Autonomous vehicles – Challenges for EU private international law[1]

Balázs Horváthy[2]

1. Introduction

It is most likely that the first prediction of fully autonomous and connected cars has been put into words by the celebrated writer of science-fiction literature, *Isaac Asimov* in 'Sally', a novel published in 1953. [3] The main character of the story was an apple green "*2045 convertible with a Hennis-Carleton positronic motor and an Armat chassis*"[4] It is also clear from the very detailed technical description of the novel that in the period of the story, automated vehicles are significant and have already spread worldwide, but are extremely expensive playthings: the novel highlights that autonomous transport means are hundred times more expensive than traditional vehicles, therefore only few can afford to own autonomous cars. As a result, due to high level of expenses, the transport revolution has been taken place mostly in the public transport, and the industry was primarily specialized in the production of autonomous buses, which, as much as possible, have been operated as a kind of demand-based communal transport.[5] [6] Moreover the vehicles featured in the novel were able to communicate with each other, so according to our today's concepts *Asimov* wrote about the 'connected cars'. It is important from the perspective of this study, that one of the most important turning points of the short story has been a criminal offense committed by an autonomous bus, when it caused a road accident and run over a 'human' character killed him 'intentionally'. Moreover, *Asimov* explicitly referred to the law in his novel, when one of his 'human' character admitted: "[...] I remember when the first laws came out forcing the old machines off the highways and limiting travel to automatics. Lord, *what a fuzz*."[7]

Taken *Asimov*'s prophecy out of context, these predictions can be easily associated with the current problems of autonomous vehicles and the revolutionary changes in the automotive industry and transport. In addition, the above examples arising from the science-fiction literature illustrate evidently that the broad social challenges comprise the legal narratives and the legal concerns have to be taken into account as well. The law must reflect on the likely challenges and social developments still in time, it means prior to the technology's

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[2] Research fellow (Centre for Social Sciences, Institute for Legal Studies); Associate professor (Széchenyi István University, Deák Ferenc Faculty of Law and Political Sciences, Department of International and European Law).

[3] Isaac Asimov: Sally. *Fantastic*, Vol. 2. No. 3., May – June 1953, 36. Online available at https://archive.org/stream/Fantastic_v02n03_1953-05-06#page/n33/mode/2up.

[4] Asimov op. cit. 38.

[5] It is easily to see that the vision in this prediction is similar to the current forms of flexible transport services. The demand-responsive transport is already very common form of shared transport services, applied also in certain European countries, where the vehicles, busses, coaches, etc. are circulating not on fix routes, but enables the passengers to signalize in advance that they want to get on, and the vehicles will establish the final route based on these demands.

[6] See Asimov's description: „*You could always call a company and have one stop at your door in a matter of minutes and take you where you wanted to go. Usually, you had to drive with others who were going your way, but what's wrong with that?*" Asimov op. cit. 38.

[7] Asimov op. cit. 38.

introduction which might help to avoid the fuzz – or "fuss" in this context – to which *Asimov* referred in his novel.[8]

In the last few years, the legal scholarship is increasingly focusing on this area, the private law, [9] legal theory and ethics,[10] criminal law,[11] as well as traffic law[12] are predominantly in centre of attention of the academia. This is not surprising, since the major legal challenges that are already foreseeable, e.g. questions of liability, can be adequately responded within these areas. In addition to these core legal areas, there are however further specific narratives have to be considered as well, including the private international law, the subject of this article. [13] The role of the EU private international law in the area of autonomous driving should not be neglected either, because from a practical point of view, perhaps not so far away, when the autonomous vehicles will start spreading in the roads of the European Union, legal problems related to transport will frequently go beyond the borders between the member states. [14] These cross-border legal problems, e.g. arising from road accidents, will require

[8] The vision of this "fuss" or "fuzz" could remember us to the descriptions of the technological revolution taken place nowadays, where this process is frequently called 'disruptive'. The new technologies are 'disruptive' in a sense that these are now building entirely new structures in a way that, at the same time, 'disrupt' or even demolish our traditional social structures, our traditional knowledge etc. See: James Manyika – Michael Chui – Jacques Bughin – Richard Dobbs – Peter Bisson – Alex Marrs: Disruptive technologies: *Advances that will transform life, business, and the global economy*. McKinsey Global Institute, New York, 2013. https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/disruptive-technologies (2019.07.15.).

[9] See especially: Kyle Colonna: Autonomous Cars and Tort Liability. *Case Western Reserve Journal of Law, Technology & the Internet*, 2013/4. https://ssrn.com/abstract=2325879 (2019.07.15.); Jan De Bruyne – Jochen Tanghe: Liability for Damage Caused by Autonomous Vehicles: A Belgian Perspective. *Journal of European Tort Law*, 2017/3. 324–371.; Kevin Funkhouser: Paving the Road Ahead: Autonomous Vehicles, Products Liability, and the Need for a New Approach. *Utah Law Review*, 2013/1., 437–462.; Jeffrey K. Gurney: Sue my car not me: products liability and accidents involving autonomous vehicles. *University of Illinois Journal of Law, Technology & Policy*, 2013/2. 247–277.; Maurice Schellekens: Self-driving cars and the chilling effect of liability law. *Computer Law & Security Review*, 2015/4., 506–517.

[10] See Alexander Hevelke – Julian Nida-Rümelin: Responsibility for crashes of autonomous vehicles: an ethical analysis. *Science and Engineering Ethics*, 2015/3., 619–630.; Heather Bradshaw-Martin – Catherine Easton: Autonomous or 'driverless' cars and disability: a legal and ethical analysis. *European Journal of Current Legal Issues*, 2014/3. http://webjcli.org/article/view/344 (2019.07.15.); Joshua Paul Davis: Law Without Mind: AI, Ethics and Jurisprudence. *Univ. of San Francisco Law Research Paper,* No. 2018-05. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3187513 (2019.07.15.); Tom Michael Gasser: *Grundlegende und spezielle Rechtsfragen für autonome Fahrzeuge*. In: Autonomes Fahren (Hrsg.: Maurer, M. – Gerdes, J. – Lenz, B. – Winner H.), Springer, Berlin – Heidelberg, 2015., 543-574.; Benjamin Sobel: Artificial Intelligence's Fair Use Crisis. *Columbia Journal of Law & the Arts* 2017/1.; Thomas E. Spahn: Is Your Artificial Intelligence Guilty of the Unauthorized Practice of Law? *Richmond Journal of Law & Technology*, 2018/4.

[11] Sabine Gless – Emily Silverman – Thomas Weigend: If Robots cause harm, Who is to blame? Self-driving Cars and Criminal Liability. *New Criminal Law Review: An International and Interdisciplinary Journal*, 2016/3., 412–436; Clint W. Westbrook: The Google made me do it: The complexity of criminal liability in the age of autonomous vehicles. *Michigan State Law Review,* 2017/1., 97–147.

[12] Konrad Lachmayer: Verkehrsrecht: Rechtsstaatliche Defizite der Regelungen zu Testfahrten. In: Autonomes Fahren und Recht (Hrsg.: I. Eisenberger – Lachmayer – G. Eisenberger), Manz Verlag, Wien, 2017. 147–167. o.

[13] It is probable that after the autonomous cars having spread worldwide, more challenges and questions will arise, far beyond the core issues mentioned above, e.g. like data protection, technical standards, or some borderline questions might arise in traffic law.

[14] The predictions are based on different scenarios. For instance, a prophetic advertisement of Nissan promised in 2013 that the Nissan's first fully autonomous car will be in production and available for customers within 5 years (see Jeffrey R. Zohn: When robots attack: How should the law handle self-driving cars that cause damages. *University of Illinois Journal of Law, Technology & Policy*, 2015/2., 462. o.). Less progressive predictions suggest that fully autonomous vehicles will be on the roads in great strength not earlier than the 2040s. See: Dorothy J. Glancy: Autonomous and Automated and Connected Cars – Oh My! First generation autonomous cars in the legal ecosystem. *Minnesota Journal of Law, Science & Technology*, 2015/2. 622–629.

complex answers. The expected legal problems should be addressed not only by the static perspective of the substantive law (e.g. liability, liability forms, etc.), but also the dynamic aspects will be needed to take into consideration. Putting it differently, not merely the question who is liable is important, but it is also vital, how the substantive law can be made effective, namely, which court in which Member State may act, what is the applicable law or how this court's judgment can be enforced. Questions of this dynamic aspects are to be answered by the private international law.

Even though the literature on autonomous vehicles has placed less emphasis on the private international law aspects, in the recent years the scholarship is showing unquestionably growing interest in this area. This increasing attention is partly a consequence of the more active role the European Union is playing in shaping the policy and legal framework of the new technologies, including the future role of private international law concerning the new technological challenges. The European Parliament has also commissioned a research paper in order to see what problems might arise in this area due to technological changes taken place in the transportation. [15] As a consequence, although the private international law is still a secondary research area in light of autonomous driving, but the first results and publications are already at hand this time. [16]

Contributing to this narrative, the main question, the current paper is seeking for, is whether the private international law is capable of responding adequately to the challenges posed by the future introduction and spreading of self-driving cars, in other terms, is its current set of rules and its legal dogmatics is able to accommodating and addressing the emerging issues of the technological revolution. However, there are two limitations to the analysis. On the one hand, the following paper offers a "Europe-centric" analysis, i.e. it examines the above objectives from the perspective of private international law of the European Union and consequently considers the cross-border legal relationships within the European Union as a model. On the other hand, this study does not want to join the discussion of the 'narratives', i.e. the debate on how the new technologies could be handled and regarded analogically in our traditional terms. As we will see these debates are of fundamental importance primarily in the area of the substantive law and are therefore not specifically related to the interpretation of EU private international law rules.[17]

Consequently, the present study is focusing on the existing EU legislation, examines how the conflicts of laws could be resolved, how the current EU law might be working in hypothetical situations. In the analysis we use a hypothetically constructed model case that helps us to demonstrate how particular provisions of the EU law could address questions that might arise in traffic road accidents in the (possibly not too far) future. The next chapter explains this model case and clarifies some basic concepts (*2. Autonomous vehicles and private international law*), then it examines the jurisdiction (*3. The main problems of jurisdiction*),

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[15] Thomas Kadaner Graziano: *Cross-border Traffic Accidents in the EU – the Potential Impact of Driverless Cars.* European Parliament – Directorate-General for Internal Policies of the Union, Brussels, 2016. http://www.europarl.europa.eu/thinktank/hu/document.html?reference=IPOL_STU%282016%29571362 (2019.07.15.).

[16] Jan De Bruynen – Cedric Vanleenhove: The Rise of Self-Driving Cars: Is the Private International Law Framework for non-contractual obligations posing a bump in the road? IALS Student Law Review, 2018/1., 14–26. o.

[17] This means that we are not attempting to determine whether autonomous vehicles, as objects of legislation, can be approached *per analogiam* within the current conceptual basis of the legislation governing other types automated vehicles (e.g. automated trains etc.), or we need completely unique law, as the autonomous cars might be *sui generis* phenomenon.

the applicable law (*4. Problems of the applicable law*) and finally closes with a conclusion (*5. Concluding remarks*).

2. Autonomous vehicles and private international law

Although the study does not aim at giving a detailed analysis of the technological background of autonomous vehicles, it is essential to clarify the underlying basic concepts. The popular media uses for 'autonomous vehicles' a couple of terms (self-driving cars, driverless vehicles, automated vehicles, etc.), which are often misplaced or used wrongly as synonyms, or are referring to technologies, where the term is inaccurate. The broadest category accepted in the literature is "*automated vehicles*", which include certain kind of vehicles (cars, buses, trucks, etc.) equipped with special, computer controlled technological features that are able to assist the driver: developed forms of these technologies could take over some of the driving functions or even the entire driving process from the driver. Some of these technologies are already in serial production and are available in new cars (e.g. adaptive headlights, frontal collision warning; automatic emergency braking; adaptive cruise control; park assist systems; lane-departure control; or lane-keep assist, etc.), but the broad term covers also the fully driverless cars, in which all driving functions are automated and operated by computers. Strictly speaking, however, only the latter could be considered as an 'autonomous car.' Consequently, the concept of 'automated vehicles' are the broader term that embraces several technological levels of automation, including the 'autonomous vehicles' as a form of the highest level of automation.

The fully autonomous cars are still in test phase but are already operating in traffic in few places – mostly in the US – within a strict and exceptional legal environment. It is, however only a matter of time before driverless cars are allowed without any exception into traffic. It is expected, that after the introduction of autonomous vehicles, the full technological change will not take place immediately, and autonomous vehicles will co-exist with vehicles at different levels of automation.[18] The law must be prepared also for this initial period, when different technologies will be in operation on the roads at the same time, specifically, private international law must also be able to deal with more complex problems arising from cross-border traffic disputes during this transitional period. This complexity can be easily seen in the below hypothetical, model case for a cross-border traffic accident. The analysis of this paper is fundamentally based on this model case, we will turn back frequently to this case with the intention of illustration and to show, how the EU law provisions could operate in complex, hypothetical situations. The merits of this model case are as follows:

> *Two cars (Car-1 and Car-2) are involved in a road accident. Car-1 is a conventional vehicle registered in Austria, owned and operated by an Austrian resident and insured by an Austrian insurance company. Car-2 is an autonomous vehicle, owned by a German company that put it into use for its Hungarian employee who operates the car. Car-2 is registered in Germany and insured by German insurance company. The unfortunate accident occurs in Slovakia due to a malfunction of the Li-DAR system of Car-2. Car-2 is marketed by a French company and was manufactured at the site of a Belgian subsidiary of that company. The automaker buys the LiDAR system from a Finnish supplier and its software has been developed by an Irish company.*

[18] But this technological coexistence is not exceptional, as even today, 'traditional' cars are operating with cars partially equipped with automated functions. In the categorization of SAE (Society of Automotive Engineers), the fully autonomous cars are at the highest, fifth level of automation, see Glancy op. cit. 631.

Considering the facts of the case it is clear that private international law has to answer two fundamental questions. On the one hand, the question arises as to where the participants in the case can bring proceedings to enforce their claim, in other words, which state will have jurisdiction in these proceedings and which forum will decide the dispute? Another important question is what law should be applied by the forum of the procedure. [19]

As the case is a complex of cross-border legal relationships, it is of great importance that which connecting factors, such as the place of residence, the place where the damage occurred, the place where the vehicle is registered, etc., are applied. Below, we examine these main issues from the perspective of EU private international law.

3. The main problems of jurisdiction

3.1. Unification of private international laws in the European Union

The unification of provisions of jurisdictions in the European Union is not a recent process. Even at the very outset of the European integration, the common market made it necessary for the Member States to introduce and apply uniform rules in certain areas of private international law, rather than domestic, national rules based on different approaches and models. Unification eliminated conflicts arising from different national rules, thereby the major objective of this process was to increase the predictability of the application and enforcement of private international law provisions. This was also expected to strengthen the confidence of businesses and other entities operating within the Community in the single market, to generate and increase in the cross-border transactions and ultimately to deepen the common market. This resulted in conclusion of the Brussels Convention in 1968, which introduced uniform rules on jurisdiction and the enforcement of judgments. [20] Later, the amendments of Treaty of Amsterdam made it possible for Member States to replace the Brussels Convention with secondary EU law, and ss a consequence, the "Brussels I" regulation has been adopted in 2001 (Council Regulation (EC) No 44/2001). [21]

In a 2009 report it was indicated the revision of the regulation has been needed, therefore, the Brussels I Regulation was replaced by the Regulation (EU) No 1215/2012 of the European Parliament and of the Council ("Brussels I bis" Regulation). [22]

3.2. The jurisdiction according to the "Brussels I bis" Regulation

The first major question regarding the "Brussels I bis" Regulation is whether the Regulation might apply to disputes relating to autonomous vehicles, namely, in a complex dispute as it has been indicated in the above model case. The scope of the Brussels I bis Regulation is broadly defined, according to which its rules shall apply in civil and commercial matters whatever the nature of the court or tribunal, [23] with only a few specific exceptions. [24]

[19] International civil procedural law issues may also arise, namely how these judgments can be enforced. This study focuses on the classic issues of private international law, so this aspect is not discussed here.
[20] 1968 Brussels Convention on jurisdiction and the recognition and enforcement of judgments in civil and commercial mattersBrüsszelben. Consolidated version: OJ C 27. (1998.1.26.), 1. o.
[21] Council Regulation (EC) No 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matter. OJ L 12. (2001.1.16.), 1. o.
[22] Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters.
[23] Brussels I bis, Article 1 para. 1.

Therefore the scope of the regulation has been defined broadly and neutrally, which means that its applicability is not restricted by technological concern, not even if the subject of the underlying dispute would be road accident involving autonomous vehicles.

The Brussels I bis Regulation lays down general and special rules on jurisdiction that all serve the predictability. Moreover, three other major concerns are also shaping the logic and characteristics of the Regulation.[25] First, it designates the defendant's domicile (*locus domicilii*) as a general rule of jurisdiction, following the principle of *actor sequitur forum rei*, which prevents the defendant from being sued before a foreign court to which the party has not got any real connection.[26] Second, derogating from the general rules of jurisdiction, the Regulation also establishes specific rules of jurisdiction for cases in which the except can be justified by the interests of the weaker, more vulnerable party (e.g. consumer, insured person, employee, etc.). Third, the regulation also respects the parties' autonomy and allows for forum choice (*prorogatio fori*), provided that it does not violate the criteria indicated in specific jurisdiction cases. For the purpose of the model case, the following rules of jurisdiction are practically important:

a) Under the general rule of jurisdiction, persons domiciled in a Member State shall, whatever their nationality, be sued in the courts of that Member State. [27] It is also important, that persons who are not nationals of the Member State in which they are domiciled shall be governed by the rules of jurisdiction applicable to nationals of that Member State. .[28] This rule governs also the status of legal person: according to the specific provision of the Regulation, a company or other legal person or association of natural or legal persons is domiciled at the place where it has its statutory seat, central administration, or principal place of business. [29] Consequently, under the general rule of jurisdiction, the defendant may cover all possible persons involved in a traffic accident, as it was indicated in the above model case, i.e. the general rule, the *locus domicilii* may be relevant for a driver, operator, manufacturer, distributor, software developer, etc. of a car, when the court wants to determine its jurisdiction.

b) The regulation lays down special provisions for jurisdiction, which covers also the delicts. As a consequence, a person domiciled in a Member State may be sued in another Member

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[24] See Brussels I bis, Article 1 para. 1–2 It shall not extend, in particular, to revenue, customs or administrative matters or to the liability of the State for acts and omissions in the exercise of State authority (*acta iure imperii*), and the the regulation shall not apply to 1. the status or legal capacity of natural persons, rights in property arising out of a matrimonial relationship or out of a relationship deemed by the law applicable to such relationship to have comparable effects to marriage; 2. bankruptcy, proceedings relating to the winding-up of insolvent companies or other legal persons, judicial arrangements, compositions and analogous proceedings; 3. social security; 4. arbitration; 5. maintenance obligations arising from a family relationship, parentage, marriage or affinity; 6. wills and succession, including maintenance obligations arising by reason of death..

[25] Xandra Kramer – Alina Ontanu – Michiel de Rooij – Erlis Themeli – Kyra Hanemaayer: The application of Brussels I (Recast) in the legal practice of EU Member States. Synthesis Report. Asser Institute, Den Haag, 2018. 5. o. https://www.asser.nl/media/5018/m-5797-ec-justice-the-application-of-brussels-1-09-outputs-synthesis-report.pdf (2019.07.15.).

[26] Mádl Ferenc – Vékás Lajos: Nemzetközi magánjog és nemzetközi gazdasági kapcsolatok joga. Eötvös Kiadó, Budapest, 2014. 305. o. https://www.tankonyvtar.hu/hu/tartalom/tamop425/2011_0001_527_nemzetkozi_maganjog (2019.07.15.).

[27] See Brussels I bis Article 4 para. 1.

[28] Brussels I bis Article 4 para. 2.

[29] Brussels I bis Article 63 para. 1.

State in matters relating to tort, delict or quasi-delict, in the courts for the place where the harmful event occurred or may occur.[30]

c) The special jurisdiction preserved for the so called 'adhesive procedures' might have relevance also in disputes arising from road accidents, in which autonomous vehicles are involved, According to this special rule, a person domiciled in a Member State may be sued in another Member State as regards a civil claim for damages or restitution which is based on an act giving rise to criminal proceedings, in the court seised of those proceedings, to the extent that that court has jurisdiction under its own law to entertain civil proceedings.[31]

d) The regulation lays down special rules for jurisdiction in matters relating to insurance. According to that, an insurer domiciled in a Member State may be sued in the courts of the Member State in which he is domiciled (*locus domicilii*). It is also possible to bring the case to an another Member State, if the actions brought by the policyholder, the insured or a beneficiary. In this case the jurisdiction of the courts is determined by the place where the claimant is domiciled (*locus actoris*). Even though the previous listing does not mention explicitly, according to the case law of the CJEU it includes the injured party as well. Special rules apply for cases where co-insurer has also interest: the co-insurer can bring the case to the courts of a Member State in which proceedings are brought against the leading insurer. [32]

In addition to the previous special jurisdictions, in respect of liability insurance or insurance of immovable property, the insurer may be sued in the courts for the place where the harmful event occurred (*locus damni*). The same applies if movable and immovable property are covered by the same insurance policy and both are adversely affected by the same contingency. [33] In respect of liability insurance, the insurer may also, if the law of the court permits it, be joined in proceedings which the injured party has brought against the insured. [34]

The 'protecting the weaker party' principle is also represented in the special jurisdiction provisions of the regulation. Therefore an insurer may bring proceedings only in the courts of the Member State in which the defendant is domiciled, irrespective of whether he is the policyholder, the insured or a beneficiary. [35] Logically, this provisions does not imply the counter claims, i.e. a counter-claim can be brought in the court in which the original claim is pending. Moreover, the parties may depart from this principle by an agreement, but only within strict circumstances.[36]

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[30] Brussels I bis Article 7 para. 2.
[31] Brussels I bis Article 7 para. 3.
[32] Brussels I bis Article 11 para. 1.
[33] Brussels I bis Article 12.
[34] Brussels I bis Article 13. The specific directive on civil liability allows explicitely to take action directly to the insurer, see 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, Article 18. OJ L 263 11 (2009.7.10.).
[35] Brussels I bis Article 14 para. 1
[36] See Brussels I bis Article 15, agreements 1. which is entered into after the dispute has arisen; which allows the policyholder, the insured or a beneficiary to bring proceedings in courts other than those indicated in this Section; which is concluded between a policyholder and an insurer, both of whom are at the time of conclusion of the contract domiciled or habitually resident in the same Member State, and which has the effect of conferring jurisdiction on the courts of that Member State even if the harmful event were to occur abroad, provided that such an agreement is not contrary to the law of that Member State; which is concluded with a policyholder who is not domiciled in a Member State, except in so far as the insurance is compulsory or relates to immovable

4. 4. Problems of the applicable law

4.1. EU and international unifications regarding the applicable law

Similar considerations we have seen *vis-a-vis* the jurisdiction, Member States harmonized their national rules. In other terms the proper functioning of the common market, the predictability of the settlement of disputes and legal certainty required that the applicable law should be determined in the same way, regardless of the fact, in which the Member State the action has been taken. In the absence of harmonized rules, however, the choice of forum could influence, which substantive law will decide the dispute, therefore it could even influence the outcome of the dispute (*forum shopping*). The unification at Community level, in comparison with the Brussels Convention, started later in this area. After a longer period of preparation, the Convention on the law applicable to contractual obligations (Rome Convention) was adopted in 1980[37] and has been replaced by a regulation later (the "Rome I Regulation").[38]

However, with regard to the non-contractual obligations directly related to our subject, the unification has arrived only in 2007 by the adoption of Parliament and Council Regulation (EC) No 864/2007 ("Rome II").[39] It is important however, that, there are also international agreements in this area, which are relevant, as certain EU Member States have concluded agreements prior to the adoption of the Rome II Regulation. The Regulation itself lays down its relationship to these international conventions, which may be a special norm and take precedence, [40] i.e. the applicable law should be determined not by the Rome II Regulation but by the international convention. Two Conventions are relevant to our analysis: Convention of 4 May 1971 on the Law Applicable to Traffic Accidents[41] and the Hague Convention of 2 October 1973 on the Law Applicable to Products Liability. [42] Many EU Member States are parties of both Conventions, but Hungary takes not part in these conventions. [43] It means that

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property in a Member State; or which relates to a contract of insurance in so far as it covers one or more of the risks set out in the regulation.

[37] Rome Convention on the Law Applicable to Contractual Relations, HL L 266 (1980. 10.9.). 1. o.

[38] Regulation (EC) No 593/2008 of the European Parliament and of the Council of 17 June 2008 on the law applicable to contractual obligations.

[39] Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II), OJ L 199, 31.7.2007, p. 40–49.

[40] According to that, the regulation shall not prejudice the application of international conventions to which one or more Member States are parties at the time when the regulation has been adopted and which lay down conflict-of-law rules relating to non-contractual obligations. See Article 28. For the parallel regimes, see: Nagy Csongor Istvan: The Rome II Regulation and Traffic Accidents: Uniform Conflict Rules with Some Room for Forum Shopping – How So? *Journal of Private International Law*, 2010/1. 93–108.; Thomas Kadner Graziano: The Rome II Regulation and the Hague Conventions on Traffic Accidents and Product Liability – Interaction, conflicts and future perspectives. *Nederlands Internationaal Privaatrecht*, 2008, 425–429.

[41] Hague Convention of 4 May 1971 on the law applicable to traffic accidents. https://www.hcch.net/en/instruments/conventions/full-text/?cid=81. (2019.07.15.).

[42] Hague Convention of 1 October 1973 on the Law Applicable to Products Liability. https://www.hcch.net/en/instruments/conventions/full-text/?cid=84. (2019.07.15.).

[43] The 1971 Hague Convention has actually 21 contracting parties, which include 13 EU member states (Ausztria, Belgium, Czech Republic, France, Netherlands, Croatia, Poland, Latvia, Lituania, Luxemburg, Spain, Slovakia and Slovenia (Portugalia signed, but not ratified the convention), see: https://www.hcch.net/en/instruments/conventions/status-table/?cid=81). The parties of the 1973 Hague Convention are 11, in which there are 7 EU member states: Finnland, France, Netherlands, Croatia, Luxemburg, Spain, Slovenia (Belgium, Italy and Portugal have been signed, but not ratified the convention), see: https://www.hcch.net/en/instruments/conventions/status-table/?cid=84).

there is a parallel system in the European Union for the applicable law to non-contractual obligations, [44] thus in addition to the rules of the Rome II Convention, the Hague Conventions are discussed below.

4.2. The Rome II regulation

The first substantive question in the context of the Rome II Regulation is whether it applies to damage caused by autonomous vehicles in road accidents. It sets out the scope of the Regulation in a neutral and universal manner. Aside from certain exceptions, [45] the scope of the Regulation is to apply to non-contractual obligations in the field of civil and commercial matters. The nature of non-contractual obligations is also broadly interpreted in the Regulation, so that damages include all consequences of wrongful harm, unjust enrichment, unlicensed administration or *culpa in contrahendo*, as well as all types of damage that is likely to occur. [46] Similarly to the Brussels I bis Regulation, the scope is defined in a neutral manner, i.e. it does not require any special prerequisites, e.g. technological, technical requirements related to damages, therefore the Rome II Regulation also seems to be applicable in disputes arising from road accidents. In addition, it is important that the approach of the Rome II Regulation is universal, it menas that it applies even if the connecting factor refers to the law of a third country, outside the European Union. [47]

The connecting factors determining the applicable law are defined in several ways in private international law. The most common approach that the connecting factors are determined by the characteristics, specificities of the case (e.g. *lex loci delicti commissi, lex loci damni*, etc.). Moreover, the connecting factors can be defined on the basis of abstract, generic concepts (e.g. closest relation principle). The Rome II Regulation combines these methods and provides a flexible framework for conflict-of-law rules. In doing so, the regulation ensures that the applicable law is determined in the most appropriate way and it is not only legally but also predictably fair to the parties of the dispute. For the non-contractual obligations, it is particularly important that the determination of the applicable law should reflect on a balance between the interests of the injured party and those who caused the damage. Considering these aspects, the Rome II Regulation designates the applicable law in the areas relevant to our subject matter in the following manner:

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[44] See: Nagy Csongor Istvan: The Rome II Regulation and Traffic Accidents: Uniform Conflict Rules with Some Room for Forum Shopping – How So? *Journal of Private International Law*, 2010/1. 93–108.

[45] From the scope of the regulation are excluded: non-contractual obligations arising out of family relationships and relationships deemed by the law applicable to such relationships to have comparable effects including maintenance obligations; non-contractual obligations arising out of matrimonial property regimes, property regimes of relationships deemed by the law applicable to such relationships to have comparable effects to marriage, and wills and succession; non-contractual obligations arising under bills of exchange, cheques and promissory notes and other negotiable instruments to the extent that the obligations under such other negotiable instruments arise out of their negotiable character; non-contractual obligations arising out of the law of companies and other bodies corporate or unincorporated regarding matters such as the creation, by registration or otherwise, legal capacity, internal organisation or winding-up of companies and other bodies corporate or unincorporated, the personal liability of officers and members as such for the obligations of the company or body and the personal liability of auditors to a company or to its members in the statutory audits of accounting documents; non-contractual obligations arising out of the relations between the settlors, trustees and beneficiaries of a trust created voluntarily; non-contractual obligations arising out of nuclear damage; non-contractual obligations arising out of violations of privacy and rights relating to personality, including defamation. See Rome II regulation Article 1.

[46] Rome II regulation Article 1 Para. 1–3.

[47] Cf. Rome II regulation Article 3.

a) Respecting the autonomy of the parties, the Rome II Regulation allows the parties themselves to choose the applicable law to a non-contractual obligation (freedom of choice).[48] The choice of law must be expressly formulated, and must not prejudice the rights of third parties. The choice of law may take the form of an agreement following the occurrence of the event giving rise to the injury or, if all parties are engaged in commercial activities, of an agreement freely negotiated prior to the occurrence of the event giving rise to the damage. Obviously, the choice of law cannot be derogated from the cogent or imperative rules of the applicable law. [49]

b) In the absence of choice of law, the regulation applies the *lex loci damni* as a general rule, irrespective of the country or countries in which the indirect consequences of the harmful act may occur. [50] For this reason, e.g. in the case of personal injury or damage in the event of a traffic accident, the State of the *lex loci damni* shall be the place where the injury was sustained or the place where the material damage occurred.[51] Therefore, when applying the main connecting factor, it is irrelevant, where the act was giving rise. In traditional traffic accidents, the *lex loci damni* and the *lex loci commissi delicti* are usually identical, but in more complex legal disputes, the wrongful act (e.g. software update that have been wrongly installed etc.) may differ from the *lex loci damni*, but even in these cases the law of the place where the damage occurred shall apply.

c) If the person claimed to be liable and the person sustaining damage both have their habitual residence in the same country at the time when the damage occurs, the law of that country shall apply; [52]

d) The Rome II Regulation applies the principle of closer relationship as an additional rule (the so-called "escape clause").[53] Where it is clear from all the circumstances of the case that the tort/delict is manifestly more closely connected with a country other than that indicated above, the law of that other country shall apply. A manifestly closer connection with another country might be based in particular on a pre-existing relationship between the parties, such as a contract, that is closely connected with the tort/delict in question.

e) Unlike the general rules, the Rome II Regulation lays down specific conflict-of-law rules for product liability. This may be of particular importance, when the damage arise from use of high technology. In these case the court should determine the applicable law according to these specific rules in the following order:

- first, the law of the country in which the injured party had his habitual residence at the time when the damage occurred, if the product was marketed in that country;

- if no such marketing has taken place, the law of the country in which the product was purchased will apply (provided that the product was marketed in that country);

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[48] Rome II regulation Article 14.
[49] Rome II regulation Article 14 para. 3–4. Burián László – Ziegler Dezső Tamás – Kecskés László – Vörös Imre: *Európai és magyar nemzetközi kollíziós magánjog*. Krim, Budapest, 2010. 244–245. o.
[50] Rome II regulation Article 4 . cikk para. 1. Ld. Burián – Ziegler – Kecskés – Vörös: op. cit. 247. o.
[51] Therefore the Rome II regulation does not use the traditional *lex loci delicti commissi* connecting factor. See: Mádl – Vékás: op. cit. 234. *Lex loci damni*hoz ld. Burián – Ziegler – Kecskés – Vörös: op. cit. uo.
[52] Rome II regulation Article 4. para. 2.
[53] Rome II regulation Article 4 para. 3.

- or, failing that, the law of the country in which the damage occurred, if the product was marketed in that country.

The above exceptional rules can be applied if the person liable could reasonably foreseeable that the product was marketed in the country of applicable law. Otherwise, the applicable law is the law of the country where the person responsible is habitually resident. The regulation also derogates from these three layers of rules, referring to the closer connection principle, as a partial exception in the area of product liability.

f) The Rome II Regulation also enables the member states to refer to the public order (*ordre public*). On that basis, the judge may refuse to apply the law indicated in the regulation, if it is manifestly incompatible with the public policy of the forum. [54] This provides an exceptional opportunity for the forum, which is in principle free to determine the scope of public order in the Member States, without being subject to any substantive limitation in the Regulation. Such public order/public policy grounds could, for example, might be important, if the applicable law would require, e.g. the application of punitive damages, [55] which would be incompatible with the forum's legal system. [56] In these cases, the forum's own law (*lex fori*) will prevail over the law as defined above.

IV. Conclusion

The above analysis has shown that the framework of current EU private international law rules might address the problems of cross-border disputes arising from traffic accidents caused by autonomous vehicles. However, it would be an exaggeration to say that the under the current legislation would be entirely appropriate and needs neither far-reaching reform nor small correction. Actually neither the Brussels I bis nor the Rome II Regulations contain specific provisions for road accidents. Both EU regulations aim to strike a balance between the interests of the litigants – plaintiff and defendant, injured and injured, etc. –, so that both rules of jurisdiction and the applicable law are incorporated in a balanced system. The 'equilibrium' can still be maintained on the basis of the current EU law provisions of non-contractual liability, however, when the autonomous vehicles started spreading across Europe, the nature of road accidents will change, and the period when conventional vehicles and fully autonomous vehicles are involved in transport will be a particular challenge for the EU legislator. Consequently, while in a typical road accident today, the negligence or intentional act of the persons concerned (e.g. not keeping the speed limits, etc.) plays a much larger role than objective factors such as technical reasons, technical problems, etc., this situation will change significantly with the arrival of autonomous vehicles. Just as the "human" drivers bound to their own decisions will be replaced by the "robot drivers" based on artificial intelligence, the causes of road accidents will change. As a result, the current balance between the interests of those involved in a road accident is also shifting, which means that victims (passengers, pedestrians, etc.) must receive considerably more attention. Changes in the nature of road accidents and the objective liability indicated above may also lead to an increase in the proportion of product liability claims and related litigation. Compared to the concept of non-contractual damages, the rules of jurisdiction and conflict of laws regarding product liability are already closer to the model that focuses on the injured party, however, the specificities of possible product liability claims related to autonomous vehicles and artificial

[54] Rome II regulation Article 26.
[55] See Burián – Ziegler – Kecskés – Vörös o p. cit. op. cit. 259. o.
[56] The preamble of the regulation refers to some example, e.g. non-compensatory exemplary or punitive damages, Rome II regulation, preamble 32.

intelligence should also be investigated. As we have also seen, the applicable law is determined currently by two coexisting, parallel regimes, i.e. the Rome II Regulation and the Hague Conventions. The coexistence of these regimes is already giving rise to the *forum shopping*, which obviously poses the risk that the parties could not enforce their claims effectively. For this reason, this 'double-regime' also endangers the predictability, which is fundamental concern in the EU private international law. As a result, it is suggested to review *de lege ferenda* the relation of the Rome II Regulation to other international agreements, specifically to the Hague Conventions.

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