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AUTONOMOUS VEHICLES AND THE ISSUE OF LIABILITY FOR DAMAGE CAUSED BY THE MOVEMENT OF SUCH A VEHICLE

ABSTRACT

The increased progress in technology and the use of artificial intelligence has resulted in the development of many sectors of the economy. These include the road transport sector, where the implementation of modern technologies has contributed to the increase in the automation of vehicles. Currently, the market already offers automated vehicles equipped with a number of driver assistance systems, which improves road safety and reduces the number of collisions and accidents.

Highly automated and fully automated vehicles are expected to be in service by the end of this decade. And although fully automated vehicles are not yet widely available, there is already a need to discuss the development of a model of civil liability for damage caused by an automated or fully automated vehicle.

This article presents an overview of current national, EU and international regulations regarding autonomous vehicles, and attempts to answer the question of which model of liability for damage caused by the movement of an autonomous vehicle will guarantee the victims of traffic incidents the greatest

legal protection. Beyond the scope of this article are ethical problems related to transferring responsibility for the life and health of the driver, passengers, and other traffic participants to artificial intelligence.

KEYWORDS: *motor vehicle owner liability, autonomous vehicle, automated vehicle, fully automated vehicle, road transport, SAE, ADAS, ADS*

AUTONOMOUS VEHICLES – GENERAL REMARKS

The technology of automated vehicles is one of the main subjects of research and interest of countries and international organizations. This type of technology will undoubtedly form the basis of inter-state transport in the future. Technological research, including in particular aspects such as vehicle control and avoiding obstacles on the road, sending information about the vehicle's condition and road hazards to the system, is also accompanied by a discussion on the legal aspects of the operation of automated vehicle technology.

The analysis of the issue of liability for damage caused by the movement of an autonomous vehicle should begin with the presentation of a few general remarks, including in particular the definition of the concept of an autonomous vehicle.

Undoubtedly, it is quite widely accepted that autonomous cars are vehicles that are able to sense the environment and drive the vehicle without human intervention. To do this, they use a variety of sensors, cameras, and other technologies to detect their surroundings, using artificial intelligence and established algorithms to analyse data and make decisions while driving.

In this regard, it should first be pointed out that it is quite commonly accepted, following the Society of Automotive Engineers (hereinafter referred to as SAE), that there are six levels of automation (https://www.sae.org/standards/content/j3016_202104/, accessed: 2 February 2023) in accordance with the following scale:

- level 0 – there is no driving automation, and the driver drives the vehicle and observes the road,
- level 1 – the driver is supported by the system, the driver drives the vehicle, and steering in the longitudinal or transverse axis is conducted by the system (e.g., lane assistant),

- level 2 – partial driving automation, where the driver drives the vehicle, while driving the vehicle is also entrusted to technology with maintaining control over the vehicle by the driver (e.g., automatic parking system),
- level 3 – conditional driving automation, where the driver does not have to control the system, but should be ready to take control of the vehicle at any time, the system has control over the steering and notifies the driver of the need to take over control with sufficient time margin,
- level 4 – high driving automation, where all activities are performed by the system,
- level 5 – full driving automation, the system can react automatically at any time while driving, no driver is required.

This classification is commonly accepted in the doctrine (Helińska, Paczocha, Piskorz, 2020, *Legalis* el.; Uzair, 2021, p. 1; Abraham, Rabin, 2019, pp. 130-131; Marson, Ferris, Dickinson, 2020, pp. 395-400; Saez-Perez, Wang, Alcaraz-Calero, GarciaRodriguez,, 2023, p. 4; Shin, Kang, Kwon, 2022, pp. 1-5; Kouroutakis, 2020, p. 1109).

The basic features, considering the SEA levels of automation, are presented in Table 1.

Table 1. *Classification of SEA driving automation levels J3016*

AUTOMATION LEVEL	LEVEL 0	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
	No automation	Assist	Partial automation	Conditional automation	High automation	Full automation
ROLE OF THE DRIVER	The driver drives the vehicle whenever the assist functions are deactivated.			The driver does not drive the vehicle while the automatic drive features are on.		
SUPERVISION	The driver supervises all functions, drives, brakes, accelerates to maintain safety.			When requested, the driver must take control.	The system does not require the driver to take control.	
SUPPORT SYSTEM	Warnings and temporary help.	Assisted steering or braking/acceleration.	Assisted steering and braking/acceleration.	Driving a vehicle after fulfilling all conditions.		Driving a vehicle in all conditions.
SAMPLE FUNCTIONS	emergency braking, blind spot warning, lane departure warning.	lane centring or cruise control.	lane centring and cruise control.	steering in a traffic jam.	unmanned taxi (pedals/steering wheel may or may not be installed).	Same as level 4, but the system can drive anywhere and under any conditions.

Source: own study based on https://www.sae.org/standards/content/j3016_202104/

While the levels of driving automation proposed by SAE are widely adopted and accepted, it should be noted that various authorities and countries use different definitions of vehicles equipped with specific systems. For example, it should be pointed out that the activities undertaken at the international level led in 2018 to the establishment of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) as part of the UNECE World Forum for Harmonization of Vehicle Regulations. Within the appointed working party, a framework document was created to develop guidelines for automated, autonomous and integrated vehicles (Framework document developed by representatives of China, the European Union,

Japan and the United States, adopted and approved by the World Forum for Harmonization of Vehicle Regulations and UNECE Inland Transport Committee, https://unece.org/sites/default/files/2022-02/FDAV_Brochure%20-%20Update%20Clean%20Version.pdf, accessed: 22 February 2023).

Also the EU legislator in Regulation (EU) 2019/2144 of the European Parliament and of the Council of 27 November 2019 on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users (OJ L 2019 No. 325, p. 1) introduced the definition of an automated vehicle and a vehicle fully automated. According to Article 3(21) of the above-mentioned Regulation, an automated vehicle means a motor vehicle designed and constructed to move autonomously for certain periods of time without continuous driver supervision but in respect of which driver intervention is still expected or required. Moreover, pursuant to Article 3(22), a fully automated vehicle means a motor vehicle that has been designed and constructed to move autonomously without any driver supervision. This Regulation entered into force on 6 July 2022.

It is therefore necessary to distinguish between an automated vehicle, a fully automated vehicle, and an autonomous vehicle. It should be noted that, as a rule, an automated vehicle and an autonomous vehicle are used as identical concepts, assuming that they are vehicles classified between level 3 and level 5 in the SAE classification (Prochowski, Sz wajkowski, Ziubiński, 2022, p. 1). At the same time, the EU legislator distinguished between automated vehicles and fully automated vehicles, which, considering the SAE classification, allows for the conclusion that a fully automated vehicle will be a vehicle at level 4-5 of the SAE classification.

In this article, the terms of an automated vehicle and an autonomous vehicle will be used interchangeably as they have the same meaning. On the other hand, the concept of a fully automated vehicle will be used to specify vehicles from level 4-5 of automation.

CURRENT STATE OF LEGISLATION IN SELECTED LEGAL ORDERS

UNITED STATES OF AMERICA

The United States of America (USA) is a pioneer in the field of work and initiatives related to the regulation of autonomous vehicles. The headquarters of the manufacturers of the first fully autonomous vehicles tested are located in the USA. In 2016, the U.S. National Highway Traffic Safety Administration (hereinafter referred to as the Agency or NHTSA) together with the U.S. Department of Transportation issued a federal policy on automated vehicles in which, following the Society of Automotive Engineers, levels of automation were adopted (https://www.sae.org/standards/content/j3016_202104/, accessed: 2 February 2023).

NHTSA distinguishes vehicles based on the system they are equipped with. ADAS is an advanced driver assistance system that is equivalent to SAE Levels 1 and 2. ADS is an automated driving system, which is equivalent to systems from SAE level 3-5 and includes hardware and software that together are able to drive the vehicle continuously, regardless of the presence of the operator, which is the entity using the vehicle (https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-08/First_Amended_SGO_2021_01_Final.pdf, accessed: 1 March 2023).

Traditionally, in the field of liability for the movement of the vehicle, there are three basic types of driver liability – negligence (traditional negligence), liability not based on the principle of fault (no-fault liability), and objective liability (strict liability) (Kalra, Anderson, Wachs, 2009, p. 17). However, in the United States there is no comprehensive legal act regulating the functioning of autonomous vehicles. Although in 2017 the House of Representatives adopted the “Self-Drive” Act, which was supposed to allow autonomous vehicles to move on public roads, the Act was not adopted by the U.S. Senate. Despite this, NHTSA continues to intensify its work on regulating the issue of autonomous vehicles. Due to the Agency’s oversight of road safety, NHTSA requires the manufacturer and operator of a vehicle equipped with level 2 ADS or ADAS to report any information about vehicle safety incidents (including prototypes)

when the level 2 ADS or ADAS is enabled. This requirement was introduced by General Order (2021-01) issued by NHTSA.

However, the lack of comprehensive regulation at the federal level hinders the development of autonomous transport in the United States.

EUROPEAN UNION

The European Union has taken a number of steps to create a European strategy for the deployment of cooperative, connected, and automated vehicles. The Communication from the Commission of 30 November 2016 entitled “A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility” should be highlighted here (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of The Regions entitled “A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility”, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016DC0766>, accessed: 22 February 2023), which indicates the important role of Cooperative Intelligent Transport Systems (C-ITS) and the need to take action to develop and implement C-ITS, enabling a vehicle to interact with other vehicles and with road infrastructure. It is also important to mention the Communication from the Commission of 17 May 2018 entitled “On the road to automated mobility: An EU strategy for mobility of the future” (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of The Regions entitled “On the road to automated mobility: An EU strategy for mobility of the future”, <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52018DC0283>, accessed: 22 February 2023), which highlights the many benefits of autonomous mobility, including reducing road fatalities, reducing harmful emissions from transport and reducing congestion.

The European Parliament resolution of 15 January 2019 on autonomous driving in European transport was also of significant importance (European Parliament resolution of 15 January 2019 on autonomous driving in European

transport (2018/2089(INI)), OJ C No. 411, 27.11.2020, p. 2). The Parliament noted that apart from the benefits of introducing autonomous vehicles, there are also a number of threats, e.g., in the field of civil liability and insurance, or cybersecurity and personal data protection.

GREAT BRITAIN

In Great Britain, the need to regulate the issues related to autonomous vehicles was noticed quite quickly. In 2018, the Automated and Electric Vehicles Act (hereinafter referred to as the AEV Act) was passed and entered into force on 21 April 2021 (Automated and Electric Vehicles Act 2018, https://www.legislation.gov.uk/ukpga/2018/18/pdfs/ukpga_20180018_en.pdf, accessed: 10 March 2023). The Act defined an automated vehicle in Part 1 of the AEV Act as a vehicle listed by the Secretary of State for Transport pursuant to the authorization provided for in part 1 of the AEV Act. At the same time, Article 8(1)(a) of the AEV Act provides a definition of when a vehicle is “driving itself”, stating that this is the case if the vehicle operates in a mode in which it is not being controlled, and does not need to be monitored, by an individual.

Section 2 of part 1 defines the rules of liability for damage caused by the movement of an automated vehicle. As a basic rule, the insurer’s liability for damage is introduced if the vehicle is insured and the insured person or a third party suffers damage as a result of the accident (Marson, Ferris, Dickinson, 2020, pp. 395-416). It also provides for a situation where damage occurred as a direct result of vehicle software alterations made by the insured person, or with the insured person’s knowledge or in the event of a failure to install “safety-critical” software updates that the insured person knows, or ought reasonably to know, are safety-critical (Article 4(4) of the AEV Act). In such a situation, a recourse claim was provided for the insurer against the person who made alterations to the software or failed to update it. However, if the vehicle is not insured, the owner of the vehicle will be liable for damage caused by its movement.

The doctrine welcomes the AEV Act due to the fact that it is the first step to ensure protection of victims of traffic incidents caused by automated vehicles. Undoubtedly, however, only the preparation of a list of automated

vehicles by the Secretary of State will make it possible to apply the indicated act in practice and to assess the legal solutions introduced by it.

GERMANY

In 2017, the German legislator amended the Road Traffic Act allowing automated vehicles to travel on public roads (Straßenverkehrsgesetz; hereinafter referred to as StVG), by introducing § 1a StVG. In this way, the legislator directly allowed the operation of autonomous vehicles, introducing the definition of motor vehicles “with highly or fully automated driving functions”. Such a vehicle must meet certain technical conditions, namely, it must have technical equipment: 1) that can control the motor vehicle (longitudinal and lateral guidance), 2) that is able to adapt to traffic regulations, 3) that can be manually switched off at any time by the driver of the vehicle, 4) that can recognize the need to drive the vehicle independently by the driver, 5) that can visually, audibly, tactilely or otherwise indicate to the driver the need to manually control the vehicle with sufficient time reserve, 6) that can indicate incorrect use of the system. From the wording of the above definition, it can be concluded that the driver must sit behind the wheel and be ready to take control of the vehicle if necessary (Kouroutakis, 2020, p. 1115). The regulations also define the drivers’ liability for damage events that take place under their control.

An important element is the obligation introduced by the legislator to equip an autonomous vehicle with a system that collects data on position and time when there is a change of the entity controlling the vehicle (from the system to the driver), when the system indicates to take control of the vehicle, as well as when a technical fault occurs in the system (§63a StVG). This device, called the “black box”, is to be a source of information about the causes of a communication event.

POLAND

On the basis of national regulations, the definition of an autonomous vehicle was introduced to the Road Traffic Act of 20 June 1997 (i.e., Journal of Laws of 2022, item 988; hereinafter referred to as RTA) in order to define the conditions and principles for conducting research work related to testing autonomous vehicles.

According to Article 65k RTA, an autonomous vehicle is understood as a motor vehicle equipped with systems that control the movement of this vehicle and enable its movement without the intervention of the driver, who can take control of the vehicle at any time. The legislator also pointed out that conducting research works related to testing autonomous vehicles on public roads is possible provided that safety requirements are met and a permit to conduct these works is obtained (Art. 65l(1) RTA). A necessary element of the application is a document confirming the conclusion of a contract of compulsory third party liability insurance of the organizer of research works for damages arising in connection with conducting research works related to driving autonomous vehicles, which enters into force in the event of obtaining a permit to conduct research works. One of the duties of the research works organizer is ensuring that during the research works in the autonomous vehicle, in the place intended for the driver, there is a person with the right to drive the vehicle, who can take over control of the vehicle in the event of a threat to road safety (Art. 65n(1)(2) RTA).

With regard to national solutions, it is impossible to omit the provisions of the Convention on Road Traffic done in Vienna on 8 November 1968 and ratified by Poland, (Journal of Laws of 1988, No. 5, item 40; hereinafter referred to as the Convention). The original wording of Article 8(1) of the Convention provides that “every moving vehicle or combination of vehicles shall have a driver”, and the driver “shall possess the necessary physical and mental ability and be in a fit physical and mental condition to drive” (Art. 8(3) of the Convention). However, pursuant to Article 8(4) of the Convention “every driver of a power-driven vehicle shall possess the knowledge and skill necessary for driving the vehicle; however, this requirement shall not be a bar to driving practice by learner-drivers in conformity with domestic legislation”. Due to the fact that the signatory states of the Convention noticed the need to adapt the Convention to the increasing progress in the automation of vehicles, amendments to the Convention entered into force on 23 March 2016, allowing the movement of a vehicle without a driver, if the vehicle is equipped with an automated driving system, provided that the driver has the ability to take control of the vehicle (Kuliczowska, 2017, p. 181).

LIABILITY FOR DAMAGE CAUSED BY THE MOVEMENT OF AN AUTONOMOUS VEHICLE

LIABILITY FOR DAMAGE CAUSED BY THE MOVEMENT OF A VEHICLE – CURRENT REGULATIONS

Due to the increase in the level of automation of vehicles, with regard to fully automated vehicles, it is necessary to establish an appropriate liability rule for events caused by the movement of an autonomous vehicle. In this regard, two types of liability can be distinguished – criminal and civil. In this study, only civil liability for damage caused by the movement of an autonomous vehicle will be the subject of analysis. Therefore, the issue of criminal liability remains outside the scope of the analysis.

The basic and key issue that needs to be established is determination of the entity responsible for the damage caused. In the case of vehicles equipped with modern driver assistance systems at SEA levels 1 and 2, it seems that the existing rules of civil liability will remain adequate and sufficient.

In the case of autonomous vehicles at SAE level 3-5, it should be stated that ensuring the safety of these vehicles in the future will depend on many factors, such as: reliability of devices used while driving an autonomous vehicle, for which manufacturers and designers are responsible, the need to keep the vehicle in a roadworthy condition, for which the owner of the motor vehicle and entities servicing the vehicle will be responsible, appropriate road infrastructure, for which the state and local governments are responsible, the system of supervision over the activities of entities producing autonomous vehicles, as well as the level of training of drivers of autonomous vehicles. In this context, it is necessary to consider whether the existing liability rules will be able to provide adequate protection to victims of a traffic incident.

The current system of liability for damage caused by the use of motor vehicles is based in most legal orders on the liability of the owner of a motor vehicle on a strict basis.

In Polish legislation, the conditions for liability for damage caused by the movement of a motor vehicle are set out in Article 436 § 1 of the Act of 23 April 1964 – the Civil Code (i.e., Journal of Laws of 2022, item 1360; hereinafter

referred to as CC). Pursuant to this provision, the liability of the vehicle owner arises if damage is caused as a result of the movement of a motor vehicle propelled by natural forces, and there is a causal relationship between the damage and the movement of the vehicle.

Therefore, in order to assign the owner liability for damage pursuant to Article 436 § 1 CC it is necessary for it to be caused by the movement of a mechanical means of communication moved by the forces of nature. The doctrine indicates that such a vehicle should be driven by its own mechanical device, move with the help of natural forces (steam, gas, electricity, liquid fuels, etc.) and serve communication purposes (Bieniek, 2011, p. 14; Szczechowicz, 213, p. 14). Therefore, passenger cars will undoubtedly fall into this category (Rembieliński, 1964, p. 21).

It should be noted that both the doctrine and jurisprudence indicate that the strict liability referred to in Article 436 § 1 CC also covers the risk of the owner of a motor vehicle of any construction defects of the vehicle used (Bucoń, 2008, p. 62). This position was expressed by the Supreme Court in its judgment of 4 October 1966 (II CR 328/66). It is also supported by the views of the doctrine (Kuźmicka-Sulikowska, 2020, p. 184).

The owner of a motor vehicle may be released from strict liability by showing one of the three exoneration circumstances (circumstances excluding liability). For this purpose, it is necessary to prove that the damage occurred solely through the fault of the injured party, solely through the fault of a third party for whom the owner of the means of communication is not responsible, or as a result of force majeure (Kuźmicka-Sulikowska, 2020, p. 170; Wilk, 2019, p. 23).

There are exceptions to the aforementioned principle, when liability for damage will be based on the principle of fault pursuant to Article 415 CC. Such exceptions include a situation in which there was a collision of mechanical means of communication moved by the forces of nature and the transport was made out of courtesy. The doctrine assumes that a collision takes place when all vehicles involved in the collision are mechanical means of communication moved by the forces of nature and they are in motion (Rembieliński, 1963, p. 27). The liability of the driver of the vehicle, who is not its owner, towards the injured party is also based on the principle of fault.

LIABILITY FOR DAMAGE CAUSED BY THE MOVEMENT OF AN AUTONOMOUS VEHICLE – DE LEGE LATA AND DE LEGE FERENDA COMMENTS

In the context of the increasing automation of motor vehicles, the key challenge for legislators will be e.g., regulating the issue of civil liability for damage caused by the movement of autonomous vehicles, in particular vehicles with SAE levels 3-5.

In the United States, the civil liability system focuses primarily on drivers, because their mistakes are the cause of the vast majority of car accidents and collisions (Abraham, Rabin, 2019, p. 131-132). However, it is indicated among the representatives of the doctrine that liability for damage caused by the movement of an autonomous vehicle can be attributed not only to the driver, but also to the vehicle manufacturer or software developers (Si Ying Tan, Araz Taeihagh, 2021, p. 8). There are also opinions that the rules developed by the legislation of individual countries for vehicles controlled by drivers are so broad that they can also be applied to damage caused by autonomous vehicles (Holder, Khurana, Harrison, Jacobs, 2016, p. 386).

The above-described difference in views on the method of regulating liability for damage caused by the movement of an autonomous vehicle indicates the importance of this issue and the difficulty in regulating it.

It should be noted that level 3 autonomous vehicles include the so-called conditional automation and assume that the driver takes over control if the system signals such a need. By contrast, this option is not available for highly automated (level 4) and fully automated (level 5) vehicles. In the context of the possibility of taking over control of the vehicle by a human or the safety factors indicated in chapter 3.1, it is crucial in the context of civil liability to determine the cause of the traffic damage. For this purpose, in accordance with the proposal of the European Commission, it would be reasonable to equip autonomous vehicles with data recorders (so-called black boxes) enabling determination of the cause of a damage event.

In this context, it may be considered whether, due to the fact that in the case of autonomous vehicles most damage events will be caused by the driver's error, the currently existing strict liability for damage caused by the movement of a mechanical means of communication moved by means of nature

should be adopted as the basic principle of civil liability? It seems that such an approach is justified, given that civil liability for most traffic incidents will continue to focus on drivers (Abraham, Rabin, 2019, p. 133). In the future, however, transport using autonomous vehicles will involve a substantial number of entities whose task will be to ensure safe communication. Here, the producer's liability for a dangerous product comes to the fore, which at the EU level is regulated by the Council Directive of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products (OJ L No. 210, p. 29), implemented into Polish national law in Article 449¹ et seq. CC. In this context, it should be noted that some representatives of the doctrine indicate that the tort liability regime for a dangerous product will not apply until at least $\frac{1}{4}$ of vehicles will be level 4 and 5 autonomous vehicles (Abraham, Rabin, 2019, p. 139).

At the same time, it is important to have an appropriate legal framework in place for the technical requirements for automated vehicle systems. The first step towards creating such a framework should be Commission Implementing Regulation (EU) 2022/1426 of 5 August 2022 laying down rules for the application of Regulation (EU) 2019/2144 of the European Parliament and of the Council as regards uniform procedures and technical specifications for the type-approval of the automated driving system (ADS) of fully automated vehicles (OJ L No. 221, p. 1).

The choice of the owner of a motor vehicle as the entity responsible for damage caused by the movement of an autonomous vehicle is beneficial primarily because the liability of this entity is covered by compulsory third party liability insurance. This issue is covered by Directive 2009/103/EC of the European Parliament and of the Council of 16 September 2009 relating to insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability (OJ L No. 263/11, 7.10.2011).

In its Communication "On the road to automated mobility: An EU strategy for mobility of the future" (2018), the Commission expressed the position that the Directive does not require any changes with regard to automated vehicles, as they will have to be insured. Without denying this statement, it should be pointed out that such an approach is a major simplification. Undoubtedly,

the adoption of a specific principle of liability for damage caused by an autonomous vehicle should be followed by changes in the provisions governing property insurance in the field of compulsory third party liability insurance. It would be necessary to create a new system of insurance products and include them in the scope of compulsory insurance in order to provide the victims of traffic incidents with the widest possible legal protection (Holder, Khurana, Harrison, Jacobs, 2016, pp. 386-387).

The necessity to review solutions in the field of property insurance was also emphasized by the European Parliament in its resolution on autonomous driving in European transport (2019), in which it noted that the provisions of the Motor Insurance Directive were not developed to deal with the challenges posed by the use of autonomous vehicles and probably these regulations will not be appropriate in the face of the new challenges of vehicle automation and connectivity. It is necessary to agree with this position and postulate taking actions in the near future to create a framework for comprehensive protection of the victim in an event involving a fully automated vehicle.

SUMMARY

To sum up, it should be stated that bringing an action against an entity other than the owner of a motor vehicle (or on the basis of a direct complaint – the insurer) will be an exceptional situation. Strict liability for damage is the most advantageous solution for the victim of a traffic incident, who is not obliged to determine or prove the cause of the damage event. However, it is impossible to exclude situations in which claims for damages will be directed against other entities (in particular, the vehicle manufacturer or the software manufacturer). This will especially apply to situations where the vehicle owner or driver is the victim of a traffic incident, the course of which he or she had no influence on (e.g., a software error). It is particularly difficult to solve the ethical problem related to the system's need to choose the method of proceeding in the event of a conflict of goods (the choice of manoeuvre when it is necessary to sacrifice, for example, a driver's life for pedestrians).

At the same time, it is necessary to agree with the position that it would be undesirable to introduce two different liability systems depending on the level of automation of the vehicle involved in the incident (Abraham, Rabin, 2019, p. 139). In any case, it should be postulated *de lege ferenda* to maintain the existing system of compulsory third-party liability insurance for motor vehicle owners, with its scope extended in the case of autonomous vehicles to the manufacturer of this vehicle or its software supplier. Regardless of the considerations, it should be stated without doubt that in the near future it will be necessary to clearly define the rules of liability of the owner of a motor vehicle for damage in connection with the development of technology.

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- European Parliament resolution of 15 January 2019 on autonomous driving in European transport (2018/2089(INI)), OJ C No. 411, 27.11.2020, p. 2
- Road Traffic Act of 20 June 1997 (i.e., Journal of Laws of 2022, item 988)
- Act of 23 April 1964 – the Civil Code (i.e., Journal of Laws of 2022, item 1360)
- Convention on Road Traffic done in Vienna on 8 November 1968 and ratified by Poland, (Journal of Laws of 1988, No. 5, item 40)
- Council Directive of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products (OJ L No. 210, p. 29)
- Directive 2009/103/EC of the European Parliament and of the Council of 16 September 2009 relating to insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability (OJ L No. 263/11, 7.10.2011)