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TORTIOUS LIABILITY FOR USING ARTIFICIAL INTELLIGENCE

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Abstract. This article discusses the principles of and premises for liability for damage caused by AI systems. It applies to liability models based on the principles of risk and guilt. It indicates that different groups of entities, e.g. programmers, may be responsible for the creation of AI under the principle of guilt, while producers and merchants may put it into circulation under the principle of risk. The liability of AI system users should be tempered and based on the principle of guilt. This article includes a critical view of the AI Act and the relevant directives. It points out that effective liability for damage should be related to the level of harm caused (harm to a person, human death) and not dependent on whether it was inflicted by a high-risk system or any other AI system.

Keywords: artificial intelligence (AI); AI liability for damage; tort liability for AI systems; liability for artificial intelligence; AI system flaws; product liability; removal of product liability.

GENERAL REMARKS

Seeking a solution to the issue of liability for damage caused by artificial intelligence is related to the implementation of the next stage of development – the so-called fourth industrial revolution. Artificial intelligence can be used in different spheres of life. Its application entails the risk of damage, in particular damage suffered by human beings. Therefore, the notion of legal protection against such phenomena arises. What prompted this contribution was the adoption of the Artificial Intelligence Act by the European Parliament on 13 March 2024 (a regulation on artificial intelligence) and the Parliament's work on the directive proposal on liability for damage caused by AI systems. In this context, the following issues need to be determined: the principles of liability for damage caused by AI, the premises of liability, the group of liable entities and the circumstances exempting liability, as well as the position of the consumer using AI with regard to damage liability.

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1. THE CONCEPT OF AI

Artificial intelligence (AI) is the ability of machines and computer programs to demonstrate human abilities, such as reasoning, learning, planning and creativity [Księżak and Wojtczak 2023. 16].

In general terms, artificial intelligence enables technical systems to perceive their environment, handle what they can perceive and solve problems while they are in operation working towards a specific aim. Descriptively speaking, this phenomenon involves the situation when the computer (an IT system) receives data (prepared and collected by its sensors, i.e. a camera), processes it and provides a response based on the ability of associating facts and drawing conclusions. Systems and devices using AI can modify their behavior to some extent as a result of the analysis of their former actions and autonomous activity, which happens in, e.g., cars, drones[1] or chat GPT. At the same time, it cannot be unanimously declared that at present AI has self-awareness.

The term "artificial intelligence" was proposed and defined for the first time in 1955 by John McCarthy [Różanowski 2007, 109]. Until today, a number of different AI definitions have been formulated. They are descriptive, place emphasis on technical or legal aspects and point out functional aspects, including IT.

In a technical sense, artificial intelligence (AI) is the field of science which deals with problem-solving on the basis of models of knowledge. AI explores the possibilities of human intelligence modelling as well as aspects of logical thinking and conclusion-drawing by machines. The question that arises, however, is to what extent such conclusions may be independent and autonomous [ibid., 111]. AI is part of information science, which tries to explain and emulate intelligent behavior using calculation methods that would make it possible [for machines or systems] to perceive the environment, draw conclusions and act [ibid., 112]. This field is focused on constructing machines and algorithms whose operation bears the attributes of intelligence as they can learn and draw autonomous conclusions.

In a legal sense, AI is the system which enables the performance of tasks that require learning and taking into account new circumstances in the process of solving a given problem and which – to a different extent, depending on the configuration – may operate autonomously and interact with the environment [Zalewski 2020, 2; Staszczyk 2022, 24-30]. Instead of defining artificial intelligence, some authors rather focus on its functional aspects claiming that the aim of AI is to "automate intellectual abilities of humans,

[1] See https://www.europarl.europa.eu/news/pl/headlines/society/20200827STO85804/sztuczna-inteligencja-co-to-jest-i-jakie-ma-zastosowania accessed: 24.07.2024].

such as drawing conclusions, associating facts and selecting information" [Janowski 2019, 24]. In its communication of 2018 "Artificial Intelligence for Europe", the European Commission indicated that artificial intelligence referred to systems that displayed intelligent behavior by analyzing their environment and taking actions – with some degree of autonomy – to achieve specific goals.[2]

In its "White Paper on Artificial Intelligence. A European approach to excellence and trust of 2020", the European Commission indicated that "AI is a collection of technologies that combine data, algorithms and computing power."[3] The European Parliament proposed its own definition of AI[4] and of an AI system.

AI may not be identified with simple algorithms as it has the ability to learn and improve in the future [Księżak and Wojtczak 2023, 18].

2. AI CLASSIFICATION

Artificial intelligence is subject to special classification. There are two categories – the so-called top-down AI and bottom-up AI.[5] The AI Act distinguishes and defines the so-called high-risk AI systems[6] and other systems. High-risk systems are defined partially by referring to an annex to the regulation (Article 6(1) of the AI Act).

People need intelligent machines to create and discover new relationships in the world. AI is applied in such disciplines as medicine, economy, law, creativity or management. The prospect of creating autonomous intelligent machines that could think and make decisions independently is worrisome. The arising concerns regard the unpredictable and unplanned consequences of AI application, including the possibility of damage and the liability related to it. Machine learning and association of facts may result in making wrong or flawed conclusions or decisions (e.g. in autonomous vehicles). Therefore,

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[2] Communication from the Commission, Artificial Intelligence for Europe, COM(2018) 237 final.

[3] White Paper on Artificial Intelligence – A European approach to excellence and trust COM(2020) 65 final.

[4] Article 3(1) of the AI Act defines an AI system as "a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments."

[5] Bottom-up AI systems are designed to carry out tasks as indicated and their capacities are limited by the technology applied, while top-down systems have the capacity to solve any problems and are constructed in a similar way to the human brain. See Rojszczak 2019, 4 (supra note 7).

[6] See footnote 22 for the definition.

the rules of liability need to be determined and the scope of liability should be regulated both for the liable entity and the authorized entity. When liability rules are defined, it is necessary to achieve an adequate balance in the relationship between the interests of the authorized entity – the injured entity and the interests of the entities responsible for the damage resulting from the development, marketing and use of AI.

These reflections are devoted to the modelling of liability foundations in relation to the damage that may arise as a consequence of AI use.

3. AI DAMAGE LIABILITY MODELS IN THE EU LEGISLATION

Legislative work with an aim to regulate AI, including its "ability to cause damage", is in progress at the moment. As it has already been mentioned, the application of AI entails the risk of damage.

The legislative framework which serves as the starting point for these considerations is the European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics.[7] One should also mention the European Parliament resolution of 3 May 2022 on artificial intelligence in a digital age,[8] which defines the essence of new AI solutions and their influence on individual spheres of life and states that it is the beginning of the fourth industrial revolution.

There is also the European Parliament resolution of 20 October 2020 with recommendations to the Commission on a civil liability regime for artificial intelligence, which includes an annex with specific recommendations for the individuals preparing the Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence.[9]

The European Parliament resolution of 2017 adopted Asimov's Laws as the starting point for legal regulations. They provide that (1) a robot (AI) may not injure a human being or, through inaction, allow a human being to come to harm; (2) a robot must obey the orders given it by human beings except where such orders would conflict with the First Law; (3) a robot must protect its own existence as long as such protection does not conflict with the First or Second Law (cf. "Runaround") and (4) a robot may not injure

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[7] European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics, 2015/2103 (INL).

[8] Report on Artificial Intelligence in a Digital Age 2020/2266 (INI).

[9] Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive) 2020/2014(INL); the product definition under directive 85/374/EEC is understood in a broad sense and AI may be a product. Cf. Twigg-Elsner 2021.

humanity or, through inaction, allow humanity to come to harm [Asimov 1943]. These laws are addressed to AI creators, robots and the products of their work. Thanks to the development of science, new entities were created, such as intelligent robots and artificial intelligence.

The direct application of these laws in the development of civil liability for AI led to the proposals of two directives and assumptions for a regulation (the AI Act,[10] which was followed by the regulation of 13 March 2024 awaiting the formal approval of the Council[11]). This regulation is addressed above all to the persons creating and introducing AI systems to the EU market. Considering the fact that the application of AI systems entails risk, it defines AI handling standards and categorizes the risk involved. Unacceptable risk is forbidden and the regulation applies to AI with high and medium-level of risk.

As for directives, the first was a proposal for a directive on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive).[12] Moreover, work is continued on the directive of the European Parliament and the Council on waiving liability for defective products that is to overrule directive 85/374/EWG and include AI systems within its thematic scope.[13]

The proposal for the first directive focuses on evidence simplification when liability is based on the principle of guilt (Article 2(5) of the directive proposal). The injured party may have serious problems with determining the entity responsible for damage. Article 3(1) of the directive proposal provides that a court may issue an order to disclose evidence concerning specific high-risk AI systems[14] which have allegedly caused damage.

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[10] Proposal for a regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act) and amending certain Union legislative acts of 21 April 2021, COM(2021) 206 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206 [accessed: 29.01.2024]. Final version: Regulation (Eu) 2024/1689 Of The European Parliament And Of The Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), Text with EEA relevance, O.J. UE. L. of 2024, item 1689, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401689 [accessed: 25.10.2024].

[11] See https://www.prawo.pl/biznes/ai-act-zasady-korzystania-ze-sztucznej-inteligencji,526385.html [accessed: 23.04.2024].

[12] AI Liability Directive Proposal: https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX%3A52022PC0496&qid=1665410785599 [accessed: 29.01.2024].

[13] See https://www.europarl.europa.eu/RegData/seance_pleniere/textes_adoptes/definitif/2024/03-12/0132/P9_TA(2024)0132_PL.pdf [accessed: 26.02.2024].

[14] Under Article 6(1) of the AI Act, an AI system is considered to be high-risk where both of the following conditions are fulfilled: (a) the AI system is intended to be used as a safety component of a product, or the AI system is itself a product, covered by the Union

Evidence requests are directed to the supplier of the AI system, to the person who is subject to the supplier's obligations defined in Article 24 or Article 28(1) of the AI Act or to the user under the AI Act. Such evidence may be secured (Article 3(3) of the directive proposal). Secondly, under general terms (also the national law), it is required to demonstrate guilt when damage was caused in connection with AI. Thirdly, the alleged existence of a causal relationship in the case of guilt is introduced (Article 4(1) of the directive proposal). For high-risk AI systems defined in the AI Act, in Article 4(4) of the directive proposal, there is an exemption from demonstrating the alleged causal relationship if a respondent can prove that the claimant may obtain a relatively easy access to evidence and expert knowledge sufficient to prove a causal relationship.[15]

In the light of the AI Act, high-risk systems include also those listed in Annex III to the regulation (Article 6 (2) of the AI Act), such as biometric identification systems, systems for emotion recognition to evaluate and recruit employees or polygraphs used by the public authorities. The catalogue is closed, but it can be updated by the European Commission (AI *numerus clausus*). It is also indicated that high-risk systems should include: unmanned aircraft, autonomous vehicles, autonomous traffic management systems, autonomous robots and autonomous appliances used to clean public space. In this regard, it is proposed to extend liability based on the principle of risk to include AI systems within the scope of liability for a hazardous product, an aspect to be further explored.

4. HOW TO SHAPE LIABILITY FOR AI?

The issue of liability for AI may be analyzed from the perspective of determining the entity responsible for damage caused by AI as well as from the perspective of liability regimes and rules applicable to damage liability. It should be noted that the issue of damage liability is extremely complex. From the perspective of the liable entity, the relationship between the injured party and the entity responsible for damage should be analyzed bilaterally each time. The AI creator (programmer) may be responsible for causing damage by violating the provisions of the contract with the contracting

harmonization legislation listed in Annex I; (b) the product whose safety component pursuant to point (a) is the AI system, or the AI system itself as a product, is required to undergo a third-party conformity assessment, with a view to the placing on the market or the putting into service of that product pursuant to the Union harmonization legislation listed in Annex I. Additionally, a list of high-risk AI systems is introduced in Annex III, which will be updated on a regular basis (Article 6(2) of the AI Act).

[15] See https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX%3A52022PC0496&qid=1665410785599 [accessed: 29.01.2024].

party, e.g. an automobile corporation (contractual liability). The AI producer or marketer (deploying an AI system) has influence over the system testing stage and decides to make it available to a larger group of clients, including consumers, in the situation when any hazards related to its use (e.g. in autonomous cars) have been excluded in its opinion. The producer or marketer also derives profits from the application of such a technology. Therefore, this entity should be responsible before third parties for the stage of putting the device using AI or the software itself into circulation. Contractual liability may be implemented between the creator and the entity putting the product into circulation or between the entity putting the product into circulation, the producer, the distributor and the contracting entity. Contractual arrangements and the liability following from them may not change the scope of responsibility before the injured third persons. As a rule, contractual relationships are outside the scope of this analysis. The parties may determine the rules of liability which apply to each of them in a contract. They may indicate the principle of guilt in the contract, mitigate this liability or tighten it up and make it more objective. In this way, compensation, rules of liability, circumstances for which the contracting party is liable and maximum liability amounts may be regulated in the contract. As for contractual liability, if AI is used, it seems axiologically important to implement a civil liability insurance system, which may be voluntary or mandatory.

These consideration are limited to tortious liability with regard to the third parties who were injured by AI application.

Separate regulations should govern liability for the use of an AI system (AI user, end operator) by a professional or final user (non-professional), in particular a consumer. In such situations, liability will be associated with the fact of AI use. However, a distinction needs to be made between the situation when a causal relationship is related to the act of an entity using AI and the decision, or its absence, of the AI system itself. If the causal relationship is related to the decision (or its absence) made by an AI system, this circumstance in itself should not determine the arising of liability, in particular liability based on the principle of risk.

As for the subject, it needs to be determined who bears responsibility for damage caused by AI and who should be entitled to compensation. Initially, it should be established what event causing damage should be linked with the responsibility of a specific group of entities. Damage may occur both in connection with the creation or production of artificial intelligence (programme creation) causing damage (the first stage), its marketing after the testing stage or without it (the second stage) as well as its application in trade or social life (commercial AI user, AI operator such as a drone operator, non-commercial user – consumer (the third phase).

Initially, it ought to be recognized that liability should apply both to the programme creators and producers, i.e. those that develop a tool with the potential to cause damage and make it available, as well as the entities that 'use' artificial intelligence, owners (proprietors) who use the appliance equipped with AI. In general terms, it should be accepted that liability is related to the fact of putting into circulation and using AI (and not exclusively to machines or systems using AI) that may cause damage, so that it is possible to apply the obligation of compensation to the largest possible pool of cases. On the other hand, if AI is not applied, the causal relationship between damage and a specific entity is non-existent.

It needs to be precisely defined what form of damage and what kind of harmful behavior a specific group of entities is responsible for, what liability rules apply, what circumstances waive or limit liability and what causal relationship is required for liability to arise.

Firstly, liability is borne by AI producers, programmers or programme producers. It remains an open question on what basis the above entities are liable. Potentially, just like in other cases, liability may be based on three principles: guilt, risk and legal certainty.

Because of limited consequences of the mere fact of AI creation on the one hand and on the other – the need to develop science and technology, liability borne by this group of entities should be based on the principle of guilt with optional evidence facilitation as indicated in the directive proposal (with regard to third persons). Liability for the creation of AI excluding the option of causing damage to the entire range of entities does not justify the burden of risk (on, e.g. programmers, for damage caused by AI). The mere creation of AI without its application and making it available to recipients or for experimental use does not entail any high or prevalent risk of damage. In the phase of experiments, it is relatively insignificant. Experiments are needed both for the development of science and the elimination of errors in AI operation. However, when AI is made available for commercial use or for consumers, it may become a source of serious damage and prevalent risk. The liability between the creator, contracting entity, system producer or marketer will be contractual by nature. In this case, it would be justified to apply a civil liability insurance system with the maximum amount of liability defined (which is provided for by the AI Act (Article 31(9)) with regard to the so-called notified units). Liability with regard to third persons would be tortious.

Secondly, separate considerations should be devoted to the liability of an AI operator, producer, entity who owns the rights to AI and the producer of the system that profits from marketing and using AI. In such cases, liability should be based on the principle of risk, in particular liability for a hazardous product, or on the principle of risk with a narrow list of cases when liability may be waived. In this respect, liability would be related to the act of

making AI, which is defective and causes damage, available to a large group of clients. It may be the result of insufficient testing before putting it into circulation or violating obligations imposed by the AI regulation, in particular neglecting the critical update of the system.

Thirdly, there arises a question about the responsibility of an AI user (system user) or AI system operator and the consumer using the AI available who is not its producer, operator or creator. The consumer's role in the causal relationship boils down to using an AI tool which caused damage. Such use may have occurred with or without the awareness of using AI or in a way that is contrary to the purpose of the AI system. It is unclear whether the entity that does not derive profits from the risk of using AI or gains or benefits related to it should be responsible for AI. The party entitled to compensation should be the entity that suffered damage. It is easy to imagine a situation when damage is suffered by an entity, a group of entities (consumers) or third parties that are anonymous. In such a situation, it is possible that, e.g., consumers' organizations may represent the injured party or injured groups.[16]

While liability based on the principle of risk could be considered reasonable for AI operators and commercial users, for consumers this liability should be excluded or mitigated – based on the principle of guilt for failing to exercise due care in using an AI system. In the situation when, e.g. an autonomous drone makes an independent decision without the operator's participation or even against the operator's intentions, it may not be confirmed that there is an adequate causal relationship between damage and the operator's behavior. In the situation when liability is based on the principle of risk, it is theoretically possible to accept the operator's responsibility for damage, including broadly defined exonerating premises. Liability would then apply to the situations of AI use.

There are also views that advocate empowerment – awarding legal personality to AI, i.e. "bringing to existence" an electronic person that would be liable for its own acts or omissions causing damage [Księżak and Wojtczak 2023, 19].[17]

Recognizing the concept of AI development, its possible empowerment and the creation of its liability, one needs to solve a number of issues related to the "existence" of a legal electronic person. Awarding special legal personality to AI would make it possible to assign the legal consequences of its activity (limited legal capacity, tortious capacity) to AI. Thus, it would be necessary to define the standard of AI "awareness" needed to consider it

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[16] Directive (EU) 2020/1828 of the European Parliament and of the Council of 25 November 2020 on representative actions for the protection of the collective interests of consumers and repealing Directive 2009/22/EC, OJ L 409/1.

[17] For the distant perspective on such an approach see Lohsse, Schulze, and Staudenmayer 2019, 8-9.

as possessing its own free will and ability to freely and consciously direct its own behavior (sufficient discernment, saneness). The question is whether it is possible to objectively verify the existence of AI's "awareness" and free will. On the other hand – is it at all necessary if legal persons, including entities, are guided by the "human will" assigned to them by way of legal fiction? Undoubtedly, where AI dominates decision-making processes (choice between 2 options), legal consequences should be borne by the entity that owns or uses AI (liability of humans or legal persons). If AI is empowered, legal consequences would arise for AI itself. The rationality of equipping AI into a personality to achieve tortious liability would be expressed in the axiological layer by recognizing AI's separate existence as an entity. Nowadays, it seems to be too early for that, in particular considering the uncertainty regarding the list of premises conditioning the recognition of an electronic entity as a subject of law. Civil liability has the nature of financial liability. It would be reasonable to empower AI to bear liability for damage if it was equipped with separate assets. The same effect, regardless of numerous doubts regarding AI empowerment, can be achieved by mandatory or voluntary liability insurance for damage caused by AI.

As it has already been said, liability may be based on a tortious or contractual regime in the situation when the injured party is bound by a contract with the party responsible for AI. Contractual liability may follow from a contract of civil liability insurance against damage caused by AI – concluded voluntarily or as a consequence of the legal obligation to do so. Thus, the protection of the injured party may be additionally strengthened by the system of civil liability insurance against damage caused by AI.

As a sidenote, it needs to be added that AI may be a component of more complex machines and appliances, such as autonomous vehicles or flying objects (drones with autonomous functions), mechanical vehicles or autonomous robots directing traffic for which there are separate liability regimes provided under the law. In practice, however, only with regard to the liability of groups of entities – owners and users of autonomous vehicles and autonomous aircraft (drones), parallel civil liability of the owners of autonomous vehicles and aircraft using AI will be of fundamental importance for the authorized (injured) party. As for the drone operator's liability for damage, the provisions of the Aviation Law apply. Under Article 206 (1) in connection with Article 207 of the Aviation Law of 3 July 2002, liability[18] for damage caused by aircraft traffic is subject to civil law provisions on civil liability for damage caused by operating mechanical means of transport propelled by a force of nature (Aviation Law provisions of 2002). Article 436 of the Civil Code is important here as it includes a reference to Article 435 of

[18] Uniform text in O.J. 2023, item 2110.

the Civil Code, which provides for liability for mechanical vehicles, including those with autonomous functions. This kind of liability is based on the principle of risk, which creates the liability of the vehicle owner – a positive mechanism for the injured party. The liable person is the person operating the aircraft (Article 207(1) of the Aviation Law).

Liability regimes may overlap in this regard.

5. PRODUCT LIABILITY AS THE FOUNDATION OF LIABILITY FOR AI

One solution is to extend liability for a hazardous product to include the cases of AI software (which is put into circulation).

In its resolution of 20 October 2020, the European Parliament proposed the introduction of a limited liability system based on the principle of risk with regard to some technologies based on artificial intelligence and facilitated the determination of the party carrying the burden of proof under the provisions regulating liability based on the principle of guilt (Article 5(2) of the directive proposal).[19] The directive proposal includes the concept of liability for an AI system with the assumption that AI does not operate in a vacuum but makes an element of a "complex whole" (artificial intelligence systems) instead [Staszczyk 2022, 25].

It should be noted that product liability was introduced into the EU legal order by 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.[20] It assumes the producer's liability, which is independent of the demonstration of the producer's guilt in the case of damage caused by the final product created by the producer. In such a situation, the burden of proof is what makes the liability of the producer and the entities equivalent to the producer for a hazardous product more objective.

After the implementation of the directive to the Polish legal order by introducing Article 449[1] and the following to the Civil Code, the predominant opinion in the doctrine is that product liability is based on the principle of risk [Gnela 2000, 286; Łętowska 2001, 126; Bielsa-Sobkowicz 2017, 308],

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[19] See https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX%3A52022PC0496&qid=1665410785599 [accessed: 29.01.2024]. As it has already been mentioned, the EU tries to solve the issue of liability for damage caused by the use of AI systems by including AI in the regulations governing product liability. This is the focus of a proposal for a directive on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive) of 28 September 2022, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022PC0496) and a proposal for a product liability directive

[20] O.J. WE L 210.

although this idea has not been fully implemented [Byczkowska 2001, 71]. It should be considered that liability in the light of the Civil Code is based on the principle of risk, including special exonerating premises as defined.[21]

At present, when the concept of extending the scope of product liability to include AI systems is implemented, a new (second) directive is envisaged, which will replace directive 85/374/EEC of 25 July 1985.[22] For the purpose of the directive, the way of delivering an AI product (appliance delivery, access to a program available online or in the cloud) is irrelevant. What is important is the act of putting the product into circulation or making it available by the distributor. The liable entities are creators and producers of software as part of their business activity that put the software into circulation or make it available, including those entities that have significantly modified the software (Article 11(2) d of the directive proposal). Compensation would apply to both direct and indirect damage suffered by consumers. Exonerating circumstances have been limited (and rightly so) as compared to the first directive to the cases when the product flaw involves the absence of the software update or new version. Liability would not apply to any open source software or putting the product into circulation outside the entity's business activity (Article 2(2) of the directive proposal).

It should be assumed that liability for traffic accidents involving autonomous vehicles or drones should be borne by the producer of the vehicle, drone or the part that failed in certain circumstances which led to an erroneous maneuver and, in consequence, an accident, regardless of the liability of the vehicle owner or aircraft operator [Marchant and Lindor 2012, 13-28]. However, the operator or driver should be liable under the principle of guilt if, e.g. he or she could or should have responded to the dangerous situation by taking control over the autonomous car in a dangerous situation.

The EU regulations which are being designed provide for strict liability in the case of high-risk AI systems.[23]

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[21] Exonerating premises under Article 4493 of the Civil Code include 1) the product was not put into circulation; 2) the product was put into circulation outside the scope of the manufacturer's business activity; 3) hazardous properties of the product were revealed after it was put into circulation; 4) the hazardous properties of the product could not have been foreseen based on scientific and technological conditions at the time the product was put into circulation; 5) the hazardous properties resulted from the application of legal regulations.

[22] See European Parliament legislative resolution of 12 March 2024 on the proposal for a directive of the European Parliament and of the Council on liability for defective products (COM(2022)0495 – C9-0322/2022 – 2022/0302(COD), which will replace directive 85/374/EEC, currently in force, https://www.europarl.europa.eu/RegData/seance_pleniere/textes_adoptes/definitif/2024/03-12/0132/P9_TA(2024)0132_EN.pdf [accessed: 04.04.2024].

[23] High-risk signifies a high potential of an autonomous AI system to cause harm or damage to one person or a larger group of people in a random way, which is impossible to foresee. High potential depends on the mutual relationship between the scale of possible harm or

CONCLUSIONS. LIABILITY RULES. HOW TO SHAPE LIABILITY FOR AI? *DE LEGE FERENDA* REMARKS

As demonstrated by the reflections presented above, two principles should be applied to liability, both the principle of risk and the principle of guilt [Wałachowska 2020, 61, 66]. In extreme situations, liability based on the principle of certainty should not be excluded. However, it should be remembered that a similar effect may be achieved by adequate modelling of liability based on the principle of risk and indicating exonerating circumstances or introducing a civil liability insurance system against damage caused by AI. The premises for damage-tort liability include: 1) causing damage, 2) as a result of an event whose occurrence was linked by the legislator with damage liability to be borne by specific entities, 3) the existence of an adequate causal relationship between damage and the event. If the principle of guilt applies, the second premise is related to the guilty party's behavior (usually, the absence of due care) and liability is waived, should exonerating circumstances arise. If the principle of risk applies, the second premise is related to the risk of a harmful event defined by a standard. Liability may be waived if exonerating circumstances arise.

The second premise and the liability rule applicable to AI creators (programmers) should be shaped separately. Making AI systems available to the public, deactivating software updates by a defined group of people – operators, producers, creators or authors of software updates – or updating AI systems during their operation should make a separate tort (harmful event) based on the principle of risk by extending the scope of liability for the product under directive 85/374/EEC.

The third kind of a tort is causing damage by the fact of using an AI system. It can be committed by an AI user.

Adopting liability based on the principle of guilt raises the question about the effectiveness of such a solution, which may be illusory and ill-suited to today's times and the resulting need of effective protection. Introducing the liability of a certain category of entities which is based on the principle of risk, while in other cases (e.g. programmers) liability will remain to be based on the principle of guilt and linked with evidence facilitation,[24] seems to be a move in a good direction.

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damage, the likelihood of the risk occurrence and the way of AI system use. It is assumed that there is a list of high-risk AI systems. See considerations above.

[24] Liability solutions adopted in the EU legal order and by, e.g., the Expert Group on Liability and New Technologies – New Technologies Formation, Liability for artificial intelligence, Publications Office of the European Union, Luxembourg 2019, p. 35 [Labuhn 2020, 265].

Firstly, it is a good idea to regulate a tort which involves putting AI into circulation or using an AI system. However, it should not be based on where the risk of damage occurs - whether it is in a high-risk AI system or not – as there is no flexible method of qualifying high-risk AI systems. The AI Act provides only for a *numerus clausus* of systems which are updated in the relevant annex.[25] In my opinion, this aspect should be analyzed from the perspective of the harmed entity. Liability for an AI system under the principle of risk should not change if it is qualified as a high-risk system, but it should depend on the type of damage and the level of harm caused by its use. When damage is suffered by a person, i.e. it involves health damage or a loss of life, liability for an AI system should be based on the principle of risk. This rule should at least be extended to include damage to a person regardless of the kind of an AI system (with regard to liability for the stage of putting AI into circulation, except for consumers). What should rather be moderated is the scope of liability for property damage unrelated to a person. There is no justified interest of an entity introducing AI to the market that would require a limitation of its liability for damage caused to a person. The type of damage and its harmfulness should determine strict liability based on the principle of risk, and not the type of the tool that caused it.

Secondly, a synthetic definition of a high-risk AI system including examples should be provided instead of a closed list of systems in the annex, which will be regularly updated. This kind of regulation does not take into account the circumstance that "the law is one step behind the reality" or does it to an insufficient extent. The final version of the AI Act introduces definitions of high-risk AI systems and refers to the annex to the regulation (Article 6(1) and Article 6(2) of the AI Act).[26]

Thirdly, the scope and criteria of contractual liability are defined and liability to third persons cannot be excluded.

Fourthly, there should be a system of mandatory insurance against the use of AI, and in particular AI systems. Depending on the type of damage, minimum amounts should be defined with an option of extending the coverage. Estimating the value of a human life in the situation of AI-caused damage as a specific sum (2 or 10 million euros) raises objections.

Fifthly, liability under the principle of risk in the case of drones or autonomous vehicles should apply both to the stage of liability for AI deployment (the second stage) and AI system use (the third stage). Within this scope,

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[25] For rightful criticism of this solution see Staszczyk 2022, 28 (supra note 6).

[26] 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, 2021/0106(COD), https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX:52021PC0206 [accessed: 19.07.2024].

liability would be borne by different groups of entities and concern different harmful events (tort types) under the principle *cuius commodum eius periculum*. Because of the need to protect third persons, liability based on the principle of risk should be extended to include the users of dangerous technologies. Extending the list of liable entities would strengthen the compensating function of damage liability. The repartition of risk for these entities may be achieved by a civil liability insurance system.

Burdening those who introduce (deploy) AI systems to the market with responsibility for risk makes it possible to achieve an impeding (preventing) effect as regards hasty, ill-considered AI system deployment which has not been sufficiently tested (prevention of an "arms race" in pursuit of profit). The above are the guidelines to be observed if damage was caused to a person. Liability for damage to property should be regulated in a different way. Protective regulation should not lead to the obstruction of scientific development. Instead – where universal access and risk of harm to a person are at play – compensation protection should be effective and real. Fundamental rights should also be subject to protection (such as sensitive personal data, biometric identification or privacy).

Liability for damage to a person under the principle of risk should be severe and may even exclude liability in the situation of a *force majeure*. The amendment of directive 85/374/EEC provides for the absence of a producer's exemption (and rightly so) in the situation when a flaw was discovered (arose) after the product was marketed if the flaw was related to the software and the possibility (impossibility) of its update.

Sixthly, liability should be based on the basis of the principle of guilt (regarding the choice or absence of due diligence – regulations is this regard should be adopted accordingly) [Ziemianin 2021, 14] – of consumers or AI users (AI system owners) with the status of consumers [Jagielska 2009, 73].[27] Their guilt would boil down to using an AI system in a way lacking due care as to the system choice, application and the awareness of an AI component. No adequate causal relationship between the consumer's behavior involving AI use and the resultant damage should exclude the consumer's liability.

Summing up, AI's self-awareness and free will to survive may lead to a conflict between AI and its creator – the human being, who may inevitably lose this battle at some point. A disciple may surpass the master and the master will have to leave the stage. What needs to be determined is the unalterable framework for the operation of AI directed at its creators, users and AI itself in the aspect of damage.

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[27] The author indicates that the category of guilt should apply to all users. In favour of limiting the liability of the consumers of AI, see Caufffman 2018, 530.

In principle, liability for AI should not be limited to the type of damage, the way of compensation or the circumstances in which damage was not caused by a human being. It seems more justified to base liability on the principle of risk combined with the system of mandatory or optional civil liability insurance against AI damage. A good solution in transborder trade would be to accept the law of the state where damage was caused as the applicable law in the cases of non-contractual liability following from a tort.

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