

4. AI & Civil Liability

4.1 Description of the issue

When dealing with novel fast-evolving technologies *that are deemed ever more complex, autonomous, capable of learning and modifying themselves, and thus opaque and unpredictable*⁶⁶, it is essential to assess the adequacy of civil liability rules.

However, in order to carry out such assessment, we must be able to identify the object of such assessment, as absent a clear definition of such it comes the impossibility to regulate. This results to be an obstacle, as there is no agreed definition of AI within the scientific community, except from the established fact that AI can have no agency⁶⁷. The difficulty in defining such technologies can be tracked back to the fact that the term is used interchangeably to refer to technologies belonging to a variety of domains: cameras, fintech applications, toothbrushes, medical diagnostic solutions and smart home appliances are just a few examples⁶⁸. The attempts that have been made to draw up a definition of artificial intelligence systems (AIS)⁶⁹, lack the necessary trait to discern across technologies due to the variety of the subject matter. As a result, there is a great deal of confusion regarding the scope of the normative

⁶⁶ Expert Group on Liability and New Technologies (2019). Report on Liability for Artificial Intelligence and other emerging digital technologies. Brussels, European Commission.

⁶⁷ Wagner, G. (2019). "Robot, Inc.: Personhood for Autonomous Systems?" Fordham L. Rev **88**: 591. Also see Bertolini, A. (2020). Artificial Intelligence and Civil Liability. Bruxelles, European Parliament - Committee on Legal Affairs: 1-132.

⁶⁸ Bertolini, A. (2022). "Artificial Intelligence does not exist! Defying the technology-neutrality narrative in the regulation of civil liability for advanced technologies." Europa e diritto privato(2): 369.

⁶⁹ European Commission (2021). Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain union legislative acts. COM/2021/206 final. Brussels, European Commission.

intervention, which poses a considerable challenge in developing appropriate regulation.

4.2 The current legal framework

Given that AIS are not beings but things, and more precisely products, the relevant European legal framework comprises mainly two bodies of norms, namely product safety regulation (§4.3), and product liability (§4.4).

4.3 Cont'd: Product Safety

Within the European Union (EU), product safety legislation is composed by the general rules as set out within the General Product Safety Directive⁷⁰ (the GPSD), and any other product or domain specific rules such as for medical devices⁷¹, toys⁷² or personal protective equipment⁷³ – to give just some examples. Under the general rules provided in the GPSD, it is a requirement to ensure that products⁷⁴ are safe, that consumers are informed of any risk associated to the use of a product – if any – and, to take corrective action in situations where a product is found to be unsafe.

⁷⁰ Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety, OJ L 11, 15.1.2002, 4–17

⁷¹ Regulation (EU) 2017/745 of the European Parliament and of the Council of 5 April 2017 on medical devices, amending Directive 2001/83/EC, Regulation (EC) No 178/2002 and Regulation (EC) No 1223/2009 and repealing Council Directives 90/385/EEC and 93/42/EEC (Text with EEA relevance.) OJ L 117, 5.5.2017, p. 1–175

⁷² Consolidated text: Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys (Text with EEA relevance) Text with EEA relevance.

⁷³ Regulation (EU) 2016/425 on personal protective equipment of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (with effect from 21 April 2018).

⁷⁴ Under art. 2(a) of the GPSD “product” is defined as “*any product - including in the context of providing a service - which is intended for consumers or likely, under reasonably foreseeable conditions, to be used by consumers even if not intended for them, and is supplied or made available, whether for consideration or not, in the course of a commercial activity, and whether new, used or reconditioned.*”

Under art. 2(b) of the GDPS, a product safety is achieved when: “[...] under normal or reasonably foreseeable conditions of use including duration and, where applicable, putting into service, installation and maintenance requirements, does not present any risk or only the minimum risks compatible with the product's use, considered to be acceptable and consistent with a high level of protection for the safety and health of persons, taking into account the following points in particular: (i) the characteristics of the product, including its composition, packaging, instructions for assembly and, where applicable, for installation and maintenance; (ii) the effect on other products, where it is reasonably foreseeable that it will be used with other products; (iii) the presentation of the product, the labelling, any warnings and instructions for its use and disposal and any other indication or information regarding the product; (iv) the categories of consumers at risk when using the product, in particular children and the elderly. [...]”.

In addition, in order to prove conformity, firms may opt for the so-called presumption of conformity with EU legislation when they decide to use harmonized standards⁷⁵. Standards are not binding unlike regulation, directives and national laws. However, their use can make it easier to demonstrate the safety of a machine or product, particularly when it comes to so-called "harmonized" standards. These standards are created upon request of the European Commission, and when manufacturers or other operators use them, it shows that their products adhere to the applicable EU laws. Furthermore, If a product belongs to those for which EU specifications exist, and affixing of the CE marking is mandatory, producers shall assess conformity with all the relevant requirements according to the appropriate procedure. CE marking indicates that the product has indeed been assessed by the manufacturer to check their compliance with the essential safety requirements set out by relevant legislation. Product certification rules thus serve a twofold aim: (i) they ensure high levels of product quality and safety, ultimately

⁷⁵ See art. 3(2) GPSD.

strengthening the users' confidence and protection, and (ii) create uniform procedures and market-conditions, allowing free trading of goods onto the EU market⁷⁶.

4.4 Cont'd: Product Liability

The framework for product safety is essential to ensure that products traded within the union are safe and will remain safe during the whole life cycle. The combination of mandatory guidelines and specification during the manufacturing and marketing phase together with the provision of administrative sanctions for non-compliance, provide for an ex-ante solution to product safety. This is then necessarily complemented⁷⁷ by the ex-post concept of product liability, which specifically addresses the question of who will bear the liability to compensate for a damage caused by products regardless of whether its commercialization was done in conformity with product safety rules.

Indeed, in the EU the Product Liability Directive (PLD)⁷⁸ provides for a horizontal mechanism where a producer will be strictly liable for damaged caused by defective products. As per the recitals in the PLD, the aim of this piece of legislation is that of ensuring consumer protection in an “*age of increasing technicality of a fair apportionment of the risks inherent in modern technological production*” by establishing “*liability without fault on the part of the producer*”. Pursuant to art. 1 of the PLD “*the producer shall be liable for*

⁷⁶ European Commission (2016). The "Blue Guide" on the implementation of EU products rules. [2016/C 272/01](#). Brussels, European Commission.

⁷⁷ As provided by art. 17 of the GPSD, the GPSD shall apply without prejudice to the application of Directive 85/374/EEC. See also Timan, T., R. Snijders, M. Kirova, S. Suardi, M. v. Lieshout, M. Chen, P. Costenco, E. Palmerini, A. Bertolini, A. Tejada, S. v. Montfort, M. Bolchi, S. Alberti, R. Brouwer, K. Karanilokova, F. Episcopo and S. Jansen (2019). Study on safety of non-embedded software. Service, data access, and legal issues of advanced robots, autonomous, connected, and AI-based vehicles and systems: final study report regarding CAD/CCAM and industrial robots. Brussel, European Commission.

⁷⁸ 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, Official Journal L 210 , 07/08/1985 P. 0029 - 0033

damage caused by a defect in his product.”. The producers are identified under art.3(1) of the PLD as “the manufacturer of a finished product, the producer of any raw material or the manufacturer of a component part and any person who, by putting his name, trade mark or other distinguishing feature on the product presents himself as its producer.”. Furthermore, under art. 3(2), importers also assume liability, in that: “without prejudice to the liability of the producer, any person who imports into the Community a product for sale, hire, leasing or any form of distribution in the course of his business shall be deemed to be a producer within the meaning of this Directive and shall be responsible as a producer.”. Art.2 of the PLD then defines products in a very broad sense as “[...] all movables, with the exception of primary agricultural products and game, even though incorporated into another movable or into an immovable. [...]Product’ includes electricity.”.

In relation to the concept of defect as referred to within the PLD, under art.6 of the PLD a product is deemed defective: “[...]when it does not provide the safety which a person is entitled to expect, taking all circumstances into account, including: (a) the presentation of the product; (b) the use to which it could reasonably be expected that the product would be put; (c) the time when the product was put into circulation.”.

4.5 Cont’d: Civil Liability Regime for AI

Spanning out of the conclusion provided by the Expert Group on Liability and New Technologies⁷⁹, on 20 October 2020, the European Parliament (EP), approved and published a report containing a set of recommendations to the Commission on a Civil liability regime for artificial intelligence, thereafter, proposing the adoption of a new regulation (hereinafter CLR)⁸⁰.

⁷⁹ Expert Group on Liability and New Technologies (2019). Report on Liability for Artificial Intelligence and other emerging digital technologies. Brussels, European Commission.

⁸⁰ European Parliament (2020). Civil liability regime for artificial intelligence. European Parliament resolution of 20 October 2020 with recommendations to the Commission

Firstly, under art. 3(a) the CLR provides a definition of AI- systems as being: “[...] *a system that is either software-based or embedded in hardware devices, and that displays behaviour simulating intelligence by, inter alia, collecting and processing data, analysing and interpreting its environment, and by taking action, with some degree of autonomy, to achieve specific goals*”, autonomy identifies under art. 3(b) as being “*the ability to operate by interpreting certain input and by using a set of pre-determined instructions, without being limited to such instructions, despite the system’s behaviour being constrained by, and targeted at, fulfilling the goal it was given and other relevant design choices made by its developer*”.

Secondly, it creates two categories of risk. High-risk AI-system (under art. 4 CLR) as listed in the Annex will carry strict liability, while those not listed in said Annex will be considered low-risk and be governed by a fault-based liability (art. 8 CLR), coupled with a presumption of fault, and enumerated defences to the benefit of the claimant⁸¹.

4.6 Major Challenges

Major concerns arise when one attempts to apply the existing legal framework to emerging advanced technologies and AIS. Some depend upon the general characteristics of existing and applicable legislation, primarily the PLD; some, instead, are specific to advanced technologies.

As per the former, the limited efficacy of the PLD is easily assessed by looking into the collected data regarding its application to date. The limited number of cases decided⁸², as well as the circumstance that they cluster in domains where products are either not too sophisticated

on a civil liability regime for artificial intelligence (2020/2014(INL)). Brussels, European Parliament.

⁸¹ See art. 8(2)(a) and (b) of the CLR

⁸² See Ernst&Young, Technopolis and VVA (2018). Evaluation of Council Directive 85/374/EEC on the approximation of laws, regulations and administrative provisions of the Member States concerning liability for defective products. Brussels, European Commission. for a discussion please allow reference to Bertolini, A. (2020). Artificial Intelligence and Civil Liability. Bruxelles, European Parliament - Committee on Legal Affairs: 1-132.

(namely raw materials), or where a significant non-pecuniary loss is suffered (e.g., pharmaceuticals), typically associated to the infringement of a fundamental right of the user (typically health and life)⁸³, may be explained with the complexity of associated litigation⁸⁴. Indeed, demonstrating defectiveness and the causal nexus between the defect and the damage suffered requires the acquisition of complex and thence costly evidence; such a concern is obviously going to be further exacerbated by increasing technological sophistication of the kind advanced technologies bring about. More broadly, the apparent technological neutrality of the legislation is clearly denied by the strong clustering of litigation in a very few, selected, domains, witnessing its intrinsic inadequacy to provide a general rule, applicable across the board to all sorts of products.

When advanced technologies are considered, instead, increasing automation brings about both additional material complexity, whereby the performance of tasks that used to be the sole competence of a human user is now often shared between humans and machines operating without direct supervision. This, in turn, also brings about the overlapping of different bodies of norms, also with respect to liability, that were not conceived to overlap, leading to the multiplication of potential responsible parties, thence ultimately to cases of alternative causation. To exemplify, in a car accident involving two traditional vehicles either one of the drivers will be responsible. Residually, a – rather clear – malfunctioning in the vehicle might become of relevance, however accounting for a very small percentage of the overall

⁸³ Ernst&Young, Technopolis and VVA (2018). Evaluation of Council Directive 85/374/EEC on the approximation of laws, regulations and administrative provisions of the Member States concerning liability for defective products. Brussels, European Commission.

⁸⁴ Bertolini, A. (2020). Artificial Intelligence and Civil Liability. Bruxelles, European Parliament - Committee on Legal Affairs: 1-132.

occurrences. When increasingly autonomous vehicles are concerned, instead, many more layers of complexity are added. Firstly, the driving task will be shared between the human driver and the machine. With current levels of automation, the human will be in control most of the time, while, in some instances, will relinquish control to the vehicle itself. Even such a choice, to activate the autonomous function, will be that of the human user, and potentially trigger his responsibility for a faulty choice, similarly to the incapacity – eventually due to distraction – to resume control if prompted to do so. Moreover, an autonomous vehicle will also be a connected one. Therefore, the accident might also be due to the road infrastructure or to the faulty connection between that and the automobile. So briefly sketched, the liability framework might point to different forms of responsibility, due to a variety of applicable legal rules, including the fault-based liability of the driver, the – typically strict – responsibility of the owner, the – potentially semi-strict – responsibility of the manufacturer, the – possibly contractual – responsibility of the different service providers involved. The overlap of so many different rules, pointing at equally different responsible parties, increases the cost and complexity of litigation, in particular with respect to the exact assessment of the causal nexus⁸⁵. That, in turn, could lead to a lack of internalization of costs by the parties that are either responsible or best suited to manage and insure against such costs, leaving the burden on the weaker party⁸⁶, eventually discouraging access to justice⁸⁷. Ultimately this could lead to distrust on the side of the users towards advanced

⁸⁵ For a detailed analysis, see Bertolini, A. and M. Riccaboni (2020). "Grounding the case for a European approach to the regulation of automated driving: the technology-selection effect of liability rules." European Journal of Law and Economics: 243.

⁸⁶ Bertolini, A. (2022). "Artificial Intelligence does not exist! Defying the technology-neutrality narrative in the regulation of civil liability for advanced technologies." Europa e diritto privato(2): 369.

⁸⁷ Expert Group on Liability and New Technologies (2019). Report on Liability for Artificial Intelligence and other emerging digital technologies. Brussels, European Commission, Bertolini, A. (2020). Artificial Intelligence and Civil Liability. Bruxelles, European Parliament - Committee on Legal Affairs: 1-132.

technologies, due to the legal risks associated with their uptake, discouraging their penetration in the market⁸⁸.

Within such an overall framework, current product liability rules prove particularly problematic. Indeed, complex and costly litigation of the kind required by the PLD, witnessed already today in less technologically sophisticated domains, are only doomed to worsen as soon as AIS are considered. Apparent technological neutrality will most certainly fail with increasing automation in providing a one-size-fits-all solution to the problem.

Finally, the most recent proposals specifically dedicated to AIS and civil liability (e.g., CLR) seem to move along similar lines, by advancing a horizontal approach to regulation, applicable – despite with different regimes (either strict or fault-based, depending on the anticipated level of risk) – to a very broad notion of AIS. Instead, to, all those domains (e.g., medical malpractice, capital markets and investment law, the liability of professionals, of keepers of things in custody, of owners of vehicles, as providers of consumer products and services, to name a few) are separately regulated with equally different incentive structures and rules. All major criticism that could be brought to said proposals ultimately stems from such a consideration⁸⁹.

4.7 Recommendations

Some very fundamental recommendations may be here formulated, based on the synthetic analysis provided.

⁸⁸ Bertolini, A. and M. Riccaboni (2020). "Grounding the case for a European approach to the regulation of automated driving: the technology-selection effect of liability rules." European Journal of Law and Economics: 243., p. 269

⁸⁹ For a detailed analysis of all potential criticism to the CLR please allow reference to Bertolini, A. (2022). "Artificial Intelligence does not exist! Defying the technology-neutrality narrative in the regulation of civil liability for advanced technologies." Europa e diritto privato(2): 369.

1. Civil liability arising from the use of emerging advanced technologies, including AIS needs to be regulated in as much as it affects the incentives towards the use and uptake of said products and devices.
2. However, the intrinsic technological diversity, as well as the equally different domains of use of technologies, also reflecting on the diversity of the – professional and non-professional – users thereof necessarily require a technology-specific approach to regulation. No one-size-fits-all solution could effectively regulate all AIS, without leading to either the under-protection of certain users – not possessing adequate knowledge and economic resources to initiate litigation – or the over-deterrence of other professional-users in adopting more technologically advanced solutions.
3. Regulatory efforts should be focused on those domains that already demonstrate the likelihood to transition towards higher levels of automation and technological sophistication. Those include, despite not being limited to, the medical profession, road vehicles and capital markets.
4. All regulatory efforts in the domain of civil liability should prioritize the internalization of costs by those that (i) develop and (ii) use the technology considered. This entails focusing on the compensatory nature of liability rules, rather than the exact assessment of responsibility or fault.
5. This in turn entails favoring a one-stop-shop approach whereby the responsible party is clearly identified ex ante, by imposing a strict liability upon that very party, minimizing if not overall eliminating the need to specifically assess the existence of a causal nexus. Alternative causation scenarios need to be radically excluded through such kind of rules.

6. Distribution of costs along the entire value chain are better addressed through secondary litigation, once the victim was compensated.
7. Ex ante investments in safety are better ensured through product safety regulation, rather than ex post liability rules, which show little or no effectiveness in inducing a desired behavior ex ante.

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