ARTIFICIAL INTELLIGENCE SYSTEMS AS LEGAL ENTITIES - STILLBIRTH OR PREMATURE BIRTH OF THE "ELECTRONIC PERSON"?

MICHAEL MARTINEK

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Michael MARTINEK
Saarland University

Abstract

The study explores the evolving legal discourse on the recognition of artificial intelligence (AI) systems as legal persons, commonly described as “electronic persons” (e-persons), within the framework of European Union law. It focuses on the EU Artificial Intelligence Regulation of 2024, which, despite its extensive scope and detailed regulatory provisions, notably refrains from engaging with the question of AI legal personhood. Central to the analysis is the distinction between “weak” AI, which underpins current applications characteristic of Industry 4.0, and the prospective “strong” AI anticipated to be a defining feature of the forthcoming Industry 5.0. The existence of weak AI and the prospect of future strong AI within an Industry 5.0 context have triggered growing concern among jurists and policymakers, giving rise to an increasingly heated debate over whether responsibility and accountability can continue to be clearly assigned and delimited in cases involving erroneous decisions or malfunctions of AI systems, and whether existing legal frameworks require adaptation in response to these developments. The study argues that, although the recognition of e-persons is theoretically and legally conceivable, it is neither necessary nor normatively justified under current legal and technological conditions, as demonstrated through a functionalist theory of legal personhood. By allocating responsibility to human actors—such as producers, operators, and users—modern legal frameworks, particularly those governing tort law, contract law, and product liability, remain adequate for addressing issues of accountability and liability arising from contemporary AI technologies. However, the anticipated development of self-learning and autonomous AI systems capable of operating without human assistance calls into question the continued suitability of these existing legal theories. Accordingly, the concept of the electronic person, while presently dispensable, may acquire substantial normative significance in the future as a mechanism for allocating liability to AI systems exhibiting a high degree of decision-making autonomy. Far from constituting a doctrinal dead end, e-personhood should therefore be regarded as a premature yet potentially critical legal concept, awaiting both technological maturity and further normative refinement.

Keywords

Artificial Intelligence, e-Person, Legal Personhood, Liability, EU Law, Industry 4.0.

1. THE NEW AI REGULATION WITHOUT MENTIONING AN "ELECTRONIC PERSON"?

The EU Regulation on the development, placing on the market and use of artificial intelligence (AI Regulation) came into force on 2 August 2024, after the text of the regulation was published in the Official Journal of the European Union on 12 July 2024 (European Union, 2024). The aim of the world's first law on the regulation of AI is to define rules and standards for dealing with AI models, AI systems and AI content. Although the AI Regulation, which has direct effect in the EU member states, has come into force, it is not yet applicable. In principle, it will only apply from 2 August 2026, but the provision of Art. 113 of the AI Regulation (entry into force and date of application) stipulates that the rules on prohibited practices must be applied within six months of the Regulation coming into force, i.e. from 2 February 2025, while a longer transitional period is specified for the majority of the provisions. The regulation aims to protect **the fundamental rights and freedoms** of citizens and ensure that AI models and AI systems respect the dignity, privacy and other fundamental rights of individuals and are not discriminatory, manipulative or otherwise harmful. It aims to strengthen citizens' trust in AI models and AI systems by promoting transparency, accountability and comprehensibility, traceability and explainability. The AI Regulation also aims to strengthen **the innovative power and competitiveness** of the European economy.

Should we not be surprised that the AI Regulation is "silent" on perhaps one of the most important and currently much-discussed legal policy issues in the international legal discourse on AI, namely: Do we need the introduction of an electronic person or "e-person" in our legal systems - analogous to a legal or juridical person - in order to better deal with the problems of liability for damage caused by highly complex AI systems? Indeed: the AI Regulation deliberately, specifically and generally omits liability issues from its regulatory scope; a special directive is being prepared for AI liability. However, the introduction of an e-person would not only affect liability issues, but also the regulatory concerns of the new AI Regulation. The question of the meaningfulness, usefulness or even necessity of an "e-person" has - as a quick search on the Internet reveals - triggered a tsunami of legal (and paralegal) writings with headlines such as: "Artificial intelligence as a legal personality", "The robot becomes a human being", "A new species is born" or "The nightmare of legal personality for AI systems". For more than ten years, the question of whether AI systems should be treated as digital e-persons with legal capacity has been debated internationally, primarily but not only by lawyers and politicians. What is the situation now? How can it be explained that the AI Regulation says nothing on this topic?

2. WEAK AND STRONG ARTIFICIAL INTELLIGENCE

2.1. Weak AI in Industry 4.0

As lawyers, we always want to know exactly what we are talking about. That's why I need to start by reminding you of some technical facts about AI and the fourth industrial revolution before we move on to the question I mentioned, true to the principle that the fact finder is the decision maker. According to the definition in Art. 3 No. 1 of the AI Regulation, an AI system is "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". Less bumpy and perhaps easier to understand than the EU's officialese, an AI system can be described as a software-based system or a system embedded in hardware devices that exhibits intelligence-simulating behaviour by, among other things, collecting and processing data, analysing and interpreting its environment and taking action with a certain degree of autonomy to achieve specific goals. An AI system is "autonomous", if it functions by interpreting certain inputs and using a series of predetermined commands without being limited to such commands, whereby the behaviour of the system is restricted by the goal given to it and other relevant specifications of its developer or is geared towards achieving the goal. AI therefore refers to systems that exhibit intelligent behaviour by analysing their environment and - with a certain degree of autonomy - taking action to achieve certain goals. AI systems can be purely software-based and operate in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and facial recognition systems, automated diagnostic procedures in medicine or stock market analyses), but can also be embedded in hardware devices (e.g. advanced robots, autonomous vehicles, drones or Internet-of-Things applications such as the United Parcel Service's shipment tracking programme - forgive the "surreptitious advertising"). AI systems attempt to emulate the cognitive abilities of humans using algorithms. Put simply, algorithms are mathematical instructions, i.e. control commands that ensure that a data input is converted into a data output. The instructions can be designed in such a way that the algorithm - on the basis of clearly specified action steps - searches for and analyses patterns and correlations in a database in order to achieve a predefined goal or solve a specific application problem. This form of AI, which operates within the limits set by the programming, is referred to as "weak AI". These are closed and mostly supporting systems. Digital assistance systems (Alexa, Siri or Google Assistant) are also categorised as "weak AI". This, and only this, is the area of Industry 4.0 in which we currently live.

2.2 Strong AI in Industry 5.0

This is to be distinguished from so-called "strong AI", which is also initiated by a programme command, but then develops independently after a machine learning and training phase. By using artificial neural networks, "strong AI" can acquire new cognitive abilities and initiate its own causal processes for which neither the goal nor certain alternative solutions are predetermined. For example, available data resources can be searched for new findings and the original algorithms can be further modified independently on this basis. The decisions made no longer appear to be the abstractly predetermined product of clear programming, but rather the result of an autonomous process. "Strong AI" is therefore characterised by the fact that it leaves the initial determinism behind and overcomes it. This is no longer the domain of Industry 4.0, but will most likely become the domain of the 5th Industrial Revolution. According to most expert assessments, such a "strong", human-like AI will exist in the foreseeable future, at least in the next few decades. However, the reality at present and probably also in the near future is still characterised by a "weak AI" with enormously accelerated automation of processes with supportive and (limited) intelligent behaviour. Don't be confused by visionary announcements that already suggest the emergence of precursors to "strong AI". A few months ago, news went around the world that a Chinese metaverse company, a reputable video game and application developer (NetDragon Websoft - apologies again for the inappropriate product placement), had appointed an AI-driven virtual humanoid robot as its CEO, a certain Ms Tang Yu, supposedly responsible for overseeing the company and serving as a real-time data hub and analytics tool to support rational decision-making and enable a more effective risk management system. If you study the news carefully, it becomes clear that Ms Tang Yu still belongs to the 4th Industrial Revolution, as her artificial intelligence is only "weak". Ms Tang Yu is not yet capable of efficient human-machine collaboration or even neuronal networking, autonomous recognition and definition of tasks and autonomous development of creative solutions to problems, as will be characteristic of the strong AI of the future.

2.3. An Illustrative Example

The widespread (High-Level Expert Group, 2018; Kaplan, 2016, p. 68; Hennemann, 2018, pp. 161-164; Feldman & Stein, 2022, pp. 94-101; Weinbaum & Veitas, 2017, pp. 371-396; Kop, 2020, p. 297, 300; Keßler, 2017, pp. 589-592; Oster, 2018, p. 14; Gaede, 2020, p. 24) distinction between "weak AI" and "strong AI", which is certainly open to further differentiation but helpful for our orientation, can be illustrated by an example from industrial production planning and control. In the digitalised production facilities of the brewery and beverage industry (to choose an example of our shared deep sympathy[1]), we already find robot-based

[1] I owe this example to the results paper published by the Federal Ministry for Economic Affairs and Energy Platform Industry 4.0 (Federal Ministry for Economic Affairs and Energy Platform Industry 4.0, 2019, pp. 3-4).

filling programmes for personalised beverage production using machine systems, human-machine hybrids or robotic systems. The filling machine receives the customer order, then retrieves the product ingredients required for the desired mixing ratio, instructs the flexible filling system to mix the beverages and then automatically starts the autonomously operating production modules such as rinsers, filling and capping systems or labellers until the saleable product has been created. If the ingredients, bottle parts or labels run out, the machine automatically reorders and triggers the necessary logistical processes. Maintenance processes can also be initiated and carried out independently by the machine using sensor-controlled cyber-physical systems, depending on the determined need. However, the decision-making options of the robot systems or self-regulating machines always remain predetermined by algorithms in clearly defined action processes. In addition, these decentralised interacting units are already capable of independently improving product-relevant components, compositions or process-relevant transport and delivery routes within the value chain, thus acting as self-optimising machines. They can even change the ingredients for, say, an Aperol drink and order sour lemons instead of sweet oranges if the analysis of customer wishes and data running in the background shows that their tendencies are no longer towards "sweet" but now towards "sour". The control command accordingly selects a "lemon" decision pattern. In many other industries, too, production machines can now determine customer requirements directly or on the basis of a big data analysis, order the workpiece, interact with service providers or suppliers via IT and cloud systems and use simple algorithms to bring supplied parts to the right place in the factory for further processing via sensor-supported transport and logistics units and prepare them for subsequent delivery to the customer. The self-regulating or self-optimising machines and systems may be highly complexly networked both vertically (i.e. within the company) and horizontally (across company boundaries). However, even here it is still the human being who determines the possible alternative actions via the programming; it is therefore still a "weak AI" of Industry 4.0.

Only in Industry 5.0 in future decades can we expect machines and systems - e.g. bottling plants in the beverage industry - to be able to make their own decisions independently of an original programme command on the basis of masses of collected and available data and use their previously trained skills by means of machine learning. Only then will they be able to not only select the appropriate option from the predefined alternatives ("sweet" = oranges and "sour" = lemons), but also independently create completely new flavours for an Aperol drink that were previously not available for selection by humans; only then will they function as self-learning machines. When AI systems, in addition to determining human preferences, also independently provide the necessary raw materials, autonomously change machine settings and control processes and autonomously control, monitor and, if necessary, intervene in the production process, we are dealing with a "strong AI". The production results are then beyond human control. They will then set their own causal processes in motion, determine work content and

working methods at their own discretion and take over the final quality control with the aim of continuous optimisation. They will develop cognitive abilities that are equivalent to human intelligence. This is still a dream of the future and will probably remain so for some time to come.[2] Although Industry 5.0 is being discussed up and down the country in theoretical and visionary terms, it is not even in sight in practice - according to everything the experts are saying and publishing. The truth is: powerful AI is still science fiction.

3. THE IDEA OF RECOGNISING LEGAL PERSONALITY FOR AI SYSTEMS

3.1. The Initiative of the European Parliament 2017

The existence of weak AI and the prospect of future strong AI in an Industry 5.0 has triggered a growing sense of concern among lawyers and politicians, legal scholars and legislators and sparked a heated discourse on the question of whether it will not become difficult to clearly assign and delimit responsibilities and accountability in the event of wrong decisions and malfunctions of AI systems, and whether there is not a need to adapt legal systems to the new developments. In this context, particular consideration is being given to giving AI systems their own legal personality; the idea of an electronic person or e-person was born.

In a 2017 resolution, the European Parliament proposed an "electronic personality (e-person)" for intelligent robots and autonomous systems, i.e. a legal entity that is to be endowed with its own rights and obligations as an independent actor, i.e. a new legal entity that can be held liable and can even be held criminally liable and subject to tax. Of course, this idea was not first formulated by the European Parliament, but goes back to futuristic writings from the first half of the last century. In this 2017 resolution, the European Parliament explicitly "called on" the European Commission (European Parliament, 2018, para. 59) to create, *"a specific legal status for robots in the long run, so that at least the most sophisticated autonomous robots could be established as having the status of electronic persons responsible for making good any damage they may cause, and possibly applying electronic personality to cases where robots make autonomous decisions or otherwise interact with third parties independently".* There was a sharp reaction shortly afterwards in an open letter from more than 250 AI researchers, law professors, philosophers, theologians and entrepreneurs who criticised this declaration as inappropriate - both from a legal and ethical perspective: the legal construct of an electronic person is neither appropriate nor necessary (Robotics Openletter, 2018).

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[2] However, Björn Beck (2024) takes a different view (probably based on a different understanding of the term); "We are now in the middle of the fifth industrial revolution, even if many people may not yet be aware of this." (p. 209).

3.2 Current systems of legal entities

In our legal systems, legal persons (legal entities) are actors who are recognised *de iure and ex lege* as having the capacity to bear rights and obligations (so-called legal capacity). Under current law, these are both natural persons (born and living people) and legal entities, i.e. associations of persons and assets in permanently established purpose-bound organisations such as corporations or foundations. Our legal systems - worldwide - do not recognise any legal persons other than the expressly selected and registered legal persons that fulfil the prescribed legal requirements; these may also include, as in Canada, New Zealand, India or Ecuador, ecosystems such as rivers, lakes or dams, temples or monuments (Okorley, 2024, p. 124).

Today, there is hardly any doubt that this categorisation is based on a legal-political will and a legislative decision: It is not mandatory, not "God-given", not an a priori, ontological phenomenon. Certainly, originally, in the 19th century, the concept of legal personality or legal subjectivity and capacity was partly linked to the nature of man and mystically exaggerated. However, as a result of numerous writings on legal philosophy and civil law theory, the view quickly prevailed - in Germany primarily under the influence of Savigny's theory of fiction - that legal persons should be seen as purely functional and purposeful. Depending on their normative form, they embody legal aspects of the allocation of rights and duties and as such are not pre-legally determined. Consequently, it was soon deemed permissible for legal entities to no longer be represented exclusively by natural persons. Organisations and even assets without a personal substrate, such as foundations, could also be assigned rights and obligations, even if they have neither will, consciousness nor emotionality without managing and representing people.

3.3. The Feasibility of Electronic Personality

On the basis of this prevailing functional approach, according to which the creation of legal entities is owed to an act of attribution under domestic law, the introduction of a new legal entity in the form of an e-person can certainly be regarded as feasible in the sense of legally permissible and practicable. There are no *a limine* obstacles - the e-person could be introduced by the legislator at any time. Feasibility and permissibility are "not an issue". All that is required is a decision by the legislator, which would have to be followed by a refinement of the doctrinal organisation. Ethical considerations or even doubts can be marginalised by the functional approach. There is no reason to fear that granting legal personality to AI machines would mean equating them with humans and, in particular, granting them the same rights that we enjoy as natural persons. Electronic personality would not be a threatening expression of a new kind of personal subjectivity competing with human subjectivity, but rather an additional artificial form of legal personality based on simple functional considerations and decisions.

Of course, the e-person would raise many other questions. The legal consequences that would result from the introduction of an e-person as an independent legal entity would certainly affect significant parts of the entire legal system. In particular, it would have to be considered whether the legal independence of an e-person should be accompanied by its own liability assets (i.e. its own assets) in order to be able to pay for any damages incurred - which would of course be obvious, as legal capacity without financial resources would be useless. Compulsory liability insurance would come into play as a substitute or supplement for sufficient financial resources. This leads to the question of capping liability. As experience with corporations shows, in practice one would quickly try to circumvent such limitations on the amount of liability by asserting claims against natural or legal persons to whom electronic persons can be attributed in order to "pierce the electronic veil". Future e-person lawyers could perhaps learn a lot from the experience of corporate lawyers in relation to the "piercing of the corporate veil".

It also appears to be a very complex task to systematically identify the normative conditions under which it might be appropriate to confer a fictitious legal personality on a certain type of AI application, similar to what is currently the case for companies. Such conditions might include, for example, the need to facilitate coordination between multiple parties, particularly where multiple subjects are involved in the provision of an AI-based service or product; in these cases, it might prove difficult to isolate the responsibility of each party. Perhaps an e-person with separate assets and limited responsibility can be utilised to facilitate both revenue sharing and the sharing of damages caused by the technology. Perhaps an e-person can help create transparency through registration and disclosure requirements to identify the parties who have an economic or other interest in the operation of the device. Certainly, it immediately comes to a lawyer's mind that granting legal personality is not the only way to achieve such effects, but it is obviously *a feasible* way. However, this raises the crucial question: Is this *a necessary* way?

4. LACK OF NECESSITY FOR THE ELECTRONIC PERSONALITY IN INDUSTRY 4.0

4.1. The Currently Sufficient and Appropriate Solutions

The protagonists of electronic personalities point to the alleged need to close an otherwise disastrous gap in responsibility and liability in the current legal systems and in the event of technical failure or technical systems that have been placed on the market incorrectly (responsibility gap) (Bertolini, 2013, p. 214; Bertolini, 2014, pp. 143-166; Zech, 2020, p. A 1 et seq.). In fact, the introduction of a legal person in the form of an "e-person" would only be necessary and justifiable if the relevant areas of civil law, but also criminal law and public law, currently lacked legal subjects of attribution as well as responsible and liable actors. In reality, however, there is no evidence that any gaps in contractual responsibility and liability can be

identified as a result of the deployment and use of "weak" AI systems. This concerns the particularly important area of the conclusion of contracts by automated and semi-autonomous systems. Of course, contractual or quasi-contractual liability requires a legally qualified relationship between the parties before any damage occurs. But even in non-contractual liability law, namely tort law and product liability law, no worrying "legal loopholes" can be identified in relation to AI systems that could not be easily compensated for by innovations inherent in the system. The same applies to product safety law. The existing legal framework, which is primarily based on contractual liability rules or on fault-based tort law (culpa aquiliana) or strict liability rules, is of course fully applicable to all advanced technologies. Strict liability under tort law or the law of torts, which, despite certain differences, is common in all civilised countries and obliges anyone who fails to comply with a certain standard of conduct, even through slight negligence, and thereby causes damage, is already widely applicable. This is flanked by the rules of "vicarious" liability according to respondeat superior rules, possibly as presumed fault liability with the possibility of exoneration, and by the concept of organisational fault. In any case, manufacturers, programmers, owners and users of advanced AI technologies can be held liable. Of course, strict liability currently plays the main role, which is particularly relevant in road traffic and accidents in the field of autonomous driving (driverless vehicles). There is no doubt that AI-based applications are now considered products that fall under product liability laws as well as product safety regulations. While product liability law aims to compensate victims for damages caused by the use of a defective good, i.e. a product that does not have the reasonably expected level of safety, product safety law prescribes the basic safety requirements for products that must be certified before they are distributed on the market.

To summarise: Given the existing liability rules today, it is always possible to identify a natural or legal person who can be held liable for damages caused by the use of the weak AI system. In this sense, the liability framework may be suboptimal - e.g. because it leads to costly and complex litigation - but it excludes the existence of a serious responsibility gap; a responsibility gap is not evident. For existing AI applications, recourse to traditional legal instruments is indeed available and practicable. In addition, new AI technologies that raise truly serious societal concerns, create new relevant risks and establish a new potential hazard that is not yet sufficiently addressed by the current legal system can always be specifically regulated by unconventional ad hoc regulations. In recent years, the EU has, for example, separately and successfully regulated drones (European Parliament and Council, 2018/2019a) and online platforms (European Parliament and Council, 2019b) without even thinking about the supposed "magic bullet" of the e-person for AI liability issues. In the future, it will be able to continue to do so and monitor emerging technologies more closely to identify those areas that require immediate intervention with minimal impact on the legal system. The idea is as old as it is simple: liability is imposed on whoever is in control of a particular risk and is able to manage it successfully.

4.2. The Current Dispensability of e-Persons

Our conclusion is therefore obvious. The need to implant an e-person in the civil law systems at present cannot be recognised. All the problems that currently arise can be solved within the existing legal systems. Even the most complex and non-transparent AI systems of Industry 4.0 do not achieve such a degree of autonomy that a link to human behaviour would no longer be possible. The alleged responsibility gaps either do not exist at all or can be closed by careful further development of the existing regulations. The technical and functional analysis of AI systems today does not suggest that there is any technological or legal reason to regard them as anything other than mere artefacts generated by the human intellect, and therefore as products. Even the most advanced AI technologies of Industry 4.0 are not subjects, but merely objects; they are never truly autonomous, human-like decision-makers, but remain in the status of products, and there are no apparent reasons to grant them rights or make them legally responsible.

4.3. The withdrawal of the European Parliament

The "Resolution (of the European Parliament) of 20 October 2020 with recommendations to the Commission on a civil liability regime for the use of artificial intelligence" is also based on these considerations (European Parliament, 2021, para. 7). The same European Parliament, which in its 2017 resolution had promoted the idea of recognising AI systems as having legal personality, explicitly departed from its previous position three years later and now states *that "all physical or virtual activities, devices or processes driven by AI systems can technically be the direct or indirect cause of personal injury or damage to property, but are almost always the result of someone designing, operating or acting on the systems".* This "backtrack" now emphasises *"that it is not necessary to give AI systems legal personality".* In its 2019 report on liability for artificial intelligence, the expert group on liability and new technologies set up by the European Commission also denies the need to introduce an electronic personality, stating: *"There is currently no need to confer legal personality on new digital technologies. Damage caused even by fully autonomous technologies can generally be reduced to risks attributable to natural persons or existing categories of legal persons, and where this is not the case, new laws aimed at individuals are a better response than the creation of a new category of legal person."* (Expert Group on Liability and New Technologies, 2019, p. 37).

It is therefore no coincidence and no omission that the new AI Regulation, which came into force on 2 August 2024, does not mention the e-person. The EU legislator has apparently consciously abandoned this idea. Instead, the Commission has presented and started to implement a coordinated plan to develop measures in the member states and at EU level European Commission, 2021). In particular, it published a proposal for a directive on AI liability

on 28 September 2022 (European Commission, 2022a; Borges, 2023, pp. 1-5) and, on the same day, a proposal for a directive to modernise the almost 40-year-old Product Liability Directive 85/374/EEC (European Commission, 2022b). Nowhere is there even a mention of the e-person, which is now classed as dispensable for human-centred, sustainable, safe and trustworthy AI. The same applies to the EU Machinery Regulation, which has already come into force (European Parliament and Council, 2023).

At present, one can only agree with these commendable insights. It is not surprising that the introduction of an electronic legal personality has not yet taken place anywhere in the world or is seriously in preparation, even though academic and, in some cases, political discussions about the e-person are ongoing in many countries around the world (Okorley, 2024, p. 275 et seq.). In 2019, a legislative proposal to introduce an e-person for AI systems failed in Estonia, a pioneering AI country (Simonart, 2021, pp. 1359-1370). So while the legal feasibility and permissibility of "e-personhood" does not pose any problems, the pursuit of this idea must currently fail due to a lack of necessity and justifiability.

4.4. State of Discussion in Germany

In Germany, the 73rd German Jurists' Conference in 2022 dealt with regulations on the responsibility and liability of digital autonomous systems. In his expert opinion, Herbert Zech (2020) also discussed the issue of digital systems as liability subjects with their own legal personality (pp. A1 et seq.). One of his most important findings was: "An e-person should not be introduced" (Zech, 2020, p. A 111, para. 8). Experts such as Georg Borges, Michael Denga, Horst Eidenmüller, Stefan Klingbeil, Christian Linke, Samantha Maria Mayinger, Thomas Riehm, Jan-Erik Schirmer, Gerald Spindler, Gunther Teubner and Gerhard Wagner had already had their say (Borges, 2018, p. 977; Borges, 2019, p. 63; Denga, 2018, pp. 69, 77; Eidenmüller, 2017, p. 765; Klingbeil, 2019, p. 718; Linke, 2021, pp. 200-202; Mayinger, 2017, p. 166 et seq.; Riehm, 2020, p. 42; Schirmer, 2019, pp. 711-712 ff.; Spindler, 2016, pp. 805, 816; Teubner, 2018, p. 155; Teubner, 2006, p. 5 et seq.; Wagner, in Faust & Schäfer, 2019, p. 1 et seq., 29 et seq.; Wagner, in Lohsse et al., 2019, p. 27, 53 et seq.). The unanimous result: the introduction of an e-person offers no advantages over the creation of strict liability or liability-replacing insurance. In contrast, my highly esteemed successor to the Saarbrücken chair, Dimitrios Linardatos, was one of the few dissenting voices in his habilitation thesis to speak out decidedly in favour of the creation of an artificial legal entity for AI systems, whereby he advocates the attainment of legal capacity through a combined system of concession and registration procedures according to the system of normative provisions and proposes judicial and extrajudicial representation by a representative as well as the provision of equity capital or the conclusion of a specific insurance policy as a liability fund (Linardatos, 2021, p. 581 et seq.). As far as can be seen, Linardatos' voice has hardly been followed. Perhaps the detailed reception is still pending.

5. STILLBIRTH OR PREMATURE BIRTH

The distinction between so-called “weak” and “strong” artificial intelligence provides an important analytical framework for evaluating contemporary debates on electronic personhood. From this perspective, the prevailing rejection of the concept of an electronic person within scientific and political discourse appears to be closely tied to the current technological paradigm, which remains dominated by weak AI systems. These systems, despite their increasing sophistication, operate within predefined parameters and lack genuine decision-making autonomy.

Against this background, the widespread dismissal of electronic personhood should not necessarily be interpreted as a definitive normative judgment. Rather, it may reflect the limitations of s of existing AI technologies. The potential emergence of strong AI—often associated with the anticipated fifth industrial revolution—could fundamentally alter this assessment. Strong AI systems, characterized by a substantially higher degree of autonomy, adaptive learning, and independence from their developers and operators, may challenge the assumptions that currently underpin the rejection of electronic personhood.

Accordingly, it may be premature to regard the concept of the electronic person as a failed or obsolete idea. Instead, electronic personhood can be understood as a concept introduced ahead of its technological time. While its early articulation in the era of weak AI may have appeared underdeveloped or impractical, future advances in AI autonomy could enable the concept to mature and acquire renewed normative relevance. In such a scenario, electronic personhood may evolve into a meaningful legal construct, particularly in addressing complex questions of responsibility and liability arising from autonomous AI behavior.

Viewed in this light, electronic personhood should not be dismissed as a theoretical dead end, but rather as a concept whose practical viability is contingent upon technological progress. As AI systems increasingly operate beyond direct human control, the legal system may once again confront the question of whether existing liability frameworks are sufficient, or whether new institutional solutions—potentially including electronic personhood—are required to ensure accountability and legal certainty.

Of course, both practical lawyers and theoretical legal scholars are generally well advised to concentrate on solving actual current problems and challenges for the development and establishment of a normative order. On the other hand, however, the regulatory foresight and caution of the forward-looking jurist demands that we be prepared for future challenges, at least when the new regulatory tasks of a "strong" AI are on the horizon and their appearance is only questionable in terms of "when" and "how", but no longer in terms of "whether". We are not yet aware of any "self-aware machines" outside the world of science fiction; the idea of an

inorganic self-awareness is beyond our imagination, even if the independent, autonomous learning of machines has already found a broad field of application. The super-intelligence of aggregated expert knowledge still represents a different intellectual level than the autonomy of human self-awareness and individual self-reflection, even in autonomous learning processes with algorithmic innovations. But it doesn't have to stay that way. Should the visions of "strong" AI materialise at some point in the coming decades of Industry 5.0 - which, by the way, there are good reasons to hope for - our solutions could collapse in terms of liability distribution, because no manufacturer, owner, operator or user will be available and can be forced to insure the autonomous, "human-like" and AI systems against damage caused by incorrect and fatal decisions. Future robots with human-like autonomy may be able to evade human control. Our traditional attribution models can no longer be constructed for AI systems where humans can no longer influence their function and which can act completely autonomously. This could bring the e-person back onto the scene in the 5th industrial revolution. In any case, it seems too early for a necrology on the e-person, who may "rest in peace" (Borges, 2023, p. 3, para. 28; Riehm, 2020, p. 42). We may hear about it again.

Keywords: Artificial Intelligence Regulation, EU Artificial Intelligence Act, Electronic Personhood, Legal Personality of AI, Weak Artificial Intelligence, Strong Artificial Intelligence, Industry 4.0, Industry 5.0, AI Governance, Liability and Accountability, Human Responsibility, Functionalist Legal Theory, Autonomous Decision-Making, AI-Related Harm, Normative Legal Framework.

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ABOUT AUTHOR

Prof. Dr. Michael MARTINEK | Saarland University |
Mimartinek[at]aol.com | ORCID: 0000-0001-7185-8811

Professor emeritus Michael Martinek has held the Chair of Civil and Commercial Law, Business Organisation Law, Comparative Law, and Private International Law at Saarland University since 1986 and up to 2019, where he also directed the Institute of European Law. Born in 1950 near Düsseldorf, he studied law and philosophy at Berlin, London, and Hamburg, earning two doctorates -in law and political science- and a Master of Comparative Jurisprudence from New York University. After academic appointments at Tübingen, Kiel, and Münster, he was appointed to a permanent professorship at Saarland University. His research focuses on German and European commercial law, trade regulation, antitrust law, distribution systems, and banking law. He has authored over thirty monographs and more than two hundred and fifty articles, many recognized as key works in their fields. Professor Martinek has received honorary doctorates from universities in China, France, Romania, Poland and Georgia and serves as a visiting professor internationally, mainly in South Africa and in China.