

RETHINKING PLANNED OBSOLESCENCE TREATMENT IN BRAZIL

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Abstract: Global consumption of billions of people in the consumer society has created an ephemeral culture that captivates consumers through the obsolescence of products, whether due to fashion, design, reduced product lifespan or the development of new technologies, with severe environmental consequences. In this sense, it is necessary to analyze the legal treatment of planned obsolescence in order to ensure consumer protection in a sustainable environment. Despite the efforts of the doctrine, the study of case law and rules in the field of comparative law revealed the Brazilian deficiency in the treatment of this issue, while indicating possible alternatives, especially the need for legal treatment, as it is being contemplated in France.

Keywords: planned obsolescence – consumer society – consumer rights – sustainability – lifespan

I. Introduction

The time between production lines and garbage cans is getting shorter. The *growing* amount of electronic *waste produced* in modern society has a huge *impact* on the *environment*. Thus, it is important to urgently *address* this *problem*. In addition, each sale made means one less customer, according to the companies. A way of regaining the customer is to make the product obsolete, bringing back to the store the consumer who had purchased that product in the past. For that purpose, this product quickly becomes outdated or begins to *lose* consumer appeal, and will soon supersede by a new and advanced version.

Therefore, the present work aims at analyzing planned obsolescence in consumer relations, its historical origin, evolution and effects on consumers, society and environment. In view of the global nature of this issue, the analysis was carried out from the perspective of comparative law, more specifically, focusing on the USA and the European laws, using parameters that include doctrine, case law and legislation in force, and comparing with those practiced in Brazil.

The first part examines the Society of the Spectacle as the basis of planned obsolescence, addressing its origin, theoretical approach and systematization in the period following the Great Depression; the second part focuses on the way planned obsolescence is currently addressed in international law, with specific emphasis on the European Union as well as the recent advances in dealing with this issue; and finally, on the Brazilian law, aiming at contributing with some possible alternatives.

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II. Consumer society and planned obsolescence

The consumer society emerged from the perception that production levels would require greater participation of wage workers, who were seen as mere workforce and were drawing from their paid work to engage in market mediated consumption. The creation of logic, which deals with consumption, such as success and personal achievement, builds dreams and subsequently frustrates these expectations by bringing back the consumer. It makes the consumer society creates illusions, which are routinely broken to give rise to new ones. It was observed that satisfied consumers do not contribute to the system. This led to the idea behind the artificial obsolescence.

A. Consumer Society

We live in a society where the goods are no longer produced solely for use, but also to be purchased. For the consumers, who are exposed to *persuasive marketing techniques*, the useless good is no longer a negative factor. The purpose of the purchase is not the product itself, but an *impulse that will lead to personal fulfillment*. Happiness, when regarded as a compulsive accumulation of goods, is fulfilled the moment the consumers/employees spend their earnings in exchange for an illusory "maximization of existence".¹ Urban centers have encouraged this behavior by stimulating easy access to different products and services, creating needs that were inexistent. Often, companies calculatingly plan and introduce obsolescence to their products deliberately, pressuring consumers to buy.

This is known as "planned obsolescence"² of consumer goods i.e. o seasonal launching of planned products so that the consumer will continue to stay with the brand. Everything is ephemeral because it follows the latest fashion trends. In this context, the consumer society promises to fulfill all human desires, but such promises only remain attractive while the wishes of the consumers remain unfulfilled. It is noteworthy that the consumers cannot be fully satisfied since their perpetual dissatisfaction (and consequent unhappiness) maintains consumption.

The explicit method of achieving such an effect is to denigrate and devalue consumer products shortly after they have been hyped into the universe of the consumers' desires (...) by satisfying every need/desire/want in such a fashion that they cannot but give birth to yet new needs/desires/wants.³

Creating needs to perpetuate the dissatisfaction and leading to the pursuit of happiness with the new purchases is the mechanism of the current market system that became today's cultural model. The new object of desire, which was prestigious in the spectacle of purchase, becomes mundane as soon as it is taken home by its customers, and by all its customers. Later, it reveals its essential poverty.⁴

If the search for fulfillment continues and if the new promises are attractive and catchy, those already made will be routinely broken and expectations regularly frustrated, keeping the vicious

¹ See LATOUCHE, Serge. Bon pour la casse: Les déraisons de l'obsolescence programmée. Brignon: Les Liens Qui Libèrent, 2012 [E-book]. The French writer analyzes the growth society (*société de croissance*), backed by an organizational model based on unlimited needs of consumption, whose logic is not to grow to satisfy the consumer needs but rather grow for grow.

² BAUDRILLARD, Jean. A sociedade de consumo. Lisboa: Edições 70, 2007, p. 42.

³ BAUMAN, Zygmunt. Consuming Life. Cambridge: Polity Press, 2007, p. 47.

⁴ DEBORD, Guy. A sociedade do espetáculo. Tradução de Estela dos Santos Abreu. Rio de Janeiro: Contraponto, 1997, pp. 46-47.

circle within the assembly lines, the shops and the trash cans. After all, according to Schumpeter, “the fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers' goods”.⁵ So if the products purchased by consumers the day before become obsolete, the market will be available again.

Actually, mass production resulted in lower prices of consumer goods from economies of scale. Consequently, sometimes it costs more to repair *a product than just buy a new one*.⁶ The same time, it boosts production and consumption, increases disposal of materials, causing huge environmental damage associated with it. Junk mail has become the biggest problems precisely where obsolescence is more common.⁷

In addition to being an *economics of excess and waste*, consumerism is for *this reason also an economics of deception*. Its wager is on the irrationality of consumers, not on their thoroughly informed and sober calculations; it is on arousing consumerist emotions, not on cultivating decisions.⁸ By perceiving and encouraging the features of this new society, many companies are promoting studies to stimulate purchases.⁹ Marketing, advertising and the so-called “selling science” aim at inducing, or, more precisely, according to Ron Harris and Einat Albin¹⁰, manipulating the consumer. These companies have been using mass media/advertising to convey the message of what product or service the consumer should purchase.

A simple communication is not as powerful as is sometimes thought to target the sale. A rational argument does not always convince the consumer but rather prevents impulse buying. Therefore, when consumers take less rational decisions is better for the seller. In case the goods are “the last items”, the anxiety of not getting what the consumer was led to believe that he/she “needs”, will lead to an unthinking purchase. Thus, appealing to *customers' unconscious* minds and emotions may produce better results. Hence, advertisements are often filled with dramatic or humorous and emotional appeals. Also, the suppliers associate their products with pleasure, personal fulfillment and social status, instilling the message that consumers need to make a purchase.

⁵ The author describes creative destruction as the “process of industrial mutation that [...] incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one”. SCHUMPETER, Joseph A. *Capitalism, Socialism and Democracy*. 2nd Ed. New York and Londo; Harper & Brothers Publishers, 1847, p. 83.

⁶ In 2017, the National Consumer Price Index (Portuguese abbreviation-IPCA) registered a reduction in the price of TVs, stereos and computers (-6.50%), kitchen appliances and equipments (-2.65%). In contrast, the prices of repair and maintenance increased (+3.14%). INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). Sistema Nacional de Índices de Preços ao Consumidor: IPCA e INPC. Available on < https://biblioteca.ibge.gov.br/visualizacao/periodicos/236/inpc_ipca_2017_dez.pdf >. Accessed on Aug 27, 2018.

⁷ According to the Global E-Waste Monitor 2017, in 2016, a total of 44.7 million metric tons of e-waste were generated. Of these, only 20% (the equivalent of 8.9 million tons) of all the e-waste was recycled. BALDÉ, C.P.; FORTI, V.; GRAY, V.; KUEHR, R.; STEGMANN, P. *The Global E-waste Monitor*. United Nations University (UNU), International Telecommunication Union (ITU) & International Solid Waste Association (ISWA), Bonn/Geneva/Vienna, 2017, p 5. Packaging is another concern. Today, according to data from the Ministry of the Environment, a 1/3 of household waste consists of packaging. MINISTÉRIO DO MEIO AMBIENTE (MMA). *Impacto das embalagens no meio ambiente*. Available on: < <http://www.mma.gov.br/responsabilidade-socioambiental/producao-e-consumo-sustentavel/consumo-consciente-de-embalagem/impacto-das-embalagens-no-meio-ambiente> >. Accessed on Aug 27, 2018.

⁸ BAUMAN, Zygmunt. *Consuming Life*. Cambridge: Polity Press, 2007, pp. 38-40.

⁹ GALBRAITH, John Kenneth. *The Affluent Society*. London: Hamish Hamilton, 1958, p. 215.

¹⁰ HARRIS, Ron; ALBIN, Einat. *Bankruptcy in light of manipulation in credit advertising – Personal Bankruptcy in the 21st Century: Emerging Trends and New Challenges*. *Theoretical Inquires in Law*, July 2006. Available on: <<http://www.westlaw.com>>. p. 1.

Conversely, the cultural model of consumption society attaches to the consuming act transcends, generating a simulacrum, which will serve to give meaning to life itself.

This can be observed in the investigations of the so-called "anthropology of consumption", which focuses on how consumers make their choices. Sophisticated equipment captures the movement of the human eye in front of a shelf, the time spent, and what has attracted them. More specifically, how the market researchers delve into the subconscious mind of the consumer to induce purchase.

In this context, the free consumer choice becomes more and more mitigated, easily manipulated, and predictable given the substantial amount of information that the supplier receives on the behavior of consumers. This information is obtained through the technological society, since consumers deliberately provide their personal details and preferences to products online.

It is a fact. Social networks never intended to be a mere social interaction program. Their primary function, as shown by the recent complaints, is to track *consumer* response to new campaigns and *offerings* to ensure positive feedback.¹¹ Similarly, some apps are offered free to interest customers in the company's other products. These apps are a valuable form of advertising. Usually, costumers are billed for these in-app purchases through the app store, or think they are not paying for these apps. Too late because now they have allowed access to their profile on the network. In this celebration of consumption, as solace or reward, the purchasing act adds greater value to the product purchased.

In this manipulative environment, the *contract* for the *online* and other distance sales of goods is a perfect way for the development of the so-called "planned obsolescence", since the consumers will not have the option to exit by *not* hiring the service, i.e. if the costumers are *using* the service, *they* are *accepting* the *terms* and conditions imposed by the supplier. Therefore, if the consumers do not update the software, they will no longer be able to download programs on their Smartphone or tablet. At the same time, every screen touch that asks if they accept the terms, which usually nobody reads, will automatically make them give up rights, among these, the right to privacy. The argument that the apps are free overlooks the fact that the consumers have paid for them with the personal information they gave, which will be passed on to suppliers eager to send targeted offers on sale via algorithms. When the new device is no longer compatible with the new version of the software, it is discarded. The customer has no other option but to buy a new device, and will be soon entangled in a vicious circle that stimulates and encourages cooptation of captive consumers.

B. Obsolescence: historical origin and evolution

The reduced lifetime of consumer goods or the lifecycle of its components dates back to methods of product tampering, used in the 19th century, as denounced by a German scientist in

¹¹ ESTADÃO. Como o Facebook coleta e usa dados de quem não é usuário da rede social. Available on: < <https://link.estadao.com.br/noticias/empresas,como-o-facebook-coleta-e-usa-dados-de-nao-usuarios-da-rede-social,70002272050> >. Accessed on Aug 27, 2018; ABRIL. Google permite que empresas leiam mensagens de usuários do Gmail, says WSJ. Available on: < <https://veja.abril.com.br/economia/google-permite-que-empresas-leiam-mensagens-de-usuarios-do-gmail-diz-wsj/> >. Accessed on Aug 27, 2018.

1820.¹² Subsequently, the use of materials with reduced useful life was associated with repeat consumption.¹³ However, this is only one part of a phenomenon manifested in many different forms in the 20th century, especially considering that (pseudo) technological advances and more attractive designs can also make products obsolete.

Functional or technological obsolescence generally occurs when a new, better product has been created to replace an older version due to technological advances. This could be the result of genuine technological advances (not programmed), although it is very difficult to identify the cases in which they are intended. Even though the term was not coined way back then, it was described in 1832 as a phenomenon inherent to the Industrial Revolution.¹⁴ After the electronic starter for cars was introduced in 1913,¹⁵ soon came the stereo sound with additional channels (two-channels, three-channels, and so on).¹⁶ Nowadays, the same is happening to computers, tablets and mobile phones. Instead of waiting for technological innovations, car manufacturers have adopted changes in the annual model, which is an example of desirability,¹⁷ psychological, progressive or dynamic obsolescence.¹⁸ Also called “planned obsolescence” in a broader sense, it is almost as old as mankind and is rooted to the fashion phenomena¹⁹ and to unfulfilled desires.²⁰ Aesthetic changes combined with the use of advertising techniques make consumer goods become outdated and old-fashioned, persuading consumers to purchase new products. These goods are simpler to create and produce, and deal with illusions and expectations of people to stimulate consumption. Despite the controversies around the origin of the annual model changes, the automakers started to pay more attention to updating car models in the mid-1920.²¹

¹² A German scientist, *Accum* published a book in 1820 in which he *denounced* the use of chemical additives to *food*. ACCUM, Fredrick. *A Treatise on Adulterations of Food, and Culinary Poisons*. London: Longman, Hurst, Rees, Orme and Brown, 1820.

¹³ See HOBSON, J. A. *Work and wealth: a human valuation*. New York: The Macmillan Company, 1914, p. 134. In 1925, Stuart Chase wrote, “Under the present industrial order, quick turnover means quick profit. Maximum profit is, therefore, achieved by a flow of goods with the shortest practicable life”. *The tragedy of waste*. New York: The Macmillan Company, 1925, pp. 71 ss. A classic example is the case of manufacturers that actively lower the life span of light bulbs from 2,500 hours in 1924 to 1,000 for costumers to replace them more often. Such a practice would have been employed by the Phoebus Cartel, in the 1920. Officially, the Phoebus Cartel never existed. *The Light Bulb Conspiracy*. Directed by Cosima Dannoritzer. Barcelona, 2010 (52min).

¹⁴ “But machinery for producing any commodity in great demand, seldom actually wears out; new improvements, by which the same operations can be executed either more quickly or better, generally superseding it long before that period arrives: indeed, to make such an improved machine profitable, it is usually reckoned that in five years it ought to have paid itself, and in ten to be superseded by a better.” (BABBAGE, Charles. *On the Economy of Machines and Manufactures*. London: Charles Knight, pall-mall east, 1832, p. 231.)

¹⁵ SLADE, Giles. *Made to Break: Technology and Obsolescence in America*. Cambridge, MA: Harvard University Press, 2006, p. 4.

¹⁶ PACKARD, Vance. *The Waste Makers*. New York: David McKay Company, Inc., 1960, pp. 55 e ss.

¹⁷ PACKARD, Vance. *The Waste Makers*. New York: David McKay Company, Inc., 1960, p. 55.

¹⁸ SLADE, Giles. *Made to Break: Technology and Obsolescence in America*. Cambridge, MA: Harvard University Press, 2006, pp. 4-5.

¹⁹ LATOUCHE, Serge. *Bon pour la casse: Les déraisons de l’obsolescence programmée*. Brignon: Les Liens Qui Libèrent, 2012 [E-book].

²⁰ GALBRAITH, John Kenneth. *The Affluent Society*. London: Hamish Hamilton, 1958, p. 112.

²¹ SLADE, Giles. *Made to Break: Technology and Obsolescence in America*. Cambridge, MA: Harvard University Press, 2006, pp. 29 ss; LATOUCHE, Serge. *Bon pour la casse: Les déraisons de l’obsolescence programmée*. Brignon: Les Liens Qui Libèrent, 2012 [E-book]. According to Daniel RAFF, the technique was not the determining factor for the success of the manufacturers, but the adoption of new production strategies that provided annual changes in the models and became competitive advantages. *Making Cars and Making Money in the Interwar Automobile Industry: Economies of Scale and Scope and the Manufacturing behind the Marketing*.

Justus George introduced the concept of progressive obsolescence in 1928, and by doing so, he tried to elevate Sloan's practice of annual model changes to an economic habit that would sustain America's economy by means of repetitive and growth consumption in all industries.²²

With the 1929 economic crash, the industry became extremely competitive and creative. Teardrops were replaced by straight lines and colors and sizes were changed. The company *marketing strategies* began to focus on constant changes of style.²³ "American industry passed from the hands of engineers into the hands of designers".²⁴ However that was not enough to stimulate demand and reheat the economy. After a decade of unprecedented affluence and consumption, consumer demand dropped dramatically during the Great Depression. Unemployment and years of deprivation worsened.²⁵ Worried about the drop in home sales, at the height of the 1932 crisis, Bernard London, a successful Manhattan real-state broker published a pamphlet about planned obsolescence.²⁶ The plan consisted in limiting the *life* of products of manufacture, mining and agriculture. After the allotted time had expired, these things would be legally "dead" and would be controlled by the duly appointed governmental agency and destroyed.²⁷ His belief was that after a first sweeping up process necessary to remove the obsolete products in use, the system would work without problems in the future. Our products would be constantly produced to replace the obsolete ones. Such a process *would* put the entire *country* on the road to *recovery* and eventually *would restore* normal *employment* and business *prosperity*.²⁸

Business History Review. vol. 54. n. 4. 1991, pp. 721-753. In early 1950, the phenomenon has intensified; the automobile industry invested heavily in the design departments, offering consumers new car models every year and less technological improvements – See the advertisements of the largest USA automakers, Ford ("*Nothing Newer in THE WORLD OF STYLE*"), Chevrolet ("*Styling That Sets a New Style*"), De Soto ("*Best Dressed Car of the Year*"), Oldsmobile ("*Start of a New Styling Cycle*"), Chrysler ("*The Newest New Cars in 20 Years*"), Nash ("*The World's Newest ... Car*") and Pontiac ("*Completely New from Power to Personality*"). The result: the cars started to depreciate faster, and no longer lasted like they used to. PACKARD, Vance. *The Waste Makers*. New York: David McKay Company, Inc., 1960, pp. 78 e ss.

²² SLADE, Giles. *Made to Break: Technology and Obsolescence in America*. Cambridge, MA: Harvard University Press, 2006, p. 58.

²³ PACKARD, Vance. *The Waste Makers*. New York: David McKay Company, Inc., 1960, pp. 118 ss.

²⁴ SLADE, Giles. *Made to Break: Technology and Obsolescence in America*. Cambridge, MA: Harvard University Press, 2006, p. 58; p. 64.

²⁵ In the United States, "real GDP fell by 27% from 1929 to 1933, and unemployment rose from 3 percent to 25 percent". MANKIOW, N. Gregory. *Principles of Economics*. Mason, Ohio: Thomson/South-Western, 2004, pp. 723-724.

²⁶ *Ending the Depression through Planned Obsolescence (1932)* was followed by *The New Prosperity through Planned Obsolescence: Permanent Employment, Wise Taxation and Equitable Distribution of Wealth (1934)*, and *Rebuilding Prosperous Nations through Planned Obsolescence (1935)*.

²⁷ LONDON, Bernard. *Ending the Depression through Planned Obsolescence*. New York [s.n.], 1932, p. 6; 12.

²⁸ In this system, the people would turn in their used and obsolete goods to certain governmental agencies, would receive from the Comptroller or Inspector of such a Station or Bureau, a receipt indicating the nature of the goods turned in. Receipts so issued would be partially equivalent to money in the purchase of new goods by the individuals, in that they would be acceptable to the Government in payment of the sales tax. Yet the Government would not have had to pay a cent of cash for the goods so surrendered. Consumers who continued to use goods exceeding the obsolescence expiration date would be taxed for retarding progress to ensure income to the government and preventing business from functioning normally. Instead of waiting until the owner died, the State would raise and collect its inheritance tax the article died. The State could extend the useful life of articles after they expired if they were not replaced and continued being. That way, there would be no overproduction. Production and consumption of good would regulate each other. LONDON, Bernard. *Ending the Depression through Planned Obsolescence*. New York [s.n.], 1932, pp. 6 and ss.

The proposal for compulsory obsolescence was not very well received by the legislators. Planned obsolescence was then widespread with the manipulation of the structure and the materials used in the manufacturing of technical products (obsolescence of quality in strict sense), with tampering of goods, as initially advocated. Still, Bernard London was credited with coining the term "*planned obsolescence*" in 1932. In the 1950s, the term became popular mainly by designers, such as Clifford Brooks Stevens, who claimed to have invented planned obsolescence himself. However, his concept of obsolescence had a broader meaning.²⁹

Here, it is worth mentioning that not all types of obsolescence are planned or conducted in bad faith. In fact, products and services are constantly changing, they should follow the market demands and there is nothing illicit in this practice. Most new models are introduced due to technical or aesthetic advances and not because they became obsolete. Other goods have a relatively short lifecycle and are readily discarded. The products follow the society dynamic changes. Considering that the product short lifecycle was not deliberately used as a business strategy, obsolescence is a natural resource. As referred to by Heraclitus, "change is the only thing constant in life."

C. Alternatives to combat planned obsolescence

As previously mentioned, the convergence between consumption relations and environment includes planned obsolescence. With that in mind, there is clearly an urgency to control abusive practices that artificially reduce the useful life of products, causing damages to consumers, society and environment. Few countries, however, have legal regulations on the matter, and those who do find it difficult to apply them due to the practices perpetrated by the manufacturers. In the United-States, there is no specific federal or State law prohibiting planned obsolescence. The solutions are administered by the *common-law courts*, through the class actions.³⁰ In Brazil, there is also no specific legal regulations aimed at regulating planned obsolescence. This situation has generated legal uncertainty as well as discussions in the courts. France deals with this problem in a very different way.

1. Planned obsolescence in the European Union

In 2013, the European Economic and Social Committee (EESC) were called on to propose an EU-level definition of planned obsolescence to extend the lifespan of (electrical) household appliances and to advocate a total ban of products whose flaws could collapse the *life cycle of*

²⁹ SLADE, Giles. *Made to Break: Technology and Obsolescence in America*. Cambridge, MA: Harvard University Press, 2006, p. 152; LATOUCHE, Serge. *Bon pour la casse: Les déraisons de l'obsolescence programmée*. Brignon: Les Liens Qui Liberent, 2012 [E-book]; PACKARD, Vance. *The Waste Makers*. New York: David McKay Company, Inc., 1960, p. 54.

³⁰ *Westley vs. Apple* (2003) was a widely-known legal case, which was brought against iPod's because the battery did not last as long as Apple said. In the settlement, Apple had to replace the batteries and extended service warranty to 2 years. DANNORITZER, 2010. *The Cupertino-giant still negotiating several legal cases after admitting that it had slowed down old iPhones to save battery life*. DAILY MAIL. Apple now facing EIGHT class action lawsuits after admitting it DOES slow down old iPhones to save battery life. Available on: <<http://www.dailymail.co.uk/sciencetech/article-5215793/Apple-facing-EIGHT-lawsuits-iPhone-slowdown.html>>. Accessed on Aug 27, 2018.

products.³¹ The EESC not only recognizes the four types of obsolescence,³² but also proposes certain considerations, which now extends to matters such as social policy, social and economic cohesion, environment, education, and public health.

Additionally, the EESC recommends that companies facilitate the repair of products through (i) information on technical repair possibilities; (ii) possibility of replacing the components up to 5 years after purchasing the product; and (iii) availability of information about reparability of products. It also encourages voluntary certification measures, following the standard guarantees of the European Union and proposes the adoption of rules on consumer information about the availability of more defective components in stock.

From the point of view of the product useful life, the EESC proposes that suppliers provide consumers with information about the expected lifetime to help them make better choices when buying the product. The Committee recommends improving guarantee rights, prolonging the duration of legal guarantees, extending the reversal of the burden of proof in favor of the buyer to ≤ 5 years, and adding the criterion of durability to the definition of conformity.

For better communication and consumer access to information, the Committee proposes a European Planned Obsolescence Observatory. The EESC also highlights that although there are a few good directives on planned obsolescence (commercial practices, waste, etc), there is little coordination between the many texts on the subject, therefore, there should be a harmonization of law. The EESC should be responsible for carrying out more straightforward studies on the social impact of planned obsolescence. The recommendations aimed at strengthening a relationship of trust between consumers and manufacturers, as well as creating more and better *jobs* throughout the *EU*. (Differently from what London proposed i.e. to invest in repairs). All that aimed at fighting back planned obsolescence through three main categories: (i) the ecodesign of products; (ii) circular economy; and (iii) functional economy.

Thus, the EESC expressed its intent to join an economic transition phase, turning a society of waste into a sustainable one, whose growth will be able to satisfy the consumer needs under the citizen perspective, but never an end in itself.

The following activities have been realized to fight back planned obsolescence. A Conference in Madrid, Spain, June 25, 2014: *New attitudes towards consumption: Best practices in the domain of built-in obsolescence and collaborative consumption*; A Public hearing in Brussels, September, 2014: *Towards a Circular Economy – a zero waste program for Europe*; Round Table events on “Planned Obsolescence”, October 17, 2014, on “Functional

³¹ EUROPEAN ECONOMIC AND SOCIAL COMMITTEE (EESC). Towards more sustainable consumption: industrial product lifetimes and restoring trust through consumer information. Available on: < <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/towards-more-sustainable-consumption-industrial-product-lifetimes-and-restoring-trust-through-consumer-information#downloads> >. Accessed on Aug 27, 2018.

³² The inclusion of a fourth type of planned obsolescence depicts the problems and the challenges of new technologies. (i) *planned obsolescence* in its strict sense consists in designing a product to have a shorter life; (ii) *style obsolescence*, which is related to marketing campaigns that aim to make existing products obsolete in the minds of consumers; (iii) indirect obsolescence is related to the impossibility of repairing a product; and (iv) incompatibility obsolescence, when tablets and personal computers cannot run efficiently after successive software updates of the operating system. EUROPEAN ECONOMIC AND SOCIAL COMMITTEE (EESC). Towards more sustainable consumption: industrial product lifetimes and restoring trust through consumer information, p. 5. Available on: < <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/towards-more-sustainable-consumption-industrial-product-lifetimes-and-restoring-trust-through-consumer-information#downloads> >. Accessed on Aug 27, 2018.

Economy”, September 9, 2015, in Brussels; and a Public hearing on “Functional Economy”, June 8, 2016, in the same city.³³

On July 4, 2017, the European Parliament approved its “*resolution on a longer lifetime for products: benefits for consumers and companies.*” The European Parliament has also called on the European Commission and EU Member States to encourage the design of robust, durable and high-quality products; to introduce economic models to encourage small and midsize companies and create jobs; to promote reparability and longevity; to ensure better information for consumers and to strengthen the right of the legal guarantee of conformity; and to protect consumers against software obsolescence in addition to other specific measures against planned obsolescence.³⁴

In this context, *France* has long been at the forefront in the fight against *planned obsolescence* globally. A new government decree in France came into force to fight any scheme through which a product has “its life intentionally reduced from its conception, limiting its usage period for reasons of economic model.” Executives *could* even be sentenced to two years in jail, and pay a potential fine of EUR 300,000, which can be of up to 5 percent of the company's annual turnover.³⁵ To this end, consumers have to file a complaint, either individually or collectively.³⁶ Recently, the French Government established a “reparability” rating for electronic products and furniture.³⁷ This was another initiative against planned obsolescence.

³³ EUROPEAN ECONOMIC AND SOCIAL COMMITTEE (EESC). Obsolescence Project: New attitudes towards consumption - Related Events. Available on: < <https://www.eesc.europa.eu/en/our-work/publications-other-work/project/obsolescence-project-new-attitudes-towards-consumption/events> >. Accessed on Aug 27, 2018.

³⁴ EUROPEAN PARLIAMENT (EUROPARL). European Parliament resolution of 4 July 2017 on a longer lifetime for products: benefits for consumers and companies. Available on: < <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P8-TA-2017-0287&language=EN> >. Accessed on Aug 27, 2018.

³⁵ The French government amended the French Energy Transition Law to include provisions rendering “planned obsolescence” a misdemeanor. In the latest wording of the provisions, article L. 441-2 of the Consumer Protection Code (*Code de la consommation*) defines planned obsolescence («*L'obsolescence programmée se définit par l'ensemble des techniques par lesquelles un metteur sur le marché vise à réduire délibérément la durée de vie d'un produit pour en augmenter le taux de remplacement.*») and its respective penalties («*Violation of the prohibition on planned obsolescence carries a potential two-year prison sentence and a criminal fine of up to €300,000. As an added deterrent, the law further provides that the courts may increase the fine to up to 5% of the annual turnover of the entity concerned (based on the average of the entity's turnover in the three years prior to the date of the offence)*»). Subsequently, the matter was addressed by arts. L. 441-2 and I. 454-6 of the Code, introduced by the *Ordonnance n. 2016-301* of March 14, 2016.

³⁶ Currently, the Directorate General for Competition Policy, Consumer Affairs and Fraud Control (DGCGRF) investigates complaints of planned obsolescence against Smartphone maker Apple and Japanese printer company Epson. A French consumer association called “HOP” — standing for “Stop Planned Obsolescence” — filed preliminary, legal complaints in court against the two companies. Epson is suspected of using the planned obsolescence, indicating that the owner has to buy new cartridges while there is still ink to stimulate demand. Meanwhile, the Cupertino giant is facing lawsuit by slowing down devices without warning to compensate for poor battery performances. See REUTERS. Enquête sur Epson pour obsolescence programmée. Available on: < <https://fr.reuters.com/article/businessNews/idFRKBN1EM16S-OFRBS> >. Accessed on Aug 27, 2018; REUTERS. CORR-Enquête contre Apple pour obsolescence programmée en France. Available on: < <https://fr.reuters.com/article/technologyNews/idFRKBN1EX27R-OFRIN> >. Accessed on Aug 27, 2018.

³⁷ The idea is to assign a score to equipment, according to its lifespan, on January 1, 2020. The information must be obligatory in the product packaging. However, according to experts, the main obstacle continues to be the high price of repairs. See: SCIENCES ET AVENIR. Obsolescence programmée: Un “indice de réparabilité” prévu pour 2020. Available on: < https://www.sciencesetavenir.fr/high-tech/obsolescence-programmee-un-indice-de-reparabilite-des-produits-electromenagers-prevu-pour-2020_125581 >. Accessed on Aug 27, 2018.

2. Planned obsolescence in Brazil

The Brazilian Constitution sets forth the norms for consumer protection and defense, regarding individual and collective rights based on art. 5, XXXII to assure the status of fundamental right. This claim is also included in the General *Principles* of the *Economic Order*, art. 170, V of the Magna Carta, as well as the *defense* of the *environment* (item VI). In the chapter which focuses on the environment, the Constitution establishes the right to an ecologically balanced environment, imposing to the public authorities and to the collectivity the duty to defend it and preserve it for present and future generations (art. 225). The infra-constitutional law provides for the right to compensation of product hidden defects with a lifetime warranty not due to natural wear but to manufacturing defects.

Note that: based on the Brazilian Consumer Code (September 11, 1990³⁸), art. 26, § 3 ("when the defect is not visible, the time period for complaints begins on the moment when the defect is the noticed") the doctrine and the jurisprudence have understood that the manufacturer's *liability* for *hidden defects* in *products* should not be limited to the contractual warranty period. The warranty claim period starts at the time the defect is evidenced.³⁹ Thus, the initial period of the legal warranty (30 days for nondurable goods and 90 days for durable goods) should be open-ended until the defect is evidenced. However, it should be noted that this does not imply an eternal warranty.⁴⁰ Using the criterion of the product useful life, it is intended to avoid the legal warranty to be confused with the product natural wear. This criterion would be used as a balanced rule, giving consistency to the legal system.⁴¹

However, one might ask, "What is the average lifetime of each product?", "To what extent are *suppliers* of materials potentially *liable* for defects of the sold product?", "When does the problem with the product cease to be considered a defect and shall be treated as natural wear, excluding the liability of the supplier or deletion of causal relationship due to the absence of defect, as defined by article 12, § 3, item II?", and "What are the limitations between legal obsolescence and planned obsolescence?"

³⁸ BRASIL. Lei n. 8.078, de 11 de set. de 1990. Planalto. Available on: < http://www.planalto.gov.br/ccivil_03/LEIS/L8078.htm >. Accessed on Aug 27, 2018.

³⁹ Note here an evolution in the treatment of a redhibitory defects: the 1916 Civil Code established a deadline of 15 days for movable goods (art. 178, § 2) and 6 months for immovable goods (art. 178, § 5, IV). The 2002 Civil extended the deadline periods to 30 days for movable goods and 1 year for immovable goods (art. 445). However, the maximum time limit for appearance of the hidden defect is 180 days and 1 year, respectively (art. 445, § 1), without disregarding the possibility of overlapping the deadline period with the contractual warranty period (art. 446). The Brazilian Consumer Code established a 30- day deadline period for nondurable goods and services and 90 days for durable ones (art. 26). At first glance, it would seem that the consumer warranty had been reduced. Since the CPC often *gives special attention* to situations of hidden defects, it establishes that the deadline period starts at the time defect was detected using the criterion of the product lifetime limits (art. 26, § 3). BESSA, Leonardo Roscoe. Vício do Produto e do Serviço. In: BENJAMIN, Antônio Herman V.; MARQUES, Claudia Lima; BESSA, Leonardo Roscoe. Manual de direito do consumidor. 5 ed. rev., atual. e ampl. São Paulo: Editora Revista dos Tribunais, 2013, p. 211.

⁴⁰ MARQUES, Claudia Lima. Contratos no Código de Defesa do Consumidor: o novo regime das relações contratuais. 6 ed. rev. atual. e ampl. São Paulo: Editora Revista dos Tribunais, 2011, pp. 1253-4.

⁴¹ MIRAGEM, Bruno. Vício oculto, vida útil do produto e extensão da responsabilidade do fornecedor. Comentários à Decisão do REsp 984.106/SC, do STJ. Revista de Direito do Consumidor. São Paulo: Editora Revista dos Tribunais. Ano 22. Vol. 85. Jan-fev. 2013, p. 353. No mesmo sentido: BESSA, 2013, p. 213.

In order to answer these questions, on 11 April 2013, a draft bill (No. 5367/2009⁴²) was proposed, foreseeing the obligation of suppliers to offer and present products and services with clear, direct, precise, comprehensive information, and in the Portuguese language regarding the characteristics, qualities, quantity, composition, price, warranty, validity and origin, among other pieces of information (art. 2). This proposal includes *sanctions (administrative penalties)* that shall be *laid down* by the Brazilian Consumer Code, without prejudice to others (art. 3). This draft bill, which was intended to grant greater protection to consumers and the environment, was filed on January 31, 2015 due to the end of the legislative term. Although it could be considered a breakthrough, it would not be an ideal solution since the supplier would randomly establish the warranty period of the product, confusing the legal right to have the *repair* or replacement of the faulty *product*, using the contractual warranty. In the absence of a fully impartial durability rating, the best alternative continues to be negotiated on a case-by-case basis.⁴³

The draft bill n. 3472/2012⁴⁴, which proposes the amendment of law 9605 of February 12, 1998 is currently being treated by the Brazilian Senate to combat planned obsolescence based on the fact that it facilitates repair of electronics and its components (art. 36-A). Paragraph 1 determines that the consumer protection agencies should constrain initiatives of planned obsolescence by manufacturers of the referred products. However, there seems to be a lacking of a sufficient structure in the Foundations for Consumer Protection and Defense in Brazil (PROCONs), which make its effectiveness more difficult and constitutes a failure of the entire control system, established in the country through the so-called regulatory agencies.

The good news have been the innovative legal decisions, in view of the above mentioned, which recognized the need to protect consumers when suppliers sell durable goods with a lifespan shorter than legitimately expected. In this case there would be a defect of the product suitability (Brazilian Consumer Code, art. 18) and a break off of objective good faith (Civil Code, arts. 113, 187 and 422; Brazilian Consumer Code art. 4, III and 51, IV), constitutes an instance of non-compliance of the right to information, and non-completion of the contract, which was the purchase of an asset whose life cycle was expected to be legitimately longer.

In fact, warranty time, whether legal or contractual, aims at ensuring buyers a minimum time period in which deteriorations owing to normal *wear* are not expected to happen. After this tolerable expiration date, some wear may occur due to the ordinary use of the product. However, a different situation refers to a latent defect either at the time of sale or during the warranty period, which manifests itself only after the warranty period has expired. This is true for household appliances that may explode due to manufacturing defect, even after the expiration warranty period. A report to an appellate decision (Special Appeal n. 984.106/SC⁴⁵) states the

⁴² BRASIL. Projeto de Lei n. 5.367 de 2009. Câmara dos Deputados. Available on: < <http://www.camara.gov.br/proposicoesWeb/fichadetramitacao?idProposicao=437370> >. Accessed on August 27, 2018.

⁴³ MIRAGEM, Bruno. Curso de Direito do Consumidor. São Paulo: Editora Revista dos Tribunais, 2016. [E-book]. It focuses on the time limit the Buyer-Consumer is *entitled to exercise the right to claim the defective performance of goods*.

⁴⁴ BRASIL. Projeto de Lei n. 3.472/2012. Câmara dos Deputados. Available on: < <http://www.camara.gov.br/proposicoesWeb/fichadetramitacao?idProposicao=537785> >. Accessed on Aug 27, 2018.

⁴⁵ BRAZIL. High Court (STJ). Civil Procedure n. 984.106/SC. Reporting Judge: Luis Felipe Salomão, tried on Oct 4, 2012.

need to have the "lifespan criterion" for goods.⁴⁶ The appellate decision even mentions some examples of programmed obsolescence: (i) old and new components are incompatible, which imposes a full software update of the product (ii) shortened lifespan of electronic components (Example: cell phone batteries) and their strategic demand-pull inflation that makes a new purchase more advantageous; and ; (iii) a new series is released, and the inputs or spare parts for the previous series are no longer manufactured.

The First Court of Civil Appeal of the city of Porto Alegre, RS understood that since the plaintiff was not able to update her mobile software to the latest version, and thus make use of certain applications, the device had become useless. Thus, this illegal practice performed by the defendant harmed the customer by unfairly pressuring her into *buying* a new *product*. *It was considered abusive* by the court and the plaintiff was entitled to *compensation*.⁴⁷ However, this case law is not unanimous. Conversely, the Court of Civil Appeal of the Special Court of Civil and Criminal Appeals of Pouso Alegre, MG had a different response to the problem. It dismissed the lawsuit for considering the practice as non abusive. The mobile device of the plaintiff did not become useless, *a sine qua non* condition to define it as a case of planned obsolescence.⁴⁸

In the complete absence of any legal provision excluding the practice of planned obsolescence, there are still court cases with no legal impediment. For example, the Court of Justice in Rio Grande do Sul has determined that cellphones were submitted to the phenomenon of planned obsolescence, "becoming disposable as time went by due to the advances in technologies." Although this practice was not immune to criticism, this innovative drive within capitalism would not be unlawful or illegal.⁴⁹ However, not all cases derive from planned obsolescence in its strict sense.

Although it is permissible to anticipate the launching of a new product, recent court cases have considered abusive business practices and deceptive advertising (Brazilian Consumer Code, art. 6, IV) the launching and marketing of two car models in the same year, when both were released as next year's model.⁵⁰ The decisions highlight the need to comply with the

⁴⁶ *Id.*, the following trials: CURITIBA. First Court of Civil Appeal. Unnamed Appeal (Recurso Inominado) n. 0018841-39.2015.8.16.0182. Reporting Judge: Fernanda de Quadros Jorgensen Geronasso, tried Mar 21, 2017. CURITIBA. First Court of Civil Appeal. Unnamed Appeal (Recurso Inominado) n. 0007460-97.2016.8.16.0182. Reporting Judge: Fernanda de Quadros Jorgensen Geronasso, tried on Feb 15, 2017.

⁴⁷ RIO GRANDE DO SUL. Court of Justice. Civil Appeal n. 71004479119. Reporting Judge: Lucas Maltez Kachny, First Court of Civil Appeal, tried on Apr 22, 2014.

⁴⁸ POUSO ALEGRE. Court of Civil Appeal. Unnamed Appeal (Recurso Inominado) n. 0157861.67.2015.8.13.0525. Reporting Judge: José Hélio da Silva, tried on Nov 10, 2015.

⁴⁹ RIO GRANDE DO SUL. Court of Justice. Civil Appeal n. 71004731089. Reporting Judge: Cleber Augusto Tonial, Third Court of Appeal, tried on Jan 30, 2014. The case involved *moving from* CDMA technology to GSM, in which the consumer would have the choice to maintain the obsolete technology or receive a value greater than that offered by the cell phone company to exchange the device. Another trial referred to at first instance by the Civil Court of Sao Bernardo do Campo understood that the situation reported in the records could be the best chance of planned obsolescence, but would be fully acceptable in the Brazilian legal system, and not considered an abusive conduct on the part of the defendant for being a widely adopted *business practice in the country*. In this case, the plaintiff pleaded the reimbursement for the purchase of an electric shower that was not working properly within the warranty period, and even after the repair, the problem persisted, as well as compensation for moral damages. The decision pronounced at first instance was partially reformed in appeal, condemning the defendant to pay compensation for property damage. SÃO BERNARDO DO CAMPO. 2nd Civil Court. Common Law n. 1024471-98.2015.8.26.0564, tried on Feb 12, 2016.

⁵⁰ "SPECIAL APPEAL. PUBLIC CIVIL ACTION. CONSUMER. "RE-DESIGN" OF PRODUCT. 2006 CAR SOLD AS A 2007 CAR. 2006 CAR AND 2007 CAR LAUNCHED IN THE SAME YEAR. CASE "FIAT PALIO

objective good faith, its binding effect in relation to the provision and advertising conveyed aiming at protecting the legitimate expectation created by the information, which must be given accordingly to ensure the consumer a freedom of choice. Both cases reported here, even indirectly, describe how to put up a fight against planned obsolescence in a broad sense.

IV. Conclusion

Based on the analysis carried out in the present study, it can be concluded that not all cases of obsolescence have been planned and identifying how they were in a way to prevent is the biggest difficulty of this theme. Some products become obsolete due to an unscheduled technological advance. Also, it is very difficult to identify those which became obsolete on purpose. To restrain this growing phenomenon, society and governments should start to take serious action to regulate and oversee planned obsolescence, preventing it from being accepted as a normal or legal business practice. In fact, in a consumer society, the manufacturers are stimulated to plan strategies to make people anticipate the purchase of a new product, especially in the case of durable goods. The demand for the product is associated with the amount of that product on the market that was purchased in the past. The higher the durability, the greater the delay imposed on the manufacturer to carry out new sales to the consumer, since the sale decline is inversely proportional to the increased durability of the product.

Therefore, advertising, easy access to credit and planned obsolescence interact in a circular cumulative causation with feedback. Advertising creates the desire to consume and illusions in the minds of consumers. Credit provides the means for consumption and sometimes leads to over-indebtedness. In contrast, planned obsolescence can renew the needs generated by the advertising. In the presence of *imperfect competition* and abusive economic power, in which the market efficiency reveals certain aggressiveness, the fight against the so-called planned obsolescence becomes urgent and necessary, particularly due to the terrible amounts of waste generated by a throwaway culture.

Despite the recognition of this phenomenon in Brazil, it is clear that the absence of legal regulations in a country with strong inflows of civil laws affects the solution of problems. Consequently, it generates legal uncertainty to detriment of the right to consumer protection. Although planned obsolescence was initially proposed as a solution to dark economic crisis

FIRE". ABUSIVE BUSINESS PRACTICE. DECEPTIVE ADVERTISING. PRINCIPLE OF OBJECTIVE GOOD FAITH. CLAIM OF LEGAL RE-DESIGN REFUTED. STANDING OF THE *MINISTÉRIO PÚBLICO* (BRAZILIAN GOVERNMENT AGENCY FOR LAW ENFORCEMENT). HOMOGENEOUS INDIVIDUAL RIGHT. NON-EXISTENT OMISSION IN RULING. PUBLIC CIVIL ACTION RULED IN FAVOR. [...]Although legal for the vehicle manufacturer to anticipate the launch of a model months before the turn of the year - a common practice in the country - it constitutes a abusive business practice and deceptive advertising and not legal "restyling", to launch and sell the car model of the year as being the next year's car model. After the consumers had purchased these models, the manufacturer stopped making them and launched another one with new features, in the same year as the year's next model, not even the previous one in the following year [...]" BRAZIL. High Court of Justice (STJ). Special Appeal n. 1.342.899/RS. Reporting Judge: Min. Sidnei Beneti, tried on Aug 20, 2013. See also "SPECIAL APPEAL. CONSUMER RIGHTS. PUBLIC CIVIL ACTION. *MINISTÉRIO PÚBLICO* (BRAZILIAN GOVERNMENT AGENCY FOR LAW ENFORCEMENT). STANDING. AUTOMOBILE. LAUNCHING OF TWO DIFFERENT MODELS IN THE SAME YEAR, BOTH ADVERTISED AS THE NEXT YEAR'S MODEL. DECEPTIVE ADVERTISMENT.CHARACTERIZATION. [...] it constitutes a deceptive advertising to launch and sell the car model of the year as being the next year's car model." BRAZIL. High Court of Justice (STJ). Special Appeal n. 871.172/SE. Reporting Judge: Min. Maria Isabel Gallotti, tried on June 14, 2016.

experienced during the Great Depression in the US (1929-1939), it later became a serious problem to be confronted by efficient legal regulations, either by the awareness of society and the Courts themselves on the need to avoid damage to the environment, or by the principle of good faith, through contractual principles and rules of law.

References

- Abril. "Google permite que empresas leiam mensagens de usuários do Gmail, diz WSJ". Available on: <<https://veja.abril.com.br/economia/google-permite-que-empresas-leiam-mensagens-de-usuarios-do-gmail-diz-wsj/>>. Accessed on Aug 27, 2018.
- Accum, Fredrick. "A Treatise on Adulterations of Food, and Culinary Poisons". London: Longman, Hurst, Rees, Orme and Brown (1820).
- Babbage, Charles. "On the Economy of Machines and Manufactures". London: Charles Knight, pall-mall east (1832).
- Baldé, C.P.; Forti, V.; Gray, V., Kuehr, R.; Stegmann, P. "The Global E-waste Monitor". United Nations University (UNU), International Telecommunication Union (ITU) & International Solid Waste Association (ISWA), Bonn/Geneva/Vienna (2017).
- Baudrillard, Jean. "A sociedade de consumo". Lisboa: Edições 70 (2007).
- Bauman, Zygmunt. "Consuming Life". Cambridge: Polity Press (2007).
- Bessa, Leonardo Roscoe. "Vício do Produto e do Serviço". *In*: Benjamin, Antônio Herman V.; Marques, Claudia Lima; Bessa, Leonardo Roscoe. "Manual de direito do consumidor". 5. ed. rev., atual. e ampl. São Paulo: Editora Revista dos Tribunais (2013).
- Brasil. Lei n. 8.078, de 11 de set. de 1990. Planalto. Available on: <http://www.planalto.gov.br/ccivil_03/LEIS/L8078.htm>. Accessed on Aug 27, 2018.
- _____. Projeto de Lei n. 5.367 de 2009. Câmara dos Deputados. Available on: <<http://www.camara.gov.br/proposicoesWeb/fichadetramitacao?idProposicao=437370>>. Accessed on Aug 27, 2018.
- _____. Projeto de Lei n. 3.472/2012. Câmara dos Deputados. Available on: <<http://www.camara.gov.br/proposicoesWeb/fichadetramitacao?idProposicao=537785>>. Accessed on Aug 27, 2018.
- _____. High Court (STJ). Civil Procedure n. 984.106/SC. Reporting Judge: Luis Felipe Salomão, tried on Oct 4, 2012.
- _____. High Court of Justice (STJ). Special Appeal n. 1.342.899/RS. Reporting Judge: Min. Sidnei Beneti, tried on Aug 20, 2013.
- _____. High Court of Justice (STJ). Special Appeal n. 871.172/SE. Reporting Judge: Min. Maria Isabel Gallotti, tried on June 14, 2016.
- Chase, Stuart. "The tragedy of waste". New York: The Macmillan Company (1925).
- Curitiba. First Court of Civil Appeal. Unnamed Appeal (Recurso Inominado) n. 0018841-39.2015.8.16.0182. Reporting Judge: Fernanda de Quadros Jorgensen Geronasso, tried Mar 21, 2017.
- _____. First Court of Civil Appeal. Unnamed Appeal (Recurso Inominado) n. 0007460-97.2016.8.16.0182. Reporting Judge: Fernanda de Quadros Jorgensen Geronasso, tried on Feb 15, 2017.
- Daily Mail. "Apple now facing EIGHT class action lawsuits after admitting it DOES slow down old iPhones to save battery life". Available on:

- <<http://www.dailymail.co.uk/sciencetech/article-5215793/Apple-facing-EIGHT-lawsuits-iPhone-slowdown.html>>. Accessed on Aug 27, 2018.
- Debord, Guy. *A sociedade do espetáculo*. Tradução de Estela dos Santos Abreu. Rio de Janeiro: Contraponto (1997).
- Estadão. “Como o Facebook coleta e usa dados de quem não é usuário da rede social”. Available on: <<https://link.estadao.com.br/noticias/empresas,como-o-facebook-coleta-e-usa-dados-de-nao-usuarios-da-rede-social,70002272050>>. Accessed on Aug 27, 2018.
- European Economic and Social Committee (EESC). “Towards more sustainable consumption: industrial product lifetimes and restoring trust through consumer information”. Available on: <<https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/towards-more-sustainable-consumption-industrial-product-lifetimes-and-restoring-trust-through-consumer-information#downloads>>. Accessed on Aug 27, 2018.
- _____. *Obsolescence Project: New attitudes towards consumption - Related Events*. Available on: <<https://www.eesc.europa.eu/en/our-work/publications-other-work/project/obsolescence-project-new-attitudes-towards-consumption/events>>. Accessed on Aug 27, 2018.
- European Parliament (EUROPARL). European Parliament resolution of 4 July 2017 on a longer lifetime for products: benefits for consumers and companies. Available on: <<http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P8-TA-2017-0287&language=EN>>. Accessed on Aug 27, 2018.
- França. *Code de la Consommation*. Legifrance. Available on: <<https://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006069565>>. Accessed on Aug 27, 2018.
- Galbraith, John Kenneth. “The Affluent Society”. London: Hamish Hamilton (1958).
- Harris, Ron; Albin, Einat. “Bankruptcy in light of manipulation in credit advertising – Personal Bankruptcy in the 21st Century: Emerging Trends and New Challenges”. *Theoretical Inquires in Law*, July 2006. Available on: <<http://www.westlaw.com>>. p. 1.
- Hobson, J. A. “Work and wealth: a human valuation”. New York: The Macmillan Company (1914).
- Instituto Brasileiro de Geografia E Estatística (IBGE). “Sistema Nacional de Índices de Preços ao Consumidor: IPCA e INPC”. Available on <https://biblioteca.ibge.gov.br/visualizacao/periodicos/236/inpc_ipca_2017_dez.pdf>. Accessed on Aug 27, 2018.
- Latouche, Serge. “Bon pour la casse: Les déraisons de l’obsolescence programmée”. Brignon: *Les Liens Qui Libèrent* (2012) [E-book].
- London, Bernard. “Ending the Depression Through Planned Obsolescence”. New York [s.n.], (1932).
- Mankiw, N. Gregory. *Principles of Economics*. Mason, Ohio: Thomson/South-Western (2004).
- Marques, Claudia Lima. “Contratos no Código de Defesa do Consumidor: o novo regime das relações contratuais”. 6. ed. rev. atual. e ampl. São Paulo: Editora Revista dos Tribunais (2011).
- Ministério do Meio Ambiente (MMA). “Impacto das embalagens no meio ambiente”. Available on: <<http://www.mma.gov.br/responsabilidade-socioambiental/producao-e-consumo->

- sustentavel/consumo-consciente-de-embalagem/impacto-das-embalagens-no-meio-ambiente >. Accessed on Aug 27, 2018.
- Miragem, Bruno. “Vício oculto, vida útil do produto e extensão da responsabilidade do fornecedor. Comentários à Decisão do REsp 984.106/SC, do STJ”. *Revista de Direito do Consumidor*. São Paulo: Editora Revista dos Tribunais. Ano 22. Vol. 85. Jan-fev. 2013, pp. 325-353.
- _____. “Curso de Direito do Consumidor”. São Paulo: Editora Revista dos Tribunais (2016). [E-book].
- Moraes, Kamila Guimarães. “Panorama atual dos aspectos jurídicos da obsolescência planejada e os novos limites para o século XXI”. *In: Direito Ambiental para o século XXI*. Leite, José Rubens Moratto; Lemos, Patrícia Faga Iglesias. São Paulo: Revista dos Tribunais, 2015 [E-book].
- Packard, Vance. “The Waste Makers”. New York: David McKay Company, Inc. (1960).
- Pouso Alegre. Court of Civil Appeal. Unnamed Appeal (Recurso Inominado) n. 0157861.67.2015.8.13.0525. Reporting Judge: José Hélio da Silva, tried on Nov 10, 2015.
- Raff, Daniel M. G. “Making Cars and Making Money in the Interwar Automobile Industry: Economies of Scale and Scope and the Manufacturing behind the Marketing”. *Business History Review*. vol. 54. n. 4. (1991). pp. 721-753.
- Reuters. “Enquête sur Epson pour obsolescence programmée”. Available on: <<https://fr.reuters.com/article/businessNews/idFRKBN1EM16S-OFRBS> >. Accessed on Aug 27, 2018.
- _____. “CORR-Enquête contre Apple pour obsolescence programmée en France”. Available on: <<https://fr.reuters.com/article/technologyNews/idFRKBN1EX27R-OFRIN> >. Accessed on Aug 27, 2018.
- Rio Grande do Sul. Court of Justice. Civil Appeal n. 71004731089. Reporting Judge: Cleber Augusto Tonial, Third Court of Appeal, tried on Jan 30, 2014.
- _____. Court of Justice. Civil Appeal n. 71004479119. Reporting Judge: Lucas Maltez Kachny, First Court of Civil Appeal, tried on Apr 22, 2014.
- São Bernardo do Campo. 2nd Civil Court. Common Law n. 1024471-98.2015.8.26.0564, tried on Feb 12, 2016.
- Schumpeter, Joseph A. “Capitalism, Socialism and Democracy”. 2. ed. New York and London: Harper & Brothers Publishers (1947).
- Sciences et Avenir. “Obsolescence programmée: Un “indice de réparabilité” prévu pour 2020”. Available on: <https://www.sciencesetavenir.fr/high-tech/obsolescence-programmee-un-indice-de-reparabilite-des-produits-electromenagers-prevu-pour-2020_125581>. Accessed on Aug 27, 2018.
- Slade, Giles. “Made to Break: Technology and Obsolescence in America”. Cambridge, MA: Harvard University Press (2006).
- The Light Bulb Conspiracy. Direção: Cosima Dannoritzer. Barcelona (2010) (52min).