

MAREK ŚWIERCZYŃSKI, ZBIGNIEW WIĘCKOWSKI

Uniwersytet Kardynała Stefana Wyszyńskiego w Warszawie

A UNIFORM ARTIFICIAL INTELLIGENCE STATUTE

1. INTRODUCTORY REMARKS

In this article we assume that the conflict-of-law system is uniform and applicable to any legal situation, including those arising from technological progress. AI systems can be adapted for various socio-economic purposes. Also liability rules depend on the legal status granted to AI systems under the new regulations.¹ Things will be different if they continue to be considered as things, and different if all or some of them are considered as entities endowed with legal personality. Also, litigation between AI systems (e.g., robots) cannot be ruled out in the future.²

¹ U. PAGALLO, *The laws of robots, crimes, contracts and torts*, Dordrecht 2013.

² M. COECKELBERGH, *Robot rights? Towards a social-relational justification of moral consideration*, «Ethics and Information Technology» 12.3/2010, s. 209-221; P. KSIĘŻAK, S. WOJTCZAK, *Prawa Asimova, czyli science fiction jako fundament nowego prawa cywilnego*, «Forum Prawnicze» 4/2020, p. 67-68.

2. THE LEGAL PERSONALITY OF AI SYSTEMS

The issue of the legal personality of artificial intelligence has been and continues to be widely discussed.³ The terms used in these discussions are ‘electronic personality,’ ‘e-personality,’ ‘digital person,’ and ‘electronic person.’⁴ Proposals to endow artificial intelligence with legal personality or limited legal capacity are not uncommon, but so far have not led to a change in the law.⁵ Undoubtedly, endowing someone or something with legal personality is, and has always been, a delicate issue not only legally, but also ethically and socially. It cannot but give rise to controversy and lack of public understanding. Straightaway Suetonius’ *Lives of the Caesars* come to mind, and the story of Emperor Caligula’s plan to make

³ L. SOLUM, *Legal Personhood for Artificial Intelligences*, «North Carolina Law Review» 4/1991, p. 1284-1285; F. ANDRADE, P. NOVAIS, J. MACHADO, J. NEVES, *Contracting agents: legal personality and representation*, «Artificial Intelligence and Law» 15.4/2007, p. 357-373; J. GÜNTHER, F. MÜNCH, S. BECK, S. LÖFFLER, C. LEROUX, R. LABRUTO, *Issues of privacy and electronic personhood in robotics*, [in:] *The 21st IEEE International Symposium on Robot and Human Interactive Communication 2012*, 2012, p. 815-820, doi: 10.1109/ROMAN.2012.6343852; Č. PAULIUS, G. JURGITA, S. GINTARĖ, *Is it possible to grant legal personality to artificial intelligence software systems?*, «Comp L Secur Rev» 33/2017, p. 685-699; B. BROŹEK, *The Troublesome ‘Person’*, [in:] *Legal Personhood: Animals, Artificial Intelligence and the Unborn*, eds. V. KURKI, T. PIETRZYKOWSKI, Springer 2017, p. 3-13; C. MAGNUSSON SJÖBERG, *Legal Automation: AI and Law Revisited*, [in:] *Legal Tech, Smart Contracts and Blockchain, Perspectives in Law*, eds. M. CORRALES, M. FENWICK, H. HAAPIO, *Business and Innovation*, Singapore 2019, p. 182ff. For the Polish publications, see M. ROJSZCZAK, *Prawne aspekty systemów sztucznej inteligencji – zarys problemu*, [in:] *Sztuczna inteligencja, blockchain, cyberbezpieczeństwo oraz dane osobowe. Zagadnienia wybrane*, eds. K. FLAGA-GIERUSZYŃSKA, J. GOŁACZYŃSKI, D. SZOSTEK, Warszawa 2019, p. 8. See also A. CHŁOPECKI, *Silna SI i jej rola w społeczeństwie. Podmiotowość SI?*, [in:] *Sztuczna inteligencja – szkice prawnicze i futurologiczne*, ed. A. CHŁOPECKI, Warszawa, 2018.

⁴ G. TEBUNER, *Digital Personhood? The Status of Autonomous Software Agents in Private Law*, 2018, available via SSRN network, <http://dx.doi.org/10.2139/ssrn.3177096> (accessed 21 May 2022); C. MAGNUSSON SJÖBERG, *op. cit.*, p. 183.

⁵ K. Biczysko-Pudełko and D. Szostek aptly note that ‘the diversity and lack of uniformity of personality concepts make it seem impossible to determine a common solution,’ K. BICZYSKO-PUDEŁKO, D. SZOSTEK, *Koncepcje dotyczące osobowości prawnej robotów – zagadnienia wybrane*, «PME» 2/2019, p. 11.

his favourite racehorse Incitatus (“Speedy”) a consul. Caligula’s death thwarted this plan. However, the horse was given a furnished house and servants, so that guests invited on his behalf could enjoy a sumptuous feast.⁶ This example is a good illustration of the uncertainties involved in the granting of legal personality to machines.

The debate on the legal personality of artificial intelligence gained momentum when the European Parliament’s report on the civil-law principles for robotics called on the European Commission to create a legislative instrument on civil liability related to damage caused by the use of artificial intelligence. The document mentions the need to consider ‘a special legal status for robots’ and ‘the potential for the grant of legal personality in electronic form’ as one of the solutions concerning liability. This proposal was rightly considered controversial.⁷ In an open letter sent to the European Commission in 2018, 150 experts in medicine, robotics, AI, and ethics criticised the plans as ‘ideological, nonsensical, and unpragmatic.’ They argued that it was ethically and legally inappropriate to create a legal personality for a robot. The letter also called on the EU to provide a legal framework to protect the users of robots and third parties, rather than the robots themselves.

The concept of granting legal rights to non-human entities is not new. For instance, such an approach has been applied to specific natural features, namely rivers. In 2017, three rivers, the Whanganui River in New Zealand, and the Ganges and Yamuna Rivers in India, were given the status of legal persons. However, legal rights are only worth having if they can be enforced. While the law states that the river enjoys the

⁶ SUTONIUS, *Lives of the Caesars*, book IV, *Gaius Caligula*, chapter 55.3. [Suet., *Cal.*, 55,3] According to Cassius Dio, Caligula appointed Incitatus to the priesthood. CASSIUS DIO COCCEIANUS, *Roman History*, I, translated and edited by W. MADYDA, Wrocław 1967, book LIX, 14.7, and 28.6 [DC 59,14,7; 59,28,6].

⁷ *Open Letter to the European Commission on Artificial Intelligence And Robotics* (2018), <http://www.robotics-openletter.eu/> (accessed 15 May 2021). See also: E. PALMERINI, *Towards a Robotic law at the EU level?*, [in:] *L’intelligence artificielle et le droit*, eds. H. JACQUEMIN, A. DE STREEL, Bruxelles, 2017, p. 69.

same rights, powers, duties and liabilities of any other person, there are important limitations that directly affect its enforceability.⁸

The doctrine rightly notes that considerations on the subjectivity of AI systems should begin with an analysis of cases where making them holders of rights and obligations actually improves business transactions, solves legal or technical problems, or brings other legal and economic benefits. However, at this point it should be emphasized that many information systems in current use and described by their developers as ‘AI systems,’ do not have any mechanisms which could entitle them to be called ‘intelligent,’ not necessarily only in the ‘strong AI’ sense. Very often the application of a simple and well-known method, e.g. a classification such as a decision tree, constitutes a sufficient prerequisite for a given system to be described as ‘intelligent.’ The artificial intelligence we now have is incapable of equalling or even surpassing humans in many areas. Otherwise we would have to call it a ‘strong’ AI.⁹ An ‘artificial superintelligence’ of this type would in fact constitute a system whose capabilities would exceed those of the human brain.¹⁰ However, there is no such system as yet. The systems we have now are employed in highly specialised fields, such as pattern or category recognition, for example, or predictions of specifically defined human behaviour.¹¹ This manner of AI application is called ‘weak’ or ‘narrow’ AI. The adjective ‘narrow’ means that the AI to which it applies has been designed for one specific task. However, the term ‘weak AI’ may be considered misleading. Modern systems for facial recognition, natural language processing, autonomous driving, and medical diagnostics cannot be

⁸ See E. O'DONNELL, J. TALBOT-JONES, *Creating legal rights for rivers: lessons from Australia, New Zealand, and India*, «Ecology and Society» 23.1/2018, p. 7-8.

⁹ For the definition of strong AI, see *Artificial intelligence, Encyclopaedia Britannica*, <https://www.britannica.com/technology/artificial-intelligence> (accessed 27 June 2022).

¹⁰ S. DIVINO, S. BRUNO, *Critical Considerations on Artificial Intelligence Liability: E-Personality Propositions*, «Revista Eletrônica Direito e Sociedade» 8.2/2020, p. 197.

¹¹ On AI types see: G. SIBIGA, W. WIEWIÓROWSKI, *Automatyzacja rozstrzygnięć i innych czynności w sprawach indywidualnych załatwianych przez organ administracji publicznej*, [in:] *Informatyzacja postępowania sądowego i administracji publicznej*, ed. J. GOŁACZYŃSKI, Warszawa, 2010, p. 231.

described as ‘weak,’ since they are incredibly advanced and perform complex tasks at an astonishing speed and degree of accuracy. At this point, it has to be said that even a ‘narrow’ AI system may behave in an autonomous way and make decisions and choices which cannot be coded or predicted¹² (as we may observe in programs for games like go or chess). A presupposition to the contrary would create the grounds for an assumption that AI is incapable of expressing a will of its own, is not intelligent at all, and cannot have a personality.

However, these presuppositions would require proof. Thus, while we affirm the notion that the attribution of a personality to AI must go with a human-centric worldview, we consider it would be overhasty to claim that such a sense (of interest) cannot be justified.

At the same time, it cannot be denied that artificial intelligence systems are becoming more and more autonomous and show the ability to learn on their own, so it is becoming more and more difficult to attribute the effects of their actions to the person who designed them.¹³ However, robotics experts warn that the use of adjectives like ‘autonomous,’ ‘unpredictable,’ or ‘self-learning’ for AI systems is inexorably heading for the overestimation of the true potential of even the most advanced machines, and is indicative of a superficial understanding of the unpredictability and self-learning powers of computers.¹⁴ This observation has induced the authors of many recent studies conducted for international organisations to give up trying to define artificial intelligence as such in favour of defining an artificial intelligence *system* (i.e. a specific tool). Currently, there is no need to define artificial intelligence as such, only specific AI-based tools.¹⁵ An

¹² Alternative view: A. BENSOUSSAN, *Droit des robots: science-fiction ou anticipation?*, «Recueil Dalloz» 28/2015, p. 1640 ff.

¹³ N. OPOLSKA, A. SOLOMON, *Intellectual Property Rights to Objects Created by Artificial Intelligence*, «Law Review of Kyiv University of Law» 3/2021, p. 212.

¹⁴ *Open Letter to the European Commission. Artificial Intelligence and Robotics*, para. 2, <http://www.robotics-openletter.eu/> (accessed 28 June 2022).

¹⁵ M. NOWAKOWSKI, *O moralnej odpowiedzialności HAL-a 9000, czyli etyka sztucznej inteligencji w praktyce. Czy potrzebujemy definicji sztucznej inteligencji?*, «PME» 1/2022, p. 11.

artificial intelligence system is an information system which is either only software or software integrated with a physical device (hardware) designed to solve complex problems and able to operate both in the physical and purely digital dimensions.

The operation of such a system entails the observation of an environment by means of collecting and interpreting structured and unstructured data, drawing conclusions on the basis of what we know already, and processing the information derived from this data to help us decide on the best course of action to achieve our objective.¹⁶

The OECD defines an artificial intelligence system as a machine-based system capable of influencing the surrounding environment by producing predictions, recommendations or decisions for a defined set of aims.

Such a system utilizes human- or machine-generated data to perceive real or virtual environments, process observations into models automatically or manually, and implement models to formulate options or outcomes. Artificial intelligence systems have diverse levels of autonomy.¹⁷

Under Article 3(1) of the EU draft for an AIA (artificial intelligence act), an ‘artificial intelligence system’ is defined as software developed with the application of one or more of the techniques and approaches listed in its Annex I, which can generate outputs such as content, predictions, recommendations or decisions affecting the environments with which it interacts, for a given set of purposes specified by a human.

Annex I of the AIA identifies: (1) machine learning mechanisms, including supervised learning, unsupervised machine learning, and reinforcement learning, with the use of a wide range of methods including deep learning; (2) logic and knowledge-based methods, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deduction engines, (symbolic) reasoning

¹⁶ I. WRÓBEL, *Artificial Intelligence Systems and the Right to Good Administration*, «Review of European and Comparative Law» 49.2/2022, p. 208.

¹⁷ <https://oecd.ai/en/ai-principles> (accessed 15 June 2022).

and expert systems; (3) statistical approaches, Bayesian estimation, and search and optimisation methods.

Every autonomously operating appliance which perceives a given environment with sensors and influences it may be defined as an AI system. Therefore, the concept may be applied to everyday activities and used as a tool to design and analyse artificial systems.¹⁸

Even if this is the case, the attribution of a legal personality to AI systems will not require granting them all the rights enjoyed by natural or legal persons. Theoretically, a legal personality could consist only of obligations.¹⁹ Such an arrangement might be considered a viable solution, since civil liability is a property-based liability implying the possession of assets. However, assets are something that AI systems do not have.²⁰

From the perspective both of national and international law, there are no grounds to give a legal personality to machines simply because what we have are new AI systems which are autonomous to a certain extent (but not fully autonomous). The need to establish liability rules for damage due to AI does not mean it should be endowed with the attributes of legal personality.²¹ Damage caused by AI systems can generally be reduced to risks attributable to recognised civil-law entities (such as the manufacturer or the user of the AI system).²² These are the entities which should be held liable for any damage.²³ The creation of a separate liability regime based on the personality of AI systems increases the legal risk by exempting the existing civil-law entities from liability, thereby

¹⁸ R. QUEIROZ, F. SAMPAIO, C. LIMA, P. LIMA, *AI from Concrete to Abstract. Demystifying artificial intelligence to the general public*, «AI & Society» 36/2021, p. 882.

¹⁹ Cf. P.M. ASARO, *A body to kick, but still no soul to damn: Legal perspectives on robotics*, [in:] *Robot Ethics*, eds. P. LIN, K. ABNEY, G.A. BEKEY, Cambridge, 2012; A. ANUSZ, *Podmiotowość prawna osoby elektronicznej a rozwój sztucznej inteligencji w wybranych obszarach prawa konsumenckiego*, «Internetowy Przegląd Prawniczy TBSP UJ» 2/2019, p. 42-51.

²⁰ AI Liability Report 2019, p. 38.

²¹ *Ibidem*, p. 6.

²² More information can be found in: M.U. SCHERER, *Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies and Strategies*, «Harvard Journal of Law & Technology» 29.2/2016, p. 353-400.

²³ AI Liability Report 2019, p. 4.

weakening the effectiveness of civil law.²⁴ This is not altered by the fact that complex, more and more powerful AI systems are becoming more and more capable of causing damage, including unintended damage, arising in situations where the person using an AI system does not want to cause damage, and takes reasonable action to prevent it.²⁵

The proponents of attributing a personality to autonomous AI systems invoke the personality of corporations, ignoring the fundamental premise that corporate personality is a symbol of the persons in such an artificial entity.²⁶ As we have already said, the AI systems currently in operation do not exercise sufficient powers to enjoy an independent personality.²⁷ It is not autonomy but free will that is the critical element.²⁸ While already an essential component of the information society, artificial intelligence is still not sufficiently advanced to be capable of replacing human intelligence.²⁹ AI systems are not comparable to any recognised legal entity. They are property and, therefore, merely objects, not subjects of law.³⁰ They are created to serve as a tool to facilitate and assist the activities of the subjects of civil law.³¹

²⁴ S.M. SOLAIMAN, *Legal personality of robots, corporations, idols and chimpanzees: a quest for legitimacy*, «Artificial Intelligence Law» 25/2017, p. 177.

²⁵ More information can be found in: R. VAN DEN HOVEN, *Do We Need New Legal Personhood in the Age of Robots and AI?*, [in:] *Robotics, AI and the Future of Law*, eds. M. CORRALES, M. FENWICK, N. FORGÓ, Singapore 2018, p. 15-55.

²⁶ S.M. SOLAIMAN, *op. cit.*, p. 175.

²⁷ *Ibidem*.

²⁸ *Ibidem*, p. 160.

²⁹ P. POLAŃSKI, *Inwigilacja, dostępność, blockchain i sztuczna inteligencja: pytania o kierunki rozwoju prawa nowych technologii w erze rewolucji internetowej*, «MOP» 2/2019, p. 112.

³⁰ S.M. SOLAIMAN, *op. cit.*, p. 176.

³¹ M. ULIASZ, *Sztuczna inteligencja jako sztuczna osoba*, [in:] *Sztuczna inteligencja...*, eds. K. FLAGA-GIERUSZYŃSKA, J. GOŁACZYŃSKI, D. SZOSTEK, Warszawa, 2019, p. 31.

3. A PERSONAL AI STATUTE

Notwithstanding these caveats, it cannot be ruled out that perhaps in the near future,³² a foreign legal order will grant legal subjectivity (personality) to certain AI systems. This does not necessarily mean an amendment to the current legislation. A change in the interpretation of the existing provisions regulating legal personality would be sufficient. Some countries have adopted a more liberal interpretation of the law on legal personality than Poland. It is important to bear in mind the variety of organisational units endowed with legal personality, as provided for in foreign legal systems. These include entities which are not envisaged or provided for in Polish law or completely different from the organisational units provided for by Polish law.

The need to determine a personal statute for AI may arise as a so-called incidental question. It would be a self-contained relation (a self-contained legal situation) separate from the mainstream situation but affecting the outcome of the mainstream. It would emerge only once the law applicable to the mainstream case (e.g. liability for damage caused by AI) has been enacted. This is an issue with a statute of its own (in this case, a personal statute). If the dispute over this issue were decided separately from the main case, it would be subject to independent classification under the relevant conflict-of-law rule. For example, in a dispute pending before a court arising from the non-performance of a contract in relation to a counterparty who is a third party, the powers of an AI system to act could be challenged on the grounds that the legal action taken by the AI system was invalid (e.g. lack of powers to represent a user).

Such situations will entail the need to determine the proper law for a personal statute for the AI system. Another question which will arise is whether the legal effects of granting legal personality in a given country will cover the territories of other countries, including Poland. Last but

³² A robot called Sofia has been granted citizenship in Saudi Arabia and there are plans to mass produce such robots. For more information, see A. АТАБЕКОВ, О. ЯСТРЕБОВ, *Legal Status of Artificial Intelligence Across Countries: Legislation on the Move*, «European Research Studies Journal» 21.4/2018, p. 773-782.

not least, it is important to consider what legal aspects would be covered by a personal statute for artificial intelligence; therefore, the scope of the statute is another relevant question.

In the age of globalisation and increasing European integration facilitating the sale of products and the provision of services on the basis of AI algorithms, the legal implications of the use of AI technologies are being evaluated more and more in a cross-border context. In contrast to more specialised innovations, artificial intelligence is becoming a truly general-purpose technology. It is transforming into a tool which can penetrate every industry and sector of the economy, as well as nearly every aspect of science, society, and culture. Manifestations of the internationalisation of AI are already widespread.

There is a growing need to find a rational solution which will take into account both the abstract model of specific life situations and the overarching values on which the entire legal system relies. Non-legal aspects, i.e. the values underlying social relations, must also be taken into account.³³ Pragmatic aspects also have to be considered. The adoption of a uniform personal statute for AI could prevent the need for several separate statutes or for their cumulative application. The broad scope of such a statute would be justified by the contemporary challenges arising from EU law, particularly with respect to liability for damage caused by AI. For example, the scope of a personal statute could be inclusive, in the same way as the scope of the personal statute for a legal entity (cf. Art 17 of the Polish Act on International Private Law of 2011).

The law indicated for the status and capability of an AI system may be referred to as its individual personal statute. However, it would be wrong to treat a personal statute for AI as the proper law only as regards legal capacity. The law applicable for all the issues pertaining to the identification of an AI system and its broadly defined ability to take part in transactions may be considered as the individual personal statute for an AI system.

³³ M. PILICH, *Zasada obywatelstwa w prawie prywatnym międzynarodowym. Zagadnienia podstawowe*, Warszawa 2015.

This will inevitably (at least initially) evoke a strong negative response from the national legal order. It is characteristic of modern international private law to have corrective norms and introduce regulations to achieve certain substantive-law objectives related to the protection of own interests. These regulations take the form of a public policy or other similar clause, and are based on the values of a country's existing legal order. Below we will discuss the feasibility of, and need to use such mechanisms when a case involves AI systems.

The best conflict-of-law solution seems obvious. A personal statute for artificial intelligence should be based on a system for the registration of artificial intelligence-based tools, preferably on a European level. The registration system could address events which affect the evaluation of their performance. Putting AI systems under the law of the registering authority would make for a consistent legal regime. Users should be able to access information about the technological solutions applied, who uses them, where, on what occasions, and for what purpose. In the context of explainability, it is particularly important to record and archive decisions made with an AI system, together with all the data and algorithms employed, so as to ensure that the data which led to any given decision may be analysed, even after a certain period of time (within a set retention period).³⁴

However, it should be borne in mind that attempts to establish a uniform statute for new technologies have already been made (cf. the country of origin principle in Art. 3 of the E-commerce Directive), but without much success. The outcome may be different for artificial intelligence. This applies mainly to AI systems declared as international legal persons,³⁵ and will occur when two or more countries adopt legislation to establish a statute for an artificial intelligence system. It is important to differentiate between this case and a situation where a specific instance of artificial intelligence is associated with more than

³⁴ G. BAR, *Przejrzystość, w tym wyjaśnialność, jako wymóg prawny dla systemów Sztucznej Inteligencji*, dodatek «MoP» 20/2020, p. 77.

³⁵ Cf.: A. WOWERKA, *Osoby prawne i inne jednostki organizacyjne*, [in:] *Prawo prywatne międzynarodowe. System Prawa Prywatnego*, XXA, ed. M. PAZDAN, Warszawa, 2014, p. 630.

one country, e.g., due to the funding of a particular artificial intelligence system.

Before we create any registers of AI systems, we must examine the conflict-of-law rules to find an answer to the question of legal subjectivity. First, we must ask which conflict-of-law rule is applicable. Will it be the conflict-of-law rule concerning the capacity of natural or legal persons? We also have to determine the right qualification (interpretation) of the scope of the conflict-of-law rules, including the meaning of the term 'person' in international private law. When we make this interpretation, we are not bound by the stance of national substantive law. Foreign legal orders, including national systems where these issues are regulated in a different way, must be taken into account.

Instances of a flexible interpretation of the scope of conflict-of-law rules are not uncommon. In the context of personal connecting factors, we should mention the creative interpretation of the common personal rights of the parties under Art. 31(2) of the Polish Act on International Private Law of 1965. The case in question involved damage caused on the territory of Czechoslovakia and the applicability of Polish law based on the common personal right of the parties concerned (the cumulative connecting factor of citizenship and residence applicable to the legal persons involved).

Interpretations made on the grounds of the Polish Act on International Private Law of 2011 should use the functional qualification method,³⁶ i.e. an autonomous approach should be used for the interpretation of expressions appearing in conflict-of-law rules. This approach assumes interpreting the terms used in conflict-of-law rules set forth in international private law in a way which corresponds to their delimiting function, without the need for constraint by their understanding or the understanding of specific legal institutions adopted in Poland's domestic (or in a foreign) substantive law. This method of qualification requires an appropriate degree of flexibility. We should not adhere too closely to the schemes, constructs, and definitions adopted in our domestic law.³⁷

³⁶ *Ibidem*, p. 79.

³⁷ *Ibidem*, p. 81.

What matters is the function these expressions perform. Comparative studies are important to arrive at the right qualification for artificial intelligence. Differences in the assignment of particular legal institutions by foreign legal systems should not be an obstacle.

Thus, from the functional viewpoint typical of international private law, can artificial intelligence be characterised as a legally independent and autonomous creation which has a will of its own and exists as such in external relations?³⁸ This is associated with the following question: Can we search for the law which will be applicable for the various issues involved in the use of AI, in the way we do for individual aspects of the activities of natural or legal persons?

The doctrine emphasises that the decisive criterion for the application of the relevant conflict-of-law rules is not so much the possession of a legal personality but rather an externally recognisable organisational autonomy.³⁹ Whether an AI system has a legal personality can only be determined by the substantive norm indicated by the relevant conflict-of-law rule. Its possession of a legal personality is thus subject to determination under the applicable conflict-of-law rule.⁴⁰

Under international private law, it is not so much a question of establishing legal personality but rather of legal subjectivity.⁴¹ The concept of legal subjectivity includes both legal personality and legal capacity of organisational units which are not legal persons. The foreign law applicable in a given case may therefore 'posit' the artificial intelligence system in legal transactions without giving it the attributes of a person in the legal sense.

³⁸ Cf.: L. FLORIDI et al., *AI4People – An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations*, «Minds and Machines» 28.4/2018, p. 689-707; M. ŚWIERCZYŃSKI, *Sztuczna inteligencja w prawie prywatnym międzynarodowym – wstępne rozważania*, «Problemy Prawa Prywatnego Międzynarodowego» 25/2019, p. 37.

³⁹ Cf.: C. MAGNUSSON SJÖBERG, *op. cit.*, p. 184.

⁴⁰ A. WOWERKA, *op. cit.*, p. 627.

⁴¹ *Ibidem*.

The doctrine of international private law distinguishes between the concept of the personal statute⁴² and a specific person's affiliation with a specific country.⁴³ The proper law for the capacity of artificial intelligence is referred to as the personal statute of artificial intelligence. The personal statute covers the assessment of the capacity and other elements of artificial intelligence, while the concept of affiliation of artificial intelligence to a specific state is related to the existence of specific ties between artificial intelligence and a specific state. Affiliation may be determined by the same factors as those which constitute the connecting factor of the conflict-of-law rule that determines the personal statute of artificial intelligence. The personal statute of artificial intelligence would then be the legal system of the country with which the artificial intelligence is affiliated. This distinction is important because of the different natures of the laws governing artificial intelligence. Recognition of the legal personality of artificial intelligence should also be distinguished from the admissibility of undertaking activities using artificial intelligence on the territory of a specific country, which can (and should) be subject to its specific national laws.

Establishing the personal statute of artificial intelligence does not imply an automatic and unconditional recognition that artificial intelligence exists and has legal personality according to its personal statute. First, the interference of the public policy clause seems justified in certain situations, for the reasons indicated above. Secondly, as regards the need for new legislation, it will be advisable to introduce a provision requiring a separate act of recognition for the legal personality of artificial intelligence.

We must also stipulate that the fact that a specific legal situation is associated with artificial intelligence does not determine its *lex fori* (the positive law in force in the jurisdiction of the authority deciding the case).⁴⁴ In certain situations it is possible to apply foreign law, which of course does not exclude the application of the public policy clause. Even

⁴² A. MĄCZYŃSKI, *op. cit.*, p. 310ff.

⁴³ For legal persons, see M. PAZDAN, *Prawo prywatne międzynarodowe*, Warszawa 2016, p. 142.

⁴⁴ M. ŚWIERCZYŃSKI, *Sztuczna inteligencja w prawie...*, p. 35.

if we disagree with certain legal arrangements for artificial intelligence (e.g., the attribution of a legal personality by a particular legal system or the recognition of a particular artificial intelligence system as a creator under domestic copyright law), the authorities of one country may not recognise only those rights which exist under that country's own legal system and exclude those acquired under the legal system of another country which is more liberal on artificial intelligence.

Assuming that the right conflict-of-law rule is found, the circumstances used to determine the proper law (i.e. the connecting factors) must then also be appropriately classified (interpreted). As far as Polish law is concerned, this applies in particular to the connecting factor of citizenship in the case of natural persons, and domicile in the case of legal persons. However, in the light of international private law, is it possible to speak at all of the citizenship of an AI system, even if a legal system has granted citizenship to that system (this may call for certain procedures to be carried out to assess the equivalence of the concepts used in different legal systems)? On the other hand, the concept of domicile is itself ambiguous and requires reference to circumstances such as the seat of the management board (the persons supervising the AI system?) or the place where the legal person is conducting operations (the place where the effects of the activity of the AI system occur?). Additional difficulties are caused by the fact that foreign legal systems use other connecting factors to determine the personal statute, such as place of residence (for natural persons), or place of incorporation (for legal persons). Can there be a subjective criterion for AI regarding place of residence, such as intention (*animus*) to stay in a particular place?

In the Polish Act on International Private Law of 2011, the personal statute of legal persons is regulated in the provisions of Chapter 3. Pursuant to Art. 21 of this Act, these provisions apply accordingly also to organisational units without a legal personality. Art. 17(1) of the Act adopts the connecting factor of domicile and Art. 17(2) adopts an auxiliary connecting factor in the form of the place of incorporation, which applies when the law of the country of domicile of a legal person subjects (refers) it to the legal system of the place of incorporation. These rules are supplemented by Art. 19 (1), which says that 'upon transfer of

domicile to another country, the legal person shall be subject to the law of that country. The legal personality acquired in the country of former domicile shall be preserved if the law of each of the countries concerned so provides. Transfer of domicile within the European Economic Area shall not lead to a loss of legal personality.⁴⁵ Discussion on the interpretation of this provision is still open because Art. 17(1) does not give a precise definition of the concept of a legal person's domicile.⁴⁵

Foreign law can give an AI system a different legal character. It may classify it as a legal person or another organisational unit. The question arises whether this justifies resorting to the conflict-of-law rules set forth in Art. 17 of the Polish Act. As the conflict-of-laws doctrine rightly points out, for the classification of a given entity within the scope of the conflict-of-law rules set forth in Art. 17 of the 2011 Act on International Private Law, what is relevant is whether the entity has the form of an externally recognisable organisational structure which allows it to acquire subjectivity as a 'legal person' (if the proper law so provides) or 'other entity'.⁴⁶ From this point of view, it does not matter whether the creation defined using the term AI is a legal entity or not.

The scope of the statute could cover issues such as the existence of an AI system as a separate legal entity, its liquidation, specific capacity

⁴⁵ In particular, see J. POZOBUT, *Osoby prawne w polskim prawie prywatnym międzynarodowym. Projekt nowelizacji ustawy*, «Kwartalnik Prawa Prywatnego» 3/2000, p. 548-552; W. KLYTA, *Spółki kapitałowe w prawie prywatnym międzynarodowym*, Kraków 2002; A.W. WIŚNIEWSKI, *Statut personalny spółek kapitałowych i uznawanie spółek zagranicznych. Orzecznictwo Trybunału Wspólnot a reforma polskiego prawa prywatnego międzynarodowego*, [in:] *Współczesne wyzwania europejskiej przestrzeni prawnej. Księga pamiątkowa dla uczczenia 70. urodzin Profesora Eugeniusza Piontka*, eds. A. ŁAZOWSKI, R. OSTRIHANSKY, Kraków 2005, p. 718-725; M. SZYDŁO, *Statut personalny osób prawnych w projekcie nowej ustawy – Prawo prywatne międzynarodowe*, «Kwartalnik Prawa Prywatnego» 1/2007, p. 194; A. OPALSKI, *Prawo właściwe dla osób prawnych w świetle projektu ustawy – Prawo prywatne międzynarodowe*, [in:] *Księga pamiątkowa 60-lecia Sądu Arbitrażowego przy Krajowej Izbie Gospodarczej w Warszawie*, eds. J. OKOLSKI, A. CAŁUS, M. PAZDAN et al., Warszawa 2010, p. 818; P. BŁASZCZYK, *Pojęcie siedziby osoby prawnej w nowej ustawie o prawie prywatnym międzynarodowym*, «PiP» 11/2011, p. 84-97; M. PAZDAN, *Nowa polska ustawa o prawie...*, p. 27.

⁴⁶ A. WOWERKA, *op. cit.*, p. 625.

to act, and succession. Under this law, we can also examine whether an AI system has the powers to perform a specific legal act.

The scope of the statute could also include rights and responsibilities in the relationship between the AI system and its users. Issues to be considered include the right of the AI system to delegate some or all of its responsibilities and powers; the right of the AI system to manage and dispose of assets; and the relationship between the creators of the system and the beneficiary users, including the liability of the developers of the AI system in relation to its users.

The provisions of the personal statute should govern the nature of the organisational unit created on the basis of its provisions. An AI system under such a statute may be assigned a certain type or subtype of legal personality.

The personal statute of an AI should determine whether it has legal capacity. Foreign AI persons are subject to recognition in a given country provided they have been properly constituted in accordance with the provisions of their personal statute. A company's personal statute determines its recognition. An entity's legal personality should also be recognised by Poland even if Polish law does not grant legal personality to comparable organisational units.⁴⁷

The provisions of an AI system's personal statute could determine what actions are necessary to create it as a separate legal entity. This law could cover the various stages of founding the AI, as well as the potential liability of its founders. In the light of its provisions, the declarations of intent made during the foundation of the AI may be evaluated in the light of the provisions of its personal statute.

The reasons for the liquidation of an AI can be assessed in the light of the law establishing it. This law could be used to assess the actions required for the liquidation, and provide guidance on the legal situation of the AI in liquidation. An AI's personal statute should determine the appropriate processes for its reorganisation or transformation. The

⁴⁷ The Polish Supreme Court still holds its position on the matter expressed in its judgement of 27 March 2007 (III CSK 210/07, «Legalis»); according to this judgement, a company's personal statute also covers its legal capacity.

personal statute should also determine the end of the existence of the creations created by the entity, which should also apply to the AI itself.

The same goes for the name of the AI. Most legal systems distinguish a separate category of designations for private-law entities serving to identify them in transactions. The provisions of international agreements on the protection of names, including the TRIPS Agreement, are of key importance. They are subject to the principle of territorialism. Thus, there will be a risk of applying a complex conflict-of-law mechanism and, in particular, making a qualification which demarcates the jurisdiction of the personal statute and other statutes which may come into play, including ones for intellectual property. The principles for the protection of a name may be constructed by analogy to the protection of personal rights. It should be borne in mind that on the grounds of Art. 1(2)(g) of the Rome II Regulation, non-contractual obligations arising from violations of privacy and other personal rights, including defamation, are outside the scope of its application. Art. 6(1) of the Rome II Regulation applies with respect to the protection of transactions against the misleading use of a name. Cumulative protection using a designated law pursuant to Art. 8 of the Rome II Regulation cannot be ruled out, either.

In specific cases, doubts may arise as to whether a specific AI system should be assessed as a structure similar to a legal person or as an obligation relationship resulting from a legal act (contract). In the latter case, the proper law will be the contractual statute established under the rules of the Rome I Regulation. Important guidelines for this case are provided by secondary EU law, especially EU regulations, in particular the Regulation on the law applicable to contractual obligations (Rome I) and the Regulation on the law applicable to non-contractual obligations (Rome II).

As regards the delineation of the personal and tort statutes with respect to the effects of the use of an AI system, the relationship between the tort and the activity of the AI system seems to be a useful criterion. The tort statute will apply if tort regulations (e.g., product liability regulations) have been violated as a result of the use of an AI system. However, a dual classification cannot be ruled out and the injured party

is given the choice of pursuing a claim under either one or the other statute.

If the applicability of a foreign law which has granted legal personality to an AI is established, it is necessary to consider the potential application of the public policy clause, which allows for refusal to apply a foreign law for the purpose of a particular verdict,⁴⁸ e.g., refusal to recognise the validity of a contract entered into by an AI system, particularly by the recognition that the fundamental principle of public policy is to grant personality only to human beings. This would make it possible to apply the public policy clause as a form of defence against any unacceptable consequences of application of norms derived from a foreign law.⁴⁹

The public policy clause is provided for in Art. 7 of the Polish Act of 2011. Its content is as follows: 'Foreign law shall not be applied if its application would have effects contrary to the fundamental principles of the legal order of the Republic of Poland.' The wording of the public policy clause is as follows in the Rome I and II Regulations: 'The application of a provision of the law of any country specified by this Regulation may be refused only if such application is manifestly incompatible with the public policy (*ordre public*) of the forum' (Art. 21 Rome I and Art. 26 Rome II). A public policy clause is also present in all the Hague Conventions.⁵⁰

There is a risk that the public policy clause will turn into a kind of conflict-of-law super-connecting factor. It does not seem reasonable to completely reject the applicability of a foreign law regulating the legal status of AI systems in a different manner.⁵¹ In a particular case, it may

⁴⁸ Cf. K. ZAWADA, *Klauzula porządku publicznego w prawie prywatnym międzynarodowym (na tle orzecznictwa Sądu Najwyższego w sprawach z zakresu prawa rodzinnego i spadkowego)*, «NP» 4/1979, p. 72.

⁴⁹ M. PAZDAN, *Prawo...*, p. 105.

⁵⁰ M. ZACHARIASIEWICZ, *Klauzula porządku publicznego jako instrument ochrony materialnoprawnych interesów i wartości 'fori'*, Warszawa, 2018, p. 25.

⁵¹ The *a priori* rejection of the possibility to apply foreign law in artificial intelligence cases is a blatant example of priority given to a principled commitment to a country's own moral and legal beliefs and the primacy of ideology over the need to take into account the legitimate expectations and needs of cross-border transactions. For more information, see M. ŚWIERCZYŃSKI, *Sztuczna inteligencja w prawie...*, p. 43.

turn out that the application of a foreign law will lead to the required results for the effective pursuit of the claims of a person injured by the actions of an AI system. What is of fundamental importance is the specific effect of the application of a foreign norm. This is because it may be similar to the effect produced by the application of the domestic law, such as admission of the validity of a contract entered into using artificial intelligence. The public policy clause should be used carefully and skilfully, in exceptional cases, and within the bounds of indispensable needs.⁵² The application of a foreign norm must be reconcilable with the domestic legal order. The effect served by the public policy clause to exclude the application of a foreign law can also be achieved by other solutions.⁵³

The general public policy clause may sometimes be supplemented by specific clauses which prohibit the application of foreign laws in certain cases. Specific public policy clauses have given rise to a considerable amount of doctrinal and practical controversy, primarily because of the vagueness of their relationship to the general clause and the automatic manner in which the foreign law may act as a substitute for the domestic law. Such clauses also create a considerable amount of interference with the way conflict-of-law rules are applied, thus dangerously upsetting the balance between the given country's domestic law and the law applicable to the particular case. Specific clauses have earned a lot of criticism and are rarely used nowadays.

A personal statute may prove inapplicable with respect to the national standards on artificial intelligence because of domestic regulations which must be applied.⁵⁴ A country's binding laws must be applied irrespectively

⁵² M. ZACHARIASIEWICZ, *Klauzula porządku publicznego*, [in:] *Prawo prywatne międzynarodowe, System Prawa Prywatnego*, ed. M. PAZDAN, Warszawa, 2014, p. 492.

⁵³ *Ibidem*, p. 3. Cf. M. PILICH, *Zasada obywatelstwa w prawie...*

⁵⁴ Mandatory regulations are ones which apply obligatorily to a specific legal relationship due to a country's important interests, even when they are not part of the legal system chosen by the parties to a contract or indicated by the applicable conflict-of-law rule. W. KOWALCZYK, *Przepisy wymuszające swoje zastosowanie w zobowiązaniach umownych - przykład rozwiązań francuskiego prawa prywatnego międzynarodowego*, «PS» 4/2014, p. 70; M.A. ZACHARIASIEWICZ, *O potrzebie wskazania w nowej ustawie o prawie prywatnym międzynarodowym podstawy stosowania przepisów wymuszających*

of the law designated by the conflict-of-law rules established in that country and irrespectively of the statute. Binding laws are the injunctions and prohibitions by means of which a country pursues certain interests which must be taken into account from the conflict-of-law perspective. We must bear in mind that the absolutely binding nature of a regulation is not in itself sufficient for it to be considered a mandatory regulation.⁵⁵ It would be mandatory if it were applicable irrespectively of the proper law in any specific situation. We cannot assume that the legislator intended to give such regulations a binding force in every cross-border situation, regardless of which personal statute a company is subject to. As regards AI, such a concept could give excessive preference to a country's domestic law. Potentially admissible criteria justifying such a solution might be the prevention of abuse or fraud, or overriding reasons of general interest.

This raises the following question: Which norms of a specific national legal order should be considered mandatory regulations? An important issue is the determination of how a mandatory regulation should be applied in the courts. Determining whether a regulation is mandatory can be done in two ways. First, the legislator may indicate that the nature of a specific regulation is imperative and that it must be applied regardless of the proper law for a particular case. Secondly, such a qualification may be made by a court. The intention to protect weaker parties sometimes leads to an overly far-reaching expansion of the catalogue of mandatory regulations. In practice, a conflict may arise between a foreign regulation which is applied as an obligatory 'police rule' and the public policy clause designed to exclude the application of certain provisions of foreign law if they violate the domestic public policy. There may be a conflict between several mandatory regulations. Indeed, specific facts may justify the deliberate application of two or more regulations imperative with respect to the same facts. These regulations play an important role within the law of obligation. This is

swoje zastosowanie, «Problemy Prawa Prywatnego Międzynarodowego» 7/2010, p. 653-677; M. MATA CZYŃSKI, *Przepisy wymuszające swoje zastosowanie w prawie prywatnym międzynarodowym*, Kraków 2005.

⁵⁵ The way the institution of the mandatory regulation functions in contemporary international private law is not clear; W. KOWALCZYK, *op. cit.*, p. 70-82.

because they allow a country to protect its interests quite extensively by giving the special feature of imperativeness to a large number of regulations. However, we should keep in mind that the application of these regulations is limited by their functionality, which requires the judge to examine whether the facts have a sufficient connecting factor for the country to make the application of the regulation advisable.

4. A PROPERTY-LAW STATUTE FOR AI

A reasonable alternative to the idea to search for a personal statute for an AI system would be to uniformly and consistently treat the AI system solely as the object of a legal relationship. This would mean first using the conflict-of-law regulations concerning things to determine not only the property-law statute of the AI system, but also other aspects of the operations of an AI system. The potential for the flexible qualification of these norms is justified by the interpretation adopted in the previous Polish conflict-of-law act.

The applicability of the property-law statute to new technologies is shown in the interpretation adopted in the light of the Polish International Private Law Act of 1965 with respect to intellectual property rights.⁵⁶ This act did not contain conflict-of-law rules indicating the applicability law for intellectual property rights. It was assumed that the law of the country providing protection (*lex loci protectionis*) is the proper law, by analogy to the conflict-of-law rules set forth in its Art. 24, which specified the proper law for property rights and other rights *in rem*. It is assumed that the scope of the conflict-of-law concept of rights *in rem* is broader than in substantive law and also includes intellectual property rights. The *locus protectionis* was thus regarded as equivalent to the *situs rei*. Similarly, we may consider including the various aspects of the operation of an AI system within the scope of the property-law statute, taking its location as the key connecting factor. Therefore, to determine

⁵⁶ For more information, see A. NOWICKA, *Komentarz do art. 46, [in:] Prawo prywatne międzynarodowe. Komentarz*, ed. J. POCZOBUĆ, Warszawa 2017, p. X.

the property-law statute for a AI, we may assume that the place where the AI conducts its operations performs a similar function to the place where the object of a property right is located.

The advisability of the use of the property-law statute also arises from the use of a more stable connecting factor. The use of personal connecting factors in relation to AI is problematic. In contrast, it is characteristic of conflict-of-law rules applicable to rights *in rem* that they use almost exclusively objective connecting factors which are fairly easy to determine. This is justified by the need to ensure the security of transactions and the protection of third parties. For a movable object (an AI system), the place of location is its actual (real) location, even if it is transitory (incidental) and changes frequently. It does not matter whether the change in the object's location complies with the will of its owner.

The application of *lex rei sitae* (Lat. "the law where the property is situated") with respect to property rights for an AI system is indisputable, and justified on the grounds of the relationship between the object and the country on whose territory it is located. The laws of that country provide the most effective protection for the holder of the property rights. That country is also the place where it will be easiest to enforce rulings already made by its authorities regarding property rights. Subjecting property rights to the law of the place where the object is located also promotes transactional certainty. The advantage the place of location offers as the connecting factor is that it is public and easy to determine.

But how do we proceed when an AI system loses its physical (material) characteristics?⁵⁷ In artificial intelligence systems, products and services are constantly interacting and it is not feasible to effect their precise separation. What raises doubts is whether software falls under the legal concept of a product or a product component. In particular, it is debatable whether the answer should be different for embedded and

⁵⁷ Sometimes artificial intelligence is equated with software; see A. ANUSZ, *Pojęcie i zastosowanie algorytmów w polityce cenowej przedsiębiorstw a prawo konkurencji*, «Internetowy Przegląd Prawniczy TBSP UJ» 4/2018, p. 15.

non-embedded software, including over-the-air software updates or other data channels.⁵⁸

Depriving an AI system of its physical form is not only a source of difficulties with its qualification, but also contributes to many uncertainties in the selection of an adequate conflict-of-laws rule connecting factor. This is because it is no longer possible to identify the location of the AI system due to its dematerialisation. While the traditional connecting factor for an AI system's location could be adapted to its place of registration, this can only be done to a limited extent for a dematerialised AI system.

We should bear in mind that only some AI systems have tangible outputs in geographically identifiable places. Most systems of this kind, for example Dall-E, GPT-3, Stable Diffusion, have purely digital outputs, which only affect virtual space. (see *Study on the Rome II Regulation (EC) 864/2007 on the law applicable to non-contractual obligations JUST/2019/JCOO_FW_CIVI_0167*, p. 74). This makes localising AI systems and the application of existing conflict-of-law rules more difficult. The courts have grappled with this problem in cases involving the internet, settling on a 'mosaic' or 'centre of interests' approach in defamation cases, but in our opinion, the simple copying of such an approach for AI systems would be in conflict with the Rome II principles of certainty and would not ensure the rigorous administration of justice. It would require defendants to comply with all the international laws for AI systems available online. It could also come into conflict with the principle of proximity by exposing defendants to liability simply because of the tenuous connection created by the accessibility of the content in the place of jurisdiction. As a result, courts could opt for escape clauses (if offered such a possibility), which would significantly increase the risk of forum shopping.

In recent years, there has been an apparent global trend to regulate the jurisdiction of the law on property rights in greater detail. There have been more and more derogations from subjecting property rights to *lex rei sitae*. Is such a derogation also valid for AI systems? This does

⁵⁸ AI Liability Report 2019, p. 28.

not seem to be correct. For example, subjecting property rights to the personal statute of the user (owner) of an AI system would entail the need to establish the fact each time the holder of the rights performs a legal act and each time other legal events occur affecting the existence and content of the property rights. Also, it does not seem appropriate to admit autonomy of will for parties searching for and determining a property-law statute for an AI.

These difficulties justify the need for a careful analysis of the connecting factors adopted in conflict-of-law rules, in order to determine the best connecting factor for the determination of the law applicable to events related to artificial intelligence.

5. CONNECTING FACTORS FOR ARTIFICIAL INTELLIGENCE

Connecting factors are those elements of conflict-of-law rules⁵⁹ which describe the criteria (factual circumstances) that determine the proper law for a specific legal relationship.⁶⁰ Thus, they serve as a pointer sending the addressee to the legal system which should be applied to meet the requirements of the conflict-of-law rule.⁶¹ The disposition of the conflict-of-law rule contains only a description of the connecting

⁵⁹ For information on the structure of conflict-of-law rules from the standpoint of Swiss international private law, see J. KREN KOSTKIEWICZ, *Grundriss des schweizerischen Internationalen Privatrechts*, Bern 2012, p. 123ff.

⁶⁰ M. PAZDAN, *Prawo ...*, p. 50; A. MĄCZYŃSKI, *Wskazanie kilku praw przez normę kolizyjną prawa prywatnego międzynarodowego*, [in:] *Rozprawy z polskiego i europejskiego prawa prywatnego. Księga pamiątkowa ofiarowana Profesorowi Józefowi Skąpskiemu*, eds. A. MĄCZYŃSKI, M. PAZDAN, A. SZPUNAR, Kraków 1994, p. 232; H. TRAMMER, *Z rozważań nad strukturą normy kolizyjnej prawa prywatnego międzynarodowego*, «*Studia Cywilistyczne*» 13-14/1964, p. 398; J. KROPHOLLER, *Internationales Privatrecht*, Mohr Siebeck e.K. 2004, p. 136.

⁶¹ W. LUDWICZAK, *Międzynarodowe Prawo Prywatne*, Poznań 1996, p. 26; J. KREN KOSTKIEWICZ, *op. cit.*, p. 123-124.

factor. On the other hand, the term ‘connecting factor’ denotes a fact with characteristics corresponding to this description.⁶²

The axiological rationale for the provision of a specific connecting factor in conflict-of-law rules is not state sovereignty but the principle of closest connection. It is about looking for the ‘centre of gravity’ in a specific relationship with respect to a specific legal system. We believe that in the case of AI, it is public interest (the interest of the state and the legal transactions) that should set the framework for the legislator’s decision about the best conflict-of-law connecting factor.

National legislators use different connecting factors in conflict-of-law rules. Hence, fundamental differences between international private law systems are inevitable since the consequence of the use of different connecting factors is usually the assumption that different legal systems will be applied.⁶³ Another problem is the lack of a uniform interpretation of connecting factors with the same wording, especially those with legal, not just factual, characteristics.⁶⁴ Therefore, the unification of conflict-of-law rules, including preference for the use of specific connecting factors, which is currently taking place in the EU, is of key importance.⁶⁵ For example, as indicated in recital 14 of the Rome II Regulation: ‘[t]he requirement of legal certainty and the need to do justice in individual

⁶² A. MĄCZYŃSKI, *Zamieszkanie jako podstawa łącznika normy kolizyjnej*, «ZNUJ» 8/1978.

⁶³ H. TRAMMER, *O tak zwanych ‘jednostronnych normach’ międzynarodowego prawa prywatnego*, «Studia Cywilistyczne» 2/1963, p. 119 ff.

⁶⁴ E. LEIN, *La nouvelle synergie Rome I, Rome II, Bruxelles I*, [in :] *Le nouveau règlement européen “Rome I” relatif à la loi applicable aux obligations contractuelles : actes de la 20^e Journée de droit international privé du 14 mars 2008 à Lausanne*, eds. E. CASHIN RITAINE, A. BONOMI, Zurich 2008, p. 42-44.

⁶⁵ For information on the search for new solutions, see K. BOELE-WOELKI, *Unifying and Harmonizing Substantive Law and the Role of Conflict of Laws* (vol. 340), [in:] *Collected Courses of the Hague Academy of International Law*, doi: <http://dx.doi.org/10.1163/1875-8096>. For information on new initiatives to create a general part of the EU international private law, cf.: S. LEIBLE, M. MÜLLER, *The Idea of a “Rome 0 Regulation”*, «Yearbook of Private International Law» 14/2012-2013, p. 137-152; L. DE LIMA PINHEIRO, *The Methodology and the General Part of the Portuguese Private International Law Codification*, «Yearbook of Private International Law» 14/2012-2013, p. 153-172.

cases are essential elements of an area of justice. This Regulation provides for the connecting factors which are the most appropriate to achieve these objectives.⁶⁶ In selecting the connecting factors which determine the applicability of a law to certain legal relations, a compromise is now sought between legal certainty (predictability of the applicability of a given law) and the imperative to find the law most closely linked to the relationship being evaluated.⁶⁷

It is worth noting that a general indication of the proper law based on a connecting factor formulated in accordance with the modern understanding of the place of the legal relationship is usually supplemented with a corrective rule.⁶⁸ The corrective rule set forth in the Regulation does not predetermine which connecting factor will apply. Thanks to its flexibility, this solution helps to take the necessary extent of the circumstances of a particular case into account in the formulation of the final decision. The phrase ‘a much closer link’ cautions against the abuse of the rule. This rule gives priority to the real connection between a particular legal relationship and a specific legal area, if it is closer than the connection indicated by the basic connecting factor.⁶⁹

⁶⁶ One of the most striking and novel elements of the new European conflict-of-law regime after the Rome II Regulation became effective is the variety of the connecting factors, as highlighted by M. HEIDEMANN, *Does International Trade Need a Doctrine of Transnational Law?* Berlin 2012, p. 60, 62. In particular, the traditional *locus delicti* (Article 3 of the 1971 Hague Convention), the common habitual place of residence of the parties (Article 4.2 of the Rome II Regulation), the place where the damage was caused (Article 4(1) of the Rome II Regulation), and the place where a vehicle was registered (Art. 4 of the 1971 Hague Convention) were used. More information can be found in T.K. GRAZIANO, *The Law Applicable to Non-contractual Obligations in Europe: A Guide to the Rome II Regulation*, Oxford 2016. It is important to note, however, that the variety of connecting factors is not a manifestation of a *better law* approach, but rather of the provision of certainty as to the proper law, in accordance with the concept of proper law.

⁶⁷ M. PAZDAN, *Koordynacja krajowego i europejskiego prawa prywatnego międzynarodowego*, [in:] *Współczesne wyzwania prawa prywatnego międzynarodowego*, ed. J. POZOBUT, Warszawa 2013, p. 230.

⁶⁸ *Ibidem*, p. 232.

⁶⁹ *Ibidem*.

However, there is no such thing as a perfect connecting factor.⁷⁰ Every method has its advantages and disadvantages. Therefore, the legislator's choice of the correct connecting factor must be careful and tailored to the specific case. It is advisable to use connecting factors which are simple and easy to understand for those who apply international private law.

It is difficult to find connecting factors which meet the needs of new technologies such as AI.⁷¹ So far, the prevailing opinion has been that it is reasonable to use personal connecting factors as much as possible.⁷² However, this opinion is changing.

The identification of the proper law for AI-related disputes may seem difficult due to the fact that the use of AI-based tools can be global. However, it seems possible to link the legal relations involving a particular AI system to a particular territory, and thus to a particular national legal order. Therefore, traditional connecting factors, especially objective ones, do not forfeit their *raison d'être* for AI.

An alternative to stable connecting factors is to use the American conflict-of-law theories aiming to individualise verdicts on an *ad hoc* system.⁷³ Here, the solution to the difficulties with qualification is to be provided primarily by analysing the tasks of competing legal systems

⁷⁰ M. PAZDAN, *Dziedziczenie ustawowe w prawie prywatnym międzynarodowym. Metody regulacji właściwości prawa*, «PNUŚ» 45/1973, p. 93.

⁷¹ Cf. Z.S. TANG, *Electronic Consumer Contracts*, especially p. 238, 241-243, and 249; C.M. LABORDE, *Electronic Signatures in International Contracts*, Frankfurt-am-Main 2010, p. 136-138, 145-146.

⁷² As an example of this trend, Art. 46 of China's new regulation provides that infringements of personal rights, such as first name, last name, image, reputation, and privacy, committed by means of the Internet or otherwise shall be governed by the law of the usual place of residence of the person whose right was infringed. See H. ZHENGXIN, *An Imperfect Improvement: the New Conflict of Laws Act of the People's Republic of China*, «The International and Comparative Law Quarterly» 60.4/2011, p. 1065-1093.

⁷³ M. PATOCCHI, *Règles de rattachement localisatrices et règles de rattachement à caractère substantiel. De quelques aspects récents de la diversification de la méthode conflictuelle en Europe*, Genève 1985, p. 158; M.C. PRYLES, *Tort and related obligations in private international law*, «Recueil des Cours de l'Académie de Droit International de la Haye» 227.2/1991, p. 64-79; D. XU, *Le droit international privé de la responsabilité délictuelle. L'évolution récente internationale et le droit chinois*, Fribourg 1992, p. 51ff.

(the conflict-of-law advisability analysis method).⁷⁴ This involves an individual analysis of the circumstances for each case.⁷⁵ The starting point is a comparison of the relevant substantive standards of the competing legal systems. This makes it possible to determine their spatial reach and identify the state most interested in resolving the dispute. The search for the proper law must then take into account the content, objectives, and result of the application of the substantive rules which may be used to resolve a specific legal question.⁷⁶ This means that the purpose of international private law is not to resolve the territorial and/or personal conflict of legal systems, but instead to resolve the conflict between the objectives of the substantive norms in different legal systems. The problems which need to be identified are those which occur when competing norms have the same content or result, or only one of them is actually interested in a resolution.

The general conclusion to be drawn from the American school's experience for the European doctrine is to clarify and differentiate between the various conflict-of-law solutions.⁷⁷ This is also evident in the intrusion of solutions drawn from substantive law into conflict-of-law analysis⁷⁸ and involves the application of the law which is more favourable to the injured party (e.g. Art. 7 of the Rome II Regulation). An example of the impact of substantive regulations, in addition to the conflict-of-law instruments concerning consumer protection, is the gradual extension of the scope of the country of origin principle,

⁷⁴ The views of the contemporary American doctrine are discussed in detail by C.G.J. MORSE, *Torts in Private International Law*, Amsterdam 1978, p. 222-229, 263-268; T. PAJOR, *Odpowiedzialność deliktowa w prawie prywatnym międzynarodowym*, Warszawa, 1989, p. 53-72; M. PATOCCHI, *op. cit.*, p. 160ff.

⁷⁵ M.A. ZACHARIASIEWICZ, *Wpływ nowych tendencji amerykańskiego prawa kolizyjnego na rozwój prawa prywatnego międzynarodowego w Europie (na przykładzie stosunków umownych)*, «Pr. Nauk. UŚL., Stud. Iur. Siles» 5/1979, p. 269.

⁷⁶ B. ANCEL, Y. LEQUETTE, *Grands arrêts de la jurisprudence de droit international privé*, «Revue internationale de droit compare» 45.2/1993, p. 171-172.

⁷⁷ H. SONNENBERGER, *Droit international privé allemand vers la fin du vingtième siècle: Avancée ou recul?*, [in:] *German Reports on Public Law Presented to the XV. International Congress on Comparative Law*, ed. E. RIEDEL, Baden-Baden 1998, p. 6 ff.

⁷⁸ M.A. ZACHARIASIEWICZ, *Wpływ nowych tendencji...*, p. 271-271.

which primarily protects the interests of businesses but also ensures the development of the EU market.⁷⁹

However, we consider it possible to use the classical international private law method, including precise and stable connecting factors,⁸⁰ for artificial intelligence. Therefore, the proposals outlined above with regard to the personal and property-law statutes remain valid. There is no need to invent new criteria to determine the proper law.

6. SUMMARY AND CONCLUSIONS

The European Parliament's proposals to grant legal personality to artificial intelligence systems are misguided and premature. They have rightly provoked strong opposition both from the doctrine and from the experts. We concur with this critical opinion from the international law perspective. Contemporary AI systems are merely a tool in the hands of humans. As yet, there are no systems which are fully capable of autonomous operations, and there are reasonable doubts whether they will ever be developed at all.

Despite the criticism of the legal justification for the granting of legal personality to AI systems, we cannot rule out the occurrence of a situation where a foreign legal order will grant legal personality to AI systems. If that happens, the search for the proper law for the resolution of the disputes which will arise will be carried out using the conflict-of-law rules of international private law.

We recommend that the future personal statute of AI be based on a registration system, which would ensure consistency of the legal regime. However, before such a model can be drafted for registration, solutions must be sought in the existing conflict-of-law rules. A country's public policy clause should apply whenever the application of foreign law would be incompatible with its own legal order.

⁷⁹ See, for example, Art. 16 of the draft EU Directive on services in the single market.

⁸⁰ Cf.: M. PAZDAN, *Dziedziczenie ustawowe...*, p. 94-95.

A reasonable alternative for the determination of the personal statute of AI would be to treat *de lege lata* AI systems solely as objects of a legal relationship. However, it would not be a perfect solution. Conflict-of-law problems will mount as AI systems lose their physical characteristics.

An additional issue which needs to be addressed is the selection of appropriate connecting factors in the conflict-of-law rules concerning AI. The advisability of the use of personal connecting factors as far as possible when it comes to new technologies, which has been advocated in the doctrine so far, needs to be amended. In our opinion, it is still possible to link the legal relations involving a specific AI system to a particular territory and thus to a specific legal order by means of objective connecting factors. Despite the perceived influence of American thought in the field of conflict-of-law theories on the European discourse, we find it advisable to continue applying stable connecting factors also for the effects of the use of AI-based tools.

These recommendations lead to the conclusion that, in order to avoid doubts over the determination of the proper law, a future Council of Europe convention on AI should also contain conflict-of-law provisions for a uniform statute of artificial intelligence. These provisions should be based on stable objective connecting factors which may be used effectively in international private law.

A UNIFORM ARTIFICIAL INTELLIGENCE STATUTE

Summary

The paper presents recommendations for new legislation required for the definition of a uniform artificial intelligence statute, in other words, legislation to justify the need for, and the feasibility of determining the proper law for the broadest possible range of legal issues relating to artificial intelligence. The article starts with a discussion of the problem of the legal personality of artificial intelligence and the validity of the establishment of a personal statute for artificial intelligence. These considerations also take into account the public policy clause and other mechanisms to correct the designation of the proper law. Next, the article discusses a property-law statute for artificial intelligence, and ends with an analysis of the choice of connecting factors for the determination of a uniform statute of artificial intelligence.

STATUT JEDNOLITY SZTUCZNEJ INTELIGENCJI

Streszczenie

W artykule przedstawiono wnioski *de lege ferenda* dotyczące określenia jednolitego statutu sztucznej inteligencji, tj. uzasadnienie potrzeby i możliwości określenia właściwego prawa dla jak najszerzego zakresu zagadnień prawnych związanych ze sztuczną inteligencją. Autorzy omówili problem osobowości prawnej sztucznej inteligencji oraz zasadność ustanowienia statutu osobowego sztucznej inteligencji. W rozważaniach tych uwzględniono również klauzulę porządku publicznego oraz inne mechanizmy korygujące wyznaczenie właściwego prawa. Artykuł kończy analiza łączników norm kolizyjnych dla ustalenia jednolitego statutu sztucznej inteligencji.

Keywords: AI, uniform statute, conflict of laws

Słowa kluczowe: AI, statut jednolity, kolizja praw

Bibliography

- ALLGROVE B.D., *Legal personality for artificial intellects: Pragmatic solution or science fiction*, Oxford, 23 June 2006, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=926015 (accessed 8 February 2022).
- ANCEL B., LEQUETTE Y., *Grands arrêts de la jurisprudence de droit international privé*, «Revue internationale de droit compare» 45.2/1993, p. 171-172.
- ANDRADE F., NOVAIS P., MACHADO J., NEVES J., *Contracting agents: legal personality and representation*, «Artificial Intelligence and Law» 15.4/2007, p. 357-373.
- ANUSZ A., *Podmiotowość prawna osoby elektronicznej a rozwój sztucznej inteligencji w wybranych obszarach prawa konsumenckiego*, «Internetowy Przegląd Prawniczy TBSP UJ» 2/2019, p. 42-51.
- ANUSZ A., *Pojęcie i zastosowanie algorytmów w polityce cenowej przedsiębiorstw a prawo konkurencji*, «Internetowy Przegląd Prawniczy TBSP UJ» 4/2018, p 113-22.
- ASARO P.M., *A body to kick, but still no soul to damn: Legal perspectives on robotics*, [in] *Robot Ethics*, eds. P. LIN, K. ABNEY, G.A. BEKEY, CAMBRIDGE, 2012.
- ATABEKOV A., YASTREBOV O., *Legal Status of Artificial Intelligence Across Countries: Legislation on the Move*, «European Research Studies Journal» 21.4/ 2018, p. 773-782, doi: 10.35808/ersj/1245.
- BAR G., *Przejrzystość, w tym wyjaśnialność, jako wymóg prawny dla systemów Sztucznej Inteligencji*, dodatek «MoP» 20/2020, p. 75-79.

- BENSOUSSAN A., *Droit des robots: science-fiction ou anticipation?*, «Recueil Dalloz» 28/2015, p. 1593-1640.
- BICZYSKO-PUDEŁKO K., SZOSTEK D., *Koncepcje dotyczące osobowości prawnej robotów – zagadnienia wybrane*, «PME» 2/2019, p. 9-15.
- BŁASZCZYK P., *Pojęcie siedziby osoby prawnej w nowej ustawie o prawie prywatnym międzynarodowym*, «PiP» 11/2011, p. 84-97.
- BOELE-WOELKI K., *Unifying and Harmonizing Substantive Law and the Role of Conflict of Laws (vol. 340)*, [in] *Collected Courses of the Hague Academy of International Law*, doi: <http://dx.doi.org/10.1163/1875-8096>.
- BRÓZEK B., *The Troublesome 'Person'*, [in] *Legal Personhood: Animals, Artificial Intelligence and the Unborn*, eds. V. KURKI, T. PIETRZYKOWSKI, Springer, 2017, p. 3-13.
- CHŁOPECKI A., *Silna SI i jej rola w społeczeństwie. Podmiotowość SI?*, [in:] *Sztuczna inteligencja – szkice prawnicze i futurologiczne [Artificial intelligence - legal and futurological drafts]*, A. CHŁOPECKI, Warszawa 2018.
- COECKELBERGH M., *Robot rights? Towards a social-relational justification of moral consideration*, «Ethics and Information Technology» 12.3/2010, p. 209-221.
- DE LIMA PINHEIRO L., *The Methodology and the General Part of the Portuguese Private International Law Codification*, «Yearbook of Private International Law» 14/2012-2013, p. 153-172.
- DIO COCCEIANUS CASSIUS, *Roman History*, vol. 1, translated and edited by W. MARDYDA, Wrocław 1967, book LIX, 14.7, and 28.6.
- DIVINO S., BRUNO S., *Critical Considerations on Artificial Intelligence Liability: E-Personality Propositions*, «Revista Eletronica Direito e Sociedade» 8.2/2020, p. 197.
- FLORIDI L. et al., *AI4People – An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations*, «Minds and Machines» 28.4/2018, p. 689–707.
- GRAZIANO T.K., *The Law Applicable to Non-contractual Obligations in Europe. A Guide to the Rome II Regulation*, Oxford 2016.
- GÜNTHER J., MÜNCH F., BECK S., LÖFFLER S., LEROUX C., LABRUTO R., *Issues of privacy and electronic personhood in robotics*, in: *The 21st IEEE International Symposium on Robot and Human Interactive Communication 2012*, 2012, p. 815-820, doi: 10.1109/ROMAN.2012.6343852.
- HEIDEMANN M., *Does International Trade Need a Doctrine of Transnational Law?*, Berlin 2012.
- KERIKMÄE T., PÄRN-LEE E., *Legal dilemmas of Estonian artificial intelligence strategy: in between of e-society and global race*, «AI & Society» 36.2/2020, p. 561-572.

- KIRŠIENĖ J., GRUODYTĖ E., AMILEVIČIUS D., *From computerised thing to digital being: mission (Im)possible?*, «AI & Society» 36.2/2020, p. 547-560.
- KLYTA W., *Spółki kapitałowe w prawie prywatnym międzynarodowym*, Kraków, 2002.
- KOWALCZYK W., *Przepisy wymuszające swoje zastosowanie w zobowiązaniach umownych - przykład rozwiązań francuskiego prawa prywatnego międzynarodowego*, «PS» 4/2014, p. 70-82.
- KREN KOSTKIEWICZ J., *Grundriss des schweizerischen Internationalen Privatrechts*, Bern 2012.
- KROPHOLLER J., *Internationales Privatrecht*, Tübingen 2004.
- KSIĘŻAK P., WOJTCZAK S., *Prawa Asimova, czyli science fiction jako fundament nowego prawa cywilnego*, «Forum Prawnicze», 4/2020, p. 57-70.
- KSIĘŻAK P., *Zdolność prawna sztucznej inteligencji*, [in:] *Czynić postęp w prawie. Księga jubileuszowa dedykowana Profesor Birucie Lewaszekiewicz-Petrykowskiej* ed. W. ROBACZYŃSKI, Łódź 2017, p. 61-72.
- LABORDE C.M., *Electronic Signatures in International Contracts*, Frankfurt-am-Main 2010.
- LEIBLE S., MÜLLER M., *The Idea of a "Rome 0 Regulation*, «Yearbook of Private International Law» 14/2012-2013, p. 137-152.
- LEIN E., *La nouvelle synergie Rome I, Rome II, Bruxelles I*, [in:] *Le nouveau règlement européen "Rome I" relatif à la loi applicable aux obligations contractuelles: actes de la 20e Journée de droit international privé du 14 mars 2008 à Lausanne*, eds. E. CASHIN RITAINE, A. BONOMI, Zurich 2008, p. 27-47.
- LUDWICZAK W., *Międzynarodowe Prawo Prywatne*, Poznań 1996.
- MĄCZYŃSKI A., *Wskazanie kilku praw przez normę kolizyjną prawa prywatnego międzynarodowego*, [in:] *Rozprawy z polskiego i europejskiego prawa prywatnego. Księga pamiątkowa ofiarowana Profesorowi Józefowi Skąpskiemu*, eds. A. MĄCZYŃSKI, M. PAZDAN, A. SZPUNAR, Kraków 1994, p. 231-247.
- MĄCZYŃSKI A., *Zamieszkanie jako podstawa łącznika normy kolizyjnej*, «ZNUJ» 8/1978, p. 45-50.
- MAGNUSSON SJÖBERG C., *Legal Automation: AI and Law Revisited*, [in:] *Legal Tech, Smart Contracts and Blockchain, Perspectives in Law*, eds. M. CORRALES, M. FENWICK, H. HAAPIO, Business and Innovation Singapore 2019, p. 173-187.
- MATACZYŃSKI M., *Przepisy wymuszające swoje zastosowanie w prawie prywatnym międzynarodowym*, Kraków, 2005.
- MORSE C.G. J., *Torts in Private International Law*, Amsterdam 1978.
- NEVEJANS N., *Traité de droit et d'éthique de la robotique civile*, Bordeaux 2017.

- NOWAKOWSKI M., *O moralnej odpowiedzialności HAL-a 9000, czyli etyka sztucznej inteligencji w praktyce. Czy potrzebujemy definicji sztucznej inteligencji?*, «PME» 1/2022, p. 4-10.
- NOWICKA A., *Komentarz do art. 46*, [in:] *Prawo prywatne międzynarodowe. Komentarz*, ed. J. POCZOBUT, Warszawa 2017.
- O'DONNELL E., TALBOT-JONES J., *Creating legal rights for rivers: lessons from Australia, New Zealand, and India* «Ecology and Society» 23.1/2018: 7.
- OPALSKI A., *Prawo właściwe dla osób prawnych w świetle projektu ustawy – Prawo prywatne międzynarodowe*, [in:] *Księga pamiątkowa 60-lecia Sądu Arbitrażowego przy Krajowej Izbie Gospodarczej w Warszawie*, eds. J. OKOLSKI, A. CAŁUS, M. PAZDAN et al., Warszawa 2010, p. 812-844.
- OPOLSKA N., SOLOMON A., *Intellectual Property Rights to Objects Created by Artificial Intelligence*, «Law Review of Kyiv University of Law» 3/2021, p. 207-215.
- PAGALLO U., *The laws of robots, crimes, contracts and torts*, Dordrecht 2013.
- PAJOR T., *Odpowiedzialność deliktowa w prawie prywatnym międzynarodowym*, Warszawa 1989, p. 53-72.
- PALMERINI E., *Towards a Robotic law at the EU level?*, [in:] *L'intelligence artificielle et le droit*, eds. H. JACQUEMIN, A. DE STREEL, Brussels 2017, p. 47-70.
- PATOCCHI M., *Règles de rattachement localisatrices et règles de rattachement à caractère substantiel. De quelques aspects récents de la diversification de la méthode conflictuelle en Europe*, Genève 1985.
- PAULIUS Č., JURGITA G., GINTARĖ S., *Is it possible to grant legal personality to artificial intelligence software systems?*, «Comp L Secur Rev» 33/2017, p. 685-699.
- PAZDAN M., *Dziedziczenie ustawowe w prawie prywatnym międzynarodowym. Metody regulacji właściwości prawa*, Katowice 1973.
- PAZDAN M., *Koordinacja krajowego i europejskiego prawa prywatnego międzynarodowego*, [in:] *Współczesne wyzwania prawa prywatnego międzynarodowego [Contemporary challenges of international private law]*, ed. J. POCZOBUT, Warszawa, 2013, p. 225-233.
- PAZDAN M., *Prawo prywatne międzynarodowe*, Warszawa 2016.
- PILICH M., *Zasada obywatelstwa w prawie prywatnym międzynarodowym. Zagadnienia podstawowe*, Warszawa 2015.
- POCZOBUT J., *Osoby prawne w polskim prawie prywatnym międzynarodowym. Projekt nowelizacji ustawy*, «Kwartalnik Prawa Prywatnego» 3/2000, p. 548-552.
- POLAŃSKI P., *Inwigilacja, dostępność, blockchain i sztuczna inteligencja: pytania o kierunki rozwoju prawa nowych technologii w erze rewolucji internetowej*, «MOP» 2/2019, p. 110-115.

- PRYLES M.C., *Tort and related obligations in private international law*, «Recueil des Cours de l'Académie de Droit International de la Haye» 227.2/1991, p. 64-79.
- QUEIROZ R., SAMPAIO F., LIMA C., LIMA P., *AI from Concrete to Abstract. Demythifying artificial intelligence to the general public*, «AI & Society» 36/2021, p. 1-23.
- ROJSZCZAK M., *Prawne aspekty systemów sztucznej inteligencji – zarys problemu*, [in:] *Sztuczna inteligencja, blockchain, cyberbezpieczeństwo oraz dane osobowe. Zagadnienia wybrane*, eds. K. FLAGA-GIERUSZYŃSKA, J. GOŁACZYŃSKI, D. SZOSTEK, Warszawa, 2019, p. 1-10.
- SCHERER M.U., *Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies and Strategies*, «Harvard Journal of Law & Technology» 29.2/2016, p. 353-400.
- SIBIGA G., WIEWIÓROWSKI W., *Automatyzacja rozstrzygnięć i innych czynności w sprawach indywidualnych załatwianych przez organ administracji publicznej*, [in:] *Informatyzacja postępowania sądowego i administracji publicznej*, ed. J. GOŁACZYŃSKI, Warszawa 2010, p. 229-242.
- SOLAIMAN S.M., *Legal personality of robots, corporations, idols and chimpanzees: a quest for legitimacy*, «Artificial Intelligence Law» 25/2017, p. 155-179.
- SOLUM L., *Legal Personhood for Artificial Intelligences*, «North Carolina Law Review» 4/1991, p. 1284-1285.
- SONNENBERGER H., *Droit international privé allemand vers la fin du vingtième siècle: Avancée ou recul?*, [in:] *German Reports on Public Law Presented to the XV. International Congress on Comparative Law*, ed. E. RIEDEL, Baden-Baden, 1998, p. 00-00.
- ŚWIERCZYŃSKI M., *Sztuczna inteligencja w prawie prywatnym międzynarodowym – wstępne rozważania* [Artificial intelligence in international private law – preliminary considerations], «Problemy Prawa Prywatnego Międzynarodowego» 25/2019, p. 27-41.
- SZYDŁO M., *Statut personalny osób prawnych w projekcie nowej ustawy – Prawo prywatne międzynarodowe*, «Kwartalnik Prawa Prywatnego» 1/2007, p. 155-196.
- TEBUNER G., *Digital Personhood? The Status of Autonomous Software Agents in Private Law*, 2018, available via SSRN network, <http://dx.doi.org/10.2139/ssrn.3177096> (accessed 21 May 2022).
- TRAMMER H., *O tak zwanych 'jednostronnych normach' międzynarodowego prawa prywatnego*, «Studia Cywilistyczne» 2/1963, p. 117-127.
- TRAMMER H., *Z rozważań nad strukturą normy kolizyjnej prawa prywatnego międzynarodowego*, «Studia Cywilistyczne» 13-14/1964, p. 398-404.

- ULIASZ M., *Sztuczna inteligencja jako sztuczna osoba prawna* [in:]: *Sztuczna inteligencja....*, eds. K. FLAGA-GIERUSZYŃSKA, J. GOŁACZYŃSKI, D. SZOSTEK, Warszawa 2019, p. 23-37.
- VAN DEN HOVEN R., *Do We Need New Legal Personhood in the Age of Robots and AI?*, [in:]: *Robotics, AI and the Future of Law*, eds. M. CORRALES, M. FENWICK, N. FORGÓ, Singapore 2018, p. 15-55.
- WIŚNIEWSKI A.W., *Statut personalny spółek kapitałowych i uznawanie spółek zagranicznych. Orzecznictwo Trybunału Wspólnot a reforma polskiego prawa prywatnego międzynarodowego*, [in:]: *Współczesne wyzwania europejskiej przestrzeni prawnej. Księga pamiątkowa dla uczczenia 70. urodzin Profesora Eugeniusza Piontka*, eds. A. ŁAZOWSKI, R. OSTRIHANSKY, Kraków 2005, p. 718-725.
- WOWERKA A., *Osoby prawne i inne jednostki organizacyjne*, [in:]: *Prawo prywatne międzynarodowe. System Prawa, XXA*, ed. M. PAZDAN, Warszawa 2014, p. 630.
- WRÓBEL I., *Artificial Intelligence Systems and the Right to Good Administration*, «Review of European and Comparative Law» 49.2/2022, p. 203-223.
- Xu D., *Le droit international privé de la responsabilité délictuelle. L'évolution récente internationale et le droit chinois*, Fribourg 1992.
- ZACHARIASIEWICZ M., *Klauzula porządku publicznego*, [in:]: *Prawo prywatne międzynarodowe [Private international law]*, ed. M. PAZDAN, System Prawa Prywatnego, Warszawa 2014, p. 492.
- ZACHARIASIEWICZ M., *Klauzula porządku publicznego jako instrument ochrony materialnoprawnych interesów i wartości fori*, Warszawa 2018, p. .
- ZACHARIASIEWICZ M.A., *O potrzebie wskazania w nowej ustawie o prawie prywatnym międzynarodowym podstawy stosowania przepisów wymuszających swoje zastosowanie*, «Problemy Prawa Prywatnego Międzynarodowego» 7/2010, p. 9-43.
- ZACHARIASIEWICZ M.A., *Wpływ nowych tendencji amerykańskiego prawa kolizyjnego na rozwój prawa prywatnego międzynarodowego w Europie (na przykładzie stosunków umownych)*, «Pr. Nauk. UŚl., Stud. Iur. Siles» 5/1979, p. 269-281.
- ZAWADA K., *Klauzula porządku publicznego w prawie prywatnym międzynarodowym (na tle orzecznictwa Sądu Najwyższego w sprawach z zakresu prawa rodzinnego i spadkowego)*, «NP» 4/1979, p. 61-114.
- ZHENGXIN H., *An Imperfect Improvement: the New Conflict of Laws Act of the People's Republic of China*, «The International and Comparative Law Quarterly» 60.4/2011, p. 1065-1093.