ *Id.* at 20

⁶⁹ *Id.*

⁷⁰ Cooper, *supra* note 22.

⁷¹ Guiltinan, *supra* note 67, at 20.

⁷² *Id.*

While consumers' perceptions seem broadly supported by evidence, they may still be partly inaccurate. Even so, they are worth taking seriously. Where consumers believe—as they do here—that firms engage in premature obsolescence, their trust in markets and willingness to engage with those markets decreases. Trust is an essential component of healthy societies and flourishing economies. High levels of trust lead parties to take fewer precautions, which, in turn, reduces friction and transaction costs.⁷³ From this perspective, European Union (EU) policy documents frequently mention trust as essential to the functioning of the internal market,⁷⁴ while the European Parliament explicitly considers curbing planned obsolescence a matter of trust.⁷⁵ High levels of trust are not only good for the economy; they also contribute to people's physical and mental health.⁷⁶ Thus, one should not dismiss consumers' attitudes and perceptions.

The literature thus provides ample evidence that firms resort to premature obsolescence in various markets. Unsurprisingly, this is not lost on consumers, who believe—and dislike—that firms engage in this practice. This belief can undercut consumers' trust in the market, resulting in both negative economic and non-economic consequences.

B. Product Obsolescence and Market Failures: An Economic Analysis

One might wonder why competitive markets cannot overcome firms' temptation to employ obsolescence strategies. To better understand why regulation is needed, this Section reviews the market failures that relate to product obsolescence.

1. Externalities

Generally speaking, economic analysis recognizes several market failures, starting with externalities. Short-life products generate clear negative externalities: Their disposal creates waste, which harms the environment, and producers seldom internalize the costs of these harms.⁷⁷ As we explain in detail below, ecodesign standards and extended producer responsibility address this problem directly by internalizing externalities.⁷⁸

⁷³ Shmuel I. Becher & Jessica C. Lai, *In Consumer Protection We Trust? Rethinking the Legal Framework for Country of Origin Cases*, 55 SAN DIEGO L. REV. 539, 557 (2018).

⁷⁴ See, e.g., *Commission Communication on A New Deal for Consumers*, at 2, 3, 5, 14, 16, COM(2018) 183 final; *Commission Staff Working Document on the Impacts of fully harmonized rules on contracts for the sales of goods*, at 11, SWD(2017) 354 final; *Commission Communication on the Mid-Term Review on the implementation of the Digital Single Market Strategy A Connected Digital Single Market for All*, at 2, COM(2017) 228 final. These documents emphasize the importance of trust for markets, not for health or well-being.

⁷⁵ European Parliament Report, *Towards a More Sustainable Single Market for Businesses and Consumers*, (2020/2021), A9-0209/2020, rec. I, ¶ 31 [hereinafter *Towards a More Sustainable Single Market*].

⁷⁶ See sources at Becher & Lai, *supra* note 73, at 556, n. 118.

⁷⁷ See, e.g., Leonard, *supra* note 3.

⁷⁸ The EU ecodesign rules set minimum energy-efficiency standards for certain goods, and compliance with these standards is mandatory to sell in the EU internal market. New mandatory minimum standards are now being expanded so as to encompass not only energy efficiency but also other aspects of sustainability, such as reparability. Extended producer responsibility refers to liability for waste created when goods are discarded. We return to this issue in Part III.B.

2. Time-inconsistent Preferences

Premature obsolescence also relates to what economists call “time-inconsistent preferences,” another source of market failure. Arguably, at least some consumers exhibit time-inconsistent preferences concerning products’ prices and durability. Simply put, consumers may prioritize cheap products ex ante (at the time of purchasing, time 0) while wishing the goods were more durable ex post (when the product stops being fully functional or satisfactory, time 1). The value that these consumers place on durability is low at time 0, yet high at time 1. Conversely, it could be that consumers want to buy durable goods ex ante but, once a fancier appliance is released, their preferences switch to the new item. In the latter scenario, which fits well with technological obsolescence, the value consumers place on durability is high at time 0, and low at time 1.

The available data suggests that the second pattern of time-inconsistency fits consumer preferences better than the first. Surveys suggest that most European consumers care about durability and reparability ex ante,⁷⁹ and several studies have found that consumers are willing to pay a premium for more durable goods.⁸⁰ That said, there is an intention-action gap: The preference for durability is not very robust and yields in the face of temptations and obstacles.⁸¹ Indeed, data show that small obstacles to finding information about durability or the process of having a product repaired can lead consumers to give up on their virtuous preferences.⁸²

3. Imperfect Information

Market forces perform well when consumers have sufficient information about potential purchases and can compare available offers. By contrast, when consumers possess limited information, they are more likely to choose goods that do not best satisfy their preferences. Under such circumstances, firms lack incentives to offer products that optimally suit consumers’ preferences.⁸³ Similarly, firms are disincentivized to improve consumers’ access to information. Where traders hold the

⁷⁹ On consumers’ willingness to engage in the Circular Economy, see *Engagement in the Circular Economy*, *supra* note 29, at 47 (offering a literature review, results from focus groups, and survey data).

⁸⁰ See, e.g., *Engagement in the Circular Economy*, *supra* note 29, at 130 (citing a UK study which, making use of a focus group and a nationally representative survey of 1,104 consumers, found that more than 80% of consumers would be willing to pay on average 10% extra for household electrical appliances that are advertised to last longer and have a longer commercial guarantee or warranty). See also GfK BELGIUM, CONSUMER MARKET STUDY TO SUPPORT THE FITNESS CHECK OF CONSUMER RULES 431 (2017), doi:10.2838/8056, (hereafter “Lot 3 study”), <https://op.europa.eu/en/publication-detail/-/publication/a8d7ca32-772c-11e7-b2f2-01aa75ed71a1/language-en> (finding that providing durability information increases willingness to pay).

⁸¹ Keirsbilck & Rousseau, *supra* note 7, at 99; Terryn, *supra* note 34, at 851-874, 853; Aleydis Nissen, *Can WTO Member States Rely on Citizen Concerns to Prevent Corporations from Importing Goods Made from Child Labour?*, 14 UTRECHT L. REV. 70 (2018); M. Joyner Armstrong, *Fashion and the Buddha: What Buddhist Economics and Mindfulness Have to Offer Sustainable Consumption*, CLOTHING & TEXTILES RES. J. 1 (2020).

⁸² *Engagement in the Circular Economy*, *supra* note 29, at 99 (finding that “frictions in the accessibility of repair services significantly lowered the attractiveness of repairing while the same type of frictions had virtually no effect on the decision to replace a product”).

⁸³ Shmuel I. Becher & Oren Bar-Gill, *Consumer Protection*, in *THE ECONOMIC APPROACH TO LAW* (Uriel Procaccia ed., 2012).

relevant information and do not disclose it to consumers, information asymmetry arises. Imperfect information, in turn, can cause the market to fail.

Such information asymmetry is well documented regarding product lifetime. Consider, for instance, a comprehensive report on consumer engagement with the circular economy—the closed-loop system in which consumers reuse, share, refurbish, and recycle products to eliminate waste—drawn up for the European Commission in 2018. Overall, 82 percent of participants from twelve EU countries agreed that “it is difficult to find information on how long a product will last.”⁸⁴ The report identified consumers’ lack of knowledge about durability and the absence of reliable information about durability and reparability as the two main obstacles standing in the way of greater sustainable consumption.⁸⁵ This reality strongly suggests that the law should step in with transparency requirements.

Nonetheless, one could argue that consumers can utilize other available information to gauge a product’s lifespan. In other words, market mechanisms can minimize information asymmetry even if firms do not directly disclose the information. For starters, firms may offer consumers warranties, known as commercial guarantees in the EU, that differ in scope and length. These may signal the product’s potential lifespan, with a lengthy commercial guarantee signaling a durable product and vice versa.⁸⁶

While we acknowledge that commercial guarantees are an apt locus for durability information, this does not, in and of itself, support a claim that markets self-correct information asymmetry. First, assuming that consumers can generally infer durability from warranties attributes high degrees of rationality and sophistication to consumers, who do not always possess these qualities. Even when they do possess them, consumers often lack the time or opportunity to use those attributes. True, where firms make their warranties salient to consumers, consumers may (perhaps unconsciously) learn something valuable about the product’s expected lifespan. However, firms that engage in product obsolescence have the opposite incentive: to hide their warranty terms and not go beyond the mandatory legal guarantee. Moreover, when firms do not make this aspect salient, consumers are unlikely to notice the missing information.⁸⁷

Another argument regarding markets’ ability to self-correct might be that online reviews, rather than commercial guarantees, can help bridge the information asymmetry. Slightly restated, some may argue that online consumer reviews can be a source of durability cues. Real consumers who share their experiences online can

⁸⁴ *Engagement in the Circular Economy*, *supra* note 29, at 82, 112 (reviewing consistent findings from previous studies).

⁸⁵ The report also identifies two other obstacles: the high cost of repair services and consumers’ lack of trust in repair services. *Engagement in the Circular Economy*, *supra* note 29, at 65.

⁸⁶ Interestingly, the EP also uses this argument. European Parliament Report, *On a Longer Lifetime for Products: Benefits for Consumers and Companies* (2017), (2016/2272(INI)) A8-0214/2017 [hereinafter *Report on a Longer Lifetime*], ¶ 3.

⁸⁷ Compare generally Paul Milgrom, *What the Seller Won’t Tell You: Persuasion and Disclosure in Markets*, 22 J. ECON. PERSP. 115, 121 (2008); Hyun Song Shin, *Disclosures and Asset Returns*, 71 ECONOMETRICA 105 (2003). See also Deepak Sirdeshmukh & H. Rao Unnava, *The Effects of Missing Information on Consumer Product Evaluations*, in 19 NA - ADVANCES IN CONSUMER RESEARCH (John F. Sherry, Jr. & Brian Sternthal eds., 1992).

inform other consumers about products and services and warn them of any failures they have experienced.⁸⁸

However, this possibility is also insufficient to counter the argument that stricter regulation is necessary. To begin with, consumers might not consult information flows; they might lack access to such flows or the motivation to explore them. Consumers might also be suspicious of these flows, discrediting their integrity and accuracy.⁸⁹ There is no guarantee, after all, that online reviews will be representative and authentic.⁹⁰ Some firms or platforms are selective with the reviews they publish, censoring negative reviews.⁹¹ Others generate fake reviews, which again undermines the validity of online information flows.⁹² Additional ways to silence dissatisfied consumers include offering vocal and assertive consumers a remedy before they get a chance to share their experiences online.⁹³ Overall, as one participant in a focus group stated, it is “very difficult [to find reliable information on durability]. You google it before you buy it and you look at reviews. Even then it’s difficult to know. Do I trust that? You don’t know who writes that, e.g., ‘this product is fantastic.’”⁹⁴

More generally, product durability is only seldom a salient attribute for consumers at the purchasing stage. Even when consumers do consider durability, other factors often outweigh any such considerations. At times, firms deliberately distract consumers from the problem of premature obsolescence. Distraction strategies may include clever ads, commercials, sales talk, and other selling tactics.⁹⁵ Typically, firms encourage consumers to focus on the product’s positive attributes and the short-term or perceived hedonic utility associated with consumption. All this makes product obsolescence less conspicuous and observable.

All in all, firms that engage in premature obsolescence practices gain an unfair advantage over firms that do not. In competitive markets, this may pressure all firms to engage in these strategies to avoid losing ground to their rivals. This dynamic is particularly probable if premature obsolescence is a non-salient dimension. As Akerlof

⁸⁸ For a detailed discussion, see Shmuel I. Becher & Tal Z. Zarsky, *E-Contract Doctrine 2.0: Standard Form Contracting in the Age of Online User Participation*, 14 MICHIGAN TELECOM. & TECH. L. REV. 303, 321 (2008).

⁸⁹ *Id.*, at 335.

⁹⁰ Yonathan A. Arbel, *Reputation Failure: The Limits of Market Discipline in Consumer Markets*, 54 WAKE FOREST L. REV. 1239, 1255 (2019).

⁹¹ See, e.g., *Commerce Commission v. Bachcare Ltd.* [2019] NZDC 25483, CRI- 2019-004-006592 (N.Z.).

⁹² Cecilia Brainard, *Are Online Reviews Reliable? (Or Understanding Astroturfing)*, HUFFPOST (May 27, 2016) https://www.huffingtonpost.com/cecilia-brainard/are-online-reviews-reliab_b_10153912.html. See also Jun Mai, *Baidu Ordered to Change How It Operates by China’s Internet Watchdog After Death of Student*, S. CHINA MORNING POST (May 9, 2016), <https://www.scmp.com/news/china/policies-politics/article/1942912/baidu-ordered-change-how-it-operates-chinas-internet>; Gillian Wong, ‘Cat-And-Mouse Game’: Alibaba Exec on Fake Transactions, WALL ST. J. (Mar. 3, 2015), <https://blogs.wsj.com/chinarealtime/2015/03/03/cat-and-mouse-game-alibaba-exec-on-fake-transactions/>.

⁹³ For general analysis and discussion see, e.g., Yonathan A. Arbel & Roy Shapira, *Theory of the Nudnik: The Future of Consumer Activism and What We Can Do to Stop It*, 73 VAND. L. REV. 929, 965 (2020); Shmuel I. Becher & Tal Z. Zarsky, *Minding the Gap*, 51 CONN. L. REV. 69, 85 (2019); Amy J. Schmitz, *Access to Consumer Remedies in the Squeaky Wheel System*, 39 PEPP. L. REV. 279, 331-32 (2012).

⁹⁴ *Engagement in the Circular Economy*, *supra* note 29, at 78.

⁹⁵ Compare generally Shmuel I. Becher & Yuval Feldman, *Manipulating, Fast and Slow: The Law of Non-Verbal Market Manipulations*, 38 CARDOZO L. REV. 459 (2016).

famously explains, where there is information asymmetry between firms and consumers, market forces are liable to reach an equilibrium where goods of the lowest possible quality are offered at the lowest possible price (also known as “market for lemons”).⁹⁶ Unsurprisingly, a lab study confirmed that information about durability or reparability increases people’s willingness to pay for more durable or repairable goods.⁹⁷

C. Product Obsolescence and Market Failures: A Behavioral Analysis

A variety of additional behavioral, psychological, and sociological phenomena further exacerbate the harms associated with product obsolescence. We address them next.

1. Optimism and the Present Bias

Premature obsolescence is a future risk, which consumers are likely to underestimate due to unrealistic optimism. Generally speaking, optimism is a robust bias that leads people to underestimate risk and overestimate the likelihood of experiencing positive life events.⁹⁸ Thus, most people believe they are less likely than others to face accidents, health problems, or disease.⁹⁹ As a result, unrealistic optimism can lead people to take risks based on mistaken perceptions regarding their relative immunity from harm.

Applied here, consumers may fail to predict their chances of experiencing premature obsolescence correctly. This failure might lead consumers to overlook durability cues or undervalue extended commercial guarantees. The present bias—the tendency to overvalue small rewards in the present over larger rewards in the future—aggravates this predisposition.¹⁰⁰ Consumers are likely to prefer immediate benefits, such as lower prices, even if these benefits come at a greater cost in the future, in the form of premature obsolescence.

2. Myopia

Myopic consumers are said to “care more about the present and not enough about the future.”¹⁰¹ Due to bounded willpower—that is, the limited ability to avoid temptations and forgo impulses—people find it difficult to delay immediate

⁹⁶ See the classic article George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488 (1970).

⁹⁷ See the LOT 3 study, n. 80 *supra*, 416 sq).

⁹⁸ See, e.g., Lynn A. Baker & Robert E. Emery, *When Every Relationship Is Above Average: Perceptions and Expectations of Divorce at the Time of Marriage*, 17 LAW & HUM. BEHAV. 439 (1993); Neil D. Weinstein, *Optimistic Biases About Personal Risks*, 246 SCI. 1232 (1989).

⁹⁹ See, e.g., Ola Svenson, *Are We All Less Risky and More Skillful than Our Fellow Drivers?*, 47 ACTA PSYCHOLOGICA 143 (1981); Neil D. Weinstein, *Unrealistic Optimism About Future Life Events*, 39 J. PERSONALITY & SOC. PSYCHOL. 806 (1980).

¹⁰⁰ Ted O’Donoghue & Matthew Rabin, *Doing it Now or Later*, 89 AM. ECON. REV. 103, 104 (1999).

¹⁰¹ OREN BAR-GILL, *SEDUCTION BY CONTRACT: LAW, ECONOMICS, AND PSYCHOLOGY IN CONSUMER MARKETS* 21 (2012).

satisfaction.¹⁰² Delaying gratification and avoiding temptation is not easy. As a result, people tend to surrender to their “present self” at the expense of their “future self.”¹⁰³

Here, once again, people might succumb to the temptation of a new product or a low price, discounting the risks of premature obsolescence. Bounded willpower is also likely to influence decision-making when a product stops functioning, and the choice is between having it repaired or purchasing a new one. If repair appears complex, time-consuming, or costly, even good intentions to consume sustainably may yield due to bounded willpower.

3. Information Overload

Furthermore, consumers might exhibit information-processing biases that make it even more difficult to approach premature obsolescence rationally. For instance, too much information can cause “information overload.”¹⁰⁴ People have limited processing capacity and can become overwhelmed by a deluge of information. Consumers may thus ignore relevant information and make suboptimal decisions.

In our context, information overload is likely to make premature obsolescence even less salient for consumers. In particular, when promotional materials highlight multiple product attributes, the before-purchase comparison between competing goods will focus on aspects other than durability. This is a phenomenon to keep in mind when considering durability labeling.¹⁰⁵

4. Motivated Reasoning and Confirmation Bias

Motivated reasoning and confirmation bias can also bring consumers to discount warning signals and potential problems related to product obsolescence.¹⁰⁶ Motivated reasoning leads people to endorse a desired conclusion or perspective.¹⁰⁷ Likewise, confirmation bias leads people to search for data that confirms their existing opinions rather than information that may challenge it.¹⁰⁸ Accordingly, if a consumer has decided to replace a product she currently possesses with a newer one, she is more likely to search for reinforcing information to buttress her decision.¹⁰⁹ The risks associated with premature obsolescence are thus more likely to be ignored.

¹⁰² For discussing myopia see generally Ted O'Donoghue et al., *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LITERATURE 351 (2002); David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q. J. ECON. 443 (1997); Robert H. Strotz, *Myopia and Inconsistency in Dynamic Utility Maximization*, 23 REV. ECON. STUD. 165 (1955).

¹⁰³ For an interesting and accessible talk that discusses the conflict between the present-self and the future-self see Daniel Gilbert, *The Psychology of the Future Self*, TED, <https://www.youtube.com/watch?v=XNbAR54Gpj4>.

¹⁰⁴ Naresh K. Malhotra, *Reflections on the Information Overload Paradigm in Consumer Decision-making*, 10 J. CONS. RES. 436, 437 (1984).

¹⁰⁵ The EP is conscious of this issue concerning durability information. *Towards a More Sustainable Single Market*, *supra* note 75, rec. F.

¹⁰⁶ See, e.g., Ziva Kunda, *The Case for Motivated Reasoning*, 108 PSYCHOL. BULL. 480 (1990).

¹⁰⁷ Compare Shmuel I. Becher, Yuval Feldman & Orly Lobel, *Poor Consumer(s) Law: The Case of High-Cost Credit and Payday Loans*, in LEGAL APPLICATIONS OF MARKETING THEORY (J. Gersen & J. Steckel, eds., forthcoming 2022).

¹⁰⁸ See, e.g., SCOTT PLOUS, *THE PSYCHOLOGY OF JUDGMENT AND DECISION-MAKING* 233 (1993).

¹⁰⁹ See ARTHUR S. REBER, *THE PENGUIN DICTIONARY OF PSYCHOLOGY* 151 (2d ed. 1995).

5. Information Avoidance

Information avoidance causes people not to obtain information even when they know it is available, valuable, and free. This behavior is closely related to the “ostrich effect,”¹¹⁰ which helps people evade psychological pain or suffering.¹¹¹

In our context, avoiding information about premature obsolescence may allow consumers to remain optimistic, reduce potential anxiety, prevent dissonance with pro-environmental values, and avoid regret.¹¹² A consumer who faces a decision to buy a new product is thus unlikely to seek and properly heed information relating to premature obsolescence.¹¹³ As a result, information avoidance may worsen a consumer’s tendency to downplay the risk of product obsolescence.

6. Social Pressures and Status-Seeking

Social pressures and status-seeking, which industry players encourage and foster, further aggravate the abovementioned biases.¹¹⁴ Status consumption and herd behavior are potent forces. They can induce consumers to consume in the present while ignoring the future problem of product obsolescence. Here, again, the present bias can be detrimental.

In sum, several behavioral phenomena are likely to aggravate market failures regarding product obsolescence. When choosing which good(s) to buy, myopia, present bias, information overload, motivated reasoning, and social pressure can lead consumers to overlook durability information. Motivated reasoning and information avoidance can combine to downplay the importance of durability in the choice between competing goods. At the same time, optimism will lead to minimizing the utility of extended commercial guarantees. Furthermore, at the stage of choosing whether to repair or replace a good, bounded willpower may interfere with one’s good intentions to keep goods longer. In a consumeristic culture, status-seeking and social pressure will further pressure consumers to replace older products with newer ones.

D. Product Obsolescence and Consumers’ Well-Being

Perhaps the subtlest problem that obsolescence strategies raise is the “well-being harm” inflicted on consumers.¹¹⁵ Discussions of product obsolescence have thus far largely neglected this problem. Premature obsolescence encourages frequent

¹¹⁰ Thomas L. Webb et al., *‘The Ostrich Problem’: Motivated Avoidance or Rejection of Information about Goal Progress*, 7 SOC. & PERSONALITY PSYCHOL. COMPASS 794, 795 (2013).

¹¹¹ Russell Golman et al., *Information Avoidance*, 55 J. ECON. LITERATURE 96 (2017).

¹¹² Thus, people who exhibit active information avoidance may be willing to pay to avoid unfavorable information they do not wish to learn. Cf. Ananda Ganguly & Joshua Tasoff, *Fantasy and Dread: The Demand for Information and the Consumption Utility of the Future*, 63 MGMT. SCI. 4037 (2016).

¹¹³ Moreover, consumers who come across negative information relating to premature obsolescence are also more likely to forget it. See Golman et al., *supra* note 111, at 103.

¹¹⁴ For an early account see THORSTEIN VEBLEN, *THE THEORY OF THE LEISURE CLASS* (1889). See also FRANK TRENTMANN, *EMPIRE OF THINGS: HOW WE BECAME A WORLD OF CONSUMERS, FROM THE FIFTEENTH CENTURY TO THE TWENTY-FIRST*, at 94, 109, 311 (2016) (illustrating the importance of consumption for identity in varied historical and cultural settings).

¹¹⁵ Although the terms ‘happiness’ and ‘well-being’ are not synonyms, we use them here interchangeably.

purchases and can turn consumers into obsessive, sometimes debt-ridden, shoppers.¹¹⁶ Product obsolescence contributes to an environment in which consumers seek happiness in material objects. In such an environment, consumers typically long for the newest and most fashionable products, erroneously believing that such products will enhance their happiness and well-being.¹¹⁷

For a variety of reasons, however, happiness lies more in experiences, not in goods.¹¹⁸ Unlike products and the short-term satisfaction we derive from them, experiences do not fade quickly. People do not adapt to experiences as they adapt to material items. Experiences, unlike products, make people feel alive and vital. Experiences can provide fond memories that last long after they occur, and significant experiences can become part of our identity. Interestingly, experiences also lead to more happiness in others beyond the individual consumer, who can better relate to them.¹¹⁹ By reducing their consumption of goods, consumers have more significant opportunities and more available resources to engage in experiential activities.

Yet, consumers often overly emphasize materialistic consumption.¹²⁰ By chasing the newest products, they are lured into a happiness trap: While believing that materialistic consumption will advance their happiness, consumers typically do not realize that it will not generate the meaningful and long-lasting happiness they desire.¹²¹ In a nutshell, materialism generally causes diminished levels of well-being.¹²² Studies reveal that people who exhibit higher levels of materialism are “less happy and less satisfied with their ‘life as a whole[.]’”¹²³ Such people were also less satisfied with some particular aspects of their lives, such as their “standard of living,” “family life,” and “amount of fun and enjoyment.”¹²⁴

All in all, premature obsolescence and materialism can feed into one another and harm both individuals and societies.¹²⁵ Materialism and possessiveness are negatively correlated to reported levels of happiness and can be a source of dissatisfaction.¹²⁶ Furthermore, possessive people may over-construct their identity around hedonic consumption. They can thus become prone to envy, which is itself detrimental to well-

¹¹⁶ See, e.g., Mariateresa Maggolino, *Planned Obsolescence: A Strategy in Search of Legal Rules*, 50 INT’L REV. INTELL. PROP. & COMPETITION L. 405, 406 (2019).

¹¹⁷ See, e.g., Serdar Karabatia & Zeynep Cemalcilar, *Values, Materialism, and Well-being: A Study with Turkish University Students*, 31 J. ECON. PSYCHOL. 624 (2010).

¹¹⁸ See, e.g., Elizabeth Dunn et al., *If Money Doesn’t Make You Happy, Then You Probably Aren’t Spending it Right*, 21 J. CONSUMER PSYCHOL. 115, 116–18 (2011).

¹¹⁹ See, e.g., Dunn et al., *id.*; JONATHAN HAIDT, *THE HAPPINESS HYPOTHESIS: FINDING MODERN TRUTH IN ANCIENT WISDOM* (2006).

¹²⁰ See generally TIM KASSER, *THE HIGH PRICE OF MATERIALISM* (2002).

¹²¹ See, e.g., Dunn et al., *supra* note 118, at 115.

¹²² See, e.g., Kau Ah Keng et al., *The Influence of Materialistic Inclination on Values, Life Satisfaction and Aspirations: An Empirical Analysis*, 49 SOC. INDICATORS RES. 317, 328 (2000); Karabatia & Cemalcilar, *supra* note 117, at 625.

¹²³ Lisa Ryan & Suzanne Dziurawiec, *Materialism and Its Relationship to Life Satisfaction*, 55 SOC. INDICATORS RES. 185, 186 (2001).

¹²⁴ *Id.*

¹²⁵ See, e.g., Kasser, *supra* note 120.

¹²⁶ See, e.g., Russel W. Belk, *Materialism: Trait Aspects of Living in the Material World*, 12 J. CONSUMER RES. 265 (1985).

being.¹²⁷ Materialism, possessiveness, and envy can also make people less likely to assign the appropriate weight to values, life purpose, and meaning.¹²⁸ Such consumeristic culture, in turn, contributes to numbing people's consciousness and conscience, which can further foster the consumption of unsustainable or unethical goods.

* * * * *

Products with short lifespans harm consumers and the environment. It thus comes as a little surprise that consumers have a negative attitude towards premature obsolescence. Yet, market failures and behavioral phenomena facilitate product obsolescence. Current law only ameliorates the issues we have reviewed partially and obliquely. Better regulation is therefore required.

III. THE LAW AND POLICY LANDSCAPE OF PRODUCT OBSOLESCENCE

To be sure, product obsolescence is not a new phenomenon, and it already preoccupied activists in the early days of consumerism.¹²⁹ At the EU level, the European Economic and Social Committee (EESC) was the first body to draw attention to premature obsolescence, expressing concern that “planned obsolescence has reached troubling levels over the past decade.”¹³⁰ Recently, the Commission recognized early obsolescence as a “growing concern for EU consumers who often complain that purchased goods do not last very long” and undertook to table legislation to address the issue.¹³¹ Overall, growing policy interest in this issue has led EU institutions to commission multiple external studies and reports dealing with planned obsolescence.¹³²

Several EU policy documents discuss product lifespan in the context of making the economy more sustainable and competitive.¹³³ The *European Green Deal*—a

¹²⁷ This may be due to the disappointment entailed in the pursuit of temporary, vanishing sources of well-being, such as material goods. See Priscilla A. La Barbera & Zeynep Gurhan, *The Role of Materialism, Religiosity, and Demographics in Subjective Well-being*, 14 PSYCHOL. & MARKETING 71, 89 (1997).

¹²⁸ On the importance of purpose and meaning for happiness, see generally PAUL DOLAN, HAPPINESS BY DESIGN: FINDING PLEASURE AND PURPOSE IN EVERYDAY LIFE (2015); MARTIN E. P. SELIGMAN, FLOURISH: A VISIONARY NEW UNDERSTANDING OF HAPPINESS AND WELL-BEING (2011).

¹²⁹ See, e.g., VANCE PACKARD, *supra* note 9.

¹³⁰ *Factsheet: Study on Planned Obsolescence*, EESC (Mar. 29, 2016), at 2, <https://www.eesc.europa.eu/sites/default/files/resources/docs/factsheet-en.pdf> (summarizing the IILC Study cited *infra* note 132). Note that the study does not seek to assess the frequency of planned obsolescence but the effect of durability labeling. In this sense, the EESC statement echoes public perception rather than disseminates the results of an empirical study.

¹³¹ European Commission, *New Consumer Agenda*, *supra* note 9, at 5.

¹³² We are aware of no less than eleven such reports and studies. For a few recent examples, see *Engagement in the Circular Economy*, *supra* note 29; CARLOS MONTALVO ET AL., A LONGER LIFETIME FOR PRODUCTS: BENEFITS FOR CONSUMERS AND COMPANIES (2016) (Study for IMCO committee of the European Parliament); ICF, STUDY ON THE COSTS AND BENEFITS OF EXTENDING CERTAIN RIGHTS UNDER THE CONSUMER SALES AND GUARANTEE DIRECTIVE 1999/44/EC (2017) [hereinafter *ICF Study 2017*]; BERT KEIRSBILCK ET AL., SUSTAINABLE CONSUMPTION AND CONSUMER PROTECTION LEGISLATION – HOW CAN SUSTAINABLE CONSUMPTION AND LONGER LIFETIME OF PRODUCTS BE PROMOTED THROUGH CONSUMER PROTECTION LEGISLATION? (2020).

¹³³ Numerous policy documents from the European Economic and Social Committee (EESC), European Commission (EC) and European Parliament (EP) mention product durability in this perspective.

collective of policy initiatives aimed at making Europe carbon-neutral by 2050—offers a clear expression of the EU’s determination to work towards these goals.¹³⁴ It states that the EU will seek to “curb the built-in obsolescence of devices”¹³⁵ and adopt measures to “encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products.”¹³⁶ This policy expresses “the Commission’s commitment to tackling climate and environmental-related challenges.”¹³⁷ Following up on this resolve, the New Consumer Agenda announced the “Green Transition” of EU consumer law—that is, abandoning the sole focus on protecting consumers’ economic interests in favor of the mainstreaming of environmental objectives.¹³⁸ As the Circular Economy Action Plan makes clear, tackling product obsolescence also aims to create jobs and develop new skills.¹³⁹ Additional socio-economic objectives include “[e]mpowering consumers and providing them with cost-saving opportunities.”¹⁴⁰ To serve these aims, the EU has not hesitated to project its regulatory powers worldwide. The Commission describes its Sustainable Product Policy (whose reach is broader than the fight against planned obsolescence) as setting “global standards in product sustainability and to influence product design and value chain management worldwide,”¹⁴¹ making it likely to result in a Brussels Effect.¹⁴²

Policy reforms will not happen in a vacuum. EU law contains many rules and instruments designed with other goals in mind that contribute, if only moderately, to regulating product durability. This Part evaluates the current legal and policy responses that aim to tackle product obsolescence. Section A discusses the current legal prohibition on unfair trade practices. Section B then analyzes how the law frames

See, e.g., Commission Communication Closing the Loop – An EU Action Plan for the Circular Economy, at 4, COM (2015) 614 final (Dec. 2, 2015) (noting the need to shift the focus of ecodesign requirement from energy efficiency to reparability, durability, upgradability, and recyclability); *Commission Communication Ecodesign Working Plan 2016-2019*, at 2-3 and 8, COM (2016) 773 final (Nov. 30, 2016) (reiterating the intention to focus on a circular economy); *Commission Communication The European Green Deal*, at 7-8, COM (2019) 640 final (Dec. 11, 2019) [hereinafter *Green Deal*]; *Commission Communication New Circular Economy Action Plan for a Cleaner and more Competitive Europe*, at 6, COM (2020) 98 final (Mar. 11, 2020) [hereinafter *Circular Economy Action Plan*]; *Parliament Report on a Longer Lifetime*, *supra* note 86, at pt. 21; Parliament Resolution of July 4, 2017 on A Longer Lifetime For Products: Benefits For Consumers and Companies, P8_TA(2017)0287, 2016/2272(INI), rec. A; *Towards a More Sustainable Single Market*, *supra* note 75, at rec. A and pt. 2 (on the necessity to balance competitive aims and consumer protection).

¹³⁴ *See* *Green Deal*, *supra* note 133.

¹³⁵ *Id.* at 8.

¹³⁶ *Id.*

¹³⁷ *Id.* at 1.

¹³⁸ Commission, *New Consumer Agenda*, *supra* note 9, at 5-6.

¹³⁹ *Circular Economy Action Plan*, *supra* note 133, at 2; *id.* at 15 (announcing an update of the Commission’s Skills Agenda and the launch of a ‘Pact for Skills’). *See also* EESC, *The EESC Calls for a Total Ban on Planned Obsolescence* (Oct. 17, 2013), https://ec.europa.eu/commission/presscorner/detail/en/CES_13_61; *Report on a Longer Lifetime*, *supra* note 86, at 15 (deploring that “the obstacles preventing repair have resulted in a decline in the number of repairers in active employment” and pointing out that the repair sector represents a pool of non-relocatable jobs). *See also* *Towards a More Sustainable Single Market*, *supra* note 75, at recs. C and P.

¹⁴⁰ *Circular Economy Action Plan*, *supra* note 133, at 5.

¹⁴¹ *Circular Economy Action Plan*, *supra* note 133, at 3.

¹⁴² The Brussels Effect refers to the significant extraterritorial impact that EU rules may have on other countries, institutions, and markets. *See* ANU BRADFORD, *THE BRUSSELS EFFECT: HOW THE EUROPEAN UNION RULES THE WORLD* (2020).

consumer choice to encourage durable consumption. Thereafter, Section C inquires how the law targets producer choice to encourage durable production. Along the way, we examine which types of obsolescence each policy tool helps tackle.

A. *Planned Obsolescence as an Unfair Practice*

Parties in France and Italy have brought successful legal action against firms engaged in product obsolescence by framing it as an unfair trade practice. In each case, firms' behavior was analyzed under national measures transposing the Directive on Unfair Commercial Practices (UCPD), which regulates commercial communications such as advertisement and marketing material.¹⁴³ Pursuant to the Directive, "planned obsolescence is not unfair per se."¹⁴⁴ It is not one of the thirty-five practices listed as unfair in all circumstances in Annex I to the Directive.¹⁴⁵ However, planned obsolescence practices may run afoul of Article 7 of the UCPD on misleading omissions.¹⁴⁶ This is not surprising since withholding information about some design features is the hallmark of planned obsolescence. Misleading omissions within the meaning of Article 7 include failures to inform consumers on durability and reparability to the extent that this information is qualified as "material." As the Commission explains, "a trader who fails to inform the consumer that a product has been designed with a limited lifetime might, according to the specific circumstances of the individual case, be considered to have omitted to provide material information."¹⁴⁷

The Italian case involving Apple illustrates that Article 7 of the UCPD can substitute for an outright ban on product obsolescence, at least for some egregious practices. AGCM (Autorità Garante della Concorrenza e del Mercato),¹⁴⁸ known in English as the Italian Competition Authority (ICA), investigated this case. As part of its investigation, it had to ascertain the unfairness of two commercial practices.

¹⁴³ Rosalie Koolhoven & Luc Heerema, *Fighting Planned Obsolescence or 'the Lightbulb Conspiracy' as an Unfair Commercial Practice*, in *LAW & TECHNOLOGY: E.TEC YEARBOOK 27* (Maria Miguel Carvalho ed., 2018).

¹⁴⁴ *Commission Guidance on the Implementation/Application of Directive 2005/29/EC on Unfair Commercial Practices*, at 75, SWD(2016) 163 final [hereinafter *UCPD Guidance*].

¹⁴⁵ See Parliament and Council Directive 2005/29/EC On Unfair Business-to-consumer Commercial Practices, Annex 1, 2005 O.J. (L 149) 22 [hereinafter *UCPD*]. Art. 3(7) of Parliament and Council Directive 2019/2161 on better enforcement and modernization of Union consumer protection rules, 2019 O.J. (L 328) 7 [hereinafter *Modernisation Directive*] has added four items to the original list of thirty-one practices.

¹⁴⁶ UCPD offers a three-tier system for determining whether a commercial practice is unfair. First, there is a blacklist of practices prohibited in all circumstances (Annex I). Second, a practice that is not blacklisted can still be unfair under the "semi-general" definitions of misleading and unfair practices (Articles 6–9). Article 6 deals with misleading actions, Article 7 with misleading omissions, Article 8 with aggressive practices in general and Article 9 with harassment, coercion and undue influence specifically. Article 7 on misleading omissions is of particular relevance for every early obsolescence strategy involves not disclosing certain information (on durability, on how to take good care of a device to make it last). Third, a practice that is neither misleading nor aggressive can still be found unfair under the general definition of Article 5 (a practice which (a) it is contrary to the requirements of professional diligence, and (b) materially distorts or is likely to materially distort the economic behavior of the average consumer with regard to the product).

¹⁴⁷ See *UCPD Guidance*, *supra* note 144, at 75.

¹⁴⁸ Decision of AGCM no. 27365 of September 25, 2018, Case No. PS11039, Apple Aggiornamento Software.

The first practice related to consumers who had purchased an iPhone 6, 6 Plus, 6s, or 6s Plus. The phones frequently prompted users to update their operating systems to iOS 10 and, subsequently, iOS 10.2.1. These updates modified functional characteristics and significantly reduced the performance of said smartphones. Consumers were not adequately informed about the consequences of these updates, and Apple provided only limited and belated advice about how to remedy these shortcomings. The AGCM ascertained that this sped up users' replacement of these smartphones with newer models.

The second practice at issue concerned the lack of information on battery characteristics and duration. Specifically, the case raised the concern that Apple did not provide sufficient information on how to manage the device and the battery correctly to slow down its natural wear-and-tear and thus maintain an adequate level of performance. The ICA held that this lack of specific information led consumers to replace their phone batteries prematurely.

Both practices were held to constitute misleading omissions under the provision of the Italian code transposing Article 7 of the UCPD. This decision was upheld on appeal, and Apple was fined €10,000,000. Both the Authority and the Administrative Court of Appeal for Lazio, which rejected an appeal against the decision, determined that the abovementioned updates and omissions significantly decreased products' performance and nudged consumers into purchasing new ones.¹⁴⁹

The case against Samsung, decided the same day by AGCM,¹⁵⁰ presented a similar background and analysis. Here, the AGCM argued that Samsung deliberately decided not to aid consumers with products no longer under warranty. This decision resulted in high costs for repair, thereby intentionally accelerating the products' substitution. Both Apple and Samsung were required to publish an amending declaration on their website with a link to the relevant ICA decision.¹⁵¹

These cases illustrate that the UCPD can effectively regulate egregious cases, even without an explicit ban on planned obsolescence.¹⁵² As fines up to 4 percent of turnover and representative actions leading to compensation should come into effect in May 2022,¹⁵³ UCPD will gain extra teeth, and manufacturers worldwide might

¹⁴⁹ Regional Administrative Court for Lazio, May 20, 2020, *Apple v. AGCM*, N. 05736/2020 REG.PROV.COLL.

¹⁵⁰ AGCM, case No. PS11009, *Samsung*, September 25, 2018.

¹⁵¹ Per art. 27 ¶ 8 of the Italian Consumer Code.

¹⁵² The Italian example has inspired similar suits against Apple. In Belgium, the Consumer association Test Achats/Test Ankop filed a suit on Dec. 1, 2020 (based on the Belgian provision transposing Art 7 UCPD). See *Action Apple*, TEST ACHATS (Dec. 12, 2020, 8:51 AM), <https://www.test-achats.be/action/espace-presse/communiqués-de-presse/2020/class-action-apple> [<https://perma.cc/Y5X2-C2DD>]. In France, a similar case was brought against Apple based on an explicit ban of planned obsolescence under French law. Apple settled for € 25 Million. See Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes, *Transaction avec le Groupe Apple pour Pratique Commerciale Trompeuse*, MINISTÈRE DE L'ÉCONOMIE (Dec. 12, 2020 9:02 AM), <https://www.economie.gouv.fr/dgcrf/transaction-avec-le-groupe-apple-pour-pratique-commerciale-trompeuse> [<https://perma.cc/LUA9-PJTQ>].

¹⁵³ Fines as per UCPD art. 13, as amended by Modernisation Directive, *supra* note 145. Member States have to adopt legislation introducing these sanctions by November 28, 2021, and sanctions will apply as of May 28, 2022. For further arrangements regarding collective redress and representative actions, see Directive (EU) 2020/1828, OJ L 409/1, 4.12.2020, art 23.

rethink some of their practices. With this in mind, we next discuss other regulatory instruments that can impact product longevity, starting with the least intrusive ones that aim to guide consumer choice.

B. Regulating Consumer's Choice: Encouraging Durable Consumption

The law can orient consumer choice towards durable options at various stages. At the purchasing stage, regulation can encourage or mandate the provision of durability information. This could be achieved through labeling requirements. Current EU law, however, only regulates mandatory pre-contractual information. Subsection 1 surveys the current regulatory regime for such disclosures. Beyond that, traders can make durability claims or otherwise seek to influence consumer choice through durability cues. Subsection 2 analyzes the regulation of voluntary pre-contractual information. Finally, Subsection 3 describes how the law may encourage—or fail to encourage—repair. Post-purchase, the single most impactful consumer decision consists of choosing between repairing a good and replacing it. Here, the law can intervene to encourage repair, either by granting consumers an explicit “right to repair”¹⁵⁴ or by otherwise facilitating repairs.

1. Pre-contractual Information: Mandatory Disclosure

Although EU law regulates pre-contractual disclosure generously,¹⁵⁵ it currently neglects to address durability information adequately. However, two types of provisions could serve to ensure proper information about the durability of goods. These are general pre-contractual information requirements and specific provisions on legal guarantees and commercial guarantees. We address each in turn.

(i) **General pre-contractual requirements.** The Consumer Rights Directive (CRD) includes general information requirements. The CRD lists all the indications that firms must disclose to consumers before in-store (Article 5) or distance (Article 6) purchases.¹⁵⁶ Both Articles are long—eight and twenty items, respectively—but neither mentions durability or reparability.

The UCPD also contains general information requirements.¹⁵⁷ Article 7(4) of the UCPD requires sellers to provide information concerning “the main characteristics of the product.” As exemplified by the Italian Apple case discussed above, a product’s “main characteristics” conceivably include durability and reparability.¹⁵⁸ However, since this is currently not spelled out in the provision itself, we support the suggestion to make this explicit.¹⁵⁹

¹⁵⁴ Terry, *supra* note 34.

¹⁵⁵ Information requirements are found in Parliament and Council Directive 2011/83/EC, On Consumer Rights, 2011 O.J. (L 304) 64 [hereinafter CRD]; Sales of Goods Directive, *supra* note 17; UCPD, *supra* note 145.

¹⁵⁶ CRD, *supra* note 155, arts. 5 and 6. Article 6 requirements also apply to off-premises contracts.

¹⁵⁷ UCPD, *supra* note 145, art. 7.

¹⁵⁸ In the Italian case, Apple was found not to have disclosed essential characteristics affecting the durability of lithium batteries. See Administrative court of Lazio, *Apple v. AGCM*, 29/05/2020, N. 5736/2020, IT:TARLAZ:2020:5736SENT, *supra* note 149.

¹⁵⁹ Keirsbilck et al., *supra* note 132, at 8; *Report on a Longer Lifetime*, *supra* note 86, at pt. 20, p. 22; see also discussion *infra* Part IV.A.3.

The UCPD also facilitates more granular disclosure requirements. These can be set in sectoral rules, such as ecolabeling regulations. If these regulations contain information requirements about design features, failure to comply will be considered a misleading omission.¹⁶⁰

Mandatory pre-contractual information on durability and reparability will also empower consumers to choose more durable products. If disclosure is clear and salient, sunshine should act as a disinfectant for the most egregious cases of planned obsolescence, as disclosing a short product lifespan would likely drive consumers away. However, pre-contractual disclosure—even if behaviorally informed¹⁶¹—comes with three limitations. First, it does nothing to drive short-lived products from the market. It merely protects consumers against overpaying for them. Second, disclosure alone does not make durability characteristics easy to compare across competing products and, therefore, does not serve as a substitute for labeling or comparators. Third, mandatory durability information does not alter the fact that potential lifetime—i.e., the good’s lifetime if it had not been designed to be less durable—will remain hidden from view. Thus, pre-contractual disclosure is of limited value concerning planned obsolescence. Besides, it is of no value at all concerning technological, postponement, and psychological obsolescence.

(ii) **Specific provisions on legal guarantees and commercial guarantees.** In the terminology of EU law, “legal guarantees” are creatures of statute. Under the national contract law of Member States, sellers (or, sometimes, producers) are obligated to offer product guarantees for a duration set by statute.¹⁶² Legal guarantees, therefore, afford consumers minimal durability protection. A legal guarantee is implied in any Business-to-Consumer sale of goods: Even if the contract is silent about any guarantee, the seller is under the obligation to honor the legal guarantee. At present, the duration of legal guarantees is set by national law, provided it is at least two years long.¹⁶³ This system entails that the legal guarantee for any product can vary from one Member State to another.¹⁶⁴

While legal guarantees mandate a specific term (e.g., three years for a washing machine in Member States), firms can go beyond the legal guarantee and offer their own commercial guarantees.¹⁶⁵ However, “commercial guarantees,” known in some other countries as warranties, are offered by sellers or manufacturers on a voluntary basis. Therefore, such guarantees are based on contract, not statute. Accordingly,

¹⁶⁰ UCPD, *supra* note 145, art. 7(5), in combination with Annex II.

¹⁶¹ Current rules only provide that pre-contractual information must be clear and comprehensible. See UCPD, *supra* note 145, art. 7(2) (a trader is liable for misleading omission if he “provides information in an unclear, unintelligible, ambiguous or untimely manner.”); CRD, *supra* note 155, art. 5 (in in-store purchases, the information must be given “in a clear and comprehensible manner if that information is not already apparent from the context.”); CRD, *supra* note 155, art. 6 (In online purchases, the information must be given “in a clear and comprehensible manner.”).

¹⁶² Sales of Goods Directive, *supra* note 17, art. 10(3) (mandating a two-year guarantee). Member States could already adopt more protective rules under art. 8 of the previous Sales and Guarantees Directive, *supra* note 17.

¹⁶³ See Sales of Goods Directive, *supra* note 17, art. 10(3). Member States could already adopt more protective rules under the previous Sales and Guarantees Directive. See Sales and Guarantees Directive, *supra* note 17, at 12.

¹⁶⁴ For further elaboration on the different durations of legal guarantees, see *infra* Section III.C.2.

¹⁶⁵ Sales of Goods Directive, *supra* note 17, art. 2 (defining the term “commercial guarantee”).

while firms A and B must both comply with the legal guarantee, each firm can use its commercial guarantee to signal to consumers valuable durability information.¹⁶⁶ Firm A can offer a five-year commercial guarantee on its washing machine, while Firm B can offer ten years. In essence, these are contractual promises.¹⁶⁷ Manufacturers and sellers are free to offer them—or not—and control their duration, coverage, and price.

EU law regulates the information consumers should receive about both legal and commercial guarantees.¹⁶⁸ As consumers often confuse the two, this is important and reasonable. Indeed, suppose consumers are unaware that a two-year legal guarantee will apply in any event.¹⁶⁹ In that case, they might find a two-year commercial guarantee highlighted in promotional materials attractive. Yet, such a guarantee carries no additional rights compared to what they are already entitled to by law.

To prevent such confusion, UCPD blacklists the practice of “presenting rights given to consumers in law as a distinctive feature of the trader’s offer.”¹⁷⁰ In addition, the CRD provides that traders must remind “consumers of the existence of a legal guarantee of conformity for goods and inform them of the existence and the conditions of after-sales services and commercial guarantees.”¹⁷¹ Yet, compliance with these requirements was found to be lacking in 2015,¹⁷² and still needs improvement. As a case filed in France against Amazon illustrates, even the largest online retailers may fail to provide mandatory information about legal guarantees.¹⁷³ The fact that the term “guarantee” refers to both legal and commercial obligations exacerbates consumer confusion.

All in all, empirical evidence suggests that commercial guarantees offer an apt vehicle to express a producer’s durability commitments. Commercial guarantees are a locus where consumers expect to find durability information. Therefore, making

¹⁶⁶ Terryn, *supra* note 34, at 862.

¹⁶⁷ The commercial guarantee can be offered by the manufacturer or the seller, but EU law focuses on the sales contract. Therefore, it only considers the responsibility of the seller. For criticizing this approach and advocating for direct remedies against the manufacturer see Vanessa Mak & Enna Lujinovic, *Towards a Circular Economy in EU consumer markets: Legal possibilities and legal challenges and the Dutch example*, 8 J. EUR. CONSUMER & MKT. L. 4, 12 (2019); Terryn, *supra* note 34, at 863.

¹⁶⁸ See Consumer Rights Directive, art. 5(e) and 6(l), (m); Sales and Guarantees Directive, *supra* note 17, art. 6; Sales of Goods Directive, *supra* note 17, art. 17.

¹⁶⁹ See, e.g., See, e.g., IPSOS-LONDON ECONOMICS-DELOITTE, CONSUMER MARKET STUDY ON THE FUNCTIONING OF LEGAL AND COMMERCIAL GUARANTEES FOR CONSUMERS IN THE EU (Study for DG Justice and Consumers), 2015, doi: 10.2838/813430 (hereafter “Guarantees Study”), at 41 (finding that, excluding Ireland, the UK and Sweden—where national provisions have extended the legal guarantee’s duration—41% of respondents correctly knew that the length of the legal guarantee period is two years, while 7% of participants mistakenly thought this period was only one year).

¹⁷⁰ UCPD, *supra* note 145, Annex I, pt. 10.

¹⁷¹ CRD, *supra* note 155, art. 5(1)e (regarding information requirements for contracts other than distance or off-premises contracts), art. 6(1) and (m) (regarding information requirements for contracts other than distance or off-premises contracts).

¹⁷² Guarantees Study, 2015, *supra* note 169, at 31 (finding that only a small minority of mystery shoppers were reminded that the commercial guarantee does not influence existing legal guarantee rights); *id.* at 218 (finding that 40% of consumers disagreed that sellers generally inform consumers about the legal guarantee period for products).

¹⁷³ *Une plainte pénale contre Amazon pour pratiques commerciales trompeuses déposée par HOP*, HOP (Dec. 19, 2019), <https://www.halteobsolence.org/une-plainte-penale-contre-amazon-pour-pratiques-commerciales-trompeuses-deposee-par-hop/>.

durability information as user-friendly as possible should be front-and-center in future reforms. We return to this point below.

However, guarantees have significant limitations. First, guarantees are ill-fitted to limit technological obsolescence, postponement obsolescence, or psychological obsolescence. Second, companies are only required to inform consumers about commercial guarantees “if applicable,” i.e., if such a commercial guarantee is offered at all.¹⁷⁴ Neither the seller nor the manufacturer of a short-life product has reason to offer a commercial guarantee. When no commercial guarantee is offered, no information requirement under EU law makes this “zero commercial guarantee” salient. To address this concern, we call below to promote saliency also vis-à-vis absent or useless commercial guarantees.¹⁷⁵

2. Pre-contractual Durability Representations: Voluntary Disclosure

In addition to mandatory disclosures, consumers receive durability information through advertisements and other promotional materials. Such materials may highlight the durability of goods yet leave consumers to guess how long a product might last. Whether explicit, implicit, or absent, durability claims and durability cues orient consumer choices and influence their durability expectations.¹⁷⁶

Let us consider first the case where a firm or producer makes a durability claim. Voluntary durability claims can take various forms. One is to display a general sustainability label (such as the European Ecolabel,¹⁷⁷ the German Blue Angel,¹⁷⁸ or the Nordic Swan),¹⁷⁹ a specific durability label (such as Longtime or Reparably),¹⁸⁰ or an affiliation to a durability code of conduct. In such circumstances, the law of unfair practices seeks to ensure that the label or code is not misused and that firms do not misrepresent voluntary compliance.¹⁸¹ UCPD ensures that durability cues are not misleading by punishing traders who engage in misleading conduct.¹⁸²

When sellers make durability claims using words, a tried legal technique to hold them to their word is to consider such claims to be part of the sales contract. In this way, cases of durability defects trigger contractual liability, and consumers can sue for damages. However, Article 17 of the 2019 Sales Directive limits this possibility by offering traders an easy escape. Specifically, it provides that, “[i]f the conditions laid out in the commercial guarantee statement are less advantageous to the consumer

¹⁷⁴ CRD, *supra* note 155, art. 5(1)e (contracts other than distance or off-premises contracts) and 6(1)(m) (distant and off-premises contracts).

¹⁷⁵ Apparently in favor of mandatory labeling, see *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 20, p. 22 (*but see also* pt. 6 and pt. 24 on voluntary labeling).

¹⁷⁶ On the protection of legitimate expectation as a fundamental aspect of consumer protection, see Norbert Reich, *Economic Law, Consumer Interests and EU Integration in HANS-W. MICKLITZ ET AL., UNDERSTANDING EU CONSUMER LAW 1* (2009).

¹⁷⁷ Durability is not the only criterion for obtaining this label, but it is one of them. Parliament and Council Regulation 66/2010 on the EU Ecolabel, art. 6(3)(c), 2010 O.J. (L 27) 1.

¹⁷⁸ *Blue Angel - The German Ecolabel*, <https://www.blauer-engel.de/en> (last visited Oct. 2, 2021).

¹⁷⁹ *Nordic Swan Ecolabel, NORDIC ECOLABELLING*, <http://www.nordic-ecolabel.org/> (last visited Oct. 2, 2021).

¹⁸⁰ See *supra* III.B.1.

¹⁸¹ UCPD, *supra* note 145, Annex I, 1 and 2.

¹⁸² UCPD, *supra* note 145, art. 11a (rules on fines introduced by the Modernization Directive).

than those laid down in the associated advertising, the commercial guarantee shall be binding under the conditions laid down in the advertising relating to the commercial guarantee.” In other words, if a seller makes a durability claim but does not offer a commercial guarantee, buyers are not protected. In addition, the Sales Directive affords no way to hold the manufacturers to their word.

Contractual liability thus has little to offer in the fight against product obsolescence. First, it addresses only positive durability claims, not the absence of any durability claims. Second, it focuses on the sales contract and therefore does not offer a systematic remedy against manufacturers.¹⁸³ Third, misrepresentations may occur after the contract has been completed; for example, when a printer pops up a message indicating that the ink cartridge is almost empty when, in fact, it is not. Contractual liability is irrelevant in these cases, too.

3. Encouraging Repairs and Upgrades

Many factors affect the decision to replace or repair a good. The first, of course, is the very fact that a product ceases to function correctly (planned or functional obsolescence). Then, there is the temptation to buy a better model (technological or postponement obsolescence) or simply a brand new one (psychological obsolescence). The price of new goods is an essential dimension of the choice to repair or buy. But so are the availability, cost, and attractiveness of alternatives to buying, such as repair or upgrades.¹⁸⁴

To steer consumers toward durable consumption, the law can ensure that consumers have a meaningful choice between replacing, repairing, and upgrading (e.g., add storage capacity to a phone). The option to repair (e.g., replace a weak part) at a reasonable cost can help defeat functional obsolescence. Likewise, the option to upgrade can help with some forms of planned or functional obsolescence, as in the cell phone example. Upgrading can also assist, to an extent, with some cases of postponement obsolescence—for example, if a rear-view camera can be added to a car. Interestingly, upgrades might also help with some psychological obsolescence cases; for example, when a coat can be re-tailored to change its style. However, neither option will be of use against technological obsolescence: No amount of repair or upgrade will morph a Walkman into an iPod.

To ensure repairing or upgrading a product is a feasible option for consumers, repairs or upgrades need to be technically possible, legally permitted, cost-effective, and trustworthy. However, at present, very few of these aspects are regulated at all. When they are, the regulation is so light that it is insufficient to make any real difference.

¹⁸³ Under some national laws, a direct action against the producer is available (such as *action directe* under French and Belgian law). However, this is not harmonized at the EU level.

¹⁸⁴ For instance, according to a 2014 Eurobarometer survey, 77% of European citizens are discouraged by the cost of repairs and the level of service provided and thus opt to buy new goods instead of repairing old ones. *Report on a Longer Lifetime*, *supra* note 86, at 15. This figure is significantly higher than the one documented one year before, also in a Eurobarometer survey (finding that 47% of the respondents reported that they decided not to have a faulty product repaired in the past 12 months because the repair costs were too high; see Flash Eurobarometer 367, Attitudes of Europeans towards building the single market for green products, 2013, 13). See also *Engagement with the Circular Economy*, *supra* note 29, at 65.

Recital 48 of the new Sales of Goods Directive pays lip service to the benefits of repair. It reads: “Enabling consumers to require repair should encourage sustainable consumption and could contribute to greater durability of products.” Yet, as a matter of law, the Directive does not take any steps towards empowering consumers to opt for the more durable option. Sellers can still refuse to repair goods and offer replacements instead.¹⁸⁵ In some cases, this makes economic sense: Sellers are better placed than consumers to know the cost of repair. However, the rule creates no incentive for sellers to minimize such costs. Neither does it steer them towards internalizing the environmental externalities associated with not repairing products. In addition, the rule provides no incentive for manufacturers to design goods in ways that make them easy to disassemble. The only improvement brought by the 2019 Digital Content Directive is a new right to updates for goods with digital elements, which will alleviate the problem of functional obsolescence of consumer electronics, but not for other goods.¹⁸⁶

Current law is thus ill-equipped to help consumers choose more durable options, both when purchasing a good and when deciding on repairs. It leaves many opportunities for producers to market goods that are not durable while staying silent about durability.¹⁸⁷ It also allows sellers a wide margin to refuse to repair goods still covered by the legal guarantee, let alone those no longer covered. Finally, the law fails to regulate the repair of goods after that period has elapsed.

C. Regulating Producer’s Choice: Encouraging Durable Production

Given the failures and loopholes delineated above, it becomes necessary to examine if and how the law regulates production for durability. Subsection 1 explores American contract law’s textbook example of how not to incentivize durable production. EU contract law stands in apparent contrast since rules on guarantees offer a vehicle for shaping durability incentives. However, Subsection 2 highlights that the current rules provide only weak incentives. Subsection 3 explains how reparability obligations would provide more robust durability incentives. Subsection 4 considers a more radical shift still: “Extended Producer Responsibility,” a form of liability that is non-contractual in nature.¹⁸⁸ Finally, Subsection 5 explains how product regulation tackles the problem at its root.

1. A Zero Benchmark: U.S. Contract Law

In some jurisdictions, like the United States, there has been little interest in regulating planned obsolescence.¹⁸⁹ American courts tend to reject premature

¹⁸⁵ Terry, *supra* note 34, at 857.

¹⁸⁶ Parliament and Council Directive 2019/770 on certain aspects concerning contracts for the supply of digital content and digital services, art. 8(2), 2019 O.J. (L136) 1.

¹⁸⁷ In this regard, an interesting development comes from French law, which mandates disclosure of the duration for which spare parts will be available. See CODE DE COMMERCE [C. COM.][COMMERCIAL CODE], art. L441-4.

¹⁸⁸ Kleoniki Pouikli, *Concretising The Role of Extended Producer Responsibility in European Union Waste Law and Policy Through the Lens of the Circular Economy*, 20 ERA FORUM 491 (2020).

¹⁸⁹ For a detailed analysis and review, see DiMatteo & Wrba, *supra* note 4, at 523-28. The authors opine that “there has been little interest in such oversight (over planned obsolescence) in the U.S.”; *id.* at 525.

obsolescence claims as unreasonable. Courts have declined invitations to make producers bear obsolescence-related costs on contractual grounds.

For instance, *Tatum v. Chrysler Group* involved a class action suit against Chrysler regarding the sale of the Dodge Journey crossover vehicle.¹⁹⁰ Chrysler's advertisements "touted the Journey as safe, durable and reliable."¹⁹¹ The plaintiff alleged that, by contrast, the brakes on the vehicle required frequent and costly repairs. The court addressed the issue of planned obsolescence but dismissed the idea out of hand. The court stated: "*Planned obsolescence, either deliberately or accidentally engineered, is not actionable*, and if the brakes outlasted their sales warranty even by a day or a mile, there would be nothing rising to the level of a design flaw for Defendants to warn of."¹⁹² The court equated planned obsolescence with the "express warranty" (as the contractual guarantee is called in the US). As long as the product works properly during the warranty period, the court reasoned, planned obsolescence that results in failures soon after the expiration of the warranty is not actionable. Since there is no legal guarantee, manufacturers, who determine both the durability of their products and the term of the commercial guarantee they offer, are immune from contractual liability for planned or functional obsolescence.

Courts adopted a similar pro-manufacturer approach in earlier cases, such as *Abraham v. Volkswagen of America, Inc.*¹⁹³ There, the court noted that "all [automobile] parts will wear out sooner or later and thus have a limited effective life."¹⁹⁴ The court acknowledged the information asymmetry between sellers and buyers, noting that "[m]anufacturers always have knowledge regarding the effective life of particular parts and the likelihood of their failing within a particular period of time."¹⁹⁵ Nevertheless, the court concluded that "[a] rule that would make failure of a part actionable based on such 'knowledge' would render meaningless time/mileage limitations in warranty coverage."¹⁹⁶ Similarly, the court in *Atlantech Inc. v. American Panel Corporation* accepted the practice of planned obsolescence;¹⁹⁷ the court regarded it as a legitimate business practice that is part of the contract between the parties.

If the foregoing cases concerned planned or functional obsolescence, another case illustrates the same orientation about postponement and possibly psychological obsolescence. In *Berkey Photo, Inc. v. Eastman Kodak Company*,¹⁹⁸ the court argued that whether consumers choose to buy a more advanced or stylish product is a matter of individual taste and preferences. The court further opined that, in such cases, consumers are not coerced into purchasing the newer product and thus left the related costs with the consumers. Indeed, American courts seem to place the burden of

¹⁹⁰ No.10-cv-4269(DMC)(JAD), 2011 U.S. Dist. LEXIS 32362 (D.N.J. Mar. 28, 2011).

¹⁹¹ *Id.* at *2.

¹⁹² *Id.* at *10 (emphasis added).

¹⁹³ 795 F.2d 238 (2d Cir. 1986).

¹⁹⁴ *Id.* at 250.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ NO. 07-10342-DPW, 2013 U.S. Dist. LEXIS 30064 (D. Mass. Mar. 6, 2013).

¹⁹⁸ 603 F.2d 263, 287 (2d Cir. 1979).

obsolescence-related costs squarely on the consumer. This may incentivize manufacturers to engage in obsolescence practices.

2. Timid Durability Incentives: EU Rules on Guarantees

EU law offers some protection of durability expectations, though these protections are quite minimal. As discussed above, rules on legal guarantees express the legislature's choice of the minimum durability to which consumers are entitled. Rules on legal guarantees allocate costs between the contracting parties; that is, they determine who has to pay for repair or replacement at any given date after the purchase.¹⁹⁹ Therefore, an essential question about durability incentives is whether the legal guarantee should be longer than the current minimum of two years.

To help answer this question, the Commission conducted a cost-benefit analysis as part of the Fitness Check of European Consumer Law.²⁰⁰ Surprisingly, the evaluation found that most business respondents believed that there would be no significant additional costs of extending the guarantee.²⁰¹ The study concluded that it would be optimal to set time limits between three and five years.²⁰² However, as Mak and Lujinovic point out, extended guarantee periods might result in higher retail prices, which can restrict access to goods for less well-off consumers.²⁰³

To be sure, even if the duration of the legal guarantees were extended, this would only incentivize durable production to the extent rules are adequately enforced. It is equally important that the burden of repairs or replacement costs are passed on to manufacturers. Alas, neither of these conditions has been fulfilled. As the Commission deplored in its first action plan for the circular economy in 2015, enforcement is a weakness of the current regime.²⁰⁴ Strangely, after accurately identifying the problem, the Commission did not seek to remedy this weakness with more dissuasive sanctions.²⁰⁵ Stepping up enforcement would certainly serve consumers' interests, but would only indirectly incentivize manufacturers as long as only sellers are held liable.²⁰⁶

Recent progress in this direction has been meager. The 2019 Consumer Sales Directive pays lip service to the need to increase producers' incentives to make goods

¹⁹⁹ Mak & Lujinovic, *supra* note 167, at 7.

²⁰⁰ *ICF Study 2017*, *supra* note 132.

²⁰¹ However, it is consistent with the finding that most goods that break do so during the two-year guarantee period. In this regard, the Consumer Market Study to support the Fitness Check of Consumer Law (Lot 3) found that in 96% of cases when European consumers experienced a problem with a defective good during the 12 months preceding the survey, the defect appeared within two years of purchasing the product (p. 149).

²⁰² Mak & Lujinovic, *supra* note 167, at 8; *ICF Study 2017*, *supra* note 132, at 61-62.

²⁰³ Mak & Lujinovic, *supra* note 167, at 8. On the need to factor social costs of environmental policy in the analysis see BIO INTELLIGENCE SERVICE, POLICIES TO ENCOURAGE SUSTAINABLE CONSUMPTION (2012) 8, https://ec.europa.eu/environment/eussd/pdf/report_22082012.pdf.

²⁰⁴ *Commission Communication Closing the Loop*, *supra* note 133, at 6-7.

²⁰⁵ A missed opportunity in this regard was the revision of the Sales Directive. Although it was adopted at the same time as the Modernisation Directive, *supra* note 153, which provided for higher sanctions of many infringements on consumer rights, such sanctions were not extended to violations of the legal guarantee.

²⁰⁶ Mak & Lujinovic, *supra* note 167, at 12.

more durable.²⁰⁷ However, by recognizing durability as a criterion of conformity, the Directive only contributes to this goal indirectly. This recent change means that when a good does not satisfy durability expectations, the good is deemed not to conform to the sales contract, and the legal guarantee is triggered.²⁰⁸ This provision has a limited reach, however. It extends only the seller's liability—not the manufacturer's—and exists only during the legal guarantee period, whose minimum duration remains at two years.²⁰⁹ In this context, the European Parliament has called on the Commission to “study the feasibility of strengthening the position of sellers in relation to manufacturers by introducing a joint manufacturer-seller liability mechanism under the legal guarantee regime.”²¹⁰ True, the explicit inclusion of durability as a conformity criterion will facilitate consumer associations' task when goods fail during the legal guarantee period, which seems surprisingly common.²¹¹ However, consumers would still have to prove what durability should be considered “normal” for a given product.²¹² Thus, it would be valuable to document the durability of various products, a point to which we return below.

There is another minor improvement stemming from the 2019 Consumers Sales Directive. The Directive revisited the presumption that defects that appear in the first six months after purchase were present at the time of purchase.²¹³ The new presumption was modified to one year, and Member States may opt for a two-year presumption.²¹⁴ In the Member States where the legal guarantee is two years, this would mean a reversal of the burden of proof for the whole duration of the legal guarantee. This burden-shifting removes a procedural obstacle for consumers and has the potential to shift costs of non-durability towards producers.

Yet again, the value of the latter improvement is limited because of the unaltered two-year minimum for the legal guarantee. Besides, incentives still only bear on sellers. How incentives might be passed on to manufacturers will depend on contractual arrangements with their distributors, a dimension completely outside the Directive's scope. The rule is also complex and makes it difficult for consumers to understand their rights. Further, the Directive does not allow for an extension of the presumption. Therefore, if the legal guarantee under national law lasts for longer than two years, the presumption will still lapse after two years.

In conclusion, the legal guarantee theoretically offers an apt container for durability incentives. However, to materialize and improve its potential, the minimum

²⁰⁷ Sales of Goods Directive, *supra* note 17, rec. 32.

²⁰⁸ Sales of Goods Directive, *supra* note 17, art. 7(1)(d) (When the new rules are transposed, sellers will have to ensure that their goods “possess the qualities and other features, *including in relation to durability* (...) which the consumer may reasonably expect given the nature of the goods and taking into account any public statement made by or on behalf of the seller (...) particularly in advertising or on labelling.”). The corresponding provision in the Sales and Guarantees Directive, *supra* note 17, art. 2 d, did not mention durability. However, durability was already mentioned in the UK Consumer Rights Act 2015, art. 9 (3) (e).

²⁰⁹ Sales of Goods Directive, *supra* note 17, art. 10.

²¹⁰ *Towards a More Sustainable Single Market*, *supra* note 75, pt. 6(f), p. 8.

²¹¹ *Supra* note 201.

²¹² *Id.* See also Stefan Wrška, *Warranty Law in Cases of Planned Obsolescence – the Austrian Situation*, 2 J. EUR. CONSUMER & MKT. L. 67, 69 (2017).

²¹³ Sales and Guarantee Directive, *supra* note 17, art. 5(3)

²¹⁴ Sales of Goods Directive, *supra* note 17, art. 10.

duration should be extended to track the expected product lifetime, and non-compliance must be effectively sanctioned. These changes would make planned and functional obsolescence costly strategies, at least within the guarantee period. Furthermore, such rules would also express a social norm in favor of durability. That said, such improved rules would be unlikely to have a direct impact on technological, postponement, or psychological obsolescence.²¹⁵

3. Robust Durability Incentives: Reparability Obligations

Consumers can keep goods longer where reparability obligations exist. Specifically, reparability obligations incentivize producers to offer durable products that will not need repairs for the duration set by law. However, reparability obligations are intrusive and entail cost-shifting. Producers are, therefore, likely to object to reparability obligations and lobby against them.

Making easily repairable goods will often mean adopting a modular design. This is valid for upgradeability—for example, designing a computer or a smartphone that is capable of having memory added post-purchase. Besides forcing new designs, reparability also means continuing the production of spare parts for a certain number of years after discontinuing the production of a given good.²¹⁶ Mandated minimum duration for the availability of spare parts is a forceful measure that would require a sectoral approach, just as lengthening the legal guarantee period. Indeed, at the EU level, legislation mandating the availability of spare parts currently exists in specific sectors, such as the automobile industry.²¹⁷

A milder tool would be to mandate disclosure regarding how long spare parts or software updates²¹⁸ will be available—an obligation already introduced under French law.²¹⁹ Such disclosures, if salient, can help consumers choose durable goods. Additionally, requiring producers to disclose information about reparability can incentivize producers to put greater efforts into improving product quality.

In any event, enhanced reparability entails imposing costs on firms alongside revenue loss. While these costs and losses may be hard to estimate,²²⁰ producers and sellers will doubtless wish to avert them. Producers may even strive to offset forgone profits through increased forms of other types of obsolescence. Therefore, it seems imperative to tackle subtler forms of obsolescence simultaneously.

4. A Radical Shift in Durability Incentives: Extended Producer Responsibility

“Extended Producer Responsibility” (“EPR”) can lead to a substantial shift in durability incentives. The OECD defines EPR as “an environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer

²¹⁵ Wrška, *supra* note 212, at 69 (using a different typology but making a similar point).

²¹⁶ EESC had suggested five years. See EESC Opinion, *supra* note 15, pt. 1.3, at 1.

²¹⁷ Terry, *supra* note 34, at 867-69.

²¹⁸ *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 7.

²¹⁹ CODE DE COMMERCE [C. COM.][COMMERCIAL CODE], art. L111-4. [Fr.]

²²⁰ ICF Study 2017, *supra* note 132, at 8.

stage of a product's life cycle."²²¹ This responsibility can be financial or physical. Notably, EPR internalizes the environmental externalities that come from waste.²²² In other words, EPR is an application of the Polluter Pays Principle (PPP).²²³ Notably, it addresses the externality market failure briefly discussed in Part II.

It is important to recognize at the outset that EPR was developed with environmental policy and waste reduction in mind. It does not tackle product durability per se, and it is not specific to consumer goods. For instance, EPR has particular relevance to some industrial goods, such as wind turbines.²²⁴ Regardless, compliance with EPR schemes, which is mainly expected to come from more sustainable product design,²²⁵ can indirectly reduce product obsolescence.

First, EPR regimes create incentives to reduce the number of products discarded annually. These incentives align, if only partly, producers' interest with the aim that consumers retain their goods for longer. Second, measures that could help reduce the amount of waste a good generates may simultaneously make that good more repairable. Such measures include using a modular design, or easing disassembly, be it for repair, reuse, or recycling.

Within the EU, a framework for EPR schemes has existed since 2008.²²⁶ In its current version, the Waste Framework Directive harmonizes the design of EPR schemes²²⁷ while applying more specific EPR rules in four sectors.²²⁸ In 2013, the European Economic and Social Committee (EESC) was the first to link EPR with the fight against obsolescence, noting that "manufacturers should also cover the cost of recycling if their goods have an expected lifetime of less than five years."²²⁹ The Commission took up this plan in its 2020 *Circular Economy Action Plan*. However, it

²²¹ OECD, EXTENDED PRODUCER RESPONSIBILITY: A GUIDANCE MANUAL FOR GOVERNMENTS 9 (2001), https://www.oecd-ilibrary.org/environment/extended-producer-responsibility_9789264189867-en. See also OECD, ECONOMIC ASPECTS OF EXTENDED PRODUCER RESPONSIBILITY (2004), https://www.oecd-ilibrary.org/environment/economic-aspects-of-extended-producer-responsibility_9789264105270-en; OECD, EXTENDED PRODUCER RESPONSIBILITY: UPDATED GUIDANCE FOR EFFICIENT WASTE MANAGEMENT (2016), <https://www.oecd.org/development/extended-producer-responsibility-9789264256385-en.htm>.

²²² Pouikli, *supra* note 181, at 493.

²²³ *Id.* at 494.

²²⁴ Chris Martin, *Wind Turbine Blades Can't Be Recycled, So They're Piling Up in Landfills*, BLOOMBERG GREEN (February 2, 2020), <https://www.bloomberg.com/news/features/2020-02-05/wind-turbine-blades-can-t-be-recycled-so-they-re-piling-up-in-landfills> [<https://perma.cc/R9PV-VPFL>].

²²⁵ Pouikli, *supra* note 188, at 493.

²²⁶ Parliament and Council Directive 2008/98/EC, On Waste and Repealing Certain Directives, 2008 O.J. (L 312) 3.

²²⁷ The 2008 Directive was amended by Parliament and Council Directive 2018/851/EU, 2008 O.J. (L 150) 109. The revision aimed to increase the recycling targets laid down initially and improve the consistency of the waste management framework with other pieces of EU legislation. Arts. 8 and 8a define minimum requirements for extended producer responsibility schemes (relating to the governance of those schemes).

²²⁸ Parliament and Council Directive 94/62/EC, On Packaging and Packaging Waste, 1994 O.J. (L 365) 10; Parliament and Council Directive 2000/53/EC, On End-of-Life Vehicles, 2000 O.J. (L 269) 21; Parliament and Council Directive 2012/19/EC, On Waste Electrical and Electronic Equipment (WEEE), 2012 O.J. (L 197) 38; Parliament and Council Directive 2006/66, On Batteries and Accumulators, 2006 O.J. (L 266) 26.

²²⁹ ICF Study 2017, *supra* note 132.

goes one step further by not conditioning producer responsibility on expected product life being within a specific range.²³⁰

EPR represents a radical shift of obsolescence-related costs, which goes beyond what the other instruments discussed above can achieve. This is because the costs of managing waste are proportional to the number of goods discarded rather than to the number of goods that break during a specific period, as for repair or replacement costs. Notably, disposing of a good, regardless of the motivation that led the consumer to part with it, triggers responsibility under EPR. Therefore, such a measure is unique in its ability to tackle all forms of obsolescence.

Despite its significant potential, EPR has been implemented with only mixed success thus far. For example, Pouikli found that the incentives under existing schemes were not large enough to lead to significant design shifts in packaging centers.²³¹ This may be because incentives are diluted when multiple producers implement EPR collectively through a joint organization.²³² In this case, the “true costs principle”—whereby each producer bears the actual cost associated with their products—is not respected, and free riding is bound to occur.²³³

5. Direct Product Regulation

Mandatory product design requirements restrict producers’ choices regarding materials, sourcing, and design. Thus, such requirements reduce overall consumer access to low-quality goods. For this reason, this tool is particularly suited to tackle some forms of obsolescence.

Direct product regulation is supported by the fact that “up to 80% of products’ environmental impacts are determined at the design phase.”²³⁴ Indeed, it is often the case that ex ante preventative measures can be more efficient and effective than ex post treatments. Possibly for these reasons, the EU legislature expressed that product regulation is the preferred regulatory route to ensure extended durability of consumer goods.²³⁵

Mandatory product design is an intrusive form of regulation whose impact goes beyond European businesses. Among all of the regulatory tools discussed in this Article, mandatory product design is the most likely to produce a Brussels Effect,

²³⁰ *Circular Economy Action Plan*, *supra* note 139, at 10.

²³¹ Pouikli, *supra* note 188, at 501.

²³² It seems that such joint organizations are common. A 2014 report examined existing EPRs in 28 Member States in various markets and sectors. One of the features studied was whether the EPRs were implemented individually or collectively, through Producer Responsibility Organizations (PROs). A PRO is a collective entity set up by producers or through legislation, which becomes responsible for meeting the recovery and recycling obligations of the individual producers. The report noted that “Despite EPR being, in theory, an individual obligation, in practice producers often exert this responsibility collectively”. DELOITTE, DEVELOPMENT OF GUIDANCE ON EXTENDED PRODUCER RESPONSIBILITY (EPR) FINAL REPORT FOR DG ENVIRONMENT (2014) 12, https://www2.deloitte.com/content/dam/Deloitte/fr/Documents/sustainability-services/deloitte_sustainability-les-filieres-a-responsabilite-elargie-du-producteur-en-europe_dec-15.pdf.

²³³ *Id.* at 499.

²³⁴ *Circular Economy Action Plan*, *supra* note 139, at 3.

²³⁵ As underscored and criticized by Terryn, *supra* note 34, at 859. This regulatory preference is clearly expressed in recital 32 of the Sales of Goods Directive, *supra* note 17.

whereby EU standards have a significant impact worldwide.²³⁶ Overseas producers who wish to conduct business within the EU Internal Market may find it economical to implement EU standards across their whole production line, thus contributing to the export of EU standards.

At present, ecodesign requirements are limited in scope and pertain only to energy-related products such as electrical appliances and cars.²³⁷ However, the Commission's "Sustainable Product Policy" legislative initiative will likely resolve this limitation.²³⁸ The intention is to "make the ecodesign framework applicable to the broadest possible range of products."²³⁹

The existing ecodesign framework consists of a horizontal Ecodesign Directive²⁴⁰ and numerous sectoral regulations on specific product categories. The revision seeks to update the existing horizontal rules and expand the range of products covered by sectoral regulations. Prioritizing electronics, the Commission has announced a "Circular Electronics Initiative." The initiative seeks to ensure that "devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling."²⁴¹ Other resource-intensive sectors, such as textiles, construction, and plastics, will also receive regulatory attention.²⁴²

The sectoral approach of the current ecodesign framework suffers from a significant enforcement weakness.²⁴³ Regulation of specific products or sectors does not provide private law remedies when the design requirements are not met,²⁴⁴ which seems to be the case for many imported goods sold online.²⁴⁵ Terryn thus argues that a link needs to be established between consumer legislation and product regulation. A blueprint along these lines has been proposed,²⁴⁶ and we return to this proposal below.

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²³⁶ See BRADFORD, *supra* note 142.

²³⁷ Parliament and Council Directive 2009/125/EC, Establishing a Framework for the Setting of Ecodesign Requirements for Energy-Related Products, 2009 O.J. (L 285) 10, *amended by* Parliament and Council Directive 2012/27/EU, On Energy Efficiency, 2012 O.J. (L 315) 1 [hereinafter Ecodesign Directive].

²³⁸ *Green Deal*, *supra* note 133, at 7; *Circular Economy Action Plan*, *supra* note 139, at 6.

²³⁹ *Circular Economy Action Plan*, *supra* note 139, at 4. See also *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 11.

²⁴⁰ Directive 2009/125/EC, *supra* note 237 at 10, amended by Ecodesign Directive, *supra* note 237.

²⁴¹ *Circular Economy Action Plan*, *supra* note 139, at 7.

²⁴² *Circular Economy Action Plan*, *supra* note 139, at 7; see also *id.* at 9 (building), 10 (textiles), 11 (plastics).

²⁴³ Parliament Resolution of 31 May 2018, On the Implementation of the Ecodesign Directive (2009/125/EC) (2017/2087(INI)), rec. K (referring to this weakness). See also Anaïs Michel, *The Design and Production Stage: Ecodesign Requirements* in CONSUMER PROTECTION IN A CIRCULAR ECONOMY, *supra* note 4, at 61, 84 and 90. A revised enforcement framework (replacing the one outlined in a 2009 directive), has been adopted in 2017. Parliament and Council Regulation 2017/1369, Setting a Framework for Energy Labelling, 2017 O.J. (L 198) 1.

²⁴⁴ Terryn, *supra* note 34, at 859.

²⁴⁵ *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 9 (pointing that many imported goods sold online do not comply with European standards).

²⁴⁶ Klaus Tonner & Rosalind Malcolm, *How an EU Lifespan Guarantee Model Could Be Implemented Across the European Union*, PARLIAMENT POLICY DEPARTMENT FOR CITIZENS' RIGHTS AND CONSTITUTIONAL AFFAIRS (2017).

This critical analysis of existing rules that impact consumer and producer durability choices has shown that policymakers have various tools to tackle obsolescence. These tools each have their strengths, limitations, and weaknesses. The above analysis also reveals that not all obsolescence practices are born equal. Some are harder and more challenging to regulate than others. While planned obsolescence and functional obsolescence are the practices most targeted and impacted by existing rules, even these types of obsolescence are not effectively regulated.

The following table summarizes our critical analysis.²⁴⁷

Obsolescence type	Improving consumer choice	Influencing producer choice
Planned	Prohibition of Unfair Practices	Right to repair
	Durability labeling	EPR
	Pre-contractual disclosure	Direct product regulation
Functional	Durability labeling	Right to repair
	Pre-contractual disclosure	EPR
		Direct product regulation
Technological	Option to upgrade	EPR
Postponement	Option to upgrade	Reversible updates; must not diminish performance/responsiveness²⁴⁸
		EPR
Psychological	Option to upgrade	EPR
	Cultural shift	

IV. POLICY RECOMMENDATIONS

The foregoing analysis illustrates that existing regulatory mechanisms were not initially designed to tackle product obsolescence and can be improved. It also highlights that current regulatory approaches are partial in scope and do not tackle all forms of obsolescence. This Part proposes a way forward. In Section A, we propose

²⁴⁷ In bold, tools that are not yet in the EU regulatory panoply.

²⁴⁸ *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 7.

ways to better address planned and technical obsolescence. We then move to the challenge of confronting other forms of obsolescence in Section B.

A. *Cracking Down on Planned and Technical Obsolescence*

Relatively small changes in existing legal instruments could render them significantly more valuable to fighting product obsolescence resulting from design. Subsection 1 explains how an explicit ban is both necessary and insufficient. Subsection 2 describes how improving access to durability and reparability information is essential and easy to do. Subsection 3 suggests that policymakers should pursue the extension of legal guarantees, while being mindful of potential industry pushback. Subsection 4 explains that encouraging repairs requires a diverse set of interventions but could be a game-changer. Last but not least, Subsection 5 suggests that ecodesign has the most significant potential to affect the lifespan of goods that are sold on the market.

1. Banning Planned Obsolescence Explicitly

While UCPD does not contain an explicit ban on product obsolescence, such a ban is advisable. A ban leverages the expressive function of law. It says loudly and clearly what is unacceptable. For this reason alone, it is important to have such a ban.

Several voices have recently called for introducing an explicit ban in the UCPD. In their report to the European Parliament, Keirsbilck et al. recommended to “blacklist the most blatant cases of premature obsolescence in the UCPD (such as the omission of information on the negative effect of updates on the performance of the device).”²⁴⁹ The European Parliament endorsed this view and invited the Commission to consider adding to this list “practices which have the sole intent of effectively shortening the lifetime of a product to increase its replacement rate and unduly constrain the reparability of products, including software.”²⁵⁰

Indeed, the blacklist is the proper place to start when considering the UCPD. The clearer the definition of each item in the blacklist, the more useful it will be for enforcement authorities. As Keirsbilck et al. point out, the blacklist should include obsolescence practices that enforcement authorities and courts have recognized as unfair practices and could include those that are, or will be, regulated by other EU rules (e.g., ecodesign requirements and other sectoral legislation).²⁵¹ That said, blacklists often give rise to creative compliance. For this reason, it would be fitting to include also a more general definition of planned obsolescence. This definition can be incorporated into the body of the Directive, in the section on misleading practices.²⁵²

²⁴⁹ Keirsbilck et al., *supra* note 132, at 5.

²⁵⁰ *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 6(g), p. 9. In this regard, the EP stresses that these practices should be clearly defined based on an objective and common definition, considering the assessment of all stakeholders involved, such as research establishments and consumer, business, and environmental organizations.

²⁵¹ Keirsbilck et al., *supra* note 132, at 14.

²⁵² Planned obsolescence can manifest as a mix of misleading actions (e.g., sneaky design) and misleading omission (e.g., not disclosing that there are ways to keep the battery working for longer). Thus, this new provision should be included after Articles 6 and 7 (rather than as a modification to either or both).

The proper scope of such a ban is relatively narrow. Banning technological obsolescence would unduly stifle innovation. Similarly, addressing postponement obsolescence by regulating the pace of new products' release seems misguided; instead, it makes more sense to regulate marketing. Likewise, a functional ban on psychological obsolescence cannot reasonably be imagined. Therefore, the only remaining question is whether the proposed ban on planned obsolescence should extend to functional obsolescence.

To date, France is the only country where planned obsolescence is banned.²⁵³ The French ban, however, covers only planned obsolescence. Article L. 213-4-1 of the Consumer Law Code reads: "Planned obsolescence is defined by all the techniques by which a person that places goods on the market seeks to deliberately reduce the lifespan of a product to increase the substitution rate." The draft legislation currently pending before the Belgian Parliament contains a similarly narrow definition.²⁵⁴

Pro-consumer and environmental associations have criticized this narrow scope.²⁵⁵ For example, the French non-profit Halte à l'Obsolescence Programmée (translated as Stop Planned Obsolescence and known as HOP) favors a European ban which would cover the following business behaviors: "Engaging in practices that aim to shorten a product's expected lifespan and stimulate the purchase of a new product, whether it is by making a product intentionally impossible to repair (through material or software means), or by resorting to technical, indirect, software or marketing practices."²⁵⁶ This definition is not much broader than the one contained in the French Code. The core elements are identical and both intend to shorten product life. The wording "aim to" is meant to express a less stringent intent requirement than "deliberately," something between *mens rea* and mere negligence. Transposed to common law legal categories, one could say that HOP's definition, like the French Code, contains an element of intent—specifically, the intent to shorten a product's life. However, HOP thinks the standard of proof should not reach the level of "beyond a reasonable doubt."²⁵⁷

Because of this intent requirement, neither definition covers functional obsolescence as we have defined it in Part I. However, in our view, practices such as choosing an inferior grade of raw materials, discontinuing the supply of spare parts, and ceasing the release of security updates deserve to be included within the scope of a ban. Accordingly, we recommend that EU legislatures adopt a negligence standard rather than one of intent.²⁵⁸ In any event, it is not clear what is gained by imposing an intent-to-boost-sales standard. While it is true that firms will generally engage in

²⁵³ CODE DE COMMERCE [C. COM.][COMMERCIAL CODE], art. L441-2 (definition) & art. L. 454-6 (sanction) (Fr.).

²⁵⁴ Proposition de Loi visant à lutter contre l'obsolescence programmée et à soutenir l'économie de la réparation [Proposed Law Against Planned Obsolescence] (55 0193/001 Jul. 19, 2019), art. 8. The law introduces a ban on planned obsolescence, defined in art. 2 as "a set of techniques by which a producer deliberately reduces the lifetime of a product, without benefit to the user, in order to increase the rate of replacement."

²⁵⁵ Maitre-Ekern & Dalhammar, *supra* note 4, at 387.

²⁵⁶ HOP, *supra* note 15, at 14.

²⁵⁷ Unlike common law systems, French law does not know the category of "standard of proof." That is, French criminal law and civil law do not formally require different standards of proof.

²⁵⁸ Even if EU law does not specify that intent should be understood as *mens rea*, national transpositions could have this effect.

functional obsolescence strategies to increase sales, requiring enforcement authorities or plaintiffs to adduce evidence of the underlying intention seems an unnecessary burden.²⁵⁹ The ban should cover the deliberate or negligent shortening of product life.

To be sure, even if such a ban is ultimately enacted, violations will remain hard to prove. Therefore, it is essential to extend the protection of whistleblowers to employees reporting manufacturers' malpractices. Whistleblowers are already protected when reporting a number of breaches of EU law, including in connection with consumer protection and environmental protection.²⁶⁰ The European Parliament recommended expanding protections in 2017,²⁶¹ but, regrettably, seems to have abandoned the idea in 2020.²⁶² It would be equally regrettable if the upcoming *Green Deal* legislative package omitted this critical aspect.

By definition, a ban operates as an ex post sanction when aggrieved consumers have experienced unduly short-lived goods. Better pre-contractual information should complement such a ban. The next Subsection discusses this.

2. Mandatory Durability and Reparability Labeling

Durability labeling is a direct response to information asymmetry.²⁶³ A mounting body of empirical evidence suggests that labeling would help consumers choose more durable goods, thus highlighting the usefulness of introducing durability and reparability labeling in the EU.

In 2013, the EESC was the first among EU bodies to flag the lack of durability information as a grave shortcoming.²⁶⁴ A 2016 study by SIRCOME substantiates this move, finding that durability labeling could indeed make a substantial difference in product obsolescence. In experimental conditions, lifespan labeling was shown to encourage consumers to opt for more durable products.²⁶⁵ On average, while different label formats had different effects in different categories of goods, adding durability information increased the overall sale of longer-lived products by 13.8 percent.²⁶⁶ In 2016, the European Parliament noted that "90% of European citizens believe that products should be clearly labelled to indicate their useful lifespan." The Parliament thus called for an improvement of the information provided to consumers on durability

²⁵⁹ In this vein, the UCPD Guidance states that "Planned obsolescence, or built-in obsolescence in industrial design, is a commercial policy involving deliberately planning or designing a product with a limited useful life so that it will become obsolete or non-functional after a certain period of time." See *UCPD Guidance*, *supra* note 144, at 75.

²⁶⁰ Parliament and Council Directive 2019/1937, On the Protection of Persons who Report Breaches of Union Law, 2019 O.J. (L 305) 17. Technically, expanding the protection of whistleblowers to another type of violation of EU law only takes an amendment to the Annex of this directive.

²⁶¹ *Report on a Longer Lifetime*, *supra* note 86, at pt. 30.

²⁶² *Towards a More Sustainable Single Market*, *supra* note 75.

²⁶³ *Towards a More Sustainable Single Market*, *supra* note 75, at recital F.

²⁶⁴ *EESC Calls for a Total Ban on Planned Obsolescence*, *supra* note 139.

²⁶⁵ See, e.g., SIRCOME, THE INFLUENCE OF LIFESPAN LABELLING ON CONSUMERS FOR THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE (2016), <https://op.europa.eu/en/publication-detail/-/publication/13cac894-fc83-11e5-b713-01aa75ed71a1/language-en/format-PDF> (measuring the effect of lifespan labeling on various sample groups and different products and markets).

²⁶⁶ *Id.* at 2-3.

and reparability.²⁶⁷ The Commission's 2018 *Behavioural Study on Engagement in the Circular Economy* confirmed that information on durability and reparability of products was difficult to find and that consumers wanted to receive better information.²⁶⁸ Two behavioral experiments led the authors of this study to conclude that information was highly effective at shifting purchasing decisions towards products with greater durability and reparability.²⁶⁹

In its *New Consumer Agenda* (2020–2025), the European Commission has taken stock of these findings and announced that, in 2021, it plans to “present a legislative proposal to empower consumers for the green transition” and better protect them “against (...) early obsolescence.”²⁷⁰ The European Parliament has welcomed this initiative and underscored the need to account for the risk of information overload when developing the labeling scheme.²⁷¹ New labeling requirements on durability and reparability can thus be expected to form part of the upcoming *Green Deal* legislative package.

Scholars also support durability labeling. For instance, Brönneke opines that transparency would eliminate obsolescent products from the market altogether.²⁷² Keirsbilck and Rousseau agree that labeling would represent an improvement, while also noting that behavioral factors may limit its impact. For instance, using non-user-friendly formats of disclosure, or disclosing the information at a relatively late stage, can undermine the effectiveness of disclosures.²⁷³ Furthermore, disclosures are likely to be less impactful for consumers who do not seek out information,²⁷⁴ or do not care about durability in the first place.²⁷⁵ We concur that durability labeling is desirable for fostering sustainable consumer choices and creating a more environmentally conscious consumer law.²⁷⁶ However, labeling—even if well-designed—is relevant only for planned and functional obsolescence, not for technological, postponement, or psychological obsolescence.

²⁶⁷ *Report on a Longer Lifetime*, *supra* note 86, at recs. J, N and U (referring to unreferenced Eurobarometer data).

²⁶⁸ *Engagement in the Circular Economy*, *supra* note 29, at Summary, 3.

²⁶⁹ *Engagement in the Circular Economy*, *supra* note 29, at 165.

²⁷⁰ *New Consumer Agenda*, *supra* note 9, at 5 (noting that “85% [of European Consumers] would welcome better information on durability of a good when deciding on a purchase. Studies show that when consumers receive such information, the sales of the most durable versions can almost triple; consumers are even willing to pay more for goods with longer durability”).

²⁷¹ *Towards a More Sustainable Single Market*, *supra* note 75, at rec. F.

²⁷² Brönneke, *supra* note 4, at 369.

²⁷³ Keirsbilck & Rousseau, *supra* note 7, at 103-04.

²⁷⁴ *Id.*; Howard, *supra* note 47.

²⁷⁵ See FLASH EUROBAROMETER 256, EUROPEANS' ATTITUDES TOWARDS THE ISSUE OF SUSTAINABLE CONSUMPTION AND PRODUCTION 11 (2009) (finding that Ecolabelling played a more important role in the purchasing decisions of those respondents with a higher level of awareness about the environmental impact).

²⁷⁶ For expressing this aspiration, see Mak & Lujinovic, *supra* note 167; Terryn, *supra* note 34.

If labeling is to help with planned and functional obsolescence, it should not be voluntary as currently envisaged.²⁷⁷ The existing Ecolabel²⁷⁸ and Nutri-Score²⁷⁹ regimes illustrate the shortcomings of voluntary labeling schemes. As long as labeling is voluntary, producers will decline to use the label for products that score poorly. Particularly when uptake is low, as is the case for the Ecolabel,²⁸⁰ the absence of a label may not strike consumers as meaning a product is not durable.²⁸¹ Indeed, people tend not to notice missing information, an oblivion bias Daniel Kahneman has named “WYSIATI.”²⁸²

Another limitation of voluntary labeling results from the sheer number of labels. Currently, many labels throughout the EU communicate to consumers that a product is sustainable or green. These include the European Ecolabel, the German Blue Angel label, the Nordic Swan label, the French Longtime label, and the Slovak Reparably label. The plurality of labels contributes to consumer confusion.²⁸³

Only a unified and mandatory label can overcome confusion and make “zero” durability or reparability salient.²⁸⁴ Such a label would empower consumers and encourage producers to compete over these aspects. The EU legislature is now working on this issue, while remaining conscious of the need to avoid information overload.²⁸⁵ Ideally, labeling should integrate as many durability dimensions as possible, from product lifetime to availability and cost of spare parts and upcyclability. Some national initiatives are already leading the way.²⁸⁶

²⁷⁷ Under the heading “protecting consumers and clamping down on planned obsolescence,” the EP proposes to “encourage the development and [harmonization] of voluntary labelling.” *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 6(b), p. 8.

²⁷⁸ Regulation 66/2010, *supra* note 177. Durability is not the sole criterion for obtaining the label, but it is one of them. See art. 6(3)(c).

²⁷⁹ Nutri-Score is a voluntary nutrition label created by the French government in 2017 to facilitate easy comparisons between food products.

²⁸⁰ The Fitness Check (ex-post evaluation) of the Ecolabel directive found that low uptake was the principal obstacle to the effectiveness of Ecolabels. See *Executive Summary of Commission Staff Working Document, On the Review of Implementation of Regulation (EC) No 122/2009 on EMAS and the Regulation (EC) No 66/2010 on the EU Ecolabel* 3, SWD (2017) 252 final.

²⁸¹ Encouraging uptake is on the policy agenda. See *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 6(c), p. 8.

²⁸² DANIEL KAHNEMAN, THINKING, FAST AND SLOW 85-88 (2011) (explaining the “What You See Is All There Is” [WYSIATI] principle). French law takes this into account by making it mandatory for manufacturers to disclose information on the availability of spare parts, whether spare parts are available or not. See CODE DE COMMERCE [C. COM.][COMMERCIAL CODE], art. L111-4. [Fr.].

²⁸³ On similar confusion with regards to food labels, see Fred Kuchler et al., *Beyond Nutrition and Organic Labels—30 Years of Experience with Intervening in Food Labels*, 239 ERR, U.S. DEPARTMENT OF AGRICULTURE, (2017).

²⁸⁴ Cf. Keirsbilck et al., *supra* note 132, at 19 (envisaging the possibility to make a ‘zero’ durability or reparability statement).

²⁸⁵ *New Consumer Agenda*, *supra* note 9, at 7; *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 6.

²⁸⁶ In France, for example, durability labeling is already mandatory, and reparability labeling will become mandatory in January 2022. Loi 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l’économie circulaire [Law 2020-105 of Feb. 10, 2020 relating to the fight against waste and the circular economy], JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.], Feb. 11, 2020, No. 0035, art. 18, <https://www.legifrance.gouv.fr/eli/loi/2020/2/10/TREP1902395L/jo/texte>. See also MAURO CORDELLA ET AL., ANALYSIS AND DEVELOPMENT OF A SCORING SYSTEM FOR REPAIR AND UPGRADE OF PRODUCTS (Publications Office of the European Union, 2019).

Mandatory labeling is not a panacea, but it can protect consumers' economic interests. Even with proper labeling, sellers can still offer short-life products. Nonetheless, by making durability and reparability more salient, labeling invites competition to extend to these product characteristics. It should thus lead to prices that better reflect the product's quality.

Labeling also ameliorates planned obsolescence for the future. Under a labeling regime, a reduction of product lifespan will be easier to spot, particularly if a trusted record of durability labels over time is available. If, for example, labels indicate that the best lightbulbs will last on average 10,000 hours, consumers are likely to notice when the label suddenly reduces this average to 6,000 hours. In this sense, labeling prevents future lightbulb cartels.

To enhance the effectiveness of labeling, four types of flanking measures are essential. First, because consumers pay more attention to information when they care about such information, it is necessary to remind shoppers that this is information they value. This can be done by raising awareness and regulating marketing.²⁸⁷ Second, information about durability and reparability is most valuable when it facilitates consumer comparisons between products. To enable automated comparison, manufacturers should disclose durability and reparability information to intermediaries in a machine-readable format, so that buyers can use technological means to compare goods.²⁸⁸ Third, comparators should be regulated to be independent of producers and sellers.²⁸⁹ Fourth, a reliable archive of durability information should be organized.²⁹⁰ This archive should record durability, reparability, and upgradability values declared by manufacturers; independent measures from objective testing; and data from smart devices themselves.²⁹¹

3. Improved Pre-contractual Information on Durability and Reparability

Besides labeling, pre-contractual information requirements should be reformed in two ways. First, it should be explicitly clarified that a product's "main characteristics" include durability and reparability.²⁹² Second, a revision is needed to end confusion between the statutory legal guarantee and contractual commercial guarantees.

As discussed in Part III, durability and reparability can be considered essential product characteristics that need to be disclosed before a purchase, but the CRD and the UCPD do not explicitly state such a requirement. Keirsbilck et al. recommend

²⁸⁷ See also *infra* Part IV.2.

²⁸⁸ Comparison apps in other areas allow to scan a barcode and see a score. Yuka, for example, does this for the nutritional quality of food products.

²⁸⁹ This is done in sectoral regulation. See, e.g., Parliament and Council Directive 2019/944/EU, On Common Rules for the Internal Market for Electricity, art. 14(a), 2019 O.J. (L 158) 125.

²⁹⁰ Along these lines, a Register for environmental claims has been proposed. See *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 30, p. 14.

²⁹¹ It is essential in this regard that the methodology for testing is common. See Keirsbilck et al., *supra* note 132, at 15-16. The point is taken up by *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 6.

²⁹² In the Italian case, Apple was found not to have disclosed essential characteristics affecting the durability of lithium batteries. See Administrative Court of Lazio, *Apple v. AGCM*, 29/05/2020, N. 05736/2020. IT:TARLAZ:2020:5736SENT.

remedying this omission,²⁹³ and the European Parliament has endorsed this idea.²⁹⁴ More precisely, the European Parliament supports adding two items to the CRD's lists of mandatory pre-contractual information: estimated lifespan and reparability.²⁹⁵ Article 7(4) of the UCPD, which applies to marketing communications, envisions similar additions. We support these suggestions and would add upgradability information, as specified in applicable ecodesign requirements.²⁹⁶

Stating precisely what durability information is required is all the more critical given upcoming increases in sanctions for the violation of consumers' rights to information. A trader who fails to disclose information concerning main characteristics will soon be liable for substantial fines set by national law according to (unified) criteria as defined in the CRD and the UCPD.²⁹⁷

Another minor revision is desirable to end existing confusion between the legal guarantee and commercial guarantees. The confusion stems from using the same word, "guarantee," for two different but related things. To avoid this confusion, one of the terms should be renamed. We thus endorse the proposal to rename the commercial guarantee "product insurance."²⁹⁸ EU law already mandates disclosure of availability, duration, and price of commercial guarantees.²⁹⁹ Only the terminology of this disclosure needs reform.

4. Extending the Duration of Legal Guarantees

Furthermore, a minimum legal guarantee set at two years is not appropriate. For the many goods expected to last longer than two years, the value of legal guarantees to consumers is real but limited. A washing machine is not a mobile phone, and neither is a piece of furniture. Recently, the European Parliament opined that the legal guarantee should be lengthened for specific categories of goods.³⁰⁰ This solution has

²⁹³ Keirsbilck et al., *supra* note 132, at 5 (mentioning art. 5 CRD with respect to in-store purchases); *id.* at 15 (recommending amending the guidance document).

²⁹⁴ *Report on a Longer Lifetime*, *supra* note 86, at pt. 20, p. 22.

²⁹⁵ Lifespan is to be expressed in years or use cycles. Among other things, it should be determined through an objective and standardized methodology based on real-use conditions, differences in terms of intensity of use, and natural factors. Regarding reparability, it is suggested that the disclosure would include, where relevant, the period of availability from date of purchase, average price of spare parts, recommended approximate delivery and repair times, and information on repair and maintenance services. *See Report on a Longer Lifetime*, *supra* note 86, at pt. 6(a), p. 8.

²⁹⁶ *See supra* Sections III.B.1, III.C.3.

²⁹⁷ Parliament and Council Directive 2011/83/EU, *supra* note 155, art. 23 (as amended by the Modernisation Directive, *supra* note 145); UCPD, *supra* note 145, art. 11a (introduced by the Modernisation Directive). Member States can opt for public enforcement through consumer protection agencies, private enforcement initiated by consumer associations or professional associations, or a mix of both.

²⁹⁸ HOP, *supra* note 15, at 21. This seems a better idea than promoting the term "warrantee," which does not exist in all EU languages.

²⁹⁹ CRD, *supra* note 155, at arts. 5(e) and 6(m). Sales and Guarantees Directive, *supra* note 17, at art. 6; and, as of Jan. 2022, Sales of Goods Directive, *supra* note 17, at art. 17.

³⁰⁰ *Towards a More Sustainable Single Market*, *supra* note 75, at rec. H and point 6(e).

already been implemented in the Netherlands and Finland³⁰¹ and envisaged in Belgium.³⁰² It would, however, represent a change for most EU Member States.³⁰³

Implementation requires a procedure for determining the “normal” lifetime of a product. Co-regulation, as currently practiced in the Netherlands, seems a pragmatic path. There, consumer organizations and industry representatives negotiate the expected lifetime of a product.³⁰⁴ However, since manufacturers would have an incentive to understate durability,³⁰⁵ consumers and regulators need access to objective durability data (e.g., data collected from smart objects), which provides yet another reason to keep a reliable record.³⁰⁶ Another option, which will become more viable as ecodesign requirements cover a wider range of goods, would be to link the legal guarantee’s duration to specific categories of product durability requirements.³⁰⁷

5. Encouraging Repair

Creating a “right to repair” has recently emerged in EU policy discussions.³⁰⁸ In a narrow sense, this refers to the consumer’s right to choose to repair a product instead of replacing it under the legal guarantee.³⁰⁹ In a broad sense, the right covers a wider array of measures facilitating repair. Some of the measures under consideration relate to pre-contractual transparency (e.g., disclosing for how long spare parts will be available).³¹⁰ Others aim to boost demand for repair services—for example, by extending the legal guarantee period by six months when consumers opt to repair.³¹¹ Another set of measures aims to enable the supply of repair services by ensuring the availability of spare parts or software updates for a certain number of years or legislating about how slowly manufacturers are allowed to respond to orders for spare

³⁰¹ *ICF Study 2017*, *supra* note 132, at 17. On Dutch law, see Mak & Lujinovic, *supra* note 167, at 7, citing art. 7:17 BW (Neth.). On Finnish law, see *Defective or Faulty Goods*, FINNISH COMPETITION AND CONSUMER AUTHORITY (KKV) (Oct. 9, 2014), <https://www.kkv.fi/en/facts-and-advice/defects-and-delays/defective-goods/> [<https://perma.cc/YUN2-WHCQ>].

³⁰² Bert Keirsbilck, *Sustainability, the Circular Economy and Consumer Law in Belgium*, 9 J. EUR. CONSUMER & MKT. L. 165, 167 (2020).

³⁰³ At present, twenty-three Member States have adopted the minimum two-year guarantee prescribed by EU law. Sweden, Iceland, Norway, and the United Kingdom (UK) opted for legal guarantees that range from three to six years (five years in Scotland, six years in England, Wales, and Northern Ireland). See Éléonore Maître-Ekern & Carl Dalhammar, *Towards a Hierarchy of Consumption Behaviour in the Circular Economy*, 26 MAASTRICHT J. EUR. & COMP. L. 394, 418 (2019); Keirsbilck et al., *supra* note 132, at 17-21; Tonner & Malcolm, *supra* note 246, at 32-34, 55; Resolution of July 4, 2017, *supra* note 133, at 27.

³⁰⁴ Mak & Lujinovic, *supra* note 167, at 7.

³⁰⁵ Anaïs Michel & Elias Van Gool, *The New EU Consumer Sales Directive and Sustainable Consumption: A Critical Study* (forthcoming, on file with the authors), at 6.

³⁰⁶ Other data recorded by a proposed Durability Observatory could also be fed in the procedure for setting the normal lifetime.

³⁰⁷ Anaïs Michel, *La Directive 1999/44/CE sur la Garantie des biens de Consommation : Un Remède Efficace Contre L’obsolescence Programmée ?*, 2 EUR. J. CONSUMER L. 207, 234 (2016).

³⁰⁸ *Report on a Longer Lifetime*, *supra* note 86, at rec. K, pt. 9; Terryn, *supra* note 34; *Green Deal*, *supra* note 133, at p. 8; *Towards a More Sustainable Single Market*, *supra* note 75, at rec. O.

³⁰⁹ This could be implemented by altering the hierarchies of remedies under the Sales of Goods Directive, *supra* note 17, art. 13 (2) and (3).

³¹⁰ See *supra* Section IV.A.3.

³¹¹ *Towards a More Sustainable Single Market*, *supra* note 75, at recital O. Some Member States have already ruled on the matter. French law, for instance, provides a six-month extension when a good has been repaired. CODE DE LA CONSOMMATION [CONSUMER CODE] art. L. 217-9.

parts.³¹² Relatedly, other measures aim to drive down the costs of repair and increase the supply of repair services.

The key to opening the repair market is forcing manufacturers to disclose spare parts and reparability information to independent professionals and DIY-savvy consumers. Though industry lobbying is to be expected against such market-opening measures, their potential to create new jobs makes them valuable to the EU legislature. Fiscal incentives also have a role to play in encouraging the development of repair services.³¹³ While taxation is a matter for Member States, the value-added tax (VAT) is harmonized at the EU level.³¹⁴ Thus, the EU could allow Member States to apply reduced VAT rates to repair services and advertisements for such services.

All of these measures are currently under consideration, and the Commission has announced a preference for a sectoral approach, with electronics, information, and communications technology chosen as pilot sectors.³¹⁵ We agree that some rules need to be sectoral. How long spare parts or software updates should be available will not be the same for a phone and a (smart) fridge. However, horizontal legislation should be privileged wherever suitable, for such legislation is much quicker to adopt than technical sectoral rules. This is the case for information requirements, guarantee extensions, and some market-opening measures and fiscal incentives. All of these measures would constitute clear progress in the fight against functional obsolescence.

6. Leveraging Ecodesign Regulation

Ecodesign regulation is ideally suited to enhance the durability of goods.³¹⁶ Initially, ecodesign requirements set energy efficiency and recyclability standards. They can, however, also incorporate durability, reparability, and upgradability standards.³¹⁷ For example, new ecodesign standards could include a requirement to provide corrective updates for the estimated lifetimes of products with digital elements.³¹⁸

Ecodesign regulation is powerful because compliance with ecodesign standards is a precondition for entering the EU market. For this reason, it carries the greatest potential to produce a Brussels Effect worldwide.³¹⁹ To deploy this regulatory tool's potential, ecodesign regulation needs to expand its reach to a broader set of goods than is currently the case, as the EU legislature has well understood.³²⁰

³¹² *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 11(c)-(e), p. 10.

³¹³ Sweden has been a pioneer in this regard. Éléonore Maître-Ekern & Carl Dalhammar, *A Scandinavian Perspective on the Role of Consumers in the Circular Economy*, in CONSUMER PROTECTION IN A CIRCULAR ECONOMY 201, *supra* note 4.

³¹⁴ Council Directive 2006/112/EC, On the Common System of Value-Added Tax, 2006 O.J. (L 347) 1.

³¹⁵ *Circular Economy Action Plan*, *supra* note 139, at 7.

³¹⁶ 'Ecodesign' means the integration of environmental aspects into product design with the aim of improving the environmental performance of the product throughout its whole life cycle. See Ecodesign Directive, *supra* note 237.

³¹⁷ *Ecodesign Working Plan*, *supra* note 133, at 2-3, 8; Tonner & Malcolm, *supra* note 246, at 41-42.

³¹⁸ *Towards a More Sustainable Single Market*, *supra* note 75, at pt. 7.

³¹⁹ BRADFORD, *supra* note 142.

³²⁰ See *New Consumer Agenda*, *supra* note 9, at 6. Since ecodesign requirements are very technical, crafting sectoral rules for a substantial number of new categories of goods will take time.

Moreover, non-compliance needs to be effectively sanctioned, and existing sanctions for non-compliance need to increase. Under the 2009 Ecodesign Framework Directive, if Member States find non-compliant goods on the market, they can order those goods' withdrawal.³²¹ Member States can also impose penalties that should be "effective, proportionate and dissuasive."³²² Nevertheless, these provisions have proven insufficient.³²³ In the same way that consumer protection law has been "modernized" by providing for more vigorous and more harmonized sanctions—e.g., a fine of up to 4 percent of turnover—ecodesign sanctions must be revised and given more teeth. Private enforcement can enhance compliance incentives. For example, product-specific EU legislation should be coupled with contractual liability under the Sales Directive.³²⁴ Collective redress in the form of representative actions should also be made available.³²⁵

Subject to cost-benefit analyses, tax incentives could be implemented in the form of reduced VAT rates for goods complying with ecodesign requirements. These incentives would make compliant goods cheaper for consumers. They would also motivate manufacturers to push for the extension of ecodesign regulation to new products. Additionally, they may incentivize manufacturers to participate in voluntary schemes to implement ecodesign requirements.³²⁶ However, tax incentives could prove costly as ecodesign regulations expand to cover more goods.

B. Tackling Other Forms of Product Obsolescence

In addition to the above, fine-tuning existing instruments will better tackle planned and technical obsolescence. However, these improvements still leave other forms of product obsolescence—namely, technical, postponement, and psychological obsolescence—largely unaddressed. Of the existing instruments, only one addresses all forms of product obsolescence: EPR. Subsection 1 explores how EPR's potential needs to be better utilized. Nevertheless, Subsection 2 will explain that, even if EPR's potential is well utilized, not all drivers of product obsolescence will be addressed by that reform.

³²¹ Ecodesign Directive, *supra* note 237, art. 7(1).

³²² Ecodesign Directive, *supra* note 237, art. 20.

³²³ In 2016, the Commission estimated that 10%–25% of products on the market did not comply with ecodesign and energy labeling requirements. *Ecodesign Working Plan*, *supra* note 133, at 8. Underenforcement was also reported by stakeholders in interviews. ANNA ZYGIEREWICZ, THE ECODESIGN DIRECTIVE (2009/125/EC): EUROPEAN IMPLEMENTATION ASSESSMENT 59 (European Parliamentary Research Service PE 611.015, 2017); Tonner & Malcolm, *supra* note 246, at 45 (noting that "Market surveillance and enforcement action appears to have been relatively limited to date" and that "Only 25 % of stakeholder respondents think current enforcement methods are effective in ensuring all products comply with the Ecodesign regulations.").

³²⁴ Terry, *supra* note 34, at 859.

³²⁵ Parliament and Council Directive 2020/1828, On Representative Actions for the Protection of the Collective Interests of Consumers, 2020 O.J. (L 409) 1 lists the Ecodesign directive in Annex I (list of provisions whose violation can give rise to a representative action), but only in relation to the provisions on consumer information (Annex I, point 27 referring specifically to Art 14 of the ecodesign directive).

³²⁶ On the importance of voluntary agreements for compliance with ecodesign requirements, see Tonner & Malcolm, *supra* note 246, at 44.

1. Tapping the Potential of Extended Producer Responsibility

One interesting tool to implement EPR is take-back schemes.³²⁷ Under such a scheme, sellers take back used goods—either goods they manufactured or sold themselves or goods with which consumers otherwise part. Voluntary commercial take-back schemes already exist for some goods, such as cars, mobile phones, large home appliances, and mattresses.³²⁸ Here, one policy option is to support these schemes through tax incentives or positive publicity.

Incentivizing voluntary schemes seems costly, however. Instead, making take-back schemes mandatory seems particularly apt to shift responsibility for post-consumption to sellers or producers, depending on how the scheme is structured. In its *Circular Economy Action Plan*, the European Commission explored options for an EU-wide take-back scheme to return or sell back old mobile phones, tablets, and chargers.³²⁹ However, take-back schemes need not be confined to electronics and could be extended to other types of goods. For example, the Commission has already indicated that it would like to subject textiles to EPR regulation.³³⁰

If take-back schemes were to be made mandatory, it is crucial that producers, rather than distributors, bear the costs. If distributors bear the costs, the potential of these schemes is unlikely to be fulfilled. Should distributors treat take-back schemes as a cost of doing business, incentives to design long-lasting goods are unlikely to be passed on to manufacturers. Indeed, in the absence of an assignment of take-back responsibility to manufacturers, multi-brand distributors may be incentivized to pick up the costs of taking used goods back, as this removes an obstacle to the purchase of new goods. For instance, consumers are less likely to replace their fridges if they have to organize the disposal of the old product themselves. Making the purchase of new products easier will nudge consumers into buying more, not less. This is particularly so considering that it is not in the distributors' interest that manufacturers make goods more durable. If anything, the contrary is true: Distributors are likely to benefit from low levels of durability.

If the EU legislature is as serious about fighting product obsolescence as it claims, it should not water down the only tool in its current regulatory toolbox suited to deal with all types of obsolescence. True costs of waste to the environment need to be internalized by each manufacturer rather than by manufacturers collectively. Collective management of EPR obligations should stay permissible for obvious reasons of limiting red tape on individual manufacturers. However, to avoid free riding, the governance of collective EPR management entities should ensure that the true costs are individualized.

³²⁷ OECD, *supra* note 221; Pouikli, *supra* note 188, at 493.

³²⁸ See *Green Deal*, *supra* note 133, at 9 (discussing take-back schemes for mobile phones, tablets, and chargers).

³²⁹ See *Circular Economy Action Plan*, *supra* note 139, at 7, 10.

³³⁰ *Id.* at 13. Some retailers offer the possibility to recycle the clothes they sell (e.g., down jackets) or collect clothes for reuse. See, e.g., RE.UNIQLO POLICY (Last visited Dec. 10, 2020 8:31 AM), <https://www.uniqlo.com/en/re-uniqlo/> [<https://perma.cc/GGM7-ZDQ4>].

2. The Limits of Law and the Challenge of True Change

Keeping goods for longer and generating less waste is not only a matter of prolonged functionality. The *raison d'être* of marketing is to reinforce psychological drivers of consumption, such as status-seeking, identity-seeking, and retail therapy.³³¹ Therefore, efforts to regulate product durability might be ruined unless opposing forces are tamed. In this regard, one could think of incentivizing responsible marketing. Possible incentives include reduced VAT rates, industry codes, public and policy discourse, and making access to regulated mass media conditional upon the inclusion of durability messaging, such as practical advice on giving a second life to goods.

More fundamentally, the attitude-behavior gap deserves greater policy attention. As Pope Francis underscored: “People may well have a growing ecological sensitivity but it has not succeeded in changing their harmful habits of consumption which, rather than decreasing, appear to be growing all the more.”³³² While awareness campaigns are often envisaged as shaping consumer attitudes,³³³ more creative steps may be warranted. The results of experiments with engagement methods, such as interactive upcycling workshops and theatre performances, are encouraging.³³⁴

Repair is an area where the attitude-behavior gap is well-documented: People prefer to repair goods rather than dispose of them, yet often fail to do so.³³⁵ Legislative reforms discussed above seek to remove various obstacles. This de-hassling approach is promising.³³⁶ We hope that in fine-tuning the right to repair, EU policymakers will be attentive to details such as incentivizing collection from the consumer’s home.

Another dimension of repair also deserves attention. Self-repair can empower consumers and contribute to changing how they relate to things, themselves, and others. Repair cafés and tool-sharing platforms offer reasons to hope that change is underway.³³⁷ Indeed, meaningful manual work brings happiness.³³⁸ In the words of a Buddhist monk, “[i]f you use an object for as long as you can, carefully repairing it

³³¹ For a fine-grained analysis of behavioral drivers see Jayne Cox et al., *Consumer Understanding of Product Lifetimes*, 79 RESOURCES, CONSERVATION & RECYCLING 21 (2013).

³³² Francis I, *Laudato Si, On Care for our Common Home*, VATICAN.VA (May 24, 2015), http://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html [https://perma.cc/69LA-GTVC], ¶ 55.

³³³ Terry, *supra* note 34, at 858; *Towards a More Sustainable Single Market*, *supra* note 75, rec. E, p. 5, pt. 13 p. 11, pt. 18 p. 12, pt. 37, p. 25.

³³⁴ Morven McEachern et al., *Encouraging Sustainable Behaviour Change via a Social Practice Approach: A Focus on Apparel Consumption Practices*, 43 J. CONSUMER POL’Y 397 (2020).

³³⁵ As noted *supra* note 184, costs of repair and levels of service often deter people from repairing goods. See also SPECIAL EUROBAROMETER 503: ATTITUDES TOWARDS THE IMPACT OF DIGITALISATION ON DAILY LIVES (2019) (finding that 79% of EU citizens think that manufacturers should be required to make it easier to repair digital devices or replace their individual parts).

³³⁶ In the context of home repairs and improvements, see Gerdien de Vries et al., *The Hassle Factor as a Psychological Barrier to a Green Home*, 43 J. CONSUMER POL’Y 345 (2020).

³³⁷ Terry, *supra* note 34.

³³⁸ MATTHEW B. CRAWFORD, *SHOP CLASS AS SOULCRAFT: AN INQUIRY INTO THE VALUE OF WORK* (2009).

when necessary, you will find that not only your relationships with objects begin to change, but so will the way you relate to people.”³³⁹

Indeed, sustainable consumption behavior correlates with a general openness to change.³⁴⁰ This finding aligns with the Buddhist approach to consumption, which underscores that significant and lasting modifications need to address resistance to change.³⁴¹ Regarding over-consumption, resistance comes from the fact that many of us feel we are lacking in some ways.³⁴² This common state of mind is exceedingly easy for marketing to leverage. In different ways, marketing tells us that if only we had a particular product (garments, device, car), we would be whole and happy. This is where the creative interventions evoked above can create a space for consumers to pause and think. In addition, a strategy suggested by a Buddhist approach to marketing consists of asking what joy and suffering a given product entails. This strategy includes both outward aspects (e.g., whether an object was sustainably produced) and inward ones (e.g., to what extent an object will nourish the individual).³⁴³

In a similar vein, Joyner Armstrong explores a potential new chapter of consumer awareness and experience with the notion of mindful clothing consumption.³⁴⁴ Fast fashion is the example *par excellence* of wasteful consumption, perhaps the birthplace of psychological obsolescence and a stronghold of the ethics-behavior gap.³⁴⁵ Mindful consumption, therefore, would be a revolution of sorts. While additional research is still needed in this context, the potential of mindfulness as a self-preservation practice against marketing may be significant.³⁴⁶ Admittedly, this spiritual approach to consumption is mostly beyond the reach of the law. However, indirectly, it points to the proper role of marketing regulation. It is entirely conceivable, for example, that advertisement boards—self-regulatory bodies in most Member States—could be more watchful of the “if only” mindset that advertising nurtures.

More generally, the law can leave space for returning to a more frugal way of life. It can pursue a de-hassling approach towards obstacles that stand in its way. There are some indications that social trends towards voluntary simplicity exist concerning repair and second-hand goods. For example, studies report generation Z is more willing than the general population to mend clothes, sell unwanted clothes, buy secondhand, and swish (swap clothes with friends).³⁴⁷ These are heartening indications

³³⁹ SHOUKEI MATSUMOTO, A MONK’S GUIDE TO A CLEAN HOUSE AND MIND 85 (2018).

³⁴⁰ Wencke Gwozdz et al., *Behaviour Change for Sustainable Consumption*, 43 J. CONSUMER POL’Y 249 (2020); S. A. Rich et al., *Development of the Voluntary Simplicity Engagement Scale: Measuring Low-consumption Lifestyles*, 43 J. CONSUMER POL’Y 295 (2020).

³⁴¹ Phap Hai Thich, *A Buddhist Approach to Consumption*, 35 J. MARKETING MGMT. 427 (2019).

³⁴² *Id.*

³⁴³ *Id.* at 431 (linking this question to the four “nutriments” distinguished by Buddhist thinking: edible food, sense impressions, volitions, and consciousness).

³⁴⁴ Joyner Armstrong, *supra* note 81.

³⁴⁵ Cf. *Engagement in the Circular Economy*, *supra* note 29, at 128 (noting that consumers care less about durability/repairability of clothing in comparison to other types of products).

³⁴⁶ Joyner Armstrong, *supra* note 81, at 11.

³⁴⁷ *UK Fashion & Sustainability Market Report*, MINTEL (Aug. 2019) *summary available at* <https://www.mintel.com/press-centre/retail-press-centre/britains-thrifty-young-fashionistas-more-than-half-of-25-34-year-olds-buy-second-hand-clothes> [<https://perma.cc/G59T-37VA>]; Katelyn Sorensen & Jennifer Johnson Jorgensen, *Millennial Perceptions of Fast Fashion and Second-Hand Clothing: An Exploration of Clothing Preferences Using Q Methodology*, 8 SOC. SCI. 244 (2019).

that the expressive function of consumption can be turned around to facilitate less waste and extravagance, while encouraging humbler and more sustainable consumption. In turn, research on such trends can guide public policy to target consumers who are happy to have goods picked up for repair and those who wish to pursue a different consumption culture.³⁴⁸

CONCLUSION

EU law has great potential to meaningfully address product obsolescence, yet most of it remains untapped. Strikingly, the law as it stands protects consumers from overpaying for short-lived goods but does little to incentivize the production and marketing of lasting goods. This is the decisive shift that needs to happen next. It does not take reinventing the regulatory toolbox, only employing existing tools better.

The rich EU framework on pre-contractual information could be repurposed to foster durable choice. Requirements to inform consumers about product life, reparability, and upgradability can be added to the CRD and UCPD. Moreover, if a unified smart labelling scheme were adopted, durability could become a factor over which firms compete. The European durability label should make “zero durability” salient to discourage buyers from unsustainable purchases. Ultimately, this would contribute to more durable goods being brought to market.

In their current incarnation, the rules on legal guarantees are somewhat of an empty shell, but they, too, could develop teeth. For instance, legal guarantees can be better designed so that they are aligned with products’ expected lives, as determined by producers’ and consumers’ input, combined with data collected directly from smart objects. This is a move that Member States are free and able to make.

Furthermore, the ecodesign framework offers an apt paradigm for direct product regulation. It could—and should—be extended well beyond energy efficiency. Ecodesign can serve durability in its many dimensions, including choice of sustainably-produced materials, modular design, reparability, and upgradability. Extended producer responsibility, which has serious potential to incentivize waste reduction, is equally under-used.

Finally, the rich regulatory arsenal of the EU offers an additional tool that should not be overlooked: whistleblower protection. Obsolescence practices are notoriously difficult to prove. This is why a ban, while desirable in itself as an expression of a social norm, will only be dissuasive if companies rationally fear being exposed. Whistleblower protection can help facilitate this transparency.

If all of these existing tools are adequately mobilized, the EU will take a decisive lead in fighting product obsolescence. This is likely to contribute to environmental wellness more universally, since the EU rules discussed in this paper are good candidates for producing a “Brussels Effect,” influencing production and marketing well beyond the confines of the EU internal market.

³⁴⁸ Rich et al., *supra* note 340.

To be sure, there are limits to what legal tools can achieve. Our analysis illustrates that some forms of obsolescence—namely, planned and technical obsolescence—can be tackled through regulation. However, other forms of obsolescence—specifically, technological, postponement, and psychological obsolescence—are trickier to address with regulation alone. The root cause of this difficulty lies deep in the psyche of *homo capitalisticus*: The issue is not only what we consume but, more fundamentally, why we consume. People's search for status, likeability, conformity, and the like all contribute to current unsustainable patterns of consumption. The sense of "not enough"—that is, never having enough and never being enough—is deeply ingrained in western, consumeristic cultures. Many of our social practices reinforce it, and marketing practices only have to leverage it.

One might argue that the law cannot help directly in tackling such a challenge; after all, it seems difficult to regulate for contentment. That said, some change is underway, and a shift in consumers' attitudes and behaviors towards a more sustainable culture is perceptible. A more holistic approach to product obsolescence could reinforce these trends. The law cannot, on its own, achieve deep cultural change. Nevertheless, it can be an important part of a holistic approach. The law is well equipped to incentivize and encourage consumers, manufacturers, and firms to move towards more sustainable consumption. It can also empower consumers to repair products, rather than constantly and mindlessly replace them. Indeed, the law can contribute to improving our relationships with objects and with ourselves.