

The concept of damage in tort law: a needed update for cases regarding non-communicable diseases and unhealthy foods and beverages

This white paper discusses the need to update the concept of damage in tort law to address the growing prevalence of non-communicable diseases (NCDs) linked to the consumption of unhealthy foods and beverages. NCDs, responsible for 74% of global deaths, are largely driven by transnational corporations that produce and market harmful products. The current understanding of damage in tort law, shaped during the Industrial Revolution, may be insufficient for addressing the modern, widespread health impacts of these products. The paper proposes re-evaluating and potentially revising the concept of damage to hold corporations accountable for the foreseeable and intentional harms their products cause, thereby ensuring tort law continues to promote compensation and deterrence effectively.

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INTRODUCTION - TORT LAW, NON-COMMUNICABLE DISEASES, AND THE CONCEPT¹ OF DAMAGE²

Non-communicable diseases³ are responsible for the greatest disease burden in the 21st century, equivalent to 74% of all deaths globally.⁴ Such illnesses,⁵ like cancer, diabetes, and cardiovascular diseases, are multi-factored and proven consequences of the consumption of products like unhealthy

1 The present paper primarily uses the word “concept”, here meaning a general idea or understanding of something. However, at some points, it also works with an idea of a “definition”. The main choice is to use the word “concept” because the paper intends to go beyond a mere definition to evaluate a mental representation or a fluid abstract notion that encompasses the essential features or characteristics of the idea of damage. In such a sense, concepts are broader in scope than a definition. Not focusing on law, but evaluating such differences from several viewpoints, See Michael F. Otte, *What is the Difference Between a Definition and a Concept?*, 4 SCIENCE JOURNAL OF EDUCATION 159 (2016).

2 The primary focus of this paper is the discussion of the concept and understanding of damage within the framework of tort law in the common law tradition. As will be clearer during the text, there will be instances where the terminology “damage” may deviate from its conventional legal connotations. Such intentional linguistic shifts are a significant part of the goal of the current work, as will be explained.

3 The term non-communicable diseases refer to a group of conditions that are not mainly caused by an acute infection, are not passed from person to person, result in long-term health consequences, and often create a need for long-term treatment and care. See *generally* Noncommunicable Diseases—PAHO/WHO | Pan American Health Organization, <https://www.paho.org/en/topics/noncommunicable-diseases> (last visited Jun 7, 2023).

4 World Health Organization, Non-communicable diseases, <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases> (last visited Feb 5, 2024).

5 The terms diseases and illnesses are used here as synonyms, but some authors propose a differentiation. See Leon Eisenberg, *Disease and illness Distinctions between professional and popular ideas of sickness*, 1 CULTURE, MEDICINE AND PSYCHIATRY 9–23 (1977).

foods and beverages.^{6,7,8} In addition to being the greatest threat to our health,⁹ they are costly, representing a heavy toll on the wealth of populations.¹⁰ The rise of non-communicable diseases has shifted the overall burden of diseases, resulting in an observable epidemiological transition.¹¹

With such reality as background, this paper is concerned with the vectors¹² or drivers¹³ of non-communicable diseases. Viruses, bacteria, animals, or humans do not transmit non-communicable diseases. The consumption of unhealthy products is the primary source of these illnesses,¹⁴ and due to this fact, some authors have called non-communicable diseases “industrial epidemics”¹⁵ in the sense that the vectors or drivers of such diseases are mainly transnational corporations. Such enterprises engineer, produce, advertise, and sell unhealthy consumer products while also interfering with public health interventions that would reduce their profit margins.¹⁶ In the realm of unhealthy food and beverages, new epidemiological studies are clarifying the links between their consumption and countless harms. A recent umbrella review study presented direct associations of ultra-processed foods to several health indicators, including mortality, cancer, and various aspects of mental, respiratory, cardiovascular, gastrointestinal, and metabolic health.¹⁷

The substantial rise in non-communicable diseases in the past decades urges societies and their legal systems to respond to these new harms.¹⁸ Since the harm caused by the consumption of unhealthy foods and beverages is now well known¹⁹ and the result of structured business enterprises, law scholars and practitioners should consider whether its “vectors” or “drivers” can be held legally responsible for the

6 The focus of the present work is on unhealthy diets, but non-communicable diseases are also a consequence of other risk factors like tobacco use, physical inactivity, and the harmful use of alcohol.

7 See World Health Organization, *Global action plan for the prevention and control of noncommunicable diseases 2013-2020*. (2013), http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R10-en.pdf?ua=1 (last visited Jun 6, 2023); Melissa M. Lane et al., *Ultra-processed food and chronic noncommunicable diseases: A systematic review and meta-analysis of 43 observational studies*, 22 *OBESITY REVIEWS* (2021), <https://onlinelibrary.wiley.com/doi/10.1111/obr.13146> (last visited Jul 25, 2023).

8 For the purpose of the present work, unhealthy foods and beverages are understood as those with an excess of sugar, sodium, or fats, often coinciding with ultra-processed food. Such a concept is an open debate. One approach to the topic uses a so-called nutrient profile, defined as ‘the science of categorizing foods according to their nutritional composition’ and focusing on high contents of sugar, sodium, and fats. See generally Peter Scarborough, Mike Rayner & Lynn Stockley, *Developing nutrient profile models: a systematic approach*, 10 *PUBLIC HEALTH NUTRITION* 330–336 (2007); The other focuses on the degree of processing, dividing foods and beverages into categories of minimally processed, processed, and ultra-processed. Ultra-processed foods are basically a blend of processed foods ingredients, typically combined with sophisticated use of additives to make them edible, palatable, and habit-forming. See generally Carlos A. Monteiro, *Nutrition and health. The issue is not food, nor nutrients, so much as processing*, 12 *PUBLIC HEALTH NUTRITION* 729–731 (2009). For the present work, the concept used is combination of both, but acknowledging that either approach is sufficient to characterize a product capable of producing damage that, in the view presented here, could trigger tort law.

9 See Daniele Piovani, Georgios K. Nikolopoulos & Stefanos Bonovas, *Non-Communicable Diseases: The Invisible Epidemic*, 11 *JOURNAL OF CLINICAL MEDICINE* 5939 (2022).

10 See e. g. Economics of NCDs — PAHO/WHO Pan American Health Organization. <https://www.paho.org/en/topics/economics-ncds> (last visited Jun 7, 2023).

11 See generally M.H. Wahdan, *The epidemiological transition*, 2 *MHJ-EASTERN MEDITERRANEAN HEALTH JOURNAL* 8–20 (1996). However, while the overall trend indicates a decline in the prevalence of many communicable diseases over the past few decades, there remain disparities and challenges that need to be addressed to sustain and further this progress.

12 On a broad definition, a vector is an organism (vertebrate or invertebrate) that functions as a carrier of an infectious agent between organisms of a different species. Anthony James Wilson et al., *What is a vector?*, 372 *PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B: BIOLOGICAL SCIENCES* 20160085 (2017).

13 A driver is here understood as an environmental factor that can be pointed as a cause to the upswing of the epidemiological transition. Boyd A Swinburn et al., *The global obesity pandemic: shaped by global drivers and local environments*, 378 *THE LANCET* 804–814, 806 (2011).

14 World Health Organization, *supra* note 7.

15 See Rob Moodie et al., *Profits and pandemics: prevention of harmful effects of tobacco, alcohol, and ultra-processed food and drink industries*, 381 *THE LANCET* 670–679 (2013); Martin O’Flaherty & Maria Guzman, *Keeping Public Health Clean: Food Policy Barriers and Opportunities in the Era of the Industrial Epidemics*, 3 *AIMS PUBLIC HEALTH* 228–234 (2016).

16 Moodie et al., *supra* note 15 at 671. (“In industrial epidemics, the vectors of spread are not biological agents, but transnational corporations. Unlike infectious disease epidemics, however, these corporate disease vectors implement sophisticated campaigns to undermine public health interventions”).

17 See Melissa M Lane et al., *Ultra-processed food exposure and adverse health outcomes: umbrella review of epidemiological meta-analyses*, 384 *BMJ* (2024).

18 The word harm is usually used in the sense of inflicting pain, suffering, or loss. Damage is used in the sense of an injury that lowers value or impairs usefulness. Also, in the legal environment, “damage” refers to the loss or injury suffered by a person or property. It is often quantified and can be subject to compensation. Therefore, damage is frequently associated with financial compensation. The legal use of the word “harm” generally refers to any injury or damage to a person or property that can be the subject of compensation or not. It is a broader concept encompassing any kind of negative impact or detriment. Harm can be physical, emotional, or psychological. It does not necessarily have to be financial or quantifiable. The text uses the word harm to describe the overall consequences of the consumption of unhealthy foods and beverages, but the main goal is to evaluate the consequences that can result in financial compensation. Hence, it will focus on the concept of damage.

19 See e. g. Sajjad Moradi et al., *Ultra-Processed Food Consumption and Adult Diabetes Risk: A Systematic Review and Dose-Response Meta-Analysis*, 13 *NUTRIENTS* 4410 (2021); Leandro F6rnias Machado de Rezende et al., *Coronary heart disease mortality, cardiovascular disease mortality and all-cause mortality attributable to dietary intake over 20years in Brazil*, 217 *INTERNATIONAL JOURNAL OF CARDIOLOGY* 64–68 (2016); Lane et al., *supra* note 17.

damage their products cause. This paper proposes tort law as one appropriate avenue for this endeavor,²⁰ building on the idea that liability functions as a meaningful mechanism of indirect regulation within legal frameworks.²¹

Tort law deals with duties that individuals and collectivities owe to others.²² In the view of this work, one of such primary duties is noninjury,²³ and the law imposes this obligation through attribution of responsibility,²⁴ deciding whether an actor should be held liable for the costs of harm to another.²⁵ By doing so, tort law awards compensation and promotes deterrence.²⁶

In contemporary society, unhealthy foods and beverages are largely mass-produced. If such products, as a result of a profit-oriented business enterprise, cause health harms to populations en masse, it is thus necessary to evaluate if such harms breach the duty of noninjury and if tort law should then play a part in establishing the responsibility of corporations. To do so, it is important to understand what “damage” means in the context of tort law. This paper aims to assess the concept of damage used in tort law and contrast it with the specific reality of the massive burden of non-communicable diseases, largely derived from the consumption of unhealthy foods and beverages.

The paper starts from the idea that the concept of damage is fluid and, during specific periods of history, has adapted²⁷ to remain useful to the purpose of tort law of promoting compensation and deterrence. The concept of damage was built in other circumstances to respond to other concerns and may nowadays be insufficient to address the type and extent of harm caused by the consumption of several products, among them unhealthy foods and beverages. Hence, the paper analyzes how the concept of damage in tort law was formed throughout history, draws some conclusions about its current understanding, and considers whether such understanding should be updated to accommodate the singularities of the harms derived from said products.

The paper will begin by assessing the concept of damage from two angles, etymological and historical, which will intertwine since etymology and history feed on each other, especially from a collective standpoint.²⁸ In doing so, it will focus on the changes that originated in the Industrial Revolution. During this period, the current concept of damage (at least regarding a meaningful part of tort law in the common law system) was formed.²⁹

Following this etymological and historical analysis of the concept of damage, the paper will then evaluate

- 20 John C. P. Goldberg & Benjamin C. Zipursky, *Tort Law and Responsibility*, SSRN ELECTRONIC JOURNAL, 17 (2013), <http://www.ssrn.com/abstract=2268683> (last visited Jun 11, 2023) (“Tort law is in the foregoing senses a law of responsibility. It allows for persons to be held responsible (or accountable) for having wrongfully injured others”).
- 21 Lawrence O Gostin et al., *The legal determinants of health: harnessing the power of law for global health and sustainable development*, 393 THE LANCET 1857–1910, 1864 (2019). (“Indirect regulation through the tort system such as product liability and tobacco litigation creates disincentives for businesses that make and sell unsafe or hazardous consumer products.”)
- 22 See generally John C. P. Goldberg, *Tort Law at The Founding*, FLORIDA STATE UNIVERSITY LAW REVIEW 85–105, 86 (2011); John CP Goldberg & Benjamin C Zipursky, *Torts as wrongs*, 88 TEX. L. REV. 917 (2009).
- 23 Goldberg, *supra* note 22 at 85. (“[T]hat is, duties to conduct oneself in certain ways toward certain persons so as to avoid injuring them”)
- 24 Goldberg and Zipursky, *supra* note 20 at 3.
- 25 See generally Thomas Kadner Graziano, *The Purposes of Tort Law: Article 10:101 of the Principles of European Tort Law Reconsidered*, 14 JOURNAL OF EUROPEAN TORT LAW 23–41, 27 (2023); Goldberg and Zipursky, *supra* note 22 at 922. (“The business of the law of torts is to fix the dividing lines between those cases in which a man is liable for harm which he has done, and those in which he is not.”)
- 26 Tort law is here understood as a tool with two main objectives: to compensate the victim for the loss suffered and to prevent harm by stating that, under certain conditions, causing damage will trigger liability. See Kadner Graziano, *supra* note 25 at 24; For a more in-depth explanation about deterrence, see TORT LAW AND ECONOMICS, 153 (Michael Faure ed., 2009). (“In engaging with activities, people create externalities, that is, the probability that others will suffer losses as a result of this activity. Tort law is regarded as an instrument that can provide behavioral incentives to the actors, so that they internalize these externalities. In other words, due to the threat of being held liable, actors incorporate the possible losses of others in their decision on how much care to take, and how often to engage in the activity”).
- 27 MAURO BUSSANI & MARTA INFANTINO, *Tort Law and Legal Cultures*, 63 THE AMERICAN JOURNAL OF COMPARATIVE LAW 77–108, 107 (2015) Here using the word harm, but in a context that can also express the idea of how tort law practitioners understand the concept of damage, the author states that “Ideas about what is a harm, who may cause or suffer it, and how it can be compensated or canceled stem from never-ending, dynamic processes. The latter are relentlessly triggered by the accumulation, crystallization, and contestation of knowledge, beliefs, stories, representations, images of justice, structures, social interactions, rituals and practices of giving and taking—involving victims, injurers, and the wider groups and social networks to which they belong. Some of these features endure over time, across people, and throughout different cultures; others do not”.
- 28 See generally ROBERT MCCOLL MILLAR, ENGLISH HISTORICAL SOCIOLINGUISTICS / ROBERT MCCOLL MILLAR (2012).
- 29 LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW 467 (Fourth edition ed. 2019) (“[T]he law of torts was totally insignificant before 1900, a twig on the great tree of law. The common law had little to say about personal injuries brought about by carelessness - the area of law and life that underwent most rapid growth in the century. The modern law of torts must be laid at the door of the industrial revolution, whose machines had a marvelous capacity for smashing the human body. Although many basic doctrines of tort law made their first appearance before 1850, tort law grew most explosively after that date.”).

if the characteristics and effects of harms have changed in the last century, potentially rendering it unfit to address civil liability for mass population harms derived from the consumption of unhealthy foods and beverages.³⁰

Next, the paper considers whether the concept of damage in tort needs an update and, if so, starts a conversation about the way forward. Ultimately, taking the case of unhealthy foods and beverages as a frame of reference, the paper calls for an additional revision of the concept of damage for cases of unhealthy foods and argues that once harm becomes the consequence of repetition, foreseeability, and intent on the part of corporate actors, they breach the duty of noninjury and should trigger the applicability of tort law.

1. THE CONCEPT OF DAMAGE - THE INDUSTRIAL REVOLUTION AND ITS FOOTPRINT

Legal concepts are not only captured by etymology³¹ or history. As a scientific field, law uses a specialized language with concepts and meanings tailored to its domains,³² anchored on the role that a legal instrument seeks to play in society. Law, therefore, is an applied science that uses legal concepts to frame legal knowledge,³³ not only relying on linguistic concepts but also creating meaning toward its particular goals.³⁴

Thus, it is important to briefly understand what reality tort law aims to create and how the concept of damage can influence such goals. Tort law comes from the intrinsic idea that if a civil wrong has been done, law (embedded with a political and sociological decision) must then decide if the resulting harm should be deemed acceptable or not, in which case it would demand a reparation.³⁵ In other words, legal theory defines whether harm is relevant from a legal standpoint.

This role of tort law is usually based on two main theories: corrective justice³⁶ and law and economics.³⁷ Corrective justice evolves from the idea that tort law serves as a correction mechanism for the injustice inflicted by one person upon another.³⁸ It aims to restore equality among the parties involved in a transaction where one unlawfully realizes a gain and another a loss.³⁹ From a law and economics perspective, tort law reassembles gains and losses by calculating the social and economic costs⁴⁰ and deciding what costs⁴¹ will lay with injurers and victims, aiming to reduce the total cost of the damage suffered.⁴²

In dealing with compensation and the distribution of costs, the understanding of damage sets boundaries to duties and rights, including liberty and property, and shapes social arrangements. Duties and rights are built around the limits of what individuals and collectiveness can and cannot do. Whenever society thinks a

30 This does not imply that the concept of damage has not evolved over time within the common law system. Rather, it underscores the notion that such evolution may not have sufficiently advanced to adequately encompass damage stemming from harms like non-communicable diseases.

31 Cambridge University Press, *Etymology* (2023), <https://dictionary.cambridge.org/dictionary/english-portuguese/etymology> (last visited Sep 8, 2023). Etymology is here understood as the study of the history and changing meanings of words.

32 MARTINA BAJČIĆ, *NEW INSIGHTS INTO THE SEMANTICS OF LEGAL CONCEPTS AND THE LEGAL DICTIONARY* 28 (2017) (“[E]ach scientific field or domain has a specific conceptual structure and a set of specific concepts which reflect in its terminology”).

33 *Id.* at 7.

34 Weronika Szeminska, *Translating law into dictionaries, or why one dictionary is not enough*, in *LANGUAGES FOR SPECIAL PURPOSES IN A MULTILINGUAL, TRANSCULTURAL WORLD* 118–125, 121 (2014) (“The language of the law, therefore, does not merely describe a given, independent reality. It creates the said reality.”).

35 See generally Birks Peter, *The Concept of a Civil Wrong*, in *THE PHILOSOPHICAL FOUNDATIONS OF TORT LAW* 31–52 (David G. Owen ed., 1 ed. 1997), <https://academic.oup.com/book/9398/chapter/156219344> (last visited Jun 26, 2023) (“A civil wrong is one in respect of which a citizen may make his own complaint. (...) The word ‘civil’ thus supposes a plaintiff who can claim to have been the victim of a wrong. (...) Harm suffered is that which most obviously gives the individual the *locus standi* to complain of conduct disapproved by the law”).

36 See e.g. Richard L. Abel, *A Critique of Torts*, 449; Christopher H. Schroeder, *Corrective Justice, Liability for Risks, and Tort Law*, 38 *UCLA LAW REVIEW* 143–161 (1990).

37 See e.g. Abel, *supra* note 36.

38 Ernest J. Weinrib, *Corrective Justice in a Nutshell*, 52 *THE UNIVERSITY OF TORONTO LAW JOURNAL* 349, 349 (2002).

39 *Id.* at 350 (“The remedy consists in simultaneously taking away the defendant’s excess and making good the plaintiff’s deficiency. Justice is thereby achieved for both parties through a single operation in which the plaintiff recovers precisely what the defendant is made to surrender”).

40 Astha Srivastava & Ankur Srivastava, *Economic Analysis of Accident Law: A New Liability Rule that Induces Socially Optimal Behaviour in Case of Limited Information*, 17 *REVIEW OF LAW & ECONOMICS* 119–131 (2021) (“From an economic perspective, the rule should induce the parties to adopt levels of precaution that minimize the total social cost of the accident”).

41 See GUIDO CALABRESI, *THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* 22 (1970), <http://www.jstor.org/stable/j.ctt1cc2mmw> (last visited Nov 25, 2022).

42 *Id.* at 22. (“[T]he principal function of accident law is to reduce the sum of the costs of accidents and the costs of avoiding accidents”).

line has been crossed and someone is unduly affected, a damage with legal implications can be said to have occurred.⁴³ Therefore, damage is a concept with several legal implications.⁴⁴

But what exactly is damage and how has this been integrated into law? The Cambridge Dictionary defines damage as a verb and a noun. The verbal form simply describes the act of harming or spoiling something or someone.⁴⁵ The noun relates to the harm and injury itself.⁴⁶ As an example of how the concept is meaningful in the legal environment, it is interesting to note that the plural “damages” is already defined in the dictionary as a monetary reparation for injury or loss.⁴⁷

Even in ancient times⁴⁸ and throughout the ages,⁴⁹ law has addressed damage and sought to provide solutions. Nevertheless, in the past two centuries, most societies have changed their legal understanding of damage. Such transformation is historically attributed to the Industrial Revolution⁵⁰ and the development of our manufacturing processes, with machines replacing handicraft labor.⁵¹ Just as society became exponentially more efficient in producing goods, it also became prolific in producing damage. The use of powerful machines directly impacted the quantity and gravity of harms,⁵² and law was called upon to change the legal treatment of the matter. It is a known phenomenon: law follows history, and in the history of damage, the Industrial Revolution inaugurated an era of an “epidemic of accidents.”⁵³ The proliferation of harms became a fact that impacted society to the point that it claimed a change in tort law.⁵⁴

However, this period was not only marked by the proliferation of damage. The Industrial Revolution was also characterized by injuries occurring during the production phase of industrial processes;⁵⁵ hence, it was no longer a family matter.⁵⁶ Injuries now involved strangers affected by novel and powerful machines powered by coal, steam, and gas. Still, they were secluded to specific impairments, such as the loss of a limb and individualized deaths in events involving mostly a labor relationship.

Therefore, although harms started to occur on constant and elevated ratios, they were essentially a repetition of similar injuries that a group of identifiable persons suffered due to a specific interaction with a given product or manufacturing process.⁵⁷ Even so, the transformation was noticeable, and significant changes occurred in the legal frameworks of the countries that experienced industrialization. Social welfare, regulation, insurance, and tort laws were reshaped to respond to these new challenges.⁵⁸ Notably, the very concept of damage was integrated into legal frameworks in this historical period.⁵⁹ Therefore, the idea of damage within tort law became intrinsically intertwined with the idea of harm derived from the production of industrialized goods and associated with a drastic event, unpredicted and undesired, that produced an immediate and clear effect on individuals. In a sense, the concept absorbed the zeitgeist of the time.⁶⁰ In

43 *Id.* at 22.

44 THE GOALS OF PRIVATE LAW, 252 (Andrew Robertson & Hang Wu Tang eds., 2009) (“A significant number of recent contributions to this debate have argued that the content of the law of torts depends on the scope of ‘rights’, and have additionally imposed strict conditions as to what can, and cannot, properly be considered a ‘right.’”).

45 Cambridge University Press, *Damage*, CAMBRIDGE DICTIONARY, <https://dictionary.cambridge.org/us/dictionary/english/damage> (last visited Aug 9, 2023) A damage as a verb is defined by the expression “to harm or spoil something.”

46 *Id.* As a noun, the Cambridge Dictionary defines damage as “harm or injury”.

47 *Id.* The plural “damages” is defined as “money paid to someone by a person or organization who has been responsible for causing them some injury or loss”.

48 David Ibbeston, *How the Romans Did for Us: Ancient Roots of the Tort of Negligence*, 26 UNSW LAW JOURNAL 475–514 (2003).

49 See generally Goldberg, *supra* note 22.

50 The term Industrial Revolution here is used as a reference of a period that approximately encompass the time between 1750 and 1913. These periods are defined, more precisely, as the first and second industrial revolutions. See CHARLES. MORE, UNDERSTANDING THE INDUSTRIAL REVOLUTION (2000); and Christopher Kennedy, *The energy embodied in the first and second industrial revolutions*, 24 JOURNAL OF INDUSTRIAL ECOLOGY 887–898 (2020).

51 See e.g. MANSEL G. BLACKFORD & K. AUSTIN KERR, BUSINESS ENTERPRISE IN AMERICAN HISTORY 99 (3rd ed. 1994).

52 FRIEDMAN, *supra* note 29. (“Every legal system tries to redress harm done by one person to another. The industrial revolution added an appalling increase in dimension. It manufactured injury and sudden death, along with profits and the products of machines.”)

53 Goldberg, *supra* note 22 at 85. Referring to Lawrence M. Friedman and stating that “tort became significant when it was first called on to function as a compensation system; that is, as a governmental response (enfeebled by then-predominant commitments to laissez-faire individualism) to the “epidemic” of accidents brought on by the industrial revolution”.

54 See generally Donald G. Gifford, *Technological Triggers to Tort Revolutions: Steam Locomotives, Autonomous Vehicles, and Accident Compensation*, 11 JOURNAL OF TORT LAW 71–143 (2018).

55 G. EDWARD. WHITE, TORT LAW IN AMERICA: AN INTELLECTUAL HISTORY 3 (1980).

56 *Id.* at 79 (“The bulk of accidents during the preindustrial era involved a single person and sometimes family members or close friends”).

57 Gifford, *supra* note 54.

58 Ken Oliphant, *Tort Law, Risk, and Technological Innovation in England*, 59 MCGILL LAW JOURNAL 819–845, 821 (2014).

59 *Id.* at 819 (“Tort law too was obliged to adapt, and its modern contours bear the mark of this history.”).

60 John Fabian Witt, *Toward a New History of American Accident Law: Classical Tort Law and the Cooperative First-Party Insurance Movement*, 114 HARVARD LAW REVIEW 690–841 (2001) (“Americans in the last decades of the nineteenth century experimented with a number of alternative institutional mechanisms for dealing with the problem of industrial accidents. The common law of torts emerged in these years - for the first time - as an accident law regime.”).

short, in the Industrial Revolution, damage was primarily an accident—an accident in the production or the use of a product.⁶¹

Turning again to the Cambridge Dictionary, an accident is something unexpected and unintended,⁶² expressing the idea of something extraordinary, precisely as an outcome of these two subjective characteristics. This definition also states that an accident often produces damage.⁶³

The concepts of damage and accident are connected but differ significantly. While damage has an abstract but closed definition, in the sense of an objective consequence of an injury that lowers value or impairs usefulness, accidents carry a subjective weight, requiring an assessment of willingness and foreseeability. Therefore, for an accident to happen, damage is not enough. It is necessary to add to such damage a prior evaluation of conduct and conclude that, in its origin, the subject did not foresee and intend the result.

Accidents (unintended, unexpected, and, consequently, extraordinary) triggered a revolution in tort law. Since in the Industrial Revolution production became so fast-paced that manufacturers often did not fully comprehend the harms their products could cause, it made sense (even if only from a strictly economic perspective) that damage would be limited to unexpected and unintended events. In fact, the economy was at the core of such a revolution in tort law. In the Industrial Revolution, liability was modified so that it should shape social interactions but not thwart (economic) progress and development, leaving room for the freedom to create and develop business models.⁶⁴ Also, in this period of history, the economic system was concerned with its view of social welfare, which understood the market merely as a relationship between seller and buyer, where supply and demand were enough to regulate product consumption and its consequences organically.⁶⁵ Consequently, damage was originally perceived as a “market accident,” not something inherent to the product itself; otherwise, the market would have likely eliminated the demand for the product, leading to its removal from circulation.⁶⁶

This understanding of damage as an accident also made its way to consumer goods and is nowadays one of the main bases for product liability in the common law.⁶⁷ For instance, the notion of accident is still present and vivid as a meaningful component of product defects.⁶⁸ This does not mean that tort law uses the concept of accidents as the only source of liability. Other areas of tort law also delve into concepts of fraudulent misrepresentation, for example. The argument made here, and in the development of the present work, is that the damage that originates from the actual consumption of products demands an evaluation that resonates with the concept of an accident as something unexpected and unforeseen.

A defect is defined as something that spoils a product, making it not work correctly.⁶⁹ Like the concept of damage, it etymologically conveys an objective characteristic: not functioning properly. However, just as in the case of damage, tort law has its own understanding of defect. One suitable example of the need and form for a defect to trigger tort law in the common law system is the Restatement of the Law⁷⁰ - Products

61 As a few examples, accidents in the industrial workplace, on railways, or caused by motor cars. See Oliphant, *supra* note 58.

62 Cambridge University Press, *Accident*, CAMBRIDGE DICTIONARY, <https://dictionary.cambridge.org/dictionary/english/accident> (last visited Sep 8, 2023). An accident is “something bad that happens that is not expected or intended and that often damage something or injures someone”.

63 Here, again, damage as an injury that lowers value or impairs usefulness. *Supra* note 18.

64 MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW: 1780-1860* 99-100 (1977). (“One of the most striking aspects of legal change during the antebellum period is the extent to which common law doctrines were transformed to create immunities from legal liability and thereby to provide substantial subsidies for those who undertook schemes of economic development.”)

65 See generally TORT LAW AND ECONOMICS, *supra* note 26 at 153.

66 Guido Calabresi, *The Decision for Accidents: An Approach to Nonfault Allocation of Costs*, 78 *HARV. L. REV.* 713 (1965), 718. The author, not specifically describing the Industrial Revolution, but presenting an argument that endures until today, states that “[a]ctivities are made more expensive, and thereby less attractive, to the extent of the accidents they cause. In the extreme cases they are priced out of the market: the market mechanism may thus eliminate an otherwise useful activity because it maims too many.”

67 DAVID G. OWEN & MARY J. DAVIS, *PRODUCTS LIABILITY AND SAFETY: CASES AND MATERIALS* 14 (Eighth edition ed. 2020) (“The law of products liability governs the private litigation of product accidents”).

68 *Id.* at 14. (“Operating ex post, after a product accident has occurred, its rules define the legal responsibility of commercial sellers for physical harm caused by product defects and safety misrepresentations”).

69 Cambridge University Press, *Defect*, CAMBRIDGE DICTIONARY (2023), <https://dictionary.cambridge.org/dictionary/english/defect> (last visited Sep 8, 2023). A defect is “a fault or problem in something or someone that spoils that thing or person or causes it, him, or her not to work correctly”.

70 Cornell Law School, *Restatements of the Law*, [https://www.law.cornell.edu/wex/restatement_of_the_law#:~:text=Restatements%20of%20the%20Law%2C%20aka,ALI\)%20to%20clarify%20the%20law](https://www.law.cornell.edu/wex/restatement_of_the_law#:~:text=Restatements%20of%20the%20Law%2C%20aka,ALI)%20to%20clarify%20the%20law.). (last visited Jul 4, 2023) (“Restatements of the Law, aka Restatements, are a series of treatises that articulate the principles or rules for a specific area of law. They are secondary sources of law written and published by the American Law Institute (ALI) to clarify the law. Restatements currently exist for twenty areas of law such as Contracts, Law Governing Lawyers, and Torts. Statements about the law that come from unofficial commentators without authority to set legal rules in the relevant jurisdiction. Common examples include law-review articles and treatises. Although secondary authority may be persuasive, it is never mandatory”).

Liability,⁷¹ from the United States of America, which indicates that product defects are the source of product liability and can come from manufacturing, design, and inadequate warnings.⁷² Regarding manufacturing and design,⁷³ a product is considered defective when it departs from its intended project or if foreseeable risks could be mitigated or avoided by a reasonable alternative design.⁷⁴ A manufacturing defect arises when a product differs from the other products in the assembly line, making a specific product a possible cause of harm. In contrast, in a design defect, the product in question does not differ from all others produced, and every product can cause damage.⁷⁵ However, both the concept of manufacturing and design defects are tied to the idea that product defects are the consequence of accidental harm.⁷⁶ Beginning in the Industrial Revolution and even throughout the development of tort law in the past century,⁷⁷ the notion of accidents has shaped the understanding of tort law.⁷⁸

Just like an accident, the concept of product defect used by tort law has the objective characteristic of a physical imperfection⁷⁹ in the project or the manufacturing process but also carries a subjective weight, requiring an assessment of intent and foreseeability.^{80,81}

Therefore, when product consumption leads to damage, it is still very much linked to the idea of an accident, restated as a consequence of a defect. This significantly impacts product liability in the food environment. When addressing damage derived from the consumption of foods and beverages, the literature limits its application to cases like food poisoning⁸² and food-borne contagious diseases,⁸³ building on the narrow concept of defect understood as an accident and its consequences. The main problem of linking damage to the concept of defect and accident is that this appears to limit the scope of tort law by not encompassing possibly the majority of the harms caused by unhealthy foods and beverages—non-communicable diseases.⁸⁴

71 Regarding product liability there have been, so far, three restatements, the last and current one issued in 1997. THE AMERICAN LAW INSTITUTE, RESTATEMENT, THIRD, TORTS: PRODUCTS LIABILITY (1997).

72 Victor E. Schwartz, *THE "RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY": A GUIDE TO ITS HIGHLIGHTS*, 34 TORT & INSURANCE LAW JOURNAL 85-100, 88 (1998). ("The new Restatement rejects the singular definition of defect found in section 402A of the Restatement (Second) of Torts. Section 2, the core section of the new Restatement, sets forth three exclusive categories of defect: A product liability claim may be based on (1) an alleged manufacturing defect; (2) an alleged defect in design; or (3) an alleged defect based on inadequate warnings.")

73 Since inadequate warnings are not the focus of the present work because an "adequate warning", in the views expressed here, does not transform a product that causes damage into a harmless product. See Howard Latin, *Good warnings, bad products, and cognitive limitations*, 41 UCLA L. REV. 1193 (1993).

74 THE AMERICAN LAW INSTITUTE, *supra* note 71 at 2.

75 FRANK J. VANDALL, *A HISTORY OF CIVIL LITIGATION: POLITICAL AND ECONOMIC PERSPECTIVES* 91 (2011).

76 Goldberg and Zipursky, *supra* note 22 at 926-927. (For several reasons, however, contemporary tort theories that see Torts as loss-allocation law tend also to see it as law for allocating losses arising out of accidents. First, the most notable expansions of tort liability for losses in the modern era have occurred in part because of the increase in accidental injuries. Second, one's perception of the importance of an area of law, and the source of that importance, is related to what one thinks it does. If tort law is fundamentally about permitting persons to shift the costs of their injuries to others, then those areas in which there is a pronounced need to have the costs of injuries shifted will figure especially prominently in thinking about what the law is. Third, when the fundamental question in Torts is posed as the question of when to shift losses, instances of intentional infliction of physical harm seem trivially easy and thus really require no attention: virtually everything interesting in the subject area involves cases in which a loss is caused accidentally.)

77 *Id.* at 923. ("By the mid-1960s, with scholarly attention squarely on automobile accidents, the linkage of the idea of Torts as law for loss allocation to the idea of tort law as accident law was transformed from an already strong tendency to an axiom.")

78 *Id.* at 917. (As it tends to be taught today, Torts is "accident-law-plus." Its most noted chestnuts involve claims for negligence or strict liability. Accidents - in the sense of unintended outcomes - are even at the center of the most commonly taught intentional tort cases.")

79 David A. Fischer, *Products Liability—The Meaning of Defect*, 39 MISSOURI LAW REVIEW 339-362, 373 (1974).

80 The requirement of a defect in a such meaningful part of product liability is spread worldwide. For example, the European Union sets product liability rules on these premises. See Council of the European Union, *Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products* (1985), <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:31985L0374&qid=1688559961145> (last visited May 7, 2023) ("Article 1. The producer shall be liable for damage caused by a defect in his product").

81 Even in civil law countries, the situation is similar. The legal frameworks often mention the need for a defect in the product to give rise to liability. See ESTATUTO DEL CONSUMIDOR, (2011), http://www.secretariasenado.gov.co/senado/basedoc/ley_1480_2011.html (last visited Dec 21, 2022) (Col); CÓDIGO DE DEFESA DO CONSUMIDOR, LEI 8,078, DE 11 DE SETEMBRO DE 1990, (1990), http://www.procon.rj.gov.br/procon/assets/arquivos/arquivos/CDC_Novembro_2014_Ingles.pdf (last visited Dec 21, 2022) (Braz).

82 See e. g. TIMOTHY D. LYTTON, *OUTBREAK: FOODBORNE ILLNESS AND THE STRUGGLE FOR FOOD SAFETY* (2019).

83 See e. g. Pia Acconci, *The Contribution of International Organizations to Food Security and Safety through a Healthy Environment*, in ENVIRONMENTAL HEALTH IN INTERNATIONAL AND EU LAW: CURRENT CHALLENGES AND LEGAL RESPONSES 215-229 (Stefania Negri ed., 2020); Charles Robert Janes, *Products Liability—The Test of Consumer Expectation for Natural Defects in Food Products*, 37 OHIO STATE LAW JOURNAL 634- (1976).

84 Lane et al., *supra* note 17; Piovani, Nikolopoulos, and Bonovas, *supra* note 9.

2.

THE MAIN HARMS CAUSED BY UNHEALTHY FOODS AND BEVERAGES IN AN AGE OF INDUSTRIAL EPIDEMICS - COMPLEX, DIFFUSE, INTENDED (ACCEPTED), AND PREDICTABLE

As described in the previous chapter, despite having uneven definitions, the legal concepts of damage, accidents, and product defects got entangled in the past when it came to tort law. This situation endures until the present.⁸⁵ In tort law, damage is mostly a consequence of accidents,⁸⁶ a concept that in product liability is commonly narrowed as an outcome of the consumption of a defective product containing an undesired and unforeseen flaw.⁸⁷ It is forceful to recognize that when such terms gained this legal meaning during the Industrial Revolution and the following decades, they did not present much more than an etymological confusion. The practical effects of such use of terms were minimal because, as history points out, the damage addressed by tort law at that time was, in fact, originated from accidents.⁸⁸ However, the main objective of the present paper is to evaluate if such entanglement can be problematic in current times once steam engines, railroads, industrial boilers, and automobiles are no longer our fundamental problems.

In the past two centuries, societies appear to have experienced massive transformations in the type of harm that populations endure. There was an exponential growth in the number of individuals affected by labor conditions and products in the industrial era. However, there were also other changes that reshaped, in the past decades, the form, extent, and intricacy of harm caused by various products. Accidents with significant consequences that affect a large number of people still exist. Trains derail, toxic products leak, and big explosions occur. Such accidents, singular events that can happen from time to time, harm many individuals but are no longer the leading cause of death and disease.⁸⁹ By far, the most impactful health harms are currently those attributable to non-communicable diseases,⁹⁰ making it relevant to analyze them: how are these harms occurring, who is producing them and with which intent, and which parts of society are bearing the resulting burdens.

The evolution of the industrial process greatly impacted manufacturers' knowledge of the products they produce. At least for the purposes of the present paper, there is a major difference between unexpected harms that could come from a novel and complex industrial process in the mid-1800s and the foreseeable⁹¹ and avoidable consequences that, nowadays, are the non-communicable diseases that can result from the consumption of ultra-processed foods with high contents of added sugar, sodium, and fat.⁹²

Unhealthy foods and beverages, in the current times, are a consequence of business design,⁹³ anchored on careful engineering and scientific knowledge⁹⁴ directed at the production of harmful products.⁹⁵ Hence, the main harms that originate from the consumption of such products are not a consequence of accidental

85 Goldberg and Zipursky, *supra* note 22 at 917.

86 See generally CALABRESI, *supra* note 41; OWEN AND DAVIS, *supra* note 67 at 14.

87 See generally Joel González Castillo, *PRODUCTS LIABILITY IN EUROPE AND THE UNITED STATES: RESPONSABILIDAD POR PRODUCTOS DEFECTUOSOS EN EUROPA Y ESTADOS UNIDOS*, 39 REVISTA CHILENA DE DERECHO 277-296 (2012).

88 Goldberg and Zipursky, *supra* note 22 at 926-927; FRIEDMAN, *supra* note 29; Gifford, *supra* note 54; Oliphant, *supra* note 58.

89 As an example, a study from 2016 found that the causes of death, from 1980 to 2016, from injuries only represented 8,43%. Mohsen Naghavi et al., *Global, regional, and national age-sex specific mortality for 264 causes of death, 1980-2016: a systematic analysis for the Global Burden of Disease Study 2016*, 390 THE LANCET 1151-1210 (2017).

90 The same aforementioned study from 2016 found that the causes of death, from 1980 to 2016, occurred due to non-communicable diseases in 72,3% of the cases. *Id.*; David Stuckler et al., *Manufacturing Epidemics: The Role of Global Producers in Increased Consumption of Unhealthy Commodities Including Processed Foods, Alcohol, and Tobacco*, 9 PLOS MEDICINE e1001235 (2012); Non-communicable diseases, (2021), <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases> (last visited Nov 24, 2021).

91 Scarborough, Rayner, and Stockley, *supra* note 8; Monteiro, *supra* note 8; World Health Organization, *supra* note 7; World Economic Forum, *The Global Economic Burden of Non-communicable Diseases* (2011), https://www.weforum.org/reports/global-economic-burden-non-communicable-diseases/?DAG=3&gclid=CjwKCAjwwb6lBhBJEiwAbuVUSuSIT750sfYzayDVG4LB8iWASuqC1tr522LJoNtrqGpz7AdUPGaqcRoCinsQAVD_BwE (last visited Jul 13, 2023).

92 Xiaojia Chen et al., *Consumption of ultra-processed foods and health outcomes: a systematic review of epidemiological studies*, 19 NUTRITION JOURNAL (2020), <https://nutritionj.biomedcentral.com/articles/10.1186/s12937-020-00604-1> (last visited Jul 19, 2023); Leonie Elizabeth et al., *Ultra-Processed Foods and Health Outcomes: A Narrative Review*, 12 NUTRIENTS 1955 (2020); Lane et al., *supra* note 17.

93 NICHOLAS FREUDENBERG, *LETHAL BUT LEGAL: CORPORATIONS, CONSUMPTION, AND PROTECTING PUBLIC HEALTH* 34 (2014) ("The recent history of these three very different industries - food, tobacco, and alcohol - show how everyday business decisions in product design, marketing, and distribution, combined with corporate lobbying, campaign contributions, and business-friendly trade agreements, have led to increases in avoidable illness and preventable deaths").

94 *Id.* at 35. ("What is new is the vast and unprecedented array of scientific, technical, marketing, economic, legal, and political powers that modern corporations have accumulated")

95 MICHAEL MOSS, *SALT, SUGAR, FAT: HOW THE FOOD GIANTS HOOKED US* 21 (1st ed. 2013) ("Salt, sugar, and fat are an entirely different game. Not only are they not accidental contaminants like E. coli, the industry methodically studies and controls their use." To provide one example, the author mentions: "To make a new soda guaranteed to create a craving requires the high math of regression analysis and intricate charts to plot what industry insiders call the "bliss point," or the precise amount of sugar or fat or salt that will send consumers over the moon".).

contaminants and are not unforeseen or unintended.⁹⁶ At the same time, these harms are not a result of a specific event defined in time and space. They result from several decisions made before, during,⁹⁷ and after⁹⁸ the production phase, aiming at the substantial profits⁹⁹ of business enterprises focusing on making hyper-palatable products¹⁰⁰ and increasing sales. The vectors of non-communicable diseases are mainly highly organized transnational corporations¹⁰¹ that produce, among other commodities, unhealthy foods and beverages, widespread consumer goods that, at the current state of science, have foreseeable consequences on individual and populational scales.¹⁰²

However, not only foreseeability, knowledge, and intent have changed in the past half-century. When addressing product consumption in the context of unhealthy foods and beverages, the extent of damage also shifts and now enters the category of mass damage,¹⁰³ a type of damage that goes beyond non-communicable diseases, addressed by mass torts.¹⁰⁴ Such harms are also a consequence of industrialization, but now on a massive scale¹⁰⁵ and unprecedented complexity¹⁰⁶ that originates from the consumption or use of widely commercialized products like prescription drugs, medical devices, and tobacco.¹⁰⁷ In the food space, the changes began in the 19th century, with improvements in technologies for the production and distribution of goods that resulted in a transformation of our food systems towards ultra-processed products.¹⁰⁸ Such foods and beverages cost less, travel far, and have long expiration dates.¹⁰⁹ All these characteristics, consequences of product design, have an impact on the non-communicable diseases epidemic.

The Industrial Revolution presented societies with new types of damage that were not addressed among family members.¹¹⁰ Even so, damage was commonly inflicted on individuals, having, at most, effects on close family and friends.¹¹¹ Nowadays, the main health harms are a consequence of our complex and globalized

96 Unhealthy foods and beverages, from a classification that takes into account an excess of sugar, sodium, or fats, or even based on the understanding that evaluates the degree of processing, are the consequence of a conscious decision to produce a consumer good with such characteristics.

97 FREUDENBERG, *supra* note 93 at 34.

98 See e.g. Rob Moodie et al., *Ultra-Processed Profits: The Political Economy of Countering the Global Spread of Ultra-Processed Foods – A Synthesis Review on the Market and Political Practices of Transnational Food Corporations and Strategic Public Health Responses*, INTERNATIONAL JOURNAL OF HEALTH POLICY AND MANAGEMENT (2021), http://www.ijhpm.com/article_4050.html (last visited Jul 19, 2023); Moodie et al., *supra* note 15 at 671.

99 Stuckler et al., *supra* note 90 at 1. (“Unhealthy commodities are highly profitable because of their low production cost, long shelf-life, and high retail value”)

100 FREUDENBERG, *supra* note 93 at 4. (““Hyperpalatable foods” have been defined as foods that provide eaters with greater physiological and psychological rewards than traditional foods”.)

101 In a sense of formal authority and organized structures. See Tracy Isaacs, *Collective Moral Responsibility and Collective Intention*, 30 MIDWEST STUDIES IN PHILOSOPHY 59-73, 73 (2006).

102 See e. g. Moodie et al., *supra* note 15; FREUDENBERG, *supra* note 93 at 4. (“The use of science and technology in the development, marketing and retailing of fast foods, children’s cereals, and sweetened beverages shows how food companies use new knowledge to increase consumption of products that are most closely linked to growing global epidemics of obesity, diabetes, and other diet-related diseases”).

103 The term “mass damage” is less common than the term “mass torts” but is more accurate to the purpose of the present paper. In the present scope, mass damage is understood as an act (or acts) that results in massified harm to multiple victims, due to mass exposure from consumer products. See e. g. David Rosenberg, *Decoupling Deterrence and Compensation Functions in Mass Tort Class Actions for Future Loss*, 88 VIRGINIA LAW REVIEW 1871 (2002).

104 Paul D Rheingold, *Mass Torts—Maturation of Law and Practice*, 37 PACE LAW REVIEW 617-641, 617 (2017). The term “mass torts” is used here to describe “product liability personal injury cases involving similar injuries from exposure to the same product and resulting in multiple claimants.”

105 RICHARD A. NAGAREDA, MASS TORTS IN A WORLD OF SETTLEMENT I (2007) (“Mass torts are the by-products of industrialization, with its systematized processes for production and sale on an unprecedented scale. As in any complex process, there is a potential for error, however inadvertent. The scale of production and sale simply expands the adverse effects of any error”).

106 Nathaniel Garrett, “Life is the Risk We Cannot Refuse:” A Precautionary Approach to the Toxic Risks We Can, 17 GEORGETOWN INTERNATIONAL ENVIRONMENTAL LAW REVIEW 517-, 518 (2005) (“Rapid developments in technology led to increasingly complex and dangerous products, and improvements in mass markets inevitably exposed more Americans to their risks”).

107 Rheingold, *supra* note 104 at 618.

108 Benjamin Wood et al., *Behind the ‘creative destruction’ of human diets: An analysis of the structure and market dynamics of the ultra-processed food manufacturing industry and implications for public health*, JOURNAL OF AGRARIAN CHANGE, 27 (2023), <https://onlinelibrary.wiley.com/doi/10.1111/joac.12545> (last visited May 17, 2023) (“Bound by the profit motive and propelled by technological change, the global UPF [Ultra-Processed Food] industry arose during the 19th century. Since this time, the industry has been instrumental in transforming capitalist food systems to the extent that many are now far more geared towards the consumption and production of UPFs compared with unprocessed or less processed food products”).

109 Francesco Capozzi et al., *A Multidisciplinary Perspective of Ultra-Processed Foods and Associated Food Processing Technologies: A View of the Sustainable Road Ahead*, 13 NUTRIENTS 3948, 4 (2021) (“The majority of UPFs [Ultra-Processed Foods] available for consumption nowadays have long shelf-life and can be consumed in any place and any time (“ready-to-eat” or “ready-to-heat”)”).

110 WHITE, *supra* note 55 at 79.

111 *Id.* at 16. (“Advances in transportation and industry - mills, dams, carriages, ships - made injuries involving strangers more common. As judges and legal scholars sought to establish a theory of liability for stranger accidents, older notions of neglect proved inadequate, for frequently parties involved in accidents had not had any previous relationship with one another and therefore had not been contemplated as owing one another any civil duties.”)

world where widespread torts¹¹² have transboundary and globalized effects and high penetration power in several layers of society. They are difficult to measure¹¹³ and can be classified as diffuse damage.

Diffuse damage (here relating to product consumption) is a concept that refers to widespread harm that affects a large number of people rather than being limited to a specific and identifiable individual or group.¹¹⁴ Such damage reflects the existence of and the need for protecting diffuse rights and interests.¹¹⁵ As a concept, diffuse damage is present in several parts of the world, with more or less clarity and application in both civil and common law systems.¹¹⁶ Such concept encompasses the idea that collectivities, even if not precisely defined, can also be bearers of enforceable rights¹¹⁷ and that such entitlements are not the mere sum of the rights of individuals but rather an independent category that demands protection.¹¹⁸

Nowadays, non-communicable diseases are a prime example of diffuse harms. For instance, the consumption of ultra-processed foods and beverages results in economic and non-economic burdens to consumers and non-consumers.¹¹⁹ Taxpayers must finance public health systems to treat non-communicable diseases caused by product consumption, as well as other social welfare measures.¹²⁰ The same happens with health insurance and other types of coverage with more expensive premiums.¹²¹ Workers, and especially employers, must absorb the loss of productivity because of illnesses.¹²² Governments must concentrate efforts not only on regulating unhealthy products but also on addressing problems in health systems. Therefore, the consumption of such products affects an unidentifiable number of persons, all linked to each other due to factual circumstances,¹²³ not limited to the actual consumers of unhealthy products.

Moreover, current health harms are diffused not only among individuals but also over time. One of the major characteristics of non-communicable diseases is the long latency periods they take to develop and present symptoms¹²⁴ and the extended period of time in which an individual can suffer from them.¹²⁵ The latent

112 Rheingold, *supra* note 104 at 618.

113 Regarding risks in the contemporary era, but also using these terms to characterize our current world, see EUGENE A. ROSA, ORTWIN RENN & AARON M. McCRIGHT, *THE RISK SOCIETY REVISITED: SOCIAL THEORY AND GOVERNANCE* 73 (2014).

114 José Carlos Barbosa Moreira, *La iniciativa en la defensa judicial de los intereses difusos y colectivos (un aspecto de la experiencia brasileña)*, 2 REVISTA URUGUAYA DE DERECHO PROCESAL, 235 (1992); Diffuse damage can be defined as damage to “a transindividual and indivisible right that belongs to a group of indeterminate people not previously connected, who are linked only by the factual circumstances of the specific instance”. also Antonio Gidi, *Class Actions in Brazil: A Model for Civil Law Countries*, 51 THE AMERICAN JOURNAL OF COMPARATIVE LAW 311, 350 (2003).

115 The differences and similarities of the concepts of right and interest will not be developed here because they are not central to this work. It can be stated that while rights are generally considered to be more absolute and enforceable in the legal system, interests are broader and can refer to a wide range of factors that may affect an entity’s involvement in a given situation. For a more profound analysis, see e. g. T. M. Scanlon, *Rights and Interests*, in ARGUMENTS FOR A BETTER WORLD: ESSAYS IN HONOR OF AMARTYA SEN: VOLUME I: ETHICS, WELFARE, AND MEASUREMENT 68-79 (Kaushik Basu & Ravi Kanbur eds., 1 ed. 2008), <https://academic.oup.com/book/3302> (last visited Dec 10, 2022).

116 Barbosa Moreira, *supra* note 114; J.A. Jolowicz, *Protection of Diffuse, Fragmented and Collective Interests in Civil Litigation: English Law*, 42 THE CAMBRIDGE LAW JOURNAL 222-256 (1983); Alexandra Aragão, *Les intérêts diffus, instruments pour la justice et la démocratie environnementale*, 22 VERTIGO : LA REVUE ÉLECTRONIQUE EN SCIENCES DE L’ENVIRONNEMENT (2015); MIGUEL SÁNCHEZ MORÓN, *LA PARTICIPACIÓN DEL CIUDADANO EN LA ADMINISTRACIÓN PÚBLICA* (1980).

117 Enrique González Mac Dowell, *Judicial Action for the Protection of Collective Rights and its Legal Impact: A Case Study*, 30 THE JOURNAL OF LAW, MEDICINE & ETHICS, SUPPL. SYMPOSIUM: HEALTH, LAW, AND HUMAN RIGHTS: EXPLORING THE... 644-654, 644 (2002).

118 Gidi, *supra* note 114 at 349-354. Not a sum of individual rights, since diffuse rights “belongs to everyone in the community and, at the same time, belongs to no one in particular.”

119 Economics of noncommunicable diseases in the Americas, REVISTA PANAMERICANA DE SALUD PÚBLICA (2018), <http://iris.paho.org/xmlui/handle/123456789/49537> (last visited Jul 13, 2023) (“Global evidence indicates that the high health burden of NCDs translates into significant economic and social costs that threaten to diminish the quality of life of millions of individuals, impoverish families, jeopardize universal health coverage, and increase health disparities within and between countries”).

120 World Economic Forum, *The Global Economic Burden of Non-communicable Diseases* 5 (2011), https://www.weforum.org/reports/global-economic-burden-non-communicable-diseases/?DAG=3&gclid=CjwKCAjwwb6lBhBJEiwAbuVUSuSIT750sfYZayDVG4LB8iWAsuqC1tr522LJoNtrqGpz7AdUPGaqcRoCinsQAVd_BwE (last visited Jul 13, 2023) (“In addition to the tremendous demands that these diseases place on social welfare and health systems, they also cause decreased productivity in the workplace, prolonged disability and diminished resources within families”).

121 *Id.* at 12 (“The business community is also concerned about the rising costs of health and life insurance and about the impact of NCDs on the size and purchasing power of its customer base”).

122 *Id.* at 12. (“Worries focus on the impact of NCDs on workforce productivity via absenteeism, presenteeism (that is, a worker being present, but unable to effectively do the work), the loss of critical skills, and the need to promote employees prematurely when more experienced employees die or can no longer work”).

123 Some authors (and legislations) use the expression “factual circumstances” to address diffuse rights and differentiate them from collective rights. A diffuse right, in such a sense, would be a right that originates from the same factual circumstances, while a collective right would originate from legislation aimed at persons in the same situation (like labor or consumer law). See Gidi, *supra* note 114 at 54-57.

124 Piovani, Nikolopoulos, and Bonovas, *supra* note 9. (“NCDs, also known as chronic diseases, are characterized by non-contagious nature, multiple risk factors, a long latency period, a prolonged temporal course, functional impairment or disability, and incurability (i.e., a complete cure is rarely achieved”).

125 Matthew McKenna & Janet Collins, *Current Issues and Challenges in Chronic Disease Control*, in CHRONIC DISEASE EPIDEMIOLOGY AND CONTROL, 4 (Ross C. Brownson, Patrick L. Remington, & James R. Davis eds., 2nd. ed ed. 1998).

effects of product consumption are a challenge for medical science and the law,¹²⁶ with clear implications in tort law.¹²⁷ The events that lead up to non-communicable diseases tend to happen over years and decades,¹²⁸ and in the case of unhealthy diets, the harmful result is the consequence of a slow and steady pace of consumption of goods that culminates in such diseases.¹²⁹ Therefore, the damage suffered is not the result of one-event occurrences but rather the aggregate consumption of unhealthy products over a lifetime.¹³⁰ This presents a challenge for the legal system, as harms are not nearly as immediate as the ones of the Industrial Revolution¹³¹ or even the more recent harms that helped shape tort law.¹³²

3. THE CURRENT CONCEPT OF DAMAGE AS ACCIDENTS IS INSUFFICIENT TO ADDRESS DIET-RELATED NON-COMMUNICABLE DISEASES

The Industrial Revolution left a mark on our society and our legal systems. It significantly shaped what is understood as damage that should be avoided and compensated.¹³³ However, the fast-paced changes that industrialization started in our society did not stop there — quite the contrary. If, in the Industrial Revolution, harms mainly consisted of accidents and as a result of defective products, and in the subsequent decades, tort law evolved its concepts upon such ideas,¹³⁴ this is not our reality anymore, at least regarding the primary burden of disease and mortality. They are not a consequence of injuries in the production of a product but the ordinary consequence of the consumption of several commercial goods.¹³⁵

The contrast between the legal concept of damage and the reality of non-communicable diseases creates several problems in the application of tort law because the damage is no longer mainly the extraordinary consequence of product defects, cross-cut by the notion of accident, but rather the ordinary consequence of the consumption of mass-produced goods.¹³⁶

The first problem stems from the fact that non-communicable diseases are a consequence of the intrinsic characteristics of several products, among them unhealthy foods and beverages. If damage is no longer understood as an accident, it tends to escape the loss-allocation that tort law is expected to provide.¹³⁷

The second problem stems from the fact that mass harmful products are widespread in society. This massified quality casts doubt on the idea that the market itself could eliminate harmful goods from circulation. As pointed out previously, the concept of damage as accidents is also built upon the idea that a product that maims too many people is organically stripped out of the market by the market itself.¹³⁸ However, when victims are not necessarily all consumers, the lack of a consumer-producer relationship

126 Harvard law review, *Latent Harms and Risk-Based Damages*, 111 HARVARD LAW REVIEW 1505–1522, 1506 (1998) (“Historically, both medical science and the courts acknowledged only harms that could be readily observed.”).

127 Gregory L. Ash, *Toxic torts and latent diseases: the case for an increased risk cause of action*, 38 UNIVERSITY OF KANSAS LAW REVIEW 1087–, 1087 (1990) (“Contemporary tort doctrine is designed to provide redress for readily ascertainable injuries.”).

128 In some cases, the latency period can surpass 50 years. See e. g. J. F. Hu, Y. Y. Liu & Y. K. Yu, *Estimation of latency period of lung cancer*, 16 ZHONGHUA ZHONG LIU ZA ZHI 18–21 (1994).

129 Harvard law review, *supra* note 126 at 1506. (“More recently, advances in the understanding of disease have led to the recognition of “latent harms” - harms that may not develop into symptomatic diseases for significant periods of time.”).

130 Ash, *supra* note 127 at 1087. (“Many of these injuries are not readily apparent after exposure, but can take years to develop, often with no accompanying symptoms to foretell the seriousness of the oncoming disease.”).

131 Allan Kanner, *Emerging conceptions of latent personal injuries in toxic tort litigation*, 18 RUTGERS LAW JOURNAL 343–, 347 (1987). (“These latent injuries, or sources of future harms, are not characterized by the traditional indicia of an injury. For example, latent injuries are not nearly as concrete nor manifest as the clear and immediate harms traditionally arising from defective consumer goods and unsafe workplaces. (...) The traditional indicia of harm or injury seem to include the following: (i) concreteness, (ii) manifestness, (iii) immediacy or acuteness, (iv) discreteness and localized in a presently identifiable manner, i.e. the fact of injury is determinable by (v) adverseness of impact and relation to causal basis, and (vi) symptom-producing agent”).

132 Goldberg and Zipursky, *supra* note 22 at 923.

133 *Id.* at 929. (“With hindsight, one can see how an obsession with accidents prompted mid-twentieth-century jurists to emphasize tort law’s potential as a source of compensation while deemphasizing its foundation in a notion of wrongs.”)

134 *Id.* at 923.

135 Kanner, *supra* note 131 at 346. (“The increasingly destructive nature of modern technology has resulted in unprecedented injuries to workers and the general public. The harm inherent in the present techno-chemical revolution far outstrips that which existed at the outset of either the industrial revolution or the advent of mass-marketing of consumer products”).

136 NAGAREDA, *supra* note 105.

137 Goldberg and Zipursky, *supra* note 22 at 926–327. (“For several reasons, however, contemporary tort theories that see Torts as loss-allocation law tend also to see it as law for allocating losses arising out of accidents”).

138 Calabresi, *supra* note 66.

makes it difficult to influence profitability and contribute to eliminating a product from the market. Understanding damage as rooted in the idea of an accident narrows the scope of tort law in a sense that does not allow the legal system to contemplate all parts of society negatively affected by product consumption.¹³⁹

The third problem stems from the fact that harms are diffused not only when it comes to victims but also in the sense of time. Non-communicable diseases like cardiovascular disease, cancer, diabetes, and chronic respiratory diseases originate from repeated and seemingly insignificant exposures, accumulating from the consumption of unhealthy products over years and decades.¹⁴⁰ This is not to say that exposure to hazardous materials did not exist and affected societies during the Industrial Revolution and beyond, with outcomes manifesting through long latency periods. What has changed is our ability to recognize, through scientific knowledge, the consequences of product consumption and establish that some products can cause several diseases even after long periods of time.¹⁴¹

Despite all these meaningful changes in the characteristics of damage, possibly the most remarkable difference between the harms produced during the Industrial Revolution and the following decades and those produced nowadays with the consumption of unhealthy products relates to intent and foreseeability. In the mid-1800s and 1900s, a lack of knowledge produced harm. Currently, it is precisely knowledge incorporated into product design and engineering that repetitively¹⁴² causes the most impactful harm derived from product consumption.¹⁴³ In the case of unhealthy foods and beverages, the main issues do not derive from explosions or contaminants. They are a consequence of the addition of sugar, sodium, or fats in products, often coinciding with ultra-processing. As such, these issues result from conscious decisions that cannot be considered accidents and do not culminate in the concept of a defective product precisely because they are part of the usual production process. The current era is one of “manufactured risks”¹⁴⁴ and “man-made disasters,”¹⁴⁵ not unforeseen or undesired.¹⁴⁶

Contrary to the understanding of damage as accidents, current harms, in fact, mainly come from the absence of a flaw or an unintended result. Therefore, the main issue is that desire and foreseeability have a direct impact on tort law since they are a fundamental part of the concept of an accident or a defective product. A product has no defect if it is all it was intended to be.¹⁴⁷ Hence, the current reality presents a situation where the absence of defectiveness of a product, as the consequence of an intended result, shields its manufacturer from product liability on that basis—which is the fourth and most pervasive problem. A product is not defective if it does not deviate from the predicted design due to a “decision for defects,”¹⁴⁸ even if the design itself has the unavoidable consequence of causing harm. If no accident has occurred

139 Goldberg and Zipursky, *supra* note 22 at 918. (“Tort is indeed a basic category of law. To see this, however, one must abandon the notion, now deeply entrenched, that tort law is law for allocating the costs of accidents. As its name indicates, tort law is about wrongs.”)

140 Kanner, *supra* note 131 at 348. (“Cancers and other illnesses arising twenty or thirty years after a seemingly insignificant exposure to some hazardous material illustrates the point.”)

141 *Id.* at 348. (“While developing technology brings with it a greater potential for harm, it also enables the scientific breakthroughs that allow us to assess presently, the probable future consequences of our past mistakes.”)

142 In a sense that this mere repetition also promotes a deviation from the concept of accidents, see Frank I. Michelman, *Pollution as a Tort: A Non-Accidental Perspective on Calabresi’s Costs*, 80 THE YALE LAW JOURNAL 647–686, 666–667 (1971) (“It is of the essence of an “accident” that, while the frequency of its occurrence in general form may perhaps be statistically ascertained, its particular incidence is unpredictable. Moreover, as soon as an accident has occurred it is over, and can no longer be prevented. There is, in short, an important sense in which any accident can be called unintentional. This will not, however, be so of a continuing or recurrent discharge of substances into the atmosphere, once someone interprets that discharge as a cause of injury or grievance and chooses to make an issue of it. At that point, a good deal is known about particular incidence: the injurer-victim relationship will have a forward extension in time, prevention will still be possible, and a failure to prevent will be intentional.”).

143 See generally FREUDENBERG, *supra* note 93.

144 ANTHONY GIDDENS & CHRISTOPHER PIERSON, CONVERSATIONS WITH ANTHONY GIDDENS: MAKING SENSE OF MODERNITY 143 (1998) (“Idea of manufactured risk: The best way to explain what is going on is to make a distinction between two types of risk. One I shall call external risk. External risk is risk experienced as coming from the outside, from the fixities of tradition or nature. I want to distinguish this from manufactured risk, by which I mean risk created by the very impact of our developing knowledge upon the world. Manufactured risk refers to risk situations which we have very little historical experience of confronting. Most environmental risks, such as those connected with global warming, fall into this category”).

145 ULRICH BECK, RISK SOCIETY: TOWARDS A NEW MODERNITY 7 (1992).

146 To be clear, the desire relates to profit from the consumption of unhealthy goods, being the damage a subproduct, as will be explained below.

147 González Castillo, *supra* note 87. (“The definition of “defect” in the case of a manufacturing problem is not usually difficult; the product is not what it was intended to be.”)

148 Here, making an analogy with the “decision for accidents”, from Calabresi. Calabresi, *supra* note 66.

because an oblique intention¹⁴⁹ to cause harm is present, no damage that could trigger tort law exists.

The result is a tort law that focuses on deviations in product design and flaws, leaving the usual, intended (accepted), and foreseeable harms from product consumption unattended. Meanwhile, the leading causes of non-communicable diseases from the consumption of unhealthy foods and beverages are not a consequence of imperfection but a specific mixture of ingredients, chemicals, and biological components¹⁵⁰ designed to maximize profit, creating health problems in entire populations. To sum up, harm is no longer, in its great majority, caused by accidents. Consequently, the entanglement of the concepts of damage, accidents, and defects from the Industrial Revolution and the following decades is no longer a mere conceptual issue. Four characteristics of our current damage – foreseeable, intended (accepted), diffused in society, and in time – make the current legal understanding problematic.

4. A NEEDED UPDATE TO THE CONCEPT OF DAMAGE FOR THE CASE OF UNHEALTHY FOODS AND BEVERAGES

If tort law differentiates between acceptable and unacceptable harms¹⁵¹ oriented by a principle of noninjury,¹⁵² the rise of non-communicable diseases puts into question the current understanding of damage, constrained by the notion of accidents. Both from the corrective justice¹⁵³ and law and economics¹⁵⁴ perspectives, tort law uses the idea of damage to determine the existence of a civil wrong¹⁵⁵ and, therefore, promotes deterrence and compensation.¹⁵⁶ The current prevalence ratios of deaths due to accidents¹⁵⁷ and non-communicable diseases¹⁵⁸ demonstrate that we may no longer be in an era of an “epidemic of accidents”¹⁵⁹ but rather a rising epidemic of harm derived from non-communicable diseases.¹⁶⁰ Meanwhile, tort law, a tool that should be at the front gates of this issue to promote deterrence and compensation for those harmed,¹⁶¹ appears to still think of damage in ways better suited to previous decades and centuries. An update to such a concept is thus needed to ascertain tort law as a viable tool to tackle the challenges presented by current times, mainly non-communicable diseases.¹⁶²

It is no longer possible to punish producers who accidentally cause harm to consumers due to an unpredicted flaw in production and not also look closely at the reality of carefully engineered harmful products. An accident only remains an accident until the same manufacturing process is repeated and results in the same damaging outcome,¹⁶³ and tort law cannot indulge subsequent productions of harm as a usual part of the manufacturing system. If damage is a civil wrong, courts should provide remedies that address such reality.¹⁶⁴

149 Oblique intention is a concept usually used in criminal law to evaluate cases where there is a desired consequence (x) and another consequence not desired but known to be inevitable (y). In the present case, making an analogy with tort law, the profit is desired, and the damage is inevitable. Therefore, the damage is intended or, at least, accepted. See e. g. Glanville Williams, *Oblique Intention*, 46 CAMBRIDGE LAW JOURNAL 417-438 (1987).

150 See e. g. Carlos A Monteiro et al., *Ultra-processed foods: what they are and how to identify them*, 22 PUBLIC HEALTH NUTRITION 936-941 (2019).

151 THE GOALS OF PRIVATE LAW, *supra* note 44.

152 Goldberg and Zipursky, *supra* note 22 at 919. (“Looked at through the lens of daily life, Torts is about duties of noninjury owed to others are counted as legal duties and what sorts of remedial obligations one will incur for failing to conduct oneself in accordance with those duties.”)

153 Abel, *supra* note 36 at 449; Schroeder, *supra* note 36.

154 See generally Abel, *supra* note 36.

155 Peter, *supra* note 35; Goldberg and Zipursky, *supra* note 22 at 944. (“Torts are not wrongful acts that happen to cause certain kinds of injuries. They are wrongings. For every tort, there is an inquiry into the nature of the tortfeasor’s actions (whether intentional in some sense or careless), the nature of the setback suffered by the victim, and the connection between the two.”)

156 Kadner Graziano, *supra* note 25 at 24.

157 Naghavi et al., *supra* note 89.

158 *Id.*

159 Goldberg, *supra* note 22 at 85.

160 See generally Piovani, Nikolopoulos, and Bonovas, *supra* note 9.

161 Goldberg and Zipursky, *supra* note 20.

162 Kanner, *supra* note 131 at 345. (“What each such historic event, as well as events of smaller moment, share, is the occurrence of a material change or a normative change in society, or both, that create new possibilities for social conflict. Tort law has and continues to respond to the challenge of preserving order in a changing world”).

163 Michelman, *supra* note 142 at 666-667.

164 Goldberg and Zipursky, *supra* note 22 at 985. (“The law of Torts is not accident law, nor even accident law plus assault and battery. It is what it purports to be: a law of wrongs. Torts are legal wrongs for which courts provide victims a right of civil recourse - a right to sue for a remedy.”)

If law creates meaning with its legal concepts and understandings,¹⁶⁵ the present work proposes to untangle the legal concepts of damage used in tort law from the notion of accidents. Accidents are still issues that need to be addressed. Deviations from product design, flaws in production, and unexpected consequences of product consumption still require the application of tort law principles and commands. However, the conceptual understanding of the facts that should trigger deterrence and compensation cannot be limited to such circumstances. Damage from product consumption must also constitute a civil wrong and be addressed through tort law¹⁶⁶ if ordinary, predicted, and even —to some extent— desired by producers due to an oblique intention.¹⁶⁷

However, untangling damage from the underpinning notion of accidents requires evaluating which harms should indeed have legal repercussions outside the previous boundaries, as not every action that lowers value or impairs usefulness should have legal consequences. It is relevant to evaluate the intent and foreseeability of each one's actions and the results of such actions upon others. In this sense, this paper proposes that the untangling be attached to an analysis of the subjective characteristics that create certain harms in the production phase of unhealthy products: repetition, foreseeability, and intent from producers. Hence, if a product aimed at consumption is mass-produced in a way where its detrimental health consequences are known and to some extent desired, such reality must be addressed through tort law since damage with such subjective characteristics violates the duty of noninjury.

The proposed change could significantly impact not only tort law, but also non-communicable diseases and the unhealthy food and beverage environment. At the current state of the understanding of damage, even when expressly recognizing the possibility of mass harms that could affect not only consumers, tort law doctrine appears to focus on the extraordinary consequences of such products, like the effects of genetically-modified organisms.¹⁶⁸ Again, what triggers liability is primarily an accident, and an accident is not merely damage but damage as a consequence of an unforeseen and undesired result, understood as product defectiveness.¹⁶⁹

Moreover, the studies and regulations on the food space, even when aiming at or relying on a comprehensive analysis involving health and its social, political, and legal implications, still focus on specific characteristics and extraordinary consequences to individuals.¹⁷⁰ The understanding of harms from mass-produced food and beverages not only as accidents can promote a significant change in this landscape of carefully designed foods and beverages with harmful characteristics artificially added to such products.¹⁷¹ Tort law will be able to address the main vectors of non-communicable diseases better, deciding if compensation and deterrence are due and allocating¹⁷² damage.

Tort law is complex, and the consumption of usually unhealthy products is one of its most controversial topics.¹⁷³ The evaluation and attribution of legal consequences are complicated and multi-factored. Among countless other situations, the actions of producers, consumers, and non-consumers must be taken into account. Assumption of risk¹⁷⁴ and causation¹⁷⁵ are just two examples of immense research topics that need to be addressed before reaching a conclusion about the role of tort law in relation to unhealthy

165 Szeminska, *supra* note 34 at 121.

166 Goldberg and Zipursky, *supra* note 22 at 936. (“Conceived of as wrongs, the various torts seem not to have any common characteristics. Some involve intentional injuries, others concern accidents.”)

167 Here, again, as in a desire for profit and an acceptance of damage. Williams, *supra* note 149.

168 DAMAGE CAUSED BY GENETICALLY MODIFIED ORGANISMS: COMPARATIVE SURVEY OF REDRESS OPTIONS FOR HARM TO PERSONS, PROPERTY, OR THE ENVIRONMENT, (Bernhard A. Koch et al. eds., 2010).

169 Amy J. Vroom, *Fast Food or Fat Food: Food Manufacturer Liability for Obesity*, 72 DEFENSE COUNSEL JOURNAL 56–66, 57 (2005) (“A product is defective in products liability law when, at the time of sale or distribution, it contains a manufacturing defect, is defective in design, or is defective because of inadequate instructions or warnings. More often than not, defective food cases involve claims of manufacturing defects; less frequently, they involve claims of defects in design or failure to warn”).

170 See e. g. Maria Asunción Torres López, *Environmental Impact Assessment: Environmental Health and Food Safety*, in ENVIRONMENTAL HEALTH IN INTERNATIONAL AND EU LAW: CURRENT CHALLENGES AND LEGAL RESPONSES 231–241, 235 (Stefania Negri ed., 2020).

171 Artificially in a sense of not belonging to the original characteristics of such products, but as a consequence of the addition or manipulation of fats, sugar, and sodium and the ultra-processing of products. See Barry M. Popkin et al., *A policy approach to identifying food and beverage products that are ultra-processed and high in added salt, sugar and saturated fat in the United States: a cross-sectional analysis of packaged foods*, 32 THE LANCET REGIONAL HEALTH - AMERICAS 100713 (2024).

172 THE GOALS OF PRIVATE LAW, *supra* note 44; Goldberg and Zipursky, *supra* note 22 at 923, 926–927, 928–929.

173 See e.g. M.G Faure, L.T Visscher & F Weber, *Smart Instrument Mixes to Deal with Legal but Unhealthy Products and Services: An Economic Approach*, 13 EUROPEAN JOURNAL OF RISK REGULATION 1–20 (2022); Elizabeth Weeks, *Healthism in Tort Law*, 12 JOURNAL OF TORT LAW 81–126 (2019); Anne Keirse & Jessy Emaus, *Unhealthy, (Un)Lawful? A Multidimensional Study of Legal but Potentially Lethal Products and Services*, 15 UTRECHT LAW REVIEW 65–69 (2019).

174 See e. g. Kenneth W Simons, *Assumption of risk and consent in the law of torts: a theory of full preference*, 67 BOSTON UNIVERSITY LAW REVIEW 213– (1987).

175 See e. g. PERSPECTIVES ON CAUSATION, (Richard Goldberg ed., 2011).

foods and beverages. However, the concept of damage is at the beginning of every analysis.¹⁷⁶ Without damage understood as a civil wrong,¹⁷⁷ all the other aspects of tort law are not even required to answer the questions they are built to provide. Therefore, the assumption of risks (from producers, consumers, and non-consumers) and causation theories may present different solutions for deterrence and compensation from usually harmful products produced with foreseen and intended (accepted) results. Nevertheless, the current narrow understanding of damage shields transnational corporations from these hard discussions.

5. CONCLUSION

This paper sought to evaluate the concept of damage used in tort law in relation to product consumption, particularly unhealthy foods and beverages, by researching its origins and considering whether an update is needed to respond to the contemporary burden of non-communicable disease.

During the Industrial Revolution, tort law gave a certain meaning to the concept of damage that reflected the characteristics of the harms that were typical then, largely an extraordinary consequence of product consumption. While this served its purpose at that time and still is a necessary approach, the current reality also presents a different situation, shaped mainly by “decisions for damage”¹⁷⁸ from producers, such as in the case of unhealthy foods and beverages.

If a decision-making process based on profit and cost allocation is present, it can be safely affirmed that no unexpected and unintended consequence exists. Looking at today’s modern corporations and the current state of scientific knowledge, there is no doubt that the actions of business enterprises are a consequence of a profit-risk assessment. Corporations are organized and complex structures, competent and obligated to assess the risks of their products.¹⁷⁹ Therefore, the reality is that corporate entities are aware of the impact of their actions and the potential consequences of their behavior. Any ordinary damage caused by their actions cannot be considered an accident.¹⁸⁰ Ironically, because of this awareness about the harms they give rise, the current understanding of damage as mainly product defects, built upon the notion of accidents, shields producers from liability. Hence, the concept of damage needs an update also to address harms that are the consequence of careful and intended design with foreseeable and desired (accepted) harmful consequences¹⁸¹ that are diffused in terms of time and victims.

Further research is necessary to fully evaluate the complex theories of tort law and address the limits and applicability of this legal understanding to products like unhealthy foods and beverages. Assumption of risk and causation must certainly answer some of the questions that will arise. What cannot withstand is the impossibility of even asking such questions just because the damage derived from the product consumption is understood to be relevant from a legal standpoint only for accidents, while non-communicable diseases driven by an industry epidemics continue to create the majority of health harms in society in a way that is not only foreseeable but also designed and engineered as such.

Calabresi once wrote that “[o]ur society is not committed to preserving life at any cost.”¹⁸² Maybe that is the case, but one meaningful step would be to evaluate the current scenario of disease prevalence and non-communicable diseases to consider whether, at least regarding tort law, the harms stemming from unhealthy products are worth another look. The ideas presented here point out that the understanding of damage may be a good place to start.

176 BUSSANI and INFANTINO, *supra* note 27 at 107.

177 Peter, *supra* note 35; Goldberg and Zipursky, *supra* note 22 at 928-929. (“Overwhelmingly, however, allocative models dominate tort theory, and the idea of torts as wrongs is mentioned only as a matter of form or etymology”)

178 Once more, building on the idea from Calabresi, *supra* note 66.

179 Isaacs, *supra* note 101 at 73.

180 See Kendy M. Hess, *The free will of corporations (and other collectives)*, 168 *PHILOSOPHICAL STUDIES* 241-260, 256 (2014).

181 Calabresi, *supra* note 66 at 717. (“Every choice of product and use hides within it a decision regarding safety and expense. The dramatic cases we resolve politically.”).

182 CALABRESI, *supra* note 41 at 18.