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Editorial

by **Thomas Dreier**

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- 1 In view of the ever-faster advancement of digital technologies, the law of intellectual property (IP) and of information technology (IT) is increasingly expanding. As a result, a journal such as JIPITEC, the Journal of Intellectual Property, Information Technology and E-Commerce Law, has to deal with an increasingly diverse range of topics. This is particularly reflected in the present issue, which rather than focusing on a particular area of law covers a wide range of legal regulations, from traditional IP law and the law of international treaties via traditional liability, and insurance law to data protection laws and the regulation providing for IT-security. This plethora of different issues is triggered, amongst others, by the paradigm shift from trading in physical objects to immaterial services, and the shift from industrial manufacturing to home production of physical objects with the help of 3D-printing, as well as by the propagation of autonomously driving vehicles.
- 2 This variety of topics creates a dilemma for the editor who – besides guaranteeing that the Journal's high quality standard is met – has to pick and choose which of the manuscripts submitted he or she considers worthy of publication. Some of the journal's readers might wish to see the focus of the article in one particular area, whereas some readers might wish to see another area highlighted. Moreover, readers who are already familiar with a particular topic or are even experts in their particular field might be looking for additional in-depth information, while those less specialized might rather wish to be confronted with an overview which just outlines the main issues of a particular area. In this respect, the present issue attempts a balancing act between a variety of topics of different legal fields, while at the same time integrating in-depth analyses with other articles that just provide a quick overview, or which only concentrate on a particular issue within a wider area.
- 3 Hence, the lead article by *Caterina Sganga*, Associate Professor of Comparative Private Law, DIRPOLIS Institute, Sant'Anna School of Advanced Studies in Pisa (Italy), provides a very thorough in-depth analysis of the case law handed by the CJEU on the issue of digital exhaustion. In view of the CJEU's argumentation in the famous *UsedSoft*-case and following the *Ranks*-case it is still unclear to what extent the CJEU considers *UsedSoft* is limited to the Computer Program Directive, or whether the CJEU will also arrive at the same result with regard to works protected under the *InfoSoc*-Directive. Sganga develops several arguments which might serve as a basis for the CJEU's decision in the pending *Tom Kabinet*-case, and she makes a convincing argument in favor of "tertium genus" in between the distribution of physical copies on the one hand, and the provision of immaterial services on the other. This model would allow the application of the doctrine of exhaustion also to the distribution/communication of some content, which is protected by the *InfoSoc*-Directive and which is communicated online.
- 4 In a similar way, the following article by *Christophe Geiger*, *Giancarlo Frosio* and *Oleksandr Bulayenko* – respectively, Director General and Director of the Research Department, Senior Researcher and Lecturer as well as Researcher and PhD Candidate of the Centre for International Intellectual Property Studies (CEIPI) in Strasbourg, France – seek to give advice to the European legislature as regards the

adoption of a suitable legal regime for out-of-commerce works. While generally being supportive of the legal rules proposed in a possible Directive on Copyright in the Digital Single Market, the authors provide some suggestions for improvement, notably concerning the definition of the scope of search required for establishing the out-of-commerce status of works, the requirement of the representative character of collective management organisations, and the non-application of the mechanism to third-country works. It thus wants to help make Pico della Mirandola's dream of having all knowledge accessible in one place eventually come true.

- 5 The somewhat shorter article by *Nina Natalia Baranowska*, Researcher at the Civil Law Institute at the Faculty of Law, Administration and Economics at the University of Wrocław (Poland), presents the technology of 3D-printing and the disruptions this technology is likely to entail for existing business models, due to the shift from industrial to private home production. The main focus of this article is on the repercussions this shift may have on trademark law and, even more, on the producing firm's trademark policies. Concluding, Baranowska gives advice to trademark owners as well as to legislatures.
- 6 With these three articles the section of this Journal which focuses on specific issues of particular intellectual property laws already comes to a close. With the article by *Clara Ducimetière* – Researcher within the EIPIN Innovation Society European Joint Doctorate programme at the CEIPI in Strasbourg (France) – on Free Trade Agreements and IP tribunals, the readers' attention is directed at a much lesser known area of law. Since most FTAs contain sections on IP, which is qualified as “property” and “investment” for the purposes of the FTAs, the issue arises regarding how to define the relationship between litigations amongst private entities as well as between private entities and states which are brought before the FTAs' IP tribunals, the WTO panels, and national courts. Although, as of yet, only few such IP cases were brought before the FTAs' IP tribunals, such cases may increase in the future.
- 7 Immaterial information is no longer confined to intellectual property as defined by traditional IP laws. Rather, the wider focus is on data and on information in general. In his article, *Gábor Szalay*, Doctoral candidate at the Department of Business and Commercial Law of the University of Pécs (Hungary), undertakes a comparison between the rules governing access to public sector information in the EU and in Hungary. This sheds some light on both the growing general acceptance, as well as the current conflicting trends in Member States such as Hungary.
- 8 With *Keri Grieman*, LLM Candidate at London's Queen Mary University (UK), the focus of this issue shifts to self-driving autonomous vehicles. In her article entitled “Hard drive crash”, Grieman examines the different liability regimes that are available for application to scenarios of damages caused by self-driving vehicles. In this respect, she analyses both statutory solutions and the – albeit small – body of existing case law, and she summarizes the main arguments on a policy level.
- 9 Closing the articles' section, *Wolfgang Kerber*, Professor for Economic Policy at the Philipps-Universität in Marburg (Germany), likewise tackles an important issue raised by autonomous, self-driving vehicles, namely the “Data Governance in Connected Cars”. The fact that even absent a property title in data, car manufacturers can by way of technical means retain exclusive control of the data generated during the operation of connected cars. This, however, may lead “to serious concerns about negative effects on competition, innovation and consumer choice on the markets for aftermarket and other complementary services in the ecosystem of connected and automated driving”, as Kerber explains. In view of this, his article offers an overview of the policy discussion while analyzing the issue from an economic perspective and using a market failure analysis. Likewise taking into consideration issues of data protection, the article examines solutions through data portability, data rights, competition law, and finally recommends a sector-specific regulatory approach.
- 10 Finally, the current issue of JIPITEC contains a reappearance of a book review section. To begin with, Severine Dusollier presents and shares her thoughts on *Gustavo Ghidni's* book “Rethinking Intellectual Property”, published by Edward Elgar. In a similar vein, Alain Strowel discusses *Daniel Gervais' proposals* in “Re-Structuring Copyright”, also published by Edward Elgar. Thomas Dreier examines the parallel book edited by *P. Bernt Hugenholtz* entitled “Copyright Reconstructed: Rethinking Copyright's Economic Rights in a Time of Highly Dynamic Technological and Economic Change”, published in the Netherlands by Wolters Kluwer. In addition, Veronika Fisher has a look at the new “Research Handbook on Intellectual Property and Creative Industries”, edited by *Abbe E.L. Brown and Charlotte Waelde*. Finally, Eric Steinhauer submitted his views on *Thomas Eger's* and *Marc Scheufens' book* entitled “The Economics of Open Access – On the Future of Academic Publishing”, both likewise published in the UK by Edward Elgar.
- 11 I hope you will once again enjoy reading the new issue of JIPITEC.

Thomas Dreier

A Plea for Digital Exhaustion in EU Copyright Law

by Caterina Sganga*

Abstract: With the Dutch referral of the Tom Kabinet case (C-263/18) in July 2017, the CJEU will soon have its final say on the admissibility of digital exhaustion under Art. 4(2) InfoSoc. Until now, years of national decisions and the CJEU's obiter dicta have provided a patchwork of inconsistent answers, and seemingly rejected the extension of the principle to digital works upon a strict literal interpretation of EU and international sources. Yet, the changed characteristics of digital markets have outdated the InfoSoc Directive and the classificatory dichotomies (sale vs license, distribution vs communication to the public, good vs service) on which the boundaries of exhaustion have been drawn. At the same time, the exclusion of digital exhaustion has tilted the balance between copyright and the protection of competition, secondary innovation, fundamental freedoms and

other conflicting fundamental rights, while the direct and indirect rulings on the matter have departed from the principles developed in the earlier CJEU's case law on Community exhaustion and caused systematic and teleological inconsistencies in the judicial development of EU copyright. Building on these premises, and on the basis of a set of legal and economic arguments, this paper advocates for the introduction of a general principle of digital exhaustion in EU copyright law and, awaiting an unlikely legislative intervention, it proposes two routes to achieve its judicial recognition: one uses a contextual/teleological interpretation to maintain the effectiveness of Article 4(2) InfoSoc; the other theorizes the possibility of a claim of invalidity of the provision under Article 52(1) CFREU, for disproportionate violation of Articles 7, 16 and 17 CFREU.

Keywords: Digital exhaustion; exhaustion; CJEU; EU copyright; UsedSoft; Tom Kabinet; WCT; Article 4 InfoSoc; copyright balance; CFREU; fundamental rights; Erschöpfungsgrundsatz; Verbreitungsrecht; e-books

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A. Introduction

1 With the recent *Rechtbank Den Haag* (District Court of the Hague)'s referral in the *Tom Kabinet* case¹ on the alleged copyright infringement committed by

an internet platform that commercializes second-hand e-books, the Court of Justice of the European Union (CJEU) will soon be called to have its final say on the controversial issue of digital exhaustion in EU copyright law.

2 The questions referred to the Court are strikingly similar to those addressed in *UsedSoft*,² where the CJEU used a markedly teleological interpretation of the Software Directive II³ to admit the exhaustion of the distribution right over a software commercialized through a license agreement and downloaded from the net. In the aftermath of the

* Associate Professor of Comparative Private Law, DIRPOLIS Institute, Scuola Superiore Sant'Anna (Pisa, Italy). The author would like to thank the participants to the EPIP Conference 2018 at ESMT Berlin, Professor Thomas Dreier and JIPITEC's anonymous reviewers for the very useful insights and comments on earlier drafts of this article. All mistakes and omissions remain, of course, my own.

1 *Rechtbank Den Haag, Nederlands Uitgeversverbond and Groep Algemene Uitgevers v Tom Kabinet Internet BV et al*, C/09/492558/ HA ZA 15-827 (12 July 2017), NL:RBDHA:2017:7543, finalized with the formalization of the questions referred in March 2018.

2 *Case C-128/11 UsedSoft GmbH v Oracle International Corp.* EU:C:2012:407.

3 Directive 2009/24/EC of 23 April 2009 on the legal protection of computer programs [2009] OJ L111/16 (Software Directive II).

decision, commentators started debating whether the same policy-oriented, functional approach could lead to the extension of exhaustion to every digital work under Article 4(2) InfoSoc⁴ which, thanks to the relative clarity of Recitals 28 and 29 InfoSoc and Article 6 of the WIPO Copyright Treaty (WCT)⁵ – binding for the EU and implemented through the InfoSoc Directive – has consistently been interpreted as limiting the principle to works fixed on a tangible medium.⁶ The advisability of complementing the purely positivistic interpretation of the provision with a deeper consideration of the social, economic and cultural implications of exhaustion, and of its role in facilitating the achievement of copyright goals is at stake.⁷

- 3 Introduced to balance between the user's property right over the material support and the author's exclusive rights over her intellectual creation, the principle shortly became a tool to reconcile copyright protection with the need to ensure access to and availability of protected works, defend competition and the development of secondary markets, foster innovation, and guarantee the enjoyment of a set of conflicting rights and freedoms – chiefly property, privacy and the freedom of movement of goods.⁸ Similar aims, with a focus on internal market arguments, were also behind the CJEU's development of the principle of Community exhaustion from 1974,⁹ marking one of the first harmonizing interventions on national copyright laws.

- 4 In the material world, the principle has never faced real challenges. Its impact on the rightholder's exploitation of the work is limited, since the "wear-and-tear" characteristics of the support render the competition between original and secondary markets insignificant.¹⁰ The copy is subject to physical deterioration, which decreases its marketability and value time after time, and its alienation requires the seller's surrender of her possession, which implies renouncing to the enjoyment of the protected work.¹¹ From a legal perspective, the boundaries of exhaustion are made clear by the tangible nature of the medium and its commercialization via implied sale contracts, which facilitate the distinction between distribution and communication to the public, between support and intellectual creation, and between the property right over the former, and the copyright over the latter.¹²

- 5 The same cannot be said for the digital environment. Here, the quality of the copy does not deteriorate over time, and its enjoyment is not rival. These features increase the risk of piracy, and cause the secondary market to potentially impact on the sales of the originals – both elements which have led legislators to cautiously avoid extending the principle to dematerialized copies.¹³ Courts have also consistently rejected the construction of digital exhaustion, maintaining that the characteristics of digital works and of their commercialization do not comply with the literal interpretation of the requirements set by copyright statutes for the operation of the principle.¹⁴ In fact, the intangibility of the copy, commercialized via written licenses that do not formally transfer its ownership, triggers its qualification as a service (while exhaustion is limited to goods), and causes the definition of its transfer as an act of communication to the public (whereas exhaustion is limited to distribution).

4 Directive 2001/29/EC of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society [2001] OJ L167/10 (InfoSoc Directive).

5 WIPO Copyright Treaty, S. Treaty Doc. No. 105-17 (1997); 36 ILM 65 (1997).

6 Similar considerations can be found in Peter Bräutigam, 'Second-Hand Software in Europe – Thoughts on the Three Questions of the German Federal Court of Justice Referred to the Court of Justice of the European Union', [2012] 1 Computer Law Review International 1, 1-2.

7 A particular emphasis on this point is made by Peter Mezei, 'Digital First Sale Doctrine Ante Portas – Exhaustion in the Online Environment', [2015] 6 JIPITEC 23, 55-56, and in more detail in Id., *Copyright Exhaustion. Law and Policy in the United States and the European Union* (CUP 2018), 139-148. See also Giorgio Spedicato, 'Online Exhaustion and the Boundaries of Interpretation' in Roberto Caso and Federica Giovanella (eds), *Balancing Copyright Law in the Digital Age - Comparative Perspectives* (Springer 2015), 43-45.

8 For a concise summary on the history of the first sale doctrine in US copyright law, see Aaron Perzanowski and Jason Schultz, 'Digital Exhaustion' [2011] 58 UCLA Law Review 889, 908 ff.

9 The landmark decision is Case C-78/70 *Deutsche Grammophon Gesellschaft GmbH v Metro-SB-Großmärkte GmbH & Co. KG*. [1971] ECR I-499. For a broader overview see Nial Fennelly, 'Rules and Exceptions: Freedom of Movement and Intellectual Property Rights in the European Union' in Hugh C. Hansen, *International Intellectual Property Law & Policy*, Vol 5 (Juris Publishing 2003), pp. 33-4 – 33-11.

10 On this comparison, arguing that the differences between material and digital markets justify the ban of digital exhaustion, see Andreas Wiebe, 'The economic perspective: exhaustion in the digital age' in Lionel Bently, Uma Suthersanen and Paul Torremans (eds), *Global Copyright Three Hundred Years Since the Statute of Anne, From 1709 to Cyberspace*, (Edward Elgar 2010), 321 ff.

11 Ibid 323. See also R. Anthony Reese, 'The First Sale Doctrine in the Era of Digital Networks', [2002-2003] 44 Boston College Law Review 57.

12 For a comprehensive analysis of the theoretical obstacles posed by the characteristics of the digital environment vis-à-vis the construction of exhaustion, see Stravroula Karapapa, 'Reconstructing copyright exhaustion in the online world', [2014] 4 IPQ 307.

13 Along these lines, and with ample references, see Wolfgang Kerber, 'Exhaustion of Digital Goods: an Economic Perspective', [2016] 8(2) Zeitschrift fuer Geistiges Eigentum/Intellectual Property Journal 149, 153 ff.

14 See the selection of cases commented on by Mezei (n 7), paras 65-94, and related ample bibliography, with a focus on the EU and the US.

6 Realizing the side-effects of a strict approach to the tangible-intangible dichotomy in other areas of copyright law, the CJEU has tried to minimize them through distinguishing decisions and *dicta*, based on adaptive readings that stand in stark contrast with the rigid attitude showed in the field of exhaustion. Such a dissonance is the inevitable result of the application of different interpretative methods to the same legislative texts. The exclusion of intangible copies from the scope of Article 4(2) InfoSoc is the product of a strictly positivistic approach, which has never reflected nor internalized the fact that when the WCT and the Infosoc Directive were conceived, the dematerialization of protected works and the development of digital markets were still embryonal, and their implications were far from being foreseen and considered.¹⁵ On the contrary, when compelled – like in *UsedSoft* – to ensure that otherwise outdated acts still realize their goals, and that copyright perform its functions and maintain its internal balance, the Court has adopted a much more flexible teleological interpretation, based on the notion of functional equivalence, and with conclusions adjusted to the new technological developments.¹⁶ To justify such an asymmetry in the approaches, systematic arguments have been used à la carte, leading to the recurrent distinction between the InfoSoc Directive and other subject-specific acts. This has resulted in the construction of a system where the InfoSoc Directive remains a weak *lex generalis*, surrounded by a plethora of *leges speciales* that derogate from the tangible-only reading of terms such as “copy”, “object”, “original” and the like, and admit the application of exhaustion in the digital environment.

7 The clash of precedents is not only synchronic, but also diachronic. The rejection of digital exhaustion represents a patent departure from the balancing principles that have characterized the judicial harmonization of EU copyright since the 1970s, when the doctrine of Community exhaustion made its debut in the jurisprudence of the CJEU to strike a balance between copyright and fundamental freedoms.¹⁷ Every time the Court hints at the literal limitation of exhaustion to tangible copies, there is no adequate consideration of the features of digital markets, and of the extent to which their shortcomings could at least be partially addressed through the operation of the principle. The Luxembourg judges seem to ignore that digital rightholders have the possibility to block the development of secondary markets, control the threats coming from potential competitors, and

maintain the ability to price-discriminate through market segmentation more than in the material world.¹⁸ It does not appear to matter that works which would easily keep on circulating online could be put out-of-commerce in no time; that access to protected works can be more tightly constrained by a technologically enforced exclusivity, while their use is subject to a more pervasive control, with a much stronger impact on users’ privacy and property rights and interests,¹⁹ and a massive backlash on decentralized innovation.²⁰ And while the balance between free movement of goods, competition and copyright is significantly tilting towards the latter, the CJEU’s case law remains anchored to a rigid literal interpretation of legislative sources, without exploring any alternative route, nor performing any reality check to test whether or not the exclusion of digital exhaustion is necessary to protect the specific subject matter and essential function of copyright. This is even more striking if one considers that exhaustion-like arguments are commonly used in the judicial development of other copyright doctrines, the chief example being the construction of the boundaries of the right of communication to the public (Article 3 InfoSoc).²¹

8 The majority of commentators believe that a legislative reform is needed to tackle the problem and adapt the notion of exhaustion to the digital environment.²² Unfortunately, the EU legislator does not seem to share the same opinion. After a meteoric appearance in the public consultation on the modernization of EU copyright rules,²³ the

15 Ibid paras 183 ff.

16 Explained in economic terms by Antoni Rubi-Puig, ‘Copyright Exhaustion Rationales and Used Software: a Law and Economics Approach to Oracle v UsedSoft’ [2013] 4(2) JIPITEC 159.

17 On which more below, part C.I.

18 As highlighted, inter alia, by Stephen M Maurer, ‘Copyright and Price Discrimination’ [2001-2002] 23 Cardozo L Rev 55; Id, ‘Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works’ [1997] 45 Buff L Rev 845; Yockai Benkler, ‘An Unhurried View of Private Ordering in Information Transactions’ [2000] 53 Vand L Rev 2063; James Boyle, ‘Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination and Digital Intellectual Property’ [2000] 53 Vand L Rev 2007; Glynn S Lunney jr, ‘Copyright’s Price Discrimination Panacea’ [2008] 21 Harv JL & Tech 387; William Fisher, ‘When Should We Permit Differential Pricing of Information’ [2007] 55 UCLA L Rev 1; Perzanowski-Schultz (n 8), 901-907; with specific regard to software products, see Puig (n 16), paras 43-71.

19 Perzanowski-Schultz (n 8), at 906-907; already Julie Cohen, ‘The Right to Read Anonymously: A Closer Look at Copyright Management in Cyberspace’ [1996] 28 Conn L Rev 981.

20 Perzanowski-Schultz (n 8), at 907.

21 See more below, part C.III. See also in this respect the analysis of Valerie Laure Benabou, ‘Digital Exhaustion of Copyright in the EU or Shall We Cease Being so Schizophrenic?’ in Irini A. Stamatoudi (ed), *New Developments in EU and International Copyright Law* (Wolters Kluwer 2016), 351-378.

22 Eg Mezei (n 7), paras 182, 191, 195, who notes, however, that several attempts of legislative amendment have already failed; see also Eleonora Rosati, ‘Online copyright exhaustion in a post-Allposters world’ [2015] 10(9) JIPLP 673, 680-681, but contra Karapapa (n 12), 309.

23 Commission, ‘Public Consultation on the Review of the EU

matter has disappeared in subsequent preparatory documents, without even being mentioned in the context of the Digital Single Market Agenda, where the cross-border commercialization of digital goods plays a central role.²⁴

- 9 Contrary to the Commission's downgrading of the problem as irrelevant or least pressing, this contribution starts from the assumption that the absence of a horizontal principle of digital exhaustion in EU copyright law and the inconsistent judicial approach to the issue have detrimental effects on the EU copyright system, alter its original balance with conflicting rights and freedoms, and frustrate the achievement of some of its economic, social and cultural goals. And while it agrees with the majoritarian view that reproducing in the digital environment the original balance struck by exhaustion for material copyright is a policy task that belongs to the EU legislator, it complements its plea for digital exhaustion with the proposal of two exegetic platforms that could help the CJEU reach similar *interim* results, flattening the divergence of outcomes of its literal, systematic and teleological interpretations.
- 10 After a brief introduction on the *Tom Kabinet* case, **Section B.** offers an overview of the international and EU sources involved in the debate, and summarizes the main scholarly positions on the matter, focusing on the key concepts and classificatory dilemmas. **Section C.** is articulated in three parts. **Part C.I.** illustrates the development of the doctrine of Community exhaustion in the CJEU's case law, emphasizing its supporting arguments, with particular reference to the notions of essential function and specific subject matter of copyright as metrics to balance copyright with fundamental freedoms. **Part C.II.** describes the fragmented patchwork of the CJEU's direct and indirect rulings on digital exhaustion, highlighting their mutual inconsistencies and unexplained departure from the principles advanced by the Court when constructing the notion of tangible exhaustion. **Part C.III.** shows the emersion of exhaustion-like principles in the CJEU's case law, commenting on the systematic short-

circuits generated by this approach as opposed to the rigidity shown in the rejection of digital exhaustion. **Section D.** gives an account of the main legal and economic reasons supporting this paper's plea for a horizontal principle of digital exhaustion in EU copyright law and proves the ultimate equivalence of traditional and digital markets as to the features justifying the need for the principle. **Section E.** is structured in two parts. **Part E.I.** provides a summary of the (few) references to the matter made by the EU legislator in its preparatory works and illustrates the legislative amendments which could allow the introduction of digital exhaustion without breaching the Union's international obligations. Waiting for a legislative intervention, **Part E.I.** proposes two alternative interpretative routes to help the CJEU bridge the legislative gap and reach similar *interim* results.

B. The state of the art

I. The Tom Kabinet case: waiting for Godot?

- 11 The *Tom Kabinet* saga has featured in the Dutch copyright scene since the launch of the website as an online intermediary for the consumer-to-consumer resale of e-books in 2014. Originally, users/sellers uploaded their copies on the platform and offered them for a self-determined value, declaring that they had deleted them from their devices. The platform validated the files to prevent multiple sales, watermarked them to make the buyers traceable, and provided a notice-and-take-down system to remove illicit content. Users/buyers could download the e-book from the seller's account, from which it was subsequently removed.
- 12 Tom Kabinet was first sued before the District Court of Amsterdam by the Dutch Publishers Association (Nederlands Uitgeversverbond – NUV) and the General Publishers Group (Groep Algemene Uitgevers – GAU), which tried – unsuccessfully – to obtain an injunction to stop its operations.²⁵ The Court rejected the request, arguing that the shutting down of the website would have been disproportionate compared to the uncertainty surrounding the applicability of the *UsedSoft* doctrine to e-books. The decision was upheld by the Amsterdam Court of Appeal²⁶ which, however, proposed a broader reading of Article 4(2)

Copyright Rules', <http://ec.europa.eu/internal_market/consultations/2013/copyright-rules/docs/consultation-document_en.pdf> accessed 13 September 2018, 13-14, and 'Report on the responses to the Public Consultation on the Review of the EU Copyright Rules', <http://ec.europa.eu/internal_market/consultations/2013/copyright-rules/docs/contributions/consultation-report_en.pdf>, accessed 13 September 2018, 20-22.

24 Commission, 'Communication a Digital Single Market Strategy for Europe' COM(2015) 192 final, 3 (mentioning as first pillar of the strategy a "better access for consumers and businesses to online goods and services across Europe", requiring "the rapid removal of key differences between the online and offline worlds to break down barriers to cross-border online activity").

25 Rechtbank Amsterdam, *Nederlands Uitgeversverbond and Groep Algemene Uitgevers v Tom Kabinet Internet BV et al*, C/13/567567/KG ZA 14-795 SP/MV (1 July 2014), NL:RBAMS:2014:4360.

26 Gerechtshof Amsterdam, *Nederlands Uitgeversverbond and Groep Algemene Uitgevers v Tom Kabinet*, Case 200.154.572/01 SKG (20 January 2015), NL:GHAMS:2015:66.

InfoSoc under §62 of the *UsedSoft* judgment, which suggests that the principle of exhaustion should be limited only if necessary, to protect the essential function and specific subject matter of copyright.²⁷

- 13 As a response to the judicial attacks, Tom Kabinet repeatedly changed its business model, finally opting for the direct commercialization of used e-books acquired from selected retailers or donated by its members and sold only to the latter. In both cases, Tom Kabinet downloads the e-book from the retailer's website, watermarks it, and offers it for 2€, retaining 0.50€ as a donation for the author/publisher, and offering the possibility for buyers to sell back the e-book to Tom Kabinet for credits.²⁸
- 14 The platform was sued again before the Hague District Court by NUV and GAU, which claimed a violation of the Dutch provisions implementing Articles 2 and 3 InfoSoc. The Court rejected Tom Kabinet's attempt to classify e-books as software products, which could have allowed the direct application of the *UsedSoft* ruling on digital exhaustion.²⁹ At the same time, it excluded that the platform's offer to sell constituted "communication" and that its members represented a "public", for they were not an indefinite and large number of individuals.³⁰ The Court also ruled out that Tom Kabinet could be obliged to verify whether the retailer deleted the e-book from its platform once it was sold,³¹ while it left open the question of whether or not the reproduction necessary to transfer the file between buyer and seller was legitimate.³² Only the retention of the copy on the Tom Kabinet's catalogue after its sale was judged in violation of the Dutch provision implementing Article 2 InfoSoc.³³
- 15 The Court believed, however, that the case could not be solved without the intervention of the CJEU, since neither the InfoSoc Directive nor the CJEU's case law were clear with regard to the applicability of the *UsedSoft* doctrine to digital works. In its opinion, the purchase of an e-book for an indefinite period

against the payment of a sum corresponding to its value was functionally equivalent to a transfer of ownership,³⁴ while the inclusion of intangible copies under Article 4(2) InfoSoc was dictated by the principle of equal treatment, since tangible and intangible copies were also functionally equivalent, and so was their sale.³⁵ After giving time for parties to submit their observations on the proposed questions, the final referral for preliminary ruling was submitted in March 2018. The CJEU will now need to determine: (i) whether the right of distribution and its exhaustion under Article 4 InfoSoc also covers the making available of the file via download, for an unlimited period and for a price which corresponds to the economic value of a copy of the work; (ii) whether and under which conditions the transfer of a legally obtained copy also implies consenting to reproductions necessary for the lawful use of the copy (Article 2 InfoSoc); and (iii) whether Article 5 InfoSoc would in any case authorize acts of reproduction of a lawfully obtained copy on which the right of distribution has been exhausted.

II. The sources at stake

1. International sources

- 16 Due to the lack of supranational consensus, neither the Berne Convention nor the TRIPs Agreement take a stance over exhaustion, leaving the decision on its scope and regulation to contracting parties.³⁶ The debut of the principle in an international text, together with the general right of distribution, is marked by the two WIPO Internet Treaties (Article 6(2) WCT and Article 8(2) WPPT),³⁷ which similarly

²⁷ Ibid para 3.5.3-4.

²⁸ The terms of the website are available at <<https://www.tomkabinet.nl/en/conditions/>>, accessed 13 September 2018.

²⁹ Rechtbank Den Haag, *Tom Kabinet* (n 1), paras 5.6-5.10.

³⁰ Ibid paras 5.11-5.17.

³¹ Ibid para 5.22. In this way the Court implicitly took a stance with regard to the burden of proof on the deletion of the file, which was left undetermined by *UsedSoft* and its progeny, among which Case C-166/15 *Aleksandrs Ranks and Jurijs Vasiļevičs v Finanšu un ekonomisko noziegumu izmeklēšanas prokuratūra and Microsoft Corp.*, EU:C:2016:762.

³² Ibid paras 5.20-5.21. According to the Court, this depended on the possibility for the donating member to rely on the digital exhaustion of the distribution right, which under *UsedSoft* would have allowed any act of reproduction required for the transfer of the copy to the lawful acquirer.

³³ Ibid para 5.22.

³⁴ Ibid paras 5.26-5.27. Also, the Amsterdam Court of Appeal agreed with this view (paragraph 3.5.2), rejecting the plaintiffs' argument that the e-book prices are usually 50% lower than the price of paper books, and arguing that such lower amount depends on the fact that the production and distribution costs of a digital file are also lower than those of a printed version.

³⁵ Despite the plaintiffs' objection, which pointed to the differences between tangible and intangible copies, where the first are subject to wear-and-tear and are offered in different formats, while the second are in plain text and offer additional features (text-to-speech, searchable text etc.). Ibid para 5.35.

³⁶ TRIPs Agreement, Article 6. Not every signatory of the Agreement, in fact, regulated exhaustion, and there was no consensus as to its national, regional or international nature. For a comment see Mihaly Ficsor, *The Law of Copyright and the Internet. The 1996 WIPO Treaties, their Interpretation and Implementation* (OUP 2002), 153-155.

³⁷ Ibid 210-226. Some aspects of the right of distribution, however, were already regulated by the Berne Convention. Sam Ricketson and Jane C. Ginsburg, *International Copyrights and Neighboring Rights. Berne Convention and Beyond*, vol 1 (2nd ed, OUP 2006), 660 ff.

rule that “nothing in this Treaty shall affect the freedom of Contracting Parties to determine the conditions, if any, under which the exhaustion of the right [of distribution] applies after the first sale or other transfer of ownership of the original or a copy of the work with the authorization of the author”. While legislators may thus regulate exhaustion without being subject to limitations such as, *inter alia*, the three-step-test,³⁸ they are obliged to set as minimum requirement for its operation the first lawful sale or transfer of ownership.³⁹ The scope of the principle is clarified by the Agreed Statement on Articles 6 and 7 WCT, which specifies that the words “copies” and “original and copies”, used in the context of the rights of distribution and rental, refer only “to fixed copies that can be put into circulation as tangible objects”.⁴⁰

- 17 The relatively ambiguous language used by the Statement has divided scholars between those who believe that it excludes the applicability to digital copies,⁴¹ and those who believe that it only requires the possibility to fix the creation on a material support, and not that the fixation has already happened.⁴² The limitation did not cause substantial problems until the distinction between traditional and online exploitations of protected works remained clear: the right of distribution covered the circulation of original and copies in the material world, while the right of communication to the public and the making available right referred to cases where the work was received and not physically possessed by the user, either on demand (making available) or upon the rightholder’s initiative and determination (communication).⁴³ However, the dichotomy did not clearly solve the qualification of permanent transfers of digital files over the Internet, which were more functionally equivalent to traditional material sales (i.e. distributions) than to any form of intangible transmission of the work. In fact, using the nature of the work to distinguish between exclusive rights was the easiest, but not the most forward-looking solution to the classificatory

puzzle triggered by the digital revolution.

2. EU sources

- 18 The development of the principle at the EU level passed through the early intervention of the CJEU, which introduced the notion of Community exhaustion to preserve the free movement of goods against the unjustified partitioning of the internal market caused by the territorially-limited scope of national IP rights. In 1988 the EU Commission maintained that the clarity of the judicial precedents ruled out the need for a legislative introduction of the principle,⁴⁴ but emphasized its non-applicability to the newly proposed rental right, justifying the policy decision on the grounds of the CJEU’s exclusion of intangibles and services from the scope of exhaustion.⁴⁵ This approach, which distinguished between sale-style and service-style rights, was followed by the Software Directive I in 1991 and by the Rental Directive I in 1992,⁴⁶ which introduced the exhaustion of the right of distribution and crossed out its extension to rental rights,⁴⁷ with no further interpretative indication in their recitals, and no specification as to the necessarily tangible form of the copy subject to exhaustion. Similarly, Article 3(3) Software I excluded exhaustion in case of communication or making available of the work to the public.
- 19 A reference to the tangible-intangible dichotomy came, instead, from the Commission’s report on the implementation of the Software Directive I, which specified that exhaustion “only applies to the sale of copies i.e. goods, whereas supply through on-line services does not entail exhaustion”.⁴⁸ The same language was used in the Follow-up to the Green Paper on Copyright in the Information Society, which qualified any online exploitation of a work as service.⁴⁹ The 1996 Database Directive followed the

38 In the opinion of Mezei (n 7) para 18, in line with Silke von Lewinski, *International Copyright Law and Policy* (OUP 2008), para 17.65.

39 Jorg Reinbothe and Silke von Lewinski, *The WIPO Treaties on Copyright. A Commentary on the WCT, the WPPT, and the BTAP* (OUP 2015) 87.

40 See *Agreed Statements concerning the WIPO Copyright Treaty, adopted by the Diplomatic Conference of December 20, 1996, Concerning Articles 6 and 7*, <http://www.wipo.int/treaties/en/text.jsp?file_id=295456>, accessed 13 September 2018.

41 See, e.g., the articulated arguments of JAL Sterling, *World Copyright Law* (4th ed, Sweet and Maxwell 2015) 574 ff.

42 More recently, see Friedrich Ruffler, ‘Is Trading in Used Software an Infringement of Copyright? The Perspective of European law’ [2007] 6 EIPR 380.

43 Broadly Mezei (n 7), paras 21-22, referring also to the definitions offered by Ficsor (n 36), 205-206 and 249-250.

44 Commission, ‘Green Paper on Copyright and the Challenge of Technology – Copyright Issues Requiring Immediate Action’, COM (1988) 172 final.

45 Ibid para 4.10.5, with reference to the *Coditel* cases (below n 109-110) and the audio-visual industry.

46 Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, OJ L122/42 (Software Directive I); Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property, OJ L346/61 (Rental Directive I).

47 Art 4(c) Software Directive I; Art 1(4) Rental Directive I.

48 Commission, Report on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs, COM(2000) 199 final, 17.

49 Commission, ‘Follow-up to the Green Paper on Copyright and Related Rights in the Information Society’, COM(96) 568 final, Ch 2, 19, para 4.

approach of the Software I and Rental I Directives,⁵⁰ but excluded exhaustion in case of re-utilization of materials extracted from the database lawfully transmitted and used online.⁵¹

- 20 Building on these precedents, when the EU legislator implemented the WCT through the InfoSoc Directive, not only did it introduce a general distribution right and its exhaustion (Article 4) using almost completely the WIPO Treaty language, but went beyond its international obligations, including the Agreed Statement's limitation to tangible copies (Recital 28)⁵² and even making a step forward with the exclusion from the scope of the principle of services, and of any copy made from online services (Recital 29).⁵³ No further specifications were made as to the interplay and boundaries between Article 4 InfoSoc and the other exclusive rights harmonized by the act.
- 21 The InfoSoc is a directive of maximum harmonization, as specified also by the CJEU in *Laserdisken*⁵⁴ with regard to the territorial scope of exhaustion. Its entry into force has therefore excluded the direct judicial application of articles of the Treaty if it can be proven that the legislative act has already introduced measures “necessary to achieve the specific objective which would be furthered by reliance” on those provisions.⁵⁵ It follows that, for instance, Article 36 TFEU could not justify, on the example of the case law on Community exhaustion, the judicial extension of Article 4 InfoSoc beyond the borders set by Recitals 28 and 29, unless it is proven that the solution provided by the Directive is not enough to fulfill the Treaty goals underlying the provision.
- 22 The latter point is particularly relevant, since while the literal interpretation of the WCT and the InfoSoc Directive does not leave much doubt as to the boundaries of exhaustion, the teleological and

systematic reading of the same provisions may lead to different results. As proven by the *UsedSoft* ruling and by the recent referral in *Tom Kabinet*, in fact, the meaning attributed to concepts such as sale and license, good and service, distribution and making available rights through a teleological and contextual interpretation may change the answer to the question of admissibility of digital exhaustion in EU copyright law.

III. Key concepts and classificatory dilemmas

1. Sale vs license

- 23 The first relevant classificatory dilemma to determine the applicability of exhaustion on digital copies lies in the dichotomy of sale vs license, which is of key importance since every provision regulating exhaustion mentions as its requirement the first lawful “sale or other transfer of ownership” of the work. On this basis, licenses have been consistently used by rightholders to circumvent the application of the principle, since (i) they do not entail any transfer of ownership, but only a variously limited authorization to use the protected work for a definite or indefinite period, with a retention of title, and (ii) their object is usually qualified as a service and not as a good.⁵⁶
- 24 The CJEU has intervened on the matter in *UsedSoft*, where it qualified the notion of “sale” as an autonomous concept of EU law, to be interpreted uniformly across the Union so as to avoid differences which may adversely impact on the functioning of the internal market.⁵⁷ “Sale” was defined as “an agreement by which a person, in return for payment, transfers to another person his right of ownership in an item of tangible or intangible property belonging

50 Directive 96/9/EC of the European Parliament and the Council of 11 March 1996 on the legal protection of databases OJ L77/20 (Database Directive), Article 5(c).

51 Ibid Recital 43.

52 “Copyright protection under this Directive includes the exclusive right to control distribution of the work incorporated in a tangible article”.

53 “The question of exhaustion does not arise in the case of services and on-line services in particular”.

54 Case C-479/04 *Laserdisken ApS v Kulturministeriet* [2006] ECR I-08089, para 24: “it follows from the clear wording of Article 4(2) of Directive 2001/29 (...) that the provision does not leave it open to the Member States to provide for a rule of exhaustion other than the Community-wide exhaustion rule”, since this is “the only interpretation which is fully consistent with the purpose of Directive 2001/29 which (...) is to ensure the functioning of the internal market” (para 26).

55 For the first time explicitly in Case C-1/96 *The Queen v Minister of Agriculture, Fisheries and Food* [1998] ECR I-01281.

56 Mezei (n 7) para 98. On the risks posed by contractual circumvention of exhaustion in the digital environment, see Joseph P. Liu, ‘Owning Digital Copies: Copyright Law and the Incidents of Copy Ownership’ [2001] 42 William and Mary LR 1245, 1339; Reese (n 11) 581, 614; Perzanowski-Schultz (n 8) 901-907; Brian W. Carver, ‘Why License Agreements Do Not Control Copy Ownership: First Sales and Essential Copies’ [2010] 25(4) Berkeley Tech LJ 1887. See also US Department of Commerce, Report to Congress: Study Examining 17 U.S.C. Sections 109 and 117 Pursuant to Section 104 of the Digital Millennium Copyright Act, March 21, 2001, <http://www.copyright.gov/reports/studies/dmca/dmca_study.html>, accessed 13 September 2018.

57 *UsedSoft* (n 2) paras 40-41. The conclusion was supported by the fact that the Software Directive II does not refer to national law to define the notion, while its preamble sets as one of its purposes that of removing “differences between the laws of the Member States which have adverse effects on the functioning of the internal market”.

to him”.⁵⁸ Then, to adapt the notion to the new technological settings and business practices, the Court opted for a functional interpretation of the commercialization scheme used by Oracle. On this basis, it considered the license and download as a single act due to their mutual indispensability for the transaction,⁵⁹ and argued that making the copy fully and permanently usable to a customer in return for the payment “of a fee designed to enable the copyright holder to obtain a remuneration corresponding to the economic value of the copy of the work”⁶⁰ was legally and economically equivalent to transferring the ownership of the copy itself, *id est* to a sale, regardless of the medium through which the copy was delivered to the buyer.⁶¹ Sharing AG Bot’s conclusions, the CJEU believed that a narrow interpretation not encompassing “all forms of product marketing” having sale-like characteristics would have undermined the effectiveness of the principle of exhaustion, allowing rightholders to circumvent it through the mere labelling of the contract as “license”,⁶² and to unduly control secondary markets and restrict fundamental freedoms beyond what was necessary for them to obtain an appropriate remuneration, and thus beyond what was needed to safeguard the specific subject matter of copyright.⁶³

- 25 From a textual and systematic perspective, there is no obstacle preventing the application of the same reasoning to contracts having other types of digital works as an object. Like the Software Directive II, the InfoSoc Directive also mentions the notion of sale without referring to national laws, and its preamble identifies the removal of obstacles to the correct functioning of the internal market as one of the purposes of the harmonization.⁶⁴ Similarly, the recitals of both Directives indicate the goals of striking a (fair) balance between copyright and conflicting rights and freedoms, and between the protection of rightholders’ interests and the achievement of other Treaty objectives.⁶⁵ These elements suggest that the functional classification proposed in *UsedSoft* would need to also find application on licenses belonging to the realm of the InfoSoc Directive, in order to avoid the frustration of the balancing aims underlying Article 4 InfoSoc. Yet, despite the linearity of this systematic interpretation, some of

the few national cases ruling on the admissibility of a general principle of digital exhaustion have referred to the *lex specialis* nature of the Software Directive – clearly not relevant in this instance – to rule out such conclusion, and to reiterate the non-applicability of Article 4(2) InfoSoc on licenses whose content did not differ much from Oracle’s scheme.⁶⁶

2. Distribution right vs communication to the public/making available right

- 26 Another key classificatory problem involves the distinction between acts of distribution (Article 4 InfoSoc) and acts of communication or making available to the public (Article 3 InfoSoc), since exhaustion is admitted only for the former and not for the latter.
- 27 Also in this respect the *UsedSoft* decision had its say, yet with a much more ambiguous two-step answer. Challenged by Oracle’s argument that the download of the software constituted an act of communication to the public, the CJEU opposed the nature of *lex specialis* of the Software Directive II to exclude the application of Article 3 InfoSoc to the transfer of dematerialized copies of computer programs, qualifying any transfer of the work as distribution (Article 4 Software II), regardless of its form.⁶⁷ Only subsequently did the CJEU clarify that according to Article 6(1) WCT, on which Articles 3 and 4 InfoSoc are based, the distinction between the two rights should be drawn on the basis of the type of transfer and use of the work,⁶⁸ where the alienation of ownership indicates a distribution and never a communication

58 Ibid para 42.

59 Ibid para 44.

60 Ibid para 45.

61 Ibid paras 45-47.

62 Ibid para 49.

63 Ibid para 63, with reference to Joined Cases C-403/08 *Football Association Premier League Ltd et al v QC Leisure et al* and C-429/08 *Karen Murphy v Media Protection Services Ltd* [2011] ECR I-09083 (FAPL), paras 105-106.

64 Recitals 1 and 3 InfoSoc Directive.

65 Recital 17 Software Directive II; Recital 31 InfoSoc Directive.

66 See, e.g., the overview provided by Maša Savič, ‘The Legality of Resale of Digital Content after *UsedSoft* in Subsequent German and CJEU Case Law’ [2015] 37 EIPR 414.

67 This assumption was in itself flawed, since the Software Directive II does not cover the making available right despite the fact that WCT obligations would have suggested the need to fill up the gap through the InfoSoc Directive – an option allowed by Article 1(2)(a) InfoSoc. See Emma Linklater, ‘*UsedSoft* and the Big Bang Theory: is the e-Exhaustion Meteor about to Strike?’ [2014] 5(1) JIPITEC 15; broadly on the point see Mezei (n 7), paras 121-123.

68 Which faced numerous critiques, such as Linklater (n 67); Spedicato (n 7); Thomas Vinje, Vanessa Marsland, Annett Gartner, ‘Software Licensing after *Oracle v UsedSoft*’ [2012] 4 *Computer Law Review International* 97; Martin Senftleben, ‘Die Fortschreibung des urheberrechtlichen Erschöpfungsgrundsatzes im digitalen Umfeld’ [2012] 40 *Neue Juristische Wochenschrift* 2924; Thomas Dreier, Matthias Leistner, ‘Urheberrecht im Internet: die Forschungsherausforderungen [2013] 9 *Gewerblicher Rechtsschutz und Urheberrecht* 887; EF Schulze, ‘Resale of digital content such as music, films or eBooks under European law’ [2014] 36 EIPR 9; Christopher Stothers, ‘When Is Copyright Exhausted by a Software License? *UsedSoft v Oracle*’, [2012] 11 EIPR 788.

to the public/making available.⁶⁹ Elaborating further on the point, scholars have characterized the making available right as featuring an on-demand transmission⁷⁰ with no permanent reproduction and/or retention of a copy, but only the possibility to access the work from a place and at a time decided by the user – an instance excluded in the case of an online sale of a digital copy, the transfer of which happens only upon conditions set by the seller.⁷¹ According to this view, the key distinction between making available and distribution is grounded on the effects of the conveyance of the work: in case of distribution, the transfer of ownership of a copy, no matter if digital or material; in case of making available, the dematerialized transmission of a work triggered by the request of a user, who does not – or at least, is not supposed to – retain any copy of the work after the transmission is terminated. The validity of this reading seems to be confirmed by the emphasis put on the notion of “transmission” by Recitals 23 and 24 InfoSoc as an element characterizing the right protected under Article 3 InfoSoc, and by the saving clause of Article 8 WCT which, in listing the provisions of the Berne Convention left untouched by the “new” right, refers only to conducts entailing a transmission of the work, such as broadcasting, recitation and public performance of cinematographic works.⁷²

28 This reading is not universally accepted, though. The tangible-only notion of original and copy suggested by the Agreed Statement on Article 4 WCT justifies for several commentators a distinction between distribution and communication to the public/making available rights based on the tangible or intangible nature of the support.⁷³ Any other

69 *UsedSoft* (n 2), para 52, as also noted by the Opinion of AG Bot, EU:C:2012:234, para 73. A similar distinction could be already found in Case C456/06 *Peek & Cloppenburg* [2008] ECR I2731, para 30.

70 Also defined “digital interactive transmission” in the definition of one of the main drafters of the Treaties, Ficsor (n 36) 203.

71 This is an observation explicitly made by Mezei (n 7), para 122, to support the CJEU’s conclusion in *UsedSoft* and answer to the criticism moved against such a reconstruction. Earlier and along the same lines see Eric Tjong Tjin Tai, ‘Exhaustion and online delivery of digital works’ [2003] 25 EIPR 208.

72 Article 8 WCT leaves unprejudiced Article 11(1)(ii) BC (public performance and communication to the public of the performance of a work), Article 11bis(1)(i) and (ii) BC (broadcasting and other wireless communications, public communication of broadcast by wire or rebroadcast, public communication of broadcast by loudspeaker or analogous instruments, and related compulsory licenses), Article 11ter(1)(ii) BC (right of public recitation and of communication to the public of a recitation), and Article 14(1)(ii) BC (public performance of cinematographic works).

73 And more recently by ALAI, *Opinion on Case C-263/18, NUV/GAU v Tom Kabinet*, Brussels, 12 September 2018, available at <<http://www.alai.org/en/.../180912-opinion-tom-kabinet-case-en.pdf>>, accessed 18 October 2018, 3-4.

interpretation – they argue – would go against the text of the Treaty, and unduly curtail the scope of Article 8 WCT.⁷⁴ Such a rigid approach, however, fails to attribute the necessary relevance to the different economic meanings of the acts of exploitation covered by Articles 4 and 8 WCT – a difference in value and impact which does not depend on the material or immaterial nature of the copy, but on the duration and extent of the availability of the work for the user.

29 Distinguishing the two rights on the basis of the type of transfer of the work has the advantage of ensuring a technologically neutral approach to the various transactions and helps adjust otherwise outdated provisions to the evolution of copyright markets. Since the drafting of the WCT, in fact, the shift towards digital content has introduced – as illustrated in more detail below – a real *tertium genus* within the tangles of the traditional good-service dichotomy, and a new grey zone between the traditional distribution and communication to the public since 1996; that is the online transfer of digital works as products, where the buyer acquires the work on its device, instead of merely accessing it from a place and at a time individually chosen by her. A distinction grounded on the type of transfer and not on the nature of the support, which limits the making available right to on-demand transmissions that do not entail any transfer of ownership over the hard/digital copy, is capable of embedding these nuances, while guaranteeing an equal treatment to transactions that are formally different but functionally similar.

30 In a diachronic perspective, this teleological interpretation is in line with the EU legislator’s original decision to classify the making available right as a form of communication to the public and not, as for example in the US,⁷⁵ under the right of distribution – a decision directed to clearly emphasize their ontological and material distinction.⁷⁶ Both options, in fact, are fully compatible with the “umbrella solution” proposed by Article 8 WCT, which leaves contracting parties free to determine under which exclusive right(s) or combination thereof such acts of dematerialized

74 *Ibid.*

75 Information Infrastructure Task Force, ‘Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights’, September 1995, 212-214; see the comment of Maria A Pallante, ‘The Next Great Copyright Act’ [2013] 38(3) *Columbia J of L & A* 324. Federal courts are split on the admissibility of the making available right under the US Copyright Act. Among the most recent landmark decisions, see *contra Sony BMG Music Entertainment et al v Joel Tenenbaum*, 663 F.3d 487 (2011), while in favor *Capitol Records Inc et al. v Jammie Thomas-Rasset*, 692 F.3d 899 (2012).

76 But see, *contra*, Linklater (n 67) para 22.

transmission should be classified, and whether or not this requires an amendment of existing national laws.⁷⁷ By the same token, an update of the criteria of distinction between the rights protected under Articles 3 and 4 InfoSoc could not be held incompatible with the WCT provision,⁷⁸ unless this would cause some form of exploitation to remain uncovered – a circumstance that is clearly excluded. The functional distinction is also more fit to explain, in a systematic perspective, why Recital 29 InfoSoc “limits” its exclusion from exhaustion to online services and the copies made by their users, and why the Commission underlined the same distinction in the context of the implementation of the 1991 Software Directive I:⁷⁹ the on-demand transmission of the work without permanent transfer of the copy represents, indeed, the provision of a service, and not the transfer of a product/good, as in the case of distribution. However, the two-step structure of the answer offered by the Court, grounded on the *lex specialis* nature of the Software Directive II and not on systematic observations, has wrongly overshadowed its role of general consideration and its applicability beyond the realm of computer programs – a defect which can be tackled only, as better illustrated below (§ 5.2), through a teleological interpretation of existing sources.

3. Good vs service

31 The controversial good-service dichotomy had already emerged in early directives and preparatory works,⁸⁰ but became relevant only after the EU legislator decided to supplement the WCT definition with the exclusion of services from the scope of exhaustion.

32 The two notions, central both in primary and secondary EU law, are not defined in the Treaties. Secondary sources provide only scattered indications, while the case law is fragmented, strongly fact-centered, and thus of little help in providing general classificatory criteria. The CJEU has consistently defined as goods (also called “products” or “objects”) entities characterized by tangibility⁸¹

and tradability,⁸² that is the capability of being the object of commercial transactions, qualifying services as a residual category.⁸³ Interestingly, however, in some cases the Court has excluded that the commercial transaction should entail a transfer of ownership, creating serious compatibility problems with those decisions where licenses or leasing of goods have been qualified as a service.⁸⁴ With a reversed reasoning, and thus adding further layers of complexity to the definitory framework, the CJEU has ruled that tangible objects may be qualified as services when they are made available as a step in the performance of a service contract.⁸⁵ The sector where this overlap of classificatory criteria has triggered more confusion is, expectedly, that of intangible products, where the CJEU has based the distinction between goods and services on the tangible or intangible nature of the support and of the distribution means, and not on the type of contract involved.⁸⁶

33 Some secondary sources follow a similar approach, with a particular emphasis on tangibility.⁸⁷ An example comes from Recital 33 Database, which excludes exhaustion for on-line databases since “unlike CD-ROM or CD-I, where the intellectual property is incorporated in a material medium, namely an item of goods, every on-line service is in fact an act which will have to be subject to authorization where the copyright so provides”. Bringing this statement a step forward, Recital 38 of the E-Commerce Directive includes in the category of services also the online sale of goods,⁸⁸ while the VAT Regulation prefers to limit the definition of supply of goods to “the transfer of the right to dispose of tangible property as owner”, using together the requirements of tangibility and of the transfer of ownership.⁸⁹ On this basis, the CJEU has

the Boundary between Goods and Services in the World Trade Organization and the European Union’ [2005] 12(1) Columbia Journal of European Law 1.

82 As in Case C-7/68 *Commission v Italy* [1968] ECR I-0423, where goods are defined as products having a monetary value and being potentially object of a commercial transaction. Later, in Case C-2/90 *Commission v Belgium* [1992] ECR I-04431, the Court carved out the monetary value requirement.

83 Particularly in Case C-155/73 *Sacchi* [1974] ECR I-0409.

84 Eg Case C-451/99 *Cura Anlagen GmbH v ASL* [2002] ECR I-3194, with reference to the long-lease of cars.

85 *FAPL* (n 63), paras 77-83, commented by Thomas Dreier, ‘Online and Its Effect on the ‘Goods Versus ‘Services’ Distinction’ [2013] 44(2) IIC 137.

86 After *Sacchi* (n 78), Case C-52/79 *Procureur du Roi v Debauve* [1980] ECR I-0833.

87 The emphasis on tangibility is a point strongly made by Karapapa (n 12) 311-313.

88 Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, [2000] OJ L178/1.

89 Council Directive 2006/112/EC of 28 November 2006 on the

77 On the “umbrella solution” see, *ex multis*, Ficsor (n 36) 145 ff; Ricketson-Ginsburg (n 37) 741-748; Reinbothe-von Lewinski (n 39) 124 ff.

78 As the ALAI Comment (n 73) does in explicit terms (at 4).

79 Explicitly in this sense, Answer by Commissioner Monti to Oral Question H-0436/95 by Arthur Newens, MEP (11.7.1995), Debates of the EP, No. 466, 175.

80 As in Commission, ‘Green Paper on Copyright and Related Rights in the Information Society’ COM(95) 382 final, 47, and in Report on the implementation of the Software Directive (n 48) 17.

81 See the overview provided by Fiona Smith and Lorna Woods, ‘A Distinction without a Difference: Exploring

qualified the online supply of e-books as a service,⁹⁰ excluding the application of the reduced rate provided for printed books. However, after harsh scholarly critiques, which judged the distinction inadequate to properly classify digital products and their commercialization,⁹¹ and AG Opinions pointing to its dubious consistency with the principles of tax neutrality and equality,⁹² the Parliament has approved with a vast majority the Commission's proposal of allowing Member States to provide the same reduced VAT rate for printed and electronic books,⁹³ which is currently being discussed before the Council.⁹⁴

- 34 To overcome the problematic limitation to “goods” made by several consumer law directives, instead, the Consumer Rights Directive (CRD)⁹⁵ has opted for a hybrid, new classification, qualifying as digital content “data which are produced and supplied in digital form (...) irrespective of whether they are accessed through downloading or streaming, from a tangible medium or through any other means”,⁹⁶ focusing only on the nature of the support and not on the means of commercialization. Along the same lines, the CRD defines a digital content supplied on a tangible medium as a good and introduces a *tertium genus* approach to the contracts for digital content not distributed on material supports, stating that they “should be classified (...) neither as sales contracts nor as service contracts”. The Directive, however, is clear in limiting the validity of this classification to its scope – a specification that reinforces the impression of a patchwork of subject-specific definitions.

common system of value added tax [2006] OJ L347/1, Article 14(1).

- 90 Case C-479/13 *Commission v France* [2015] EU:C:2015:141, and Case C-502/13 *Commission v Luxembourg* [2015] EU:C:2015:143.
- 91 See especially Yves Gaubiac, ‘The exhaustion of rights in the analogue and digital environment’ [2002] 4 Copyright Bulletin 9.
- 92 See, eg, the Opinion of AG Szpunar in Case C-174/15 *Vereniging Openbare Bibliotheken v Stichting Leenrecht* (VOB) [2016] EU:C:2016:856, para 61.
- 93 Commission, Communication Towards a single EU VAT area – Time to decide’, COM(2016) 148 final, 12.
- 94 Commission, ‘Proposal for a Council Directive amending Directive 2006/112/EC, as regards rates of value added tax applied to books, newspapers and periodicals’. COM/2016/0758 final.
- 95 Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, OJ L304/64 (Consumer Rights Directive).
- 96 Ibid Recital 19: “If digital content is supplied on a tangible medium, such as a CD or a DVD, it should be considered as goods within the meaning of this Directive. Similarly to contracts for the supply of water, gas or electricity, where they are not put up for sale in a limited volume or set quantity, or of district heating, contracts for digital content which is not supplied on a tangible medium should be classified, for the purpose of this Directive, neither as sales contracts nor as service contracts.”

35 Against this fragmented background, the introduction of the good-service dichotomy to define the scope of exhaustion (Recital 29 InfoSoc) could only trigger further ambiguities. As noted by AG Bot in his Opinion in *UsedSoft*, following Recital 18 E-Commerce would, *inter alia*, mean to exclude the principle in the case of an online purchase of a CD-ROM incorporating the copy of a software, while “the distinction as to whether the sale takes place remotely or otherwise is irrelevant for the purposes of applying that rule”.⁹⁷ In fact, the reference to services to define the scope of Article 4(2) InfoSoc clashes with the different purposes of the principle of exhaustion and the good-service dichotomy,⁹⁸ where what matters is the transfer of ownership over the copy, and not its tangible nature or material delivery.⁹⁹ To solve the standstill, some scholars have advocated for the judicial formulation of new *ad hoc* “meta-criteria” to qualify as goods or services works offered online,¹⁰⁰ while other voices believe that Recital 29 InfoSoc is outdated compared to the evolution of copyright markets, but exclude that the judiciary alone can tackle the issue, and deem a legislative amendment necessary.¹⁰¹

36 Nothing prevents, however, an immediate reordering that passes through a contextual and teleological interpretation of the good-service dichotomy, based on the grounds of a distinction between communication to the public and distribution rights, and on the consideration of the objectives of exhaustion.

37 As to the first point, the different acts covered by the two rights suggest linking goods to Article 4 Infosoc and services to Article 3 InfoSoc, pairing the two dichotomies in a more consistent contextual framework. As to the second point, the reference goes to the goals of exhaustion as defined in *UsedSoft*, where the Court stated that the principle has the fundamental role of avoiding the partitioning of markets, while limiting the restrictions to the right of distribution to “what is necessary to safeguard the specific subject-matter of the intellectual property concerned”.¹⁰² On this basis, it allowed digital

97 Opinion of AG Bot in *UsedSoft* (n 2) para 76.

98 See, eg, Andreas Wiebe, ‘The Principle of Exhaustion in European Copyright Law and the Distinction between Digital Goods and Digital Services [2009] GRUR International 115.

99 In this sense Spedicato (n 7) 48-49. For the US, similarly, Tai (n 71) 209, referring to the text of two official reports (US Department of Commerce, Report to Congress (n 56), and US Copyright Office, A Report of the Register of Copyrights Pursuant to §104 of the DMCA, 18 August 2001), which admitted digital exhaustion in case of lawfully downloaded copies.

100 Dreier (n 85) 138.

101 Mezei (n 7) para 195.

102 *UsedSoft* (n 2) para 62, referring to Case C-200/96 *Metronome*

exhaustion, arguing that a limitation of the doctrine to tangible copies would be unjustified, since it would allow rightholders to control the resale of copies sold online and demand an additional remuneration after each transaction, even when the first sale has already granted them an appropriate return – something going “beyond what is necessary to safeguard the specific subject-matter” of copyright.¹⁰³ This teleological approach, recalling principles used in the early case law on Community exhaustion, aimed at (i) overcoming the distortions that could derive from treating similar transactions differently on the basis of the nature of the support and the delivery method, and (ii) avoiding that the adoption of criteria taken from outside copyright law, and thus inspired by other rationales and goals, undermine the role and effects of the principle in the copyright market. With a commercialization of copyright-protected works moving almost completely online and on digital formats, in fact, the use of tangibility as a watershed to distinguish between goods and services would ultimately expunge exhaustion from the system.¹⁰⁴ These arguments may be generalized, possibly with even more ground, to cover all the works protected by copyright.

- 38 Against this background, it should not be impossible to overcome the classificatory obstacles commonly opposed to digital exhaustion, flanking the literal interpretation of secondary sources with a broader contextual and teleological analysis. The inevitable starting point of this operation is the path that led to the creation of Community exhaustion in the 1970s, drawing rationales and roles on the principle.

C. From material to digital exhaustion in the CJEU’s case law

I. The doctrine of Community exhaustion: fundamental freedoms and the essential function and specific subject matter of copyright

- 39 Exhaustion was one of the first Trojan horses through which the CJEU launched its intervention on national copyright laws,¹⁰⁵ circumventing the obstacles set by Article 295 EC (now Article 345 TFEU), which excludes the interference of the Treaty with the national systems of property ownership,¹⁰⁶ and by Article 36 EC (now Article 36 TFEU), which admits restrictions to the freedom of circulation of goods when necessary to protect industrial and commercial property.¹⁰⁷ To this end, the Court ruled that the derogation introduced by Article 36 EC referred to the existence of the rights, *id est* their creation by national legislators, but not to their exercise, which could in no case violate the provisions of the Treaty.¹⁰⁸ This distinction, also known as the existence-exercise dichotomy, made its debut in the late 1970s with a decision – *Deutsche Grammophon* – that is also remembered as the origin of the doctrine of Community exhaustion.
- 40 In *Deutsche Grammophon*, the rightholder used a licensing scheme to segment the internal market through a net of exclusive national distributors of sound recordings. The scheme could work thanks to the territorial nature of copyright, and to the fact that most of the national copyright statutes limited the operation of exhaustion to first sales that took

105 On the development of the doctrine see Jens Schovsbo, ‘The Exhaustion of Rights and Common Principles of European Intellectual Property Law’ in Ansgar Ohly (ed), *Common Principles of European Intellectual Property Law* (Mohr Siebeck 2012) 174 ff.

106 But see, contra, Bram Akkermans and Eveline Ramaekers, ‘Article 345 TFEU (ex. 295 EC), Its Meanings and Interpretations’ [2010] 16(3) *European Law Journal* 292.

107 For a general comment on the provision, see David T. Keeling, *Intellectual Property Rights in EU Law. Vol I - Free Movement and Competition Law* (OUP 2004) 54 ff; Peter J. Oliver, *Free Movements of Goods in the European Community* (Hart 2004) 315 ff.

108 See, e.g., Fennelly (n 9); Benedetta Ubertaini, ‘The Principle of Free Movement of Goods: Community Exhaustion and Parallel Imports’ in Paul Torremans and Irini Stamatoudi (eds), *EU Copyright Law - A Commentary* (Edward Elgar 2014) 38-51; Alain Strowel and Hee-Eun Kim, ‘The Balancing Impact of General EU law on European Intellectual Property Jurisprudence’ in Justine Pila and Ansgar Ohly, *The Europeanization of Intellectual Property Law: Towards a European Legal Methodology* (OUP 2012) 121 ff.

Musik GmbH v. Music Point Hokamp GmbH [1998] ECR I-01978, Case C61/97 *FDV* [1998] ECR I5171, para 13 and *FAPL* (n 63) para 106.

103 *UsedSoft* (n 2) para 63; *FAPL* (n 63) paras 105-106.

104 In this sense explicitly Dreier (n 85) 139, defining the distinction between goods and services as no longer technology-neutral.

place within their national boundaries. Arguing that Article 36 EC admitted derogations only if justified “for the purpose of safeguarding rights which constitute the specific subject-matter” of industrial and commercial property,¹⁰⁹ the Court stated that allowing rightholders to prevent the marketing of a product in a Member State simply because the first act of distribution did not take place in its territory was “repugnant to the essential purpose of the Treaty, which is to unite national markets into a single market”.¹¹⁰ Since the balance between fundamental freedoms and copyright enforcement was too heavily tilted towards the latter, and beyond what was necessary to protect the subject matter of copyright, the principle of national exhaustion was declared not applicable, and its geographical scope extended to become Community-wide.¹¹¹ Similar arguments were used in *Musik-Vertrieb Membran*¹¹² against the practice of GEMA (the then-monopolistic German collecting society) to charge a levy on imported sound recordings originally put in circulation by rightholders, which was deemed to result in an unjustified partitioning of the internal market that frustrated the competition between national systems,¹¹³ made again possible by national exhaustion.¹¹⁴

41 In both cases, Article 36 EC and the notion of specific subject matter of copyright acted as a balancing tool between copyright and conflicting rights, freedoms, and policy goals. Later on, the same principles were also followed to draw the boundaries of Community exhaustion. In the early 1980s, in *Coditel I*¹¹⁵ and *II*,¹¹⁶ the Court excluded the application of the principle in case of a provision of services. In both instances a Belgian company, exclusive assignee for Belgium of the performing right on the movie *Le Boucher*, sued Coditel for the rebroadcasting of the movie in Belgium, taken from the signal of a German television channel, which was the exclusive assignee of the broadcasting right for Germany. Following its precedents, the CJEU stated that the freedom to provide services could have prevailed only if copyright could still perform its essential function, which is that of ensuring an appropriate remuneration for rightholders.¹¹⁷ This

was not the case for cinematographic works, which differed from other literary and artistic works, as their main and most profitable form of exploitation laid in their repeated performances, and not in the sale of tangible copies.¹¹⁸ In this sense, the power to control (and profit from) each performance or broadcasting was judged as “part of the essential function of copyright” in such type of works,¹¹⁹ the protection of which required to exclude the application of exhaustion, and justified under Article 36 EC a compression of fundamental freedoms unless the rightholder’s conduct constituted “a means of arbitrary discrimination or a disguised restriction on trade between Member States”.¹²⁰ However, rather than radically expunging the principle, the CJEU specified that it was for national courts to establish whether the exercise of copyright created artificial and unjustifiable barriers to the industry, charged fees that exceeded a fair return on investment, or excessively restricted or distorted competition.¹²¹ In these cases, in fact, the rightholder’s conduct would have departed from the functions of copyright, justifying the disapplication of Article 36 EC and – one would conclude – the return in force of exhaustion also in the case of services.¹²²

42 The Court reached similar conclusions in the field of rental right before its harmonization in 1992.¹²³ In *Warner Bros v Christiansen*¹²⁴ the plaintiff wanted to block the lawful import and subsequent rental in Denmark, where the rental right was included in the copyright bundle, of a videocassette legally bought in the United Kingdom, where the rental right was not regulated. The question was whether the doctrine of Community exhaustion, which terminated the distribution right after the first sale in a country not recognizing an independent rental right, could have had the effect of preventing the rightholder to exercise the latter in another Member State that recognized it. The CJEU answered to the negative, arguing that the legislative recognition of the rental right was justified, under Article 36 EC, by the need to make sure that copyright performs its essential function, which was to guarantee to rightholders “a remuneration which reflects the number of occasions on which the video-cassettes

109 *Deutsche Grammophon* (n 9) para 11.

110 *Ibid* paras 12-13.

111 *Ibid*.

112 Joined Cases C-55/80 and C-57/80 *Musik-Vertrieb Membran and K-tel International v GEMA* [1981] ECR I-0147.

113 *Ibid* para 18.

114 *Ibid* para 26.

115 Case C-62/79 *SA Compagnie générale pour la diffusion de la télévision, Coditel, and others v Ciné Vog Films and others* (Coditel I) [1980] ECR I-0881.

116 Case C-262/81 *Coditel v CinéVog Films II* (Coditel II) [1982] ECR I-3381.

117 *Coditel I* (n 115) para 11.

118 *Ibid* para 12.

119 *Ibid* para 14.

120 Unless the rightholder’s conduct “constitutes a means of arbitrary discrimination or a disguised restriction on trade between Member States”. *Ibid* para 15.

121 *Coditel II* (n 116) para 19.

122 For a broader comment on this strain of cases, see Gaubiac (n 91); Frank Gotzen, ‘Distribution and exhaustion in the EC’ [1990] 8 EIPR 301; Keeling (n 107) 81 ff; Fennelly (n 9) 32 ff.; David Gladwell, ‘The Exhaustion of Intellectual Property Rights’ [1986] 12 EIPR 368.

123 With the Rental Directive I (n 41).

124 Case C-158/86 *Warner Brothers Inc. and Metronome Video ApS v Christiansen* [1988] ECR I-02629, paras 14-15.

are actually hired out and which secures for them a satisfactory share of the rental market”.¹²⁵ Excluding its exhaustion did not contradict the principle as applied to the right of distribution, “the purpose and scope of which are different”,¹²⁶ since a harmonized rental right is necessary to foster innovation, avoid distortion in competition and obstacles to the functioning of the internal market,¹²⁷ and has a key role in guaranteeing “that authors and performers can receive appropriate income and amortise the especially high and risky investments required particularly for the production of phonograms and films”.¹²⁸ As in *Coditel I* and *II*, the implicit underlying assumptions were, one the one hand, that service-like rights cannot be subject to exhaustion because their exploitation require multiple acts to grant an appropriate remuneration, and a more pervasive control to prevent easy infringements; on the other hand, that exhaustion makes economic sense and is needed for the copyright balance predominantly in sale-like settings.¹²⁹

- 43 Out of the different nuances and arguments advanced by the CJEU in the construction of Community exhaustion, subsequent legislative texts and judicial interpretations inherited only the strict material-only construction and the exclusion of services from the scope of the principle. Particularly the second point represented a problematic and probably not needed addition compared to the WCT, which made EU secondary sources even more rigid *vis-à-vis* technological changes and the evolution of digital business models.¹³⁰ Dismissing the teleological criteria of the specific subject-matter and essential function of copyright as balancing tools to adapt the contours of the principle has inevitably triggered its stiffening, and contributed to the loss of systemic consistency shown by the CJEU’s decisions that have since then ruled directly or indirectly upon digital exhaustion.

II. Direct and indirect rulings on digital exhaustion: a fragmented picture

1. *UsedSoft* (C-128/11)

- 44 To date, the CJEU has decided on the issue of digital exhaustion only in *UsedSoft*, whose scope is limited to software products. *UsedSoft* has been one of the most contested copyright decisions in the history of the Court, featuring several layers of arguments and the use of a wide array of interpretative methods. The ruling introduced a functional definition of the notion of sale, the distinction between communication to the public and distribution, the consideration of the goals of exhaustion to overcome the good-service dichotomy and, not least, the functional/economic equivalence of tangible and intangible copies, which the principle of equal treatment requires to be treated similarly also *vis-à-vis* the principle of exhaustion.¹³¹ Particularly the last point allowed overcoming the limitation of the notion of “copy”, “original” and “object” to tangible copies of the work, enshrined in the WCT, its Agreed Statements and the InfoSoc Directive with regard to the distribution right. The strong teleological considerations, however, were and are weakened by the apologetic recourse to the *lex specialis* nature of the Software Directive II, which was used to justify the disregard of the doctrine according to which concepts used in EU secondary law must have in principle the same meaning.¹³²
- 45 Despite the critiques, the omissions and some weak passages, *UsedSoft* had the merit of preserving legal certainty while ensuring that functions and aims of the discipline could still be realized even in changed circumstances. The reference to the specific subject matter of copyright as metrics to set the boundaries of exhaustion channeled in the purpose/function of copyright as a variable determining its interplay with conflicting rights, freedoms and policy goals. This linked past and current CJEU’s case law, paving the way for a coherent evolution of the system. Unfortunately, subsequent decisions have completely lost this path.

125 Ibid para 15.

126 Ibid para 20.

127 Ibid para 22.

128 Ibid.

129 See, similarly, *Mezei* (n 7) paras 26-28.

130 Ibid para 43.

131 *UsedSoft* (n 2) para 61.

132 Ibid para 60. The Court referred to the different language used in the two texts, where Article 4(2) Software II refers to the sale of a copy of the program, making no distinction as to its tangible or intangible form (para 55), and Article 1(2) Software II extends the scope of the Directive “to the expression in any form of a computer program”, with a clear assimilation of tangible and intangible copies (paras 57-58).

46 After *UsedSoft*, the Court has never had the opportunity to intervene directly on the issue of digital exhaustion under the InfoSoc Directive, mostly due to the scarce engagement of national courts, and their resolute denial of the principle in the few decisions on the matter.¹³³ Side references appear in those sporadic CJEU's rulings which attempt to limit the negative effects of the rigid approach to the tangible-intangible dichotomy in other areas of copyright law. These fragmented responses depict an inconsistent framework, further complicated by the reactions to *UsedSoft* which, albeit limited by the *lex specialis* argument, has nevertheless challenged the validity of the distinction between tangible and intangible copies as a criterion defining the borders of exhaustion, and between InfoSoc exclusive rights.

2. Art & Allposters (C-419/13)

47 The first intervention, *Art & Allposters*,¹³⁴ is commonly read as the final “nay” against digital exhaustion,¹³⁵ and this despite the case involves tangible supports, for it discusses the legitimacy of the transfer of images of protected works from posters, lawfully acquired and on which the distribution right was thus exhausted, to canvas, commercialized without the rightholder's authorization. The matter could have been more properly analyzed through the lens of the adaptation right, not harmonized by the InfoSoc Directive. Yet, the Court decided to qualify the commercialization of posters and canvas under the right of distribution, since both contained an image of the protected work.¹³⁶ The question was, therefore, whether or not the subsequent alteration of the medium excluded the original operation of exhaustion.

48 At stake there was the interpretation of the meaning of “that object” as an entity, the sale of which triggers the effects of Article 4(2) InfoSoc. The CJEU offered a textual and contextual reading of the notion, concluding that Recital 28 InfoSoc, Article 6 WCT and the Agreed Statements to the WCT¹³⁷ concurrently showed the intention to “give authors control over the initial marketing (...) of each *tangible object* incorporating their intellectual creation”.¹³⁸ The reference to tangibility was more of a *dictum* than an integral part of the main argumentation, and digital

exhaustion was not mentioned a single time in the text of the decision. Yet, several commentators seem to agree on the fact that the Court has already taken a definite stance on the matter,¹³⁹ which eventually will be followed in the *Tom Kabinet* case.

49 In *Allposters* the CJEU ruled that the alteration of the medium created a new object, constituting a new unlawful reproduction under Article 2 InfoSoc, even if the first medium ceased to exist.¹⁴⁰ The conclusion was mostly based on a strict reading of EU and international texts, only complemented by the teleological consideration of the InfoSoc's goal of establishing a high level of protection of rightholders, “allowing them to obtain an appropriate reward for the use of their work”,¹⁴¹ where appropriate means “reasonable in relation to the economic value of the (...) work”,¹⁴² Hinting at the criteria used in the past to draw the borders of exhaustion, the Court argued that applying the principle on new supports, which open new potential markets, would deprive rightholders of the possibility of requiring an appropriate reward from the new forms of commercial exploitation of their works.¹⁴³ The axiological reference is, however, only secondary, not elaborated, and tilted towards the “high level of protection” for copyright owners.¹⁴⁴ These features confirm its role of a mere supporting argument, rather than of an interpretative tool guiding the adaptation of the principle when the changed economic and technological variables endanger its effectiveness.

3. Ranks (C-166/15)

50 There is no trace of teleological reasoning, instead, in *Ranks*,¹⁴⁵ which circumscribes the scope and effects of *UsedSoft* by excluding the applicability of exhaustion to backup and other non-original copies, even if the original support was destroyed or damaged. The Opinion of AG Saugmandsgaard Øe tried to bridge the InfoSoc and Software I and II Directives by offering a common reading of the notion of “that copy”,¹⁴⁶ overcoming the clustered separation between *lex generalis* and *leges speciales*. Similarly, the Opinion linked *UsedSoft* and *Allposters* in a unitary framework, explaining that while traditional tangible copies do not require adaptive

133 As maintained and evidenced by Galič (Savič) (n 66) 415-416.

134 Case C-419/13 *Art & Allposters International BV v Stichting Pictoright* [2015] EU:C:2015:27.

135 See, eg, Rosati (n 22), and Maša Galič (Savič), ‘The CJEU Allposters Case: Beginning of the End of Digital Exhaustion?’, [2015] 37 EIPR 389.

136 *Allposters* (n 134) paras 26-27.

137 *Ibid* paras 34-35 and 38-39.

138 *Ibid* para 3.7 (emphasis added).

139 See particularly Rosati (n 22) 680.

140 *Allposters* (n 134), para 43.

141 *Ibid* para 47.

142 *Ibid* para 48, as also in *FAPL* (n 63) paras 107-109.

143 *Ibid*.

144 *Ibid* para 47.

145 *Ranks* (n 31).

146 Opinion of AG Saugmandsgaard Øe in *Ranks* (n 31) paras 40-42.

interpretations of the legislative text in order to preserve the effectiveness of exhaustion, intangible copies demand a more thorough, teleologically-oriented approach to existing norms.¹⁴⁷

- 51 Unfortunately, the final judgment opted for a much more concise argumentation, putting little effort in contextualizing the decision. The CJEU confirmed the main tenets of *UsedSoft*, stating that the lawful acquirer of a tangible copy of a software, who no longer possesses the original medium because it got destroyed, damaged or lost, cannot be deprived of the possibility to resell that copy and be discriminated against the lawful acquirer of an intangible copy of the program, since this would render exhaustion ineffective. However, the Court added that the effects of the principle cannot broaden the scope of the backup exception (Article 5(2) Software I) and allow its second-hand commercialization in case of unavailability of the original, since the provision authorizes only reproductions “made and used to meet the sole needs of the person having the right to use that program”.¹⁴⁸ This is contrast to Article 5(1), which authorizes the reproduction by any lawful acquirer “in accordance with its intended purpose”.¹⁴⁹

4. VOB (C-174/15)

- 52 Against this background, when in *VOB*¹⁵⁰ the CJEU was asked whether the public lending exception (Article 6 Rental II¹⁵¹) could also be applied to e-books, one could have expected that the reference to “originals” and “copies” made by Article 3 Rental II to define the scope of the rental and lending rights would have led the Court to answer negatively. Instead, a marked teleological approach and the willingness to maintain the effectiveness of the exception for cultural promotion¹⁵² triggered a completely different interpretation. Arguing that the Agreed Statement to the WCT limits the tangible-only reading of “original” and “copies” to the sole rights of distribution and rental, and that the WCT does not regulate lending, the CJEU split rental and lending rights – leveraging in particular on the use of the plural “rights”¹⁵³ – assumed that the EU legislator did not necessarily want to regulate the two entitlements

similarly, and used teleological arguments to apply the public lending exception to e-books. With the same niche approach, and in order to rebut the objection that the explanatory memorandum on the proposal of the Rental Directive I of 1992 clearly excluded from its scope the making available of films via electronic transmission,¹⁵⁴ the Court went as far as to distinguish e-books from movies commercialized online. Needless to say, the Rental Directive II was also defined *lex specialis* to circumscribe the effects of the decision,¹⁵⁵ and a *dictum* specified the need to read in any case the concept of “object” and “copies” as referred to tangible items, in light of the Agreed Statement.¹⁵⁶

- 53 Two elements are of key relevance, though. First, the CJEU underlined that its conclusions were motivated by the objectives of the Directive and by its Recital 4, which states that copyright must adapt to new economic developments such as new forms of exploitation.¹⁵⁷ The statement was translated into an explicit request to privilege the teleological method of interpretation which – AG Szpunar noted – is present also in the InfoSoc Directive (Recitals 2, 5 and 8).¹⁵⁸ Second, the Court ruled that EU law does not preclude a Member State from making the application of the public lending exception subject to the condition that the distribution right on the copy has been exhausted under Article 4(2) InfoSoc.¹⁵⁹ The conclusion was justified by the fact that the requirement is more protective towards authors, since the exception would otherwise allow the public lending of materials not necessarily put in circulation with the rightholder’s consent.¹⁶⁰ Most importantly, however, the CJEU extended the argument to the lending of digital copies, but without spending a word on the matter of digital exhaustion.¹⁶¹ Paradoxically, Member States thus seem authorized to introduce digital exhaustion as a requirement for the application of specific rules, but not to provide for a general digital exhaustion principle under Article 4 InfoSoc.

147 Ibid paras 43-45.

148 *Ranks* (n 31) para 43.

149 Ibid para 50.

150 *VOB* (n 92).

151 Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property (Rental Directive II), OJ L376/28.

152 *VOB* (n 92) paras 50-51.

153 Ibid para 27.

154 Ibid paras 41 and 42.

155 Ibid para 56, with reference to Article 1(2)(b) InfoSoc.

156 Ibid paras 33-34.

157 Ibid para 45.

158 AG Szpunar Opinion in *VOB* (n 92) para 29, who deems “imperative to give legal acts an interpretation which takes into account developments in technology, markets and behaviour and not to fix such acts in the past by adopting too rigid an interpretation”.

159 *VOB* (n 92) para 60.

160 Ibid paras 61-63.

161 Ibid para 64.

- 54 Albeit more progressive, the decision in *VOB* missed the opportunity to offer systematic guidance.¹⁶² As in *UsedSoft*, the CJEU escaped the strictness of the InfoSoc Directive and the Agreed Statement on the WCT by declaring the Rental Directive II *lex specialis*, and the lending right as outside the scope of the Treaty. Compared to the much more detailed and comprehensive AG's Opinion, there is no attempt to connect the ruling with previous decisions, nor any willingness to offer a more holistic answer to the debate on the functional equivalence of tangible and intangible copies.
- 55 The result of the narrowly-focused approach to the problems raised by the strict literal interpretation of the InfoSoc Directive is a patchwork of *ad hoc* solutions, carving out exceptions to the general rule and lacking any systematic coherence and consistency. This would not be the first time that the unclear relationship between the InfoSoc and other subject-specific directives creates interpretative problems of the CJEU.¹⁶³ Yet, while the Court usually aims at reaching horizontal uniformity in the terminology and principles used in a given area, here its case law is characterized by a deliberately extreme fragmentation, justified through the redundant recourse to the "lex specialis" argument to erode the scope of the InfoSoc Directive and the WCT. This approach has not provided any clear principle to guide future decisions, to the detriment of legal certainty, nor has it followed consistent economic or value-based considerations that could make its output foreseeable and internally coherent. Many of the most compelling interpretative questions have remained unsolved, or touched upon with unrelated, concise *dicta*.
- 56 Should this not be enough, the degree of systematic confusion is possibly increased by the use of exhaustion-like arguments in other copyright matters.

162 For a more detailed comment, see Caterina Sganga, 'Public e-Lending and the CJEU: Chronicle of a Missed Revolution Foretold' [2016] 1(1) *Opinio Juris* 1, n.2. For an interpretation of the decision as rejecting digital exhaustion under Article 4 InfoSoc, see ALAI (n 73) 6.

163 The difficulties faced by the CJEU in drawing the boundaries between copyright-related directives are noted and commented on by Matthias Leistner, 'Europe's copyright law decade: Recent case law of the European Court of Justice and policy perspectives' [2014] 51(2) *CMLR* 559, 595; Mireille van Eechoud, 'Along the Road to Uniformity – Diverse Readings of the Court of Justice Judgments on Copyright Work' [2012] 1 *JIPITEC* 83, paras 90 ff. (with reference to the autonomous interpretation). On the teleological rather than contextual interpretative approach adopted by the CJEU, particularly as opposed to Advocate Generals, see Marcella Favale, Martin Kretschmer, Paul C Torremans, 'Is There a EU Copyright Jurisprudence? An Empirical Analysis of the Workings on the European Court of Justice' [2016] 79(1) *Modern Law Review* 31, at 59–61.

III. Exhaustion-like principles outside the borders of the distribution right?

- 57 Paradoxically if compared to the strong aversion towards digital exhaustion, the CJEU's case law shows evidence of exhaustion-like principles in different areas, with the chief example being the construction of the boundaries of exclusive rights. Commentators have mostly highlighted the concepts and arguments used by the Court in defining the scope of the right of communication to the public under Article 3 InfoSoc, particularly in the digital environment.¹⁶⁴ From *Svensson* on,¹⁶⁵ the CJEU has consistently held that the rightholder's authorization is needed every time the communication is directed to a "new public", which is a public that the rightholder has not targeted or envisioned when she first released the work, or is it conveyed through a "new technical mean" compared to the first authorized transmission.¹⁶⁶ This implies that hyperlinking to or framing a website that contains publicly and lawfully available materials will not constitute an infringement,¹⁶⁷ while Article 3 InfoSoc will be violated if the link gives access to restricted content,¹⁶⁸ or if a freely accessible cable broadcasted program is streamed online without the rightholder's authorization.¹⁶⁹

164 See, eg, Mezei (n 7), para 159, and Benabou (n 21), 351–378.

165 Case C-160/15 *Nils Svensson and Others v Retriever Sverige AB* [2014] EU:C:2014:76. The case law dealing with the notion of communication to the public in the online environment built on the criteria already developed by the Court in landmark decisions such as Case C-306/05 *Sociedad General de Autores y Editores de España (SGAE) v Rafael Hoteles SA* [2006] ECR I-11519; Case C-135/10 *Società Consortile Fonografici (SCF) v Marco Del Corso* [2012] EU:C:2012:140; Case C-607/11 *ITV Broadcasting Ltd and Others v TVCatchUp Ltd* [2013] EU:C:2013:147, and Case C-351/12 *OSA – Ochraný svaz autorský pro práva k dílům hudebním os. v Léčebné lázně Mariánské Lázně as* [2014] EU:C:2014:110.

166 After *Svensson* the various criteria, defined interdependent and complementary but not cumulative, have been clarified and reiterated by, *inter alia*, Case C-466/12 *GS Media BV v Sanoma Media Netherlands BV and Others* [2016] EU:C:2016:644; Case C-117/15 *Reha Training Gesellschaft für Sport- und Unfallrehabilitation mbH v Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte eV (GEMA)* [2016] EU:C:2016:379; Case C-527/15 *Stitching Brein v Jack Frederic Willems (Filmspeler)* [2017] EU:C:2017:300.

167 As in *Svensson* (n 165) para 24.

168 As in *GS Media* (n 166) esp. paras 43 and 49.

169 As in *ITV Broadcasting* (n 165) para 40, and later in C-265/16 *VCAST Limited v RTI SpA* [2017] EU:C:2017:913.

- 58 The criteria, broadly criticized for their subjective nature and weak grounding in the legislative text,¹⁷⁰ take the first exploitation of the work as a condition upon which any subsequent communication, if identical in the technical means used or the public to which it is directed, ceases to be subject to the rightholder's control. It is not difficult to note the great similarity between this judge-made doctrine and the principle of exhaustion of the distribution right, both in their mechanism and in the rationale justifying their operation.¹⁷¹ Setting the boundaries of Article 3 through the notions of new public and new technical means curtails rightholders' exclusivity to the first voluntary making available of their work, under the presumption that this act was based on a reasoned selection of the markets to exploit, and was enough for them to obtain an appropriate remuneration. In fact, the approach seems to be inspired by the same distinction between exploited and yet-to-be-exploited markets, based on the reward theory and the notion of appropriate remuneration, used to set the scope of Community exhaustion in the past. Once the remuneration goals are met, other rights and freedoms prevail in the copyright balance, for the control over the work is no longer deemed necessary to ensure a high level of protection to rightholders, and for copyright to achieve its functions.¹⁷²
- 59 Significantly, these precedents show more stability and consistency than the decisions which have (collaterally) intervened on the question of digital exhaustion, where the CJEU does not seem to be similarly concerned by the effects that its rulings might have on the economic and technical equilibria of EU copyright law. There are, in fact, a number of reasons, both legal and economic, why EU copyright law would need a horizontal principle of digital exhaustion. The next pages will briefly highlight some of them, before suggesting how to tackle the legislative silence on the matter.

170 Chiefly European Copyright Society, 'Opinion on the Reference to the CJEU in Case C-466/12 Svensson', <<https://europeancopyrightsocietydotorg.files.wordpress.com/2015/12/european-copyright-society-opinion-on-svenssonfirst-signatoriespaginatedv31.pdf>>, accessed 13 September 2018; P Bernt Hugenholtz and Sam Van Velze, 'Communication to a New Public? Three Reasons Why EU Copyright Law Can Do without a "New Public"' [2016] 47(7) IIC 797; Jane C. Ginsburg: 'Hyperlinking and "making available"' [2014] 3 EIPR 147; Pekka Savola, 'Blocking Injunctions and Website Operators' Liability for Copyright Infringement for User-Generated Links' [2014] 5 EIPR 279.

171 Similarly Benabou (n 21), at 351-378.

172 Benabou (ibid 366) argues that the same arguments feature, in different forms, the functional interpretation of the scope of exceptions in *FAPL* (n 63), and the case law that followed, from Case C-201/13 *Johan Deckmyn and Vrijheidsfonds VZW v Helena Vandersteen and Others* [2014] EU:C:2014:2132 to Case C-117/13 *Technische Universität Darmstadt v Eugen Ulmer KG* [2014] EU:C:2014:2196, and *VOB* (n 92).

D. Why EU copyright law needs digital exhaustion

I. Legal reasons: from systematic consistency to teleological coherence

- 60 With a decision in favor of digital exhaustion, the Court would again be able to ensure consistency in the systematic reading of the various copyright-related directives, and coherence in their teleological interpretation.
- 61 On the side of systematic consistency, the CJEU could tackle a number of unsolved short-circuits that have emerged in the construction of EU copyright law. To name but the most important ones, the reference goes to the negative effects of the *lex specialis* argument, the uneven definition of the boundaries of Article 4 InfoSoc, the blurred borders between distribution and communication to the public, the problematic extension of the autonomous concept of sale, and the functional interpretation of the sale-license dichotomy.

1. Systematic consistency: (i) tackling the negative effects of the *leges speciales* patchwork

- 62 To be able to read similar notions ("distribution" and "copy") in a different manner and exclude the application of Article 3 InfoSoc to the download of a software copy, the Court was forced to define the Software Directive II as a *lex specialis*, inspired by different intentions and goals.¹⁷³ The theory has been vastly criticized for valid systematic observations. The WCT, in fact, does not provide different rules for different subject matters, but only requires extending copyright protection to software and databases.¹⁷⁴ One could argue that the EU legislator decided to make a step forward compared to the Treaty, and to regulate the sector differently in light of the specific features of computer programs and their market. However, this assumption does not have a real basis, and may attribute to the EU legislator intentions it never had.
- 63 In fact, the Software Directive I, enacted five years before the adoption of the WCT, contained exactly the same language as the 2009 Software Directive II, which introduced very few amendments to the 1991 text, and none of them were dictated by

173 As in *UsedSoft* (n 2) para 51.

174 See, e.g., *Spedicato* (n 7) 49-50, and *Mezei* (n 7) para 179.

the adhesion of the EU to the WCT. In addition, neither the preamble of the Software Directive II, nor its preparatory works make any reference to the intention to depart from the InfoSoc Directive. The *lex specialis* argument is grounded on Article 1 (“this Directive shall leave intact and shall in no way affect existing Community provisions relating to (...)”) and Recital 20 InfoSoc, which declares that the InfoSoc text should be without prejudice to the provisions of previous copyright-related directives. Still, the same Recital also states that the InfoSoc Directive is based on principles and rules already laid down by its predecessors, and “it develops those principles and rules and places them in the context of the information society”. This last statement may well suggest the intention of the EU legislator to use InfoSoc as an updated general framework for areas covered by previous acts, unless otherwise specified. Such a reading would explain why the Software Directive II does not contain the right of communication to the public, nor the making available right – an omission that would otherwise constitute patent violation of the WCT, unless the distribution right under Article 4 Software II is interpreted as covering also transmissions, retransmissions and on-demand access to the program.¹⁷⁵ *UsedSoft* is everything but clear on this point, leaving the definition of the spaces of cogency of the InfoSoc Directive and the consequence of the label “*lex generalis*” open to interpretation.

- 64 Until now the Court has carefully avoided these interpretative problems, trying to curtail the effects of *UsedSoft* (*Nintendo*,¹⁷⁶ *Ranks*), or worsened them, using the *lex specialis* argument in other areas (*VOB*), again with the aim of circumventing the tangible-only reading of “copy” imposed by the WCT and the InfoSoc Directive. Now that it is called to decide on the admissibility of a general principle of exhaustion under the InfoSoc Directive, the Court may take the opportunity to reorder its fragmented case law, and to clarify the implications of the *lex generalis-lex specialis* dichotomy, with particular regard to the role of the InfoSoc Directive’s principles, rules, and definitions in areas covered by other subject-specific directives. In this context, a teleological decision in favor of digital exhaustion, on the basis of the policy arguments advanced in *UsedSoft*, would offer a more adaptive and reasonable reading of the tangibility requirement, reducing the need for Pindaric recourses to the *lex generalis-lex specialis* alibi, and their negative effect of the overall systematic clarity of the CJEU’s case law.

2. Systematic consistency: (ii) providing a single autonomous notion of sale across EU copyright law

- 65 Another controversial element is given by the introduction of an autonomous EU notion of “sale” in *UsedSoft*, qualified as the transfer of ownership, upon a payment, of a tangible or intangible object.¹⁷⁷ The definition is in line with the common core of Member States’ laws and doctrinal restatements such as the DCFR,¹⁷⁸ but it clashes with the notion of sale that would derive from Recital 29 InfoSoc if the distribution right is limited to tangible objects. Should this reading be maintained, the peculiar exegetic result would be the contemporary presence of two autonomous notions of sale within a single area of EU law. The same would happen to the functional re-labelling of licenses as sales in presence of specific characteristics, made possible under the Software Directive II by *UsedSoft*, but destined to clash with the barriers posed by Recitals 28 and 29 InfoSoc. While it is true that the Software Directives may appear as opening the notion of distribution to any channel of commercialization, whereas the InfoSoc Directive seems to imagine a bipolar world where tangible distribution via sale belongs to the material world, while intangible communication to the public/making available via license dominates the online environment, it should also be considered that such a difference may depend on the fact that it was clear already in 1991 that software programs were dematerialized creations which could be distributed in different but functionally equivalent forms and manners, while in 2001 the same was not fully perceived for more traditional works.¹⁷⁹ Realizing this hiatus and applying the same principle of functional equivalence in the context of the InfoSoc Directive in order to allow, *inter alia*, digital exhaustion would make sure that similar market evolutions are treated analogously, and that the definitions of each directive remain updated, and its goals effectively pursued despite the change.

3. Systematic consistency: (iii) uniformity in the method of interpretation used for Article 4(1) and 4(2) InfoSoc

- 66 Further systematic inconsistencies have arisen from the bipolar attitude of the CJEU towards Article 4 InfoSoc, where the rigidity shown with the literal

175 But contra Linklater (n 67) para 27.

176 Case C-355/12 *Nintendo Co. Ltd, Nintendo of America Inc., Nintendo of Europe GmbH v PC Box Srl and 9Net Srl* [2014] EU:C:2014:25.

177 *UsedSoft* (n 2) para 42.

178 See Christian Von Bar, Eric Clive, Hans Schulte-Nolte et al. (eds), *Principles, Definitions and Model Rules of European Private Law – Draft Common Frame of Reference, Outline Edition* (Sellier 2009), 278, IV. A. – 1:202: Contract for sale.

179 Similarly, Mezei (n 7) paras 142 ff.

interpretation of the tangibility requirement contrasts with the flexible, teleological reading of the activities covered by the provision. Precedents like *Dimensione Direct Sales*¹⁸⁰ have pushed the borders of Article 4 much beyond the mere sale or other transfer of ownership of the protected work, reaching out to preparatory acts such as offers to sell and advertisement, even if they do not materialize in actual sales.¹⁸¹ The Court has justified the departure from the letter of the law with the need to pursue a high level of protection of rightholders as required by Recital 9 InfoSoc.¹⁸² Yet, no similar interpretation has ever been followed to adapt the implementation of Article 4 InfoSoc to new objects excluded in light of the Agreed Statement. The teleological opening of the InfoSoc Directive to digital exhaustion, on the model traced by *UsedSoft*, would help to harmonize the approach to the provision, admitting its extension to digital copies when needed for exhaustion to still perform its function and achieve the goals underlying Article 4(2) InfoSoc. The spillover effect of the functional reading of the provision would be a clearer definition of the boundaries between communication to the public and distribution, with the latter covering every act which, even if involving an intangible copy or distribution means, cannot fall under Article 3 InfoSoc for it entails a transfer of ownership.

4. Coherence in the teleological interpretation of existing sources

67 The acceptance of digital exhaustion under the InfoSoc Directive would also guarantee coherence in the teleological interpretation and implementations of legal solutions which largely share the same goals. In *UsedSoft* the objectives underlying Article 4(2) Software II play a key role in justifying the equal treatment of tangible and intangible copies and the functional re-labelling of a license agreement as a sale. One would expect the same reasoning to inspire the interpretation of Article 4(2) InfoSoc, and particularly to justify a softening of its literal interpretation with the aim of guaranteeing that the provision keeps on performing its function in the now-dominant digital market of protected works. More generally, the acceptance of a horizontal principle of digital exhaustion would be conducive to the fulfillment of some of the key objectives the EU legislator attributed to the InfoSoc Directive, such as the implementation of the four freedoms (Recital 3) and the non-distortion of competition in the internal market (Recital 1), once again in light

of the increasing predominance of digital markets of protected works over traditional ones, and the challenges their features pose to (and opportunities they offer for) the realization of such goals. These and other economic reasons prove the functional equivalence of traditional and digital markets *vis-à-vis* the necessity of exhaustion, and support its introduction in the digital environment.

II. (Some) economic reasons: the functional equivalence of traditional and digital markets *vis-à-vis* the necessity of exhaustion

68 Back in 2010 already, market data reported a higher sale of e-books than hardbacks,¹⁸³ while the shift towards new online, digital business models in the music, movie and software industries can be traced back to the early 2000s.¹⁸⁴ As of today, digital copyright markets have largely outgrown more traditional means and forms of commercialization of protected works. Yet, while exclusive rights have been adjusted to the new environment, either by legislative interventions or with the help of axiologically-inspired court decisions, their limitations have faced substantial contractions, together with other tools used to maintain the copyright balance.¹⁸⁵ Exhaustion makes no exception to this trend.

69 The principle has traditionally answered to a number of balancing needs emerging in the market of copyright-protected works. Interdisciplinary studies have evidenced four main areas where exhaustion

180 Case C-516/13 *Dimensione Direct Sales Srl, Michele Labianca v Knoll International SpA* [2015] EU:C:2015:315.

181 *Ibid* para 33.

182 *Ibid* para 34.

183 See, e.g., Dylan F. Tweney, 'Amazon Sells More E-Books Than Hardcover', WIRED (July 19, 2010), <<http://www.wired.com/epicenter/2010/07/amazon-more-e-books-than-hardcovers>>.

184 Jacqui Cheng, 'Forget the Box: Downloads Dominate Online Software Purchases', *Ars Technica* (May 28, 2010), <<http://arstechnica.com/software/news/2010/05/forget-the-box-downloadsdominate-online-software-purchases.ars>>, accessed 13 September 2018.

185 One of the first analyses of the negative impact of the digital revolution on the copyright balance can be found in Jessica Litman, *Digital Copyright* (Prometheus Books 2006), 35-70. Along the same lines, *inter alia*, see Giuseppe Mazziotti, *EU Digital Copyright Law and the End-User* (Springer Verlag 2008) 15-39, 77-109; Neil W Netanel, *Copyright Paradox* (OUP 2008) 54-80; Tana Pistorius, 'Copyright in the Information Age: the Catch-22 of Digital Technology' [2006] 20 *North Cultural and Media Studies* 47; Matthew Rimmer, *Digital Copyright and the Consumer Revolution: Hands off My iPod* (Edward Elgar 2007); Lawrence Lessig, *Free Culture: How Big Media Uses Technology and Law to Lock Down Culture and Control Creativity* (Penguin 2004); James Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain' [2003] 66 *Law & Contemp Probs* 33.

is the most likely to strike a balance between copyright enforcement and conflicting policy objectives; namely, access, preservation, privacy and reduction of transaction costs.¹⁸⁶ More recently, other commentators have proven the functional equivalence of traditional and digital markets in this respect, and pinpointed other positive effects which exhaustion could have by fostering opportunities and tackling distortions that are characteristic of the digital environment.¹⁸⁷

1. Access, preservation, privacy and reduction of transaction costs

70 Exhaustion reduces the social cost of monopoly by increasing the availability and affordability of protected works achieved through the rise of secondary markets where consumer costs are recouped through resale, while competition is higher and bolsters the development of effective distribution models.¹⁸⁸ In response, copyright holders are pushed to control excesses in their supra-competitive prices, cover as many geographical markets as possible, and engage in positive price discrimination to make sure that they can still attract low-income consumers away from the second-hand market.¹⁸⁹ This is not different but even truer for digital markets, where rightholders can exercise a much more pervasive control over the uses of the protected work, and reduce or exclude access from particular geographical areas, in spite of the delocalization and almost inexistent distribution costs, which were made possible by the internet.

71 Copyright owners have opposed digital exhaustion, arguing that secondary markets would increase the risk of piracy and cannibalize the original market of the work, thus decreasing accessibility, and ultimately hinder price discrimination and affordability, with a consequent loss of consumer welfare.¹⁹⁰ These arguments, similar to those used

lack empirical evidence in support, and a number of economic studies have already proven them wrong, identifying technological measures which could effectively control piracy and avoid instances of unfair competition.¹⁹¹ The CJEU have followed the same reasoning in *UsedSoft*: its teleological statements supporting the innovative interpretation of Article 4(2) Software II are all grounded on the belief of a similar if not increased need for exhaustion in the digital environment, while the introduction of technical requirements to ensure the functional equivalence between tangible and digital resales answers to the risks voiced by rightholders. With no real economic difference between software and other digital works in this respect, it would be hard for the Court to deny the existence of similar needs and concerns with respect to the scope of Article 4(2) InfoSoc.

72 The development of secondary markets allowed by the principle of exhaustion also helps to increase access to out-of-commerce and orphan works, contributing to the preservation of cultural heritage.¹⁹² While this has been particularly important in the material world, it might have other positive implications in the digital environment, where the pervasive control exercised by rightholders may allow them to withdraw their works from the market in very little time, leading to their irreversible disappearance from the online environment.¹⁹³

73 Albeit not intuitively, exhaustion plays a key role in protecting privacy and secrecy, per se and in their positive effects on competition. By excluding the rightholder's control over subsequent transfers of the work, the principle makes it possible to avoid the tracking and identification of buyers.¹⁹⁴ This

186 See Liu (n 56); Reese (n 11); Molly Shaffer Van Houweling, 'The New Servitudes' [2008] 96 Georgia Law Journal 885.

187 The most comprehensive being Perzanowski-Schultz (n 8).

188 As in Reese (n 11), 587.

189 See Douglas Lichtman, First Sale, First Principles, Media Institute (April 26, 2010) <http://www.mediainstitute.org/new_site/IPI/2010/042610_FirstSale.php>, accessed 13 September 2018.

190 Perzanowski-Schultz (n 8) 895; Nakimuli Davis, Reselling Digital Music: is there a Digital First Sale Doctrine? [2009] 29(3) Loyola Entert LR 363, 370-371, but see contra Tai (n 71) 210; Friedrich Ruffler, 'Trading in Used Software an Infringement of Copyright? The Perspective of European Law' [2011] 6 EIPR 378; BM Kawabata, Unresolved Textual Tension: Capitol Records v. ReDigi and a Digital First Sale Doctrine [2014] 21(1) UCLA Entert LR 33, 76.

191 E.g., Wendy Gordon, 'Intellectual Property as Price Discrimination: Implications for Contracts' [1998] 73 Chi-Kent L Rev 1367, showing how secondary markets are better than monopolistic markets in implementing successful price discrimination; Anindya Ghose, Michael D Smith, Rahul Telang, Internet Exchanges for Used Books: an Empirical Analysis of Product Cannibalization and Welfare Impact' [2006] 17 Info Sys Res 3, highlighting how 84 percent of used books sold on Amazon are purchased by buyers who would have not been able or willing to pay the price set for the original copy by the rightholder; Study pursuant to Section 104 of DMCA (n 99), Conclusions; Evan Hess, Code-ifying Copyright: an Architectural Solution to Digitally Expanding the First Sale Doctrine' [2013] 81 Fordham L Rev 1965.

192 Reese (n 11), 594-5, 599.

193 Deirdre K. Mulligan and Jason M. Schultz, 'Neglecting the National Memory: How Copyright Term Extensions Compromise the Development of Digital Archives' [2002] 4 J App Prac & Process 451. See also the empirical evidence brought by Anna Vuopala, Assessment of the Orphan Works Issue and Costs for Rights Clearance (May 2010), <http://ec.europa.eu/information_society/activities/digital_libraries/doc/reports_orphan/anna_report.pdf>, accessed 13 September 2018.

194 See Cohen (n 19) 993.

is not only relevant in case of sensitive and/or controversial content, where anonymity reassures potential acquirers and thus avoids chilling effects on access, but it has a much broader preventive power against consumers' profiling,¹⁹⁵ and can limit the control of rightholders over, for instance, competitive reverse engineering or product review in case of technical works.¹⁹⁶ Needless to say, the need for balance is much stronger in the digital environment, given that the possibilities of tracking and profiling are exponentially increased, and the rightholder's power to control consumers' and competitors' behaviors is much more effective and broader in scope.

- 74 Last, commentators refer to the positive effect of exhaustion in avoiding the transaction costs which would spike should rightholders have the possibility to variously limit and control the use of the protected work, particularly if each work or format would be subject to different conditions. Severing the power to determine the fate of the copy after the first sale, the principle makes any contractual agreement to the contrary unenforceable, thus levelling the terms of use of the work to the standard determined by the copyright statute.¹⁹⁷ In this sense, digital exhaustion would be needed even more than material exhaustion. In fact, digital works are commercialized via complex End User License Agreements (EULAs), which carve out this or that use depending on the type of work, business model or price of the copy, producing even greater market inefficiencies and increasing information and transaction costs, and the same consequences on consumers' behaviors, which oscillate between avoiding the purchase or ignoring the terms of the license.¹⁹⁸

2. Increased innovation and platform competition

- 75 Together with the balancing needs that are present both in the material and digital markets, the principle of exhaustion is capable of realizing additional benefits in the digital environment, which scholars have identified in increased innovation and platform competition.¹⁹⁹

195 Ibid.

196 Perzanowski-Schultz (n 8) 896.

197 As in Van Houweling (n 186) 897-898.

198 Ibid. The latter point is particularly important, as it proves wrong those arguments which attribute to consumers the capability to drive the market by selecting the best bargain and rejecting extremely restrictive terms. In fact, empirical studies prove that consumers tend to ignore contractual terms unless they are essential to the purchase (ibid 932-933).

199 Broadly Perzanowski-Schultz (n 8) 897 ff.

- 76 The competition with secondary markets created by exhaustion pushes copyright owners to ameliorate their products in order to make them remain attractive against used copies, originating innovation in the form of new versions, premium content, additional features and updates.²⁰⁰ Similarly, it triggers the development of new business models, targeting the same audience which could be attracted by what secondary markets could offer.²⁰¹ Not least, the availability of low-cost copies no longer under the rightholders' control facilitates innovations which, if competing with the original work or its mode of exploitation, would probably be hindered by the rightholders themselves.²⁰² Exhaustion is also capable of diminishing consumers' lock-in, which usually happens when the costs of switching from the current to a new, more favorable/competitive product are too high, creating barriers for new competitors, and thus stifling innovation. By allowing the resale of used products and thus the recovery of part of the sum invested in the first product, exhaustion decreases the switch costs, and the same is done by the lowered price of the new platform made possible by the competition of secondary markets.²⁰³

- 77 The clear advantages that digital exhaustion would bring, countered by limited risks for the original market of the work which could easily be controlled through new technologies, justify a convinced plea for its introduction, render the judicial and legislative obliteration on the matter hardly explicable, and indicate a rather obvious way forward.

E. The way forward

I. Waiting for Godot, again: what the legislator could have done but has not done it yet

- 78 Most commentators agree on the fact that the current language of the InfoSoc Directive makes it quite difficult for the CJEU to proceed to a judicial

200 Ibid 898.

201 The same effect of creating incentives to innovation is attributed to fair use. See Fred von Lohmann, 'Fair Use as Innovation Policy' [2008] 23 Berkeley Tech LJ 829.

202 The most famous example is Netflix, which used the first sale doctrine to be able to commercialize titles which rightholders preferred to keep out from online distribution deals. See Transcript of Netflix, Inc. Q3 2009 Earnings Call (Oct. 22, 2009) (statement of Netflix CEO Reed Hastings), <<http://seekingalpha.com/article/168407-netflix-inc-q3-2009-earnings-call-transcript>>, accessed 13 September 2018.

203 Perzanowski-Schultz (n 8) 990.

introduction of digital exhaustion.²⁰⁴ They also share the view, however, that the legislative approach is outdated and does not respond to the technological and business models (r)evolution of the past two decades, where most of the protected works are commercialized in a digital form and/or online, and technological measures of protection can effectively control the additional piracy risks triggered by the digital version of the principle.

- 79 Receptive to the doctrinal debate and to the “earthquake” caused by *UsedSoft*, the Commission decided to include the matter in its public consultation on the review of EU copyright rules, asking whether exhaustion should find application also “in the case of an act of transmission equivalent in its effect to distribution (i.e. where the buyer acquires the property of the copy)”.²⁰⁵ The text of the consultation also highlighted the difficulties underlying the practical implementation of the mechanism, from the higher risk of piracy caused by the possibility for re-sellers to keep their copy, to the economic impact that a second-hand market of never-deteriorating copies may have on the original market of the work.²⁰⁶ As expected, industrial rightholders and intermediaries opposed the idea, upholding the Commission’s concerns on the impact that digital exhaustion would have on copyright incentives and market equilibria, while private and institutional users and part of the authors supported its introduction, advancing the same arguments that have traditionally backed material exhaustion.²⁰⁷ Among the Member States which took a position on the matter, France underlined that the EU international obligations under the WCT stood against the extension of the principle to the digital environment.²⁰⁸
- 80 The last assertion has been challenged by several scholars.²⁰⁹ The Treaty provides for a minimum standard of protection for a range of exclusive rights, setting up a “floor” and not a “ceiling”. In this sense, Article 6 WCT requires the provision of a distribution right having certain characteristics, and leaves the freedom to determine the conditions of its exhaustion to contracting parties, but it does not prevent them from defining the online sale of digital works as distribution, attaching to a digital distribution a digital exhaustion. This would not overlap nor contradict the existence of the right of communication to the public, which entails a transmission of the work and not, as distribution,

the transfer of ownership over a copy.

- 81 Despite the fact that a large part of the Digital Single Market Strategy has been framed around the need to provide better access to online goods and services in the Union, removing national barriers and closing the regulatory gap between digital and material markets,²¹⁰ the 2016 proposal of a Directive on Copyright in the Digital Single Market²¹¹ completely omits referring to digital exhaustion which, as seen above, could play a significant role in facilitating availability and affordability of digital content. The omission is left unexplained, with no reference to the matter in preparatory works. The question seems to have disappeared from the table, overcome by more pressing and harshly debated proposals of reform.²¹²
- 82 Should the EU legislator decide to intervene, the introduction of digital exhaustion would require few amendments to the InfoSoc Directive. The extension of the principle could be reached by either removing the limitations enshrined in Recitals 28 and 29 and excluding the sale of digital works from the definition of “services”, or by introducing an additional provision devoted to digital distribution and its exhaustion. The second option would be preferable, as it would allow a specification of the technical requirements of the resale necessary to control its impact on the original market of the work (e.g. removal of the copy by the seller, use of digital rights management tools), and clarify what should be considered as a sale or other transfer of ownership, in order to avoid circumventions of the provision similar to those tackled by the *UsedSoft* ruling. No other intervention would be needed, since the new digital distribution right and its exhaustion would be clearly distinguished from the right of communication of the public, entailing only transmission or retransmission of a work by wire or wireless means and no other act (Recital 23), and from the making available right, covering only interactive on-demand transmission individually decided in time and place by the user (Recital 25).
- 83 Absent, however, is any sign of policy interest towards the problem in the current discussion on the copyright reform package, which will still absorb the attention and energies of the EU legislators in the months to come, it is reasonable to believe that with the *Tom Kabinet* case, the CJEU will decide alone on the fate of the principle in EU copyright law. Yet, there are still two potential interim judicial solutions to bridge the legislative gap: the

204 *Supra*, at 19.

205 See Public Consultation (n 23) 13, question 13.

206 *Ibid.*

207 Report on the responses (n 23) 20-22.

208 *Ibid.* 22.

209 Such as Spedicato (n 7), 48; Karapapa (n 12), 311; Mezei (n 7) para 144.

210 Communication on a Digital Single Market Strategy for Europe (n 24) 3.

211 Commission, ‘Proposal for a Directive of the European Parliament and of the Council on Copyright in the Digital Single Market’, COM (2016) 593 final.

212 As noted by Rosati (n 22) 681.

first implementable in *Tom Kabinet* to maintain the effectiveness of Article 4(2) InfoSoc through a less literal and more contextual and teleological interpretation; and the second left to the initiative of national courts, and aiming at invalidating the provision for disproportionate violation of Articles 7, 16 and 17 CFREU.

II. Two interim solutions to bridge the legislative gap

1. A more contextual and teleological interpretation of existing sources

- 84 Despite the fact that a literal interpretation of existing sources gives little room for the judicial introduction of digital exhaustion under Article 4(2) InfoSoc, a more teleological and contextual approach may offer alternative solutions to the stalemate. For this purpose, the most logical starting point is represented by the roots of the principle at the EU level.
- 85 The doctrine of Community exhaustion was introduced as a balancing tool between copyright and fundamental freedoms. To draw its borders, the CJEU used the notion of essential function and the specific subject matter of copyright, which characterizes all its jurisprudence on Article 36 EC and on the interplay between IP and competition law: copyright protection prevails to the extent necessary for the core of the right to be preserved, and for the right to perform its essential function.
- 86 Theoretically, the CJEU can no longer directly apply an article of the Treaty to rule on matters on which the EU legislator has already introduced measures “necessary to achieve the specific objective which would be furthered by reliance on this provision”.²¹³ Since the InfoSoc Directive has introduced the principle of exhaustion with the aim of balancing copyright protection, competition and the freedom of movement of goods, this would rule out the possibility for the Court to intervene on it following its case law on Article 36 EC. However, the literal interpretation of Article 4(2) InfoSoc excludes the availability of a similar measure for the digital environment. By drawing a neat line between brick-and-mortar and online markets, imagining the first as characterized by the sale of works in a tangible form (distribution), and the second as dominated by the transmission, usually on demand, of digital works (communication to the public/making available), the Directive has left out the plethora

of business models, now dominant, featuring the commercialization of works in digital format with effects functionally similar to a sale.²¹⁴ Exactly as it happened to digital content under consumer protection law, this online “distribution” remains in a definitory limbo, with no measures tackling the threats it poses to fundamental freedoms and other conflicting rights and policies enshrined in the Treaty.

- 87 Against this background, it may be reasonable to infer that such a regulatory gap leaves space for the CJEU to intervene with a direct application of Treaty provisions, to the extent necessary to ensure the fulfillment of the Directive’s goals and the respect of Treaty principles and rules. The referral in the *Tom Kabinet* case may be the opportunity to reach this result.
- 88 A literal reading of the most relevant sources would lead, as seen above, to a negative response. Several variables, however, have changed, making it possible to propose a different interpretation.
- 89 First, a proposal for a Directive amending the VAT system, approved by the Parliament and currently under discussion before the Council, is set to enable Member States to charge a reduced VAT rate on e-books matching the rate applied to printed copies, inspired by principles of tax neutrality, equality of treatment, and a functional consideration of the growing importance and role of the e-book market compared to the market of printed books, particularly for cultural policy objectives.²¹⁵ This intervention subtracts e-books from the umbrella of services, yet without redefining them as goods, following the *tertium genus* approach adopted by the Consumer Rights Directive with respect to contracts on digital content.²¹⁶
- 90 The decision responds to the momentous change in the forms of commercialization of copyright-protected works and in their proportion, now heavily tilted towards online digital consumption. A corollary of this transition has been the spread of business models where the acquisition of a digital work is no longer transient or heavily limited in its uses, but progressively more resembling a transfer of ownership.²¹⁷ This is particularly visible in the music

214 Similarly, see Mezei (n 7) paras 182-183.

215 Proposal for a Council Directive amending Directive 2006/112/EC (n 89).

216 CRD, Recital 19 (n 95).

217 On the evolution of the business models for the online commercialization of digital copyright content, see the empirical analysis conducted by Maurizio Borghi, Mariateresa Maggolino, Maria Lillà Montagnani and Massimiliano Nuccio, ‘Determinants in the online distribution of digital content: an exploratory analysis’ [2012] 3(2) European Journal for Law and Technology 1.

213 The principle was spelled out in *The Queen v Minister of Agriculture, Fisheries and Food* (n 52) para 47.

and book markets, where more expensive versions of the same copy are DRM-free or anyway allowing the enjoyment of the product for an unlimited period of time and without substantial use limitations.²¹⁸ Parallel to this, is the fact that the distribution models have also changed. As it happened for software programs, digital works can now be enjoyed as a product, that is with a full transfer of the file, or as a service, that is through access to a platform where the file is centrally hosted and from which it is transmitted to the user.²¹⁹

- 91 As a consequence, the traditional distinction on which the InfoSoc Directive was based has become fully outdated. Between the scope of the right of communication of the public and making available right (Article 3 InfoSoc), covering the dematerialized transmission of digital works as services, and the scope of the right of distribution (Article 4 InfoSoc), covering the tangible transfer of works as products/goods, a new grey zone has emerged: that is the online transfer of digital works as products, which entails the buyer's acquisition of the work on its device, and not the mere access from a place and at a time individually chosen by them.²²⁰ In this sense, the difference in features between software and other protected works, which would have justified a specific treatment for the former, has in fact ceased to exist.
- 92 To make sure that the goals of exhaustion are still achieved in the software market, in *UsedSoft* the Grand Chamber used the notion of functional equivalence between license and sale and between a tangible and intangible medium of distribution, and referred to *Peek & Cloppenburg* to set the boundaries of distribution as to cover any act of transfer of ownership.²²¹ The CJEU could avoid dealing with the borders between distribution and communication to the public thanks to the absence of a provision similar to Article 3 InfoSoc in the Software Directive

II.²²² In this sense, the question posed now by the District Court of the Hague requires an additional systematic effort to reach the same result.

- 93 The teleological argument advanced in *UsedSoft* can be mirrored without any modification in the *Tom Kabinet* case, for the factual matters at stake are almost overlapping, and so are the balancing objectives of exhaustion under the two directives. Having this as a guiding (interpretative) star, the obstacle posed by Recital 28 and the WCT can be circumvented with two considerations. The first is that the WIPO Treaty introduces a minimum and not maximum standard of protection;²²³ the second is that – as mentioned above – the Court can recur to the direct application of Treaty provisions if the EU legislator has not provided measures directed to realize their goals. This means, on the one hand, that the tangible-only limitation of the Agreed Statement can be read as the lower and not upper edge of the protection to be granted to rightholders, and on the other hand that the principles developed by the CJEU when building and drawing the boundaries of Community exhaustion can be implemented here to shape a horizontal principle of digital exhaustion.
- 94 As to the first point, once it is assessed that the license commercializing the digital work is functionally equivalent to a sale, which attributes to the buyer something that is akin to an ownership, reasons of systematic consistency requires excluding the application of Article 3 InfoSoc²²⁴ – a circumstance that triggers the need to “host” this form of exploitation under another right in order to keep on offering effective protection to rightholders. This may legitimately justify a stretch of the right of distribution to cover digital works without being afraid of breaching the obligations arising under the minimum threshold provided by WCT. As to the second point, and for the reasons illustrated above, the respect of those Treaty provisions that justified the introduction of Community exhaustion (freedom of circulation of goods and protection of competition in the internal market) may as well support

218 See, e.g., Press Release, EMI Music Group, EMI Music launches DRM-free superior sound quality downloads across its entire digital repertoire (2 April 2007), <<http://www.emigroup.com/Press/2007/press18.htm>> accessed 13 September 2018; similarly, Press Release, Apple, Apple Launches iTunes Plus, Higher Quality DRM-Free Tracks Now Available on the iTunes Store Worldwide (30 May 2007), <<https://www.apple.com/newsroom/2007/05/30Apple-Launches-iTunes-Plus/>>, accessed 13 September 2018. See also the study conducted by Natali Helberger, Kristof Kerenyi, Bettina Krings, Rik Lambers, Carsten Orwat, Ulrich Riehm, Stef van Gompel, Nicole Dufft, ‘Digital Rights Management and Consumer Acceptability: A Multi-Disciplinary Discussion of Consumer Concerns and Expectations’ in INDICARE Project report - State of the Art (December 2004), <https://mpr.ub.uni-muenchen.de/6641/1/MPRA_paper_6641.pdf>, accessed 13 September 2018.

219 Borghi-Maggiolino-Montagnani-Nuccio (n 217) 21-25.

220 Ibid.

221 *UsedSoft* (n 2) para 52.

222 Ibid para 51.

223 In this sense also von Lewinski (n 38) 452, para 17.61, who opines that since the WIPO Treaties do not specify the content of the distribution right, “national law can take over the wording of the treaties, or implement the right by the so called droit de destination, which has been developed in France by jurisprudence on the basis of the reproduction right of authors. It may also make the narrow distribution right of the WCT and WPPT a part of a broad distribution right, which in addition includes transfer of possession such as rental”.

224 This would also be in line with Recital 29 InfoSoc, which excludes services from the scope of exhaustion, and Recitals 23-24, which makes it explicit that the right of communication and making available to the public should not cover any other act beyond those described by the Directive as within its scope.

the construction of the principle in the digital environment, coupled with new Treaty goals such as cultural policy objectives, to be achieved through a greater availability and affordability of protected works, and the respect of fundamental rights and freedoms, such as the right to property (Article 17 CFREU) and the right to privacy (Article 8 CFREU) of the buyer of the digital support, requested by the CFREU. Once it is proven that the making available of the work via download, for an unlimited period and for a price which corresponds to the economic value of a copy ensures an appropriate remuneration to the rightholder, so that the subject matter and essential incentivizing function of copyright is preserved, nothing prevents digital exhaustion to take place.

- 95 This systematic reordering would not only draw a fil rouge that connects the earliest CJEU's case law on exhaustion with the implementation of the principle on the most recent challenges raised by the digital economy, but it would also help to consolidate the functional reading of the notion of sale and its technical requirement (*id est* the application of technological protection measures to ensure that the second-hand sale of digital copies produces the same effects as the second-hand sale of tangible copies), sketch the borders between Articles 3 and 4 InfoSoc, and set aside the good-service dichotomy, which was introduced by Recital 29 beyond what was required by the WCT, and created interpretative problems ever since. Not least, the decision would be able to clarify the role of the InfoSoc Directive as *lex generalis*, reduce the need for future decisions to recur to the *lex specialis* argument, and clarify the degree of standardization introduced by the WCT and the margin of appreciation left to the EU and its Member States.
- 96 As to the act of reproduction needed in order to effectively transfer a digital work,²²⁵ absent a provision authorizing the lawful acquirer to perform it as under Article 5 Software II, two potential solutions are still available under the InfoSoc Directive. The first may come from the

doctrine introduced in *FAPL*²²⁶ and *Ulmer*,²²⁷ which allowed an extension of the scope of exceptions when needed to ensure that they can still effectively pursue their goals. Applying the same principle to exhaustion, which may be understood as a limitation to copyright, it is possible to argue that a temporary reproduction of the file is necessary to finalize the transfer, and thus for the principle to materialize and produce its effects. As in *UsedSoft*, however, adequate technological measures, such as watermarking and forward-and-delete technologies, should ensure that the seller's copy is deleted upon alienation.²²⁸ The second solution would leverage the mandatory exception of Article 5(1) InfoSoc, considering the transient reproduction as an essential part of a technological process whose sole purpose is to enable a lawful use of the work. Also in this case, appropriate measures such as forward-and-delete technologies should guarantee the temporary nature of the reproduction via the deletion of the copy from any seller's device.

2. A claim of invalidity of Article 4(2) InfoSoc for violation of Articles 7, 16 and 17 CFREU

- 97 Should the CJEU reject this approach in the *Tom Kabinet* case, offering a conservative reading of Articles 2, 3 and 4(2) InfoSoc, the second, less orthodox path passes through a claim of invalidity of Article 4(2) under Article 51(2) CFREU, for disproportionate restriction of the right to property (Article 17 CFREU), the right to respect of one's private life (Article 7 CFREU) and, in specific cases, the freedom to conduct a business (Article 16 CFREU), caused by the limitation of the scope of Article 4(2) InfoSoc to tangible copies only, with the exclusion of digital works.
- 98 Article 52(1) CFREU states that any restriction on the exercise of the rights and freedoms protected by the Charter must be provided by law, respect their essence, and, subject to the principle of proportionality, should be made only if necessary and meeting the objectives of general interest recognized by the Union, or the need to protect other rights and freedoms.²²⁹ In the case of digital copies, absent digital exhaustion, the limitations to the

225 This seems to represent a key point against the admissibility of digital exhaustion under the InfoSoc Directive, as well as it was the case in *UsedSoft* (n 2). In fact, even if technological protection measures are put in place to ensure the functional equivalence of digital and material second-hand sales, the transfer of a digital copy requires the performance of an act of reproduction that constitutes an infringement if not covered by an exception or authorized by the rightholder. See ALAI (n 73) 2. The so-called "new copy" theory, which maintains that any second-hand sale of digital files entails, in fact, an unauthorized reproduction and not the transfer of the same copy, has consistently been used by those national courts which in different settings and circumstances have rejected the notion of digital exhaustion. More details in Mezei (n 7) para 124-139, and ALAI (n 73) 2.

226 *FAPL* (n 63), para 163.

227 *Ulmer* (n 172) para 43.

228 *UsedSoft* (n 2) paras 86-87.

229 On the application, sources, interrelationship with other provisions of the Charter and implications of Article 52(1) CFREU, see the comment of Steve Peers, Sacha Prechal, 'Article 52 - Scope and Interpretation of Rights and Principles' in Steve Peers, Tamara Hervej, Jeff Kenner, Angela Ward (eds), *The EU Charter of Fundamental Rights: a Commentary* (Hart Publishing 2014) 1455-1522.

right to property derives from the control that the rightholder can exercise on the use of the support carrying the work even after its alienation. The same control, as discussed above, intrudes in many ways in the user's private life, allowing tracking and profiling and, more generally, monitoring the user's activities on a constant basis and limiting her autonomy. In more limited instances, the anti-competitive settings created by the absence of exhaustion may impact on the freedom to conduct a business of entities innovating in the second-hand market of digital products, as in the case of *Tom Kabinet*. The exclusion of exhaustion in case of digital works is justified – albeit not explicitly – by the prevalence of the protection of copyright, covered by Article 17(2) CFREU.²³⁰

- 99 On the example set by the *Digital Rights Ireland* case,²³¹ which builds on settled case law,²³² the assessment of the proportionality of the limitation of exhaustion to material copies, with the exclusion of intangible supports, may be construed as a two-prong test verifying the appropriateness and the

230 The scope and implication of Article 17(2) CFREU on the protection conferred to copyright, however, are widely debated. See, e.g., Christophe Geiger, 'Intellectual Property Shall Be Protected!?' – Article 17(2) of the Charter of Fundamental Rights of the European Union: A Mysterious Provision with an Unclear Scope' [2009] 31(3) EIPR 113; Jonathan Griffiths and Luke McDonagh, 'Fundamental Rights and European IP Law: The Case of Art. 17(2) of the EU Charter' in Christophe Geiger (ed), *Constructing European Intellectual Property Achievements and New Perspectives* (Edward Elgar 2013) 75 ff. According to the Praesidium, Explanations relating to the Charter of Fundamental Rights [2007] OJ C303/17, 23, the intent of the provision is to put a stronger emphasis on the growing importance of intellectual property in the EU, certifying the status quo rather than increasing the level of protection granted to IP rights. The same opinion is advanced by the comment redacted by the Commission's Network of Independent Experts on Fundamental Rights, 'Commentary of the Charter of Fundamental Rights of the European Union' (2006) <http://ec.europa.eu/justice/fundamental-rights/files/networkcommentaryfinal_en.pdf>, accessed 13 September 2018, 165-166.

231 Joined Cases C-293/12 *Digital Rights Ireland Ltd v Minister for Communications, Marine and Natural Resources and Others* and C-594/12 *Kärntner Landesregierung and Others* [2014] EU:C:2014:238, paras 38 and 47. The CJEU draws here an analogy with the ECtHR decision *S. and Marper v. the United Kingdom* [GC], nos. 30562/04 and 30566/04, § 102, [2008] ECHR 2008-V.

232 Case C343/09 *Afton Chemical Limited v Secretary of State for Transport* [2010] EU:C:2010:419, para 45; Joined Cases C-92/09 *Volker und Markus Schecke GbR* and C-93/09 *Hartmut Eifert v Land Hessen* [2010] EU:C:2010:662, para 74; Joined Cases C-581/10 *Nelson et al v Deutsche Lufthansa AG* and C-629/10 *TUI Travel plc et al v Civil Aviation Authority* [2012] EU:C:2012:657, para 71; Case C283/11 *Sky Österreich GmbH v Österreichischer Rundfunk* [2013] EU:C:2013:28, para 50; and Case C101/12 *Herbert Schaible v Land Baden-Württemberg* [2013] EU:C:2013:661, para 29.

necessity of the measure to achieve its objectives.²³³ To fit with the case at stake, the test would check the appropriateness of the measure on the basis of the principle of equal treatment of comparable situations,²³⁴ and the necessity on the basis of the respect and fulfillment of the essential function and specific subject matter of copyright. The latter point would use the CJEU's jurisprudence on the matter as a reference, and the functions of copyright as declared by the copyright directives.²³⁵

F. Conclusions

100 After a series of contradictory *obiter dicta* and controversial decisions, with the referral in the *Tom Kabinet* case, the CJEU will finally have the opportunity to clarify its position on the admissibility of digital exhaustion under Article 4(2) InfoSoc. The debate on the matter, long dormant due to the apparently straightforward exclusion of intangible supports from the scope of the distribution right (Article 4 InfoSoc) made by Recitals 28-29 InfoSoc and the Agreed Statement of the WCT, has revived after the *UsedSoft* decision, which extended the principle to digital copies of software acquired through sale-like licenses.

101 Due to the different legal, economic and technological features of brick-and-mortar and digital markets, the introduction of digital exhaustion has been challenged on the one hand by rightholders, afraid of its impact on piracy rates and on the original market of the work, and on the other hand questioned by judges and scholars, who found it incompatible with the current architecture of EU copyright law. Conceptualizing its extension to cover intangible copies commercialized online was inconsistent with the neat separation between distribution, limited to the sale or other transfer of ownership over tangible copies, and communication to the public/making available, covering dematerialized transmissions of the work, qualified as service and usually realized via licenses.

233 "The principle of proportionality requires that acts of the EU institutions be appropriate for attaining the legitimate objectives pursued by the legislation at issue and do not exceed the limits of what is appropriate and necessary in order to achieve those objectives" (Ibid para 46).

234 With particular regard to Article 4(2) InfoSoc, see AG Jääskinen's Opinion in case C-5/11 *Criminal proceedings against Titus Alexander Jochen Donner* [2012] EU:C:2012:195, para 71.

235 Along the same lines, but with reference to the identification and control of rightholders' dysfunctional conducts, see Caterina Sganga and Silvia Scalzini, 'From Abuse of Right to European Copyright Misuse. A New Doctrine for EU Copyright Law' [2017] 48(4) IIC 405.

- 102 While this construction could still work in 2001, when online markets were still embryonal, the drastic change in the forms of commercialization of copyright-protected works and in their proportion, now heavily tilted towards online digital consumption, has completely changed the framework. Digital works are now enjoyed both as a service, usually from a platform where the file is centrally hosted, or as a product, with a full transfer of the file akin to a sale. The latter represents a new grey zone, functionally closer to a distribution than to a communication to the public/making available. As a result of this momentous change, the same balancing needs that led to the introduction of exhaustion in traditional copyright law have now become pressing also in the digital environment, from preserving access to and availability of protected works to the protection of competition, innovation, and of a set of conflicting rights and freedoms – chiefly property, privacy and the freedom of movement of goods.
- 103 After *UsedSoft*, the CJEU’s case law touching directly or indirectly upon the matter has been fragmented and contradictory. When the tangible-intangible dichotomy risked producing negative effects in other areas of copyright law, altering the copyright balance or hindering the pursuance of copyright goals, the Court has tried to minimize them by recurring to teleological and systematic arguments such as *lex specialis* and functional equivalence, carving out exceptions to the InfoSoc and WCT diktat, as in *UsedSoft* and *VOB*. On the contrary, the interpretation of Article 4 InfoSoc has been characterized by a rigid literal interpretation, with no consideration of the features and shortcomings of digital markets, and no elaboration on whether and to what extent exhaustion could constitute a valid answer. This resulted in a system where the InfoSoc Directive remains a weak *lex generalis* against *leges speciales* which all admit, for different reasons and with different implications, digital exhaustion. Such an approach stands in clear contrast both with the attention to balancing principles that inspired the Court’s introduction of Community exhaustion in the 1970s, and with the use that the Court has recently made of exhaustion-like arguments in other matters - the most eloquent one being the definition of the borders of the right of communication to the public.
- 104 The most appropriate solution to the stalemate would be a legislative intervention on the InfoSoc Directive, either through eliminating the limits imposed by Recital 28 and 29 or by adding a new provision on digital distribution and exhaustion. This would not run counter to the WCT, which is an act of minimum standardization that does not prevent the extension of distribution and its exhaustion to cover the online transfer of ownership over digital works, which represent a grey zone between Articles 3 and 4 InfoSoc. However, despite a vast array of systematic and economic reasons which would support the introduction of the principle in the digital environment, the matter does not feature among the priorities of the EU legislator in the current modernization of EU copyright rules, even if its effects would converge towards the policy targets set by the Digital Single Market Agenda. This does not mean, however, that the game is fully over. On the contrary, there are at least two potential interpretative paths that could provide a temporary judicial solution bridging the regulatory gap, and provide a systematic reordering that clarifies the degree of standardization introduced by the WCT, the role of the InfoSoc as *lex generalis*, the borders between Articles 3 and 4 InfoSoc, the good-service dichotomy, and the requirements to assess the functional equivalence of sale and license and of tangible and intangible supports.
- 105 The first solution, which may be implemented in the *Tom Kabinet* case, uses a contextual and teleological interpretation of Article 4 InfoSoc to overcome its strictness, based on the direct application of Treaty provisions. While it is true, in fact, that judge-made solutions based on articles of the Treaty are not allowed in areas where the EU legislator has already introduced measures directed to implement them, it is also true that the tangible-only limitation of Article 4(2) InfoSoc leaves the digital copyright market short of a measure necessary to balance copyright with competition, freedom of movement of goods, cultural policy objectives and fundamental rights such as property and privacy. Such a gap affords the CJEU room to interpret the legislative text in light of Treaty principles and rules, to the extent necessary to ensure their respect and the fulfillment of the Directive’s goals.
- 106 The InfoSoc text renders the exegetic operation more difficult than in *UsedSoft*, but not impossible. The teleological arguments advanced there by the Grand Chamber to support the functional equivalence of sale and license and tangible and intangible supports can be mirrored without modification in the *Tom Kabinet* case, thanks to the similarity of fact pattern and balancing objectives of exhaustion in the Software II and InfoSoc Directives. The more complex literal obstacle posed by Recital 28 InfoSoc may be overcome, instead, by two considerations. The first is that the WCT sets only a minimum threshold of protection, allowing contracting parties to set higher standards. This means that once the license commercializing the digital work is judged functionally equivalent to a sale and thus excluded from the scope of Article 3 InfoSoc, the need to “host” it under another right in order to keep on offering effective protection to rightholders may justify an extension of the right of distribution to cover digital works. The second

is that a literal interpretation of Article 4 InfoSoc may not guarantee that in the digital environment the Treaty provisions underlying the principle of exhaustion, from those which have already justified its introduction by the CJEU in the 1970s (freedom of circulation of goods and protection of competition in the internal market) to new ones such as those setting specific cultural policy objectives or requiring the respect of fundamental rights of the buyer of the digital support, would equally be respected and fulfilled. This consideration may allow the horizontal application of such Treaty provisions to interpret secondary EU law in a manner that is conducive to the realization of their objectives, as digital exhaustion would do in case of transfer of ownership over digital works. In line with the earliest CJEU's case law, nothing would prevent this interpretation, provided that the first sale of the work ensures an appropriate remuneration to the rightholder, so that the subject matter and essential incentivizing function of copyright is preserved. The reproduction necessary to finalize the transfer of the work from buyer to seller, provided that adequate technological measures ensure the deletion of the seller's copy upon alienation, could be either covered by Article 5(1)(b) InfoSoc or by the *FAPL* and *Ulmer* doctrine, which allows extending the scope of an exception or limitation when needed to ensure that they can still perform their functions.

107 Should the Court opt for maintaining its conservatory stance on Article 4 InfoSoc, the second and least orthodox alternative would be a claim of invalidity of Article 4(2) InfoSoc under Article 51(2) CFREU, raised by national courts, for disproportionate restriction of the right to property (Article 17 CFREU), the right to respect of one's private life (Article 7 CFREU) and, in specific cases, the freedom to conduct a business (Article 16 CFREU) of the buyers of digital works, caused by the restriction of the scope of Article 4(2) InfoSoc to tangible copies only. The two-prong proportionality assessment, focusing on the appropriateness and necessity of the measure to achieve its objective – in this case that of the limitation of exhaustion to tangible copies in order to effectively protect copyright – would be based on the model drawn by precedents such as *Digital Rights Ireland*, and would test the appropriateness of the measure on the basis of the principle of equal treatment of comparable situations, and its necessity on the basis of the essential function and specific subject matter of copyright.

Facilitating Access to Out-of-Commerce Works in the Digital Single Market

How to Make Pico della Mirandola's Dream a Reality in the European Union

by **Christophe Geiger, Giancarlo Frosio and Oleksandr Bulayenko***

Abstract: Renaissance genius Pico della Mirandola dreamed of making all knowledge accessible in one place. The Proposal for a Directive on Copyright in the Digital Single Market could help Pico's dream come true. The proposal, *inter alia*, aims at facilitating wider access to Europe's cultural heritage through the introduction of a mechanism enabling the use of out-of-commerce works by cultural heritage institutions in the digital environment. After examining the key elements of this mechanism, this Opinion critically discusses the definition of the scope of search required for establishing the out-of-com-

merce status of works, the requirement of the representative character of collective management organisations, and the non-application of the mechanism to third-country works. This Opinion also looks into the coordination between the CJEU's *Soulier* decision and the Directive Proposal, with special emphasis on the sufficiency of general publicity measures, and the creation of the EUIPO's out-of-commerce online database. In conclusion, while being supportive of the proposal and the idea of promoting more access to out-of-commerce works, this Opinion provides some suggestions for improving the text.

Keywords: Copyright; digital single market; reform; digitisation; out-of-commerce

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A. Introduction

1 Cultural heritage stands as perhaps one of the major assets of the European Union. No other world region can showcase such a vast amount of cultural riches. Digitisation has enabled access and the ability to reuse this heritage to an extent previously unknown, rendering the fundamental right to culture a reality in the European Union.¹ Cultural heritage can be

made available online from a single access point for all EU citizens—and the international community—to enjoy. The entire collection of European cultural heritage may only be one click away. As the former European Commissioner for the Digital Agenda,

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1 On the right to culture, see Christophe Geiger (ed.), *Intellectual Property and Access to Science and Culture: Convergence or Conflict?*, CEIPI/ ICTSD publication series on "Global Perspectives and Challenges for the Intellectual Property System", Issue No. 3, Geneva/Strasbourg, December 2016.

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Nellie Kroes, has recalled:

Just as artists have always travelled, to join sponsors, avoid wars or learn from masters far from home, now digital technology helps them to cross borders and break down barriers. Their work can be available to all. In a sense, the internet is the realisation of the Renaissance dream of Giovanni Pico della Mirandola: all knowledge in one place. Yet, it does not mean there are no more obstacles to sharing cultural and artistic works on the net.²

- 2 Thus, it seems essential that this “digital renaissance” is not hindered by the copyright legal framework, as there are immense positive externalities for society that could be lost. In fact, digitised cultural heritage can serve to promote new businesses, boost tourism in the EU, take research and data aggregation to an all new level, and finally push democratization through better access to knowledge.³ In particular, a potential welfare loss in the context of unavailable works, whether out-of-commerce works or orphan works, meaning works where the right owner cannot be identified, is evident. For example, a recent survey found that 39% of feature films in European collections are out-of-commerce.⁴ Again, according to data from the German National Library, there were 2 million books out-of-commerce in 2013.⁵ In this scenario, digitisation does not conflict with the exploitation of works protected by copyright law, thus undermining potential remuneration of rightholders. Instead, when works are unavailable on the market, such as in the case of out-of-commerce works, there is no benefit to rightholders, creators

or the public at large. As Neelie Kroes further underlined, it is dysfunctional to keep cultural treasures “stuck in the digital darkness when they could be on digital display for future generations. It is time for this dysfunction to end.”⁶

- 3 Actually, the European Union has increasingly taken up Kroes’ call for action. Of course, the EU Directive on certain permitted uses of orphan works represented a first fundamental initiative by adopting a diligent search standard for public digitisation projects across Europe.⁷ Recently, however, the EU is furthering this action by considering how to also unlock broader availability of out-of-commerce works. In particular, on 12 September 2018 the European Parliament approved with some amendments (Parliament’s Amendments) the European Commission’s Proposal for a Directive on copyright in the Digital Single Market (DSM Draft Directive)⁸ that aims to ensure EU-wide access to works held in collections of European cultural heritage institutions when such works are no longer available to the public through customary channels of commerce (e.g., bookshops). To this end, the Commission would like to introduce a collective licensing mechanism facilitating uses of out-of-commerce works, building upon Member States’ experiences with similar schemes.⁹ The proposed provisions should enable—through a legal presumption—representative collective management organisations to authorise non-commercial use of works of their members as well as of other unrepresented rightholders. In the following, this Opinion will discuss underlying critical issues with the proposal and room for improvement.

2 Neelie Kroes (2010), A Digital World of Opportunities, SPEECH/10/619, Forum d’Avignon - Les Rencontres Internationales de la Culture, de l’Économie et des Medias, Avignon, France, 5 November 2010.

3 See Giancarlo Frosio (2018), *Reconciling Copyright with Cumulative Creativity: the Third Paradigm*, Cheltenham, UK: Edward Elgar, pp. 220-225; Laura King, James Stark and Paul Cooke (2016), ‘Experiencing the Digital World: The Cultural Value of Digital Engagement with Heritage’, *Heritage & Society*, Vol. 9(1), pp. 76-101; Henning Kagermann (2015), ‘Change Through Digitization—Value Creation in the Age of Industry 4.0’, in: Horst Albach, Heribert Meffert, Andreas Pinkwart and Ralf Reichwald (eds.), *Management of Permanent Change—New Challenges and Opportunities for Change Management*, Heidelberg, Germany: Springer Gabler, pp. 23-45; Giancarlo Frosio (2011), *COMMUNIA Final Report on the Digital Public Domain*, report prepared for the European Commission on behalf of the COMMUNIA Network and the NEXA Center, pp. 76-83; Olga Hadžić (2004), ‘Tourism and Digitization of Cultural Heritage’, *Преглед НИД*, Vol. 5, pp. 74-79.

4 See Gilles Fontaine and Patrizia Simone (2017), *The Access to Film Works in the Collections of Film Heritage Institutions in the Context of Education and Research*, Strasbourg, France: European Audiovisual Observatory, p. 16.

5 See Deutscher Bundestag, BT 17/13423, Entwurf eines Gesetzes zur Nutzung verwaister und vergriffener Werke und einer weiteren Änderung des Urheberrechtsgesetzes § 13, available at: <<http://dip21.bundestag.de/dip21/btd/17/134/1713423.pdf>>.

6 Nellie Kroes (2010), Ending Fragmentation of the Digital Single Market, SPEECH/11/70, Business for New Europe event, London, 7 February 2010.

7 See Directive 2012/28/EU of the European Parliament and the Council of 25 October 2012 on certain permitted uses of orphan works, 2012 OJ (L 299)5.

8 European Parliament, Copyright in the Digital Single Market ***I, Amendments adopted by the European Parliament on 12 September 2018 on the proposal for a directive of the European Parliament and of the Council on copyright in the Digital Single Market (COM(2016)0593 – C8-0383/2016 – 2016/0280(COD)), P8_TA-PROV(2018)0337 (Parliament’s Amendments); and European Commission (14 September 2016), Proposal for a Directive of the European Parliament and of the Council on copyright in the Digital Single Market, 14 September 2016, COM(2016) 593 final, 2016/0280 (DSM Draft Directive).

9 E.g., in France, Germany and Poland, described further below.

B. In search of a Comprehensive Notion of Out-of-Commerce Works

- 4 The DSM Draft Directive emphasises the promotion of digitisation and cross-border availability of European cultural heritage building upon the Orphan Works Directive¹⁰ and other non-binding instruments.¹¹ Besides the specific mandatory exception for the preservation of cultural heritage,¹² the reform proposal would like to facilitate the **use of out-of-commerce works** by cultural heritage institutions (CHI)—and ensure access to cultural heritage—by improving licensing practices.¹³ According to Recital 22 of the Directive Proposal:

Cultural heritage institutions should benefit from a clear framework for the digitisation and dissemination, including across borders, of out-of-commerce works or other subject-matter. However, the particular characteristics of the collections of out-of-commerce works mean that obtaining the prior consent of the individual rightholders may be very difficult. This can be due, for example, to the age of the works

- 10 The circle of beneficiaries of the out-of-commerce mechanism are more limited than in the Orphan Works Directive, Art. 1(1) enabling uses of orphan works also by educational establishments and public-service broadcasters, Directive 2012/28/EU, *supra* 7.
- 11 Memorandum of Understanding, Key Principles on the Digitisation and Making Available of Out-of-Commerce Works, 20 September 2011; European Commission (2011), Recommendation 2011/711/EU of 27 October 2011 on the digitisation and online accessibility of cultural material and digital preservation, 2011 OJ (L 283)39; European Commission (2006), Recommendation 2006/585/EC of 24 August 2006 on the digitisation and online accessibility of cultural material and digital preservation, (2006) OJ (L 236)28; and European Parliament and Council (2005), Recommendation 2005/865/CE of 16 November 2005 on film heritage and the competitiveness of related industrial activities, (2005) OJ (L 323)57.
- 12 Art. 5 of the DSM Draft Directive. On this new exceptions, see Christophe Geiger, Giancarlo Frosio and Oleksandr Bulayenko (2017), ‘The EU Commission’s Proposal to Reform Copyright Limitations: A Good but Far Too Timid Step in the Right Direction’, *EIPR*, Vol. 40, No. 1, pp. 12-15.
- 13 Libraries and CHIs have pointed at the insufficiency of this solution due to a serious limitation to the number of works covered and suggested instead the introduction of an exception to make out-of-commerce works as well as works that have never been in-commerce, which are kept in their collections, available online for non-commercial purposes. EBLIDA, Public Libraries 2000, IFLA, Europeana and Liber (2017), *Commission Proposal on Copyright in the Digital Single Market, Library and Cultural Heritage Institution Responses*, p. 2, available at: <https://www.ifla.org/files/assets/clm/publications/copyright_proposals_-_library_and_chi_responses.pdf>. In response to these concerns, the new Article 7(1a) and (1b) and Recital 22a of the Parliament’s Amendments provide Member States with a “back-up” option to introduce an exception for use of out-of-commerce works if collective licenses are not available (Amendments 23 and 69).

*or other subject-matter, their limited commercial value or the fact that they were never intended for commercial use. It is therefore necessary to provide for measures to facilitate the licensing of rights in out-of-commerce works that are in the collections of cultural heritage institutions and thereby to allow the conclusion of agreements with cross-border effect in the internal market.*¹⁴

- 5 Enabling the digitisation and making available to the public of materials establishing facts of historical and other significance will also contribute to addressing the problem of so-called “fake news”.¹⁵ For example, convenient one-click online access to verified photographs documenting important events and accompanied by appropriate comments can help to more easily check the correctness of (mis) represented information.

- 6 According to the DSM Draft Directive, all types of copyrighted works in CHIs’ collections can possibly enjoy an **out-of-commerce status**.

*A work or other subject-matter shall be deemed to be out of commerce when the whole work or other subject-matter, in all its translations, versions and manifestations, is not available to the public through customary channels of commerce and cannot be reasonably expected to become so.*¹⁶

- 7 In this respect, the DSM Draft Directive would expand the scope of the notion of out-of-commerce works in comparison to the non-binding Memorandum of Understanding,¹⁷ which is limited to books and journals, and the Orphan Works Directive’s notion of orphan works, which does not include stand-alone photographs.¹⁸ Furthermore, according to the proposal, the notion of out-of-commerce works should also **encompass works never intended for commercial use**.¹⁹ Also, in order to ensure maximum

14 Commission (2016), *supra* 8, Recital 22.

15 European Commission, Digital Single Market, Policies, Fake news: <<https://ec.europa.eu/digital-single-market/en/fake-news>>.

16 Commission (2016), *supra* 8, Art. 7(2). Parliament’s Amendments propose to completely delete the quoted definition from the Directive (Amendment 69).

17 The Memorandum of Understanding, *supra* 11, was signed 20 September 2011 by representatives of some major stakeholders, rightholders as well as European cultural heritage institutions.

18 Directive 2012/28/EU, *supra* 7, Art. 10. According to Article 12 “Review clause” of the Orphan Works Directive, the European Commission is under an obligation to provide annual reports “concerning the possible inclusion in the scope of application of this Directive of [...] stand-alone photographs”.

19 Commission (2016), *supra* 8, Recital 22. The Parliament’s Amendment 22 further extends the scope of the notion to works that “have never been in commerce” (even if intended for commercial use) by amending Recital 22. This position reflects the suggestions of three Committees of the European Parliament: Amendment 22 of the Report of the Committee

legal certainty to cross-border digitisation projects, the **proposed definition** of out-of-commerce works would be **mandatory in all Member States**. The DSM Draft Directive dropped the Impact Assessment's proposal giving Member States "the possibility to establish further national-specific criteria for works to be eligible for the mechanisms in question."²⁰ For example, currently, German law provides mechanisms for making available out-of-commerce literary works published before 1 January 1966.²¹ Instead, Polish law requires for a work to qualify as out-of-commerce to be a literary work published before 24 May 1994.²² However, the possibility for Member States (to continue) to provide different national cut-off dates for determining the out-of-commerce status of works and subject matter has been revived by the European Parliament.²³

- 8 The scope of the search to establish the out-of-commerce status remains undetermined.** Are offers of second-hand sales covered by the notion of "customary channels of commerce" (e.g., through brick and mortar second-hand bookshops or e-commerce platforms)?²⁴ Should the search be conducted in "customary channels of commerce" of the Member State of origin of the works,²⁵ the

on Legal Affairs (JURI) of the European Parliament of 29 June 2018 (PE601.094v02-00 - A8-0245/2018), adopting the Draft European Parliament Legislative Resolution on the proposal for a directive of the European Parliament and of the Council on copyright in the Digital Single Market (COM(2016)0593 - C8-0383/2016 - 2016/0280(COD)) (JURI Report); Amendment 58 of the Opinion of the Committee on the Internal Market and Consumer Protection (IMCO) of 14 June 2017; and Amendments 18 and 61 of the Opinion of the Committee on Culture and Education (CULT) of 4 September 2017.

- 20 Commission (2016), Commission Staff Working Document, Impact Assessment on the modernisation of EU copyright rules, 14 September 2016, SWD(2016) 301 final, Part 1/3, pp. 70-71.
- 21 Ibid., Part 3/3, Annex 9E, p. 131; and Axel Paul Ringelmann and Marc Mimler (2017), 'Digital exploitation of out-of-print books and copyright law: French licensing mechanism for out-of-print books under CJEU scrutiny', *EIPR*, Vol. 39, No. 3, p. 193.
- 22 Commission (2016), *supra* 20, Part 3/3, Annex 9E, p. 131.
- 23 Parliament's Amendment 69 provides that "Member States may provide a cut-off date in relation to determining whether a work previously commercialised is deemed to be out of commerce.", reflecting Amendment 69 of the JURI Report.
- 24 Memorandum of Understanding, *supra* 11, referred to "second hand bookshops or antiquarian bookshops" in its definition of out-of-commerce books. This definition is supported by Reto M. Hilty, Tao Li and Valentina Moscon (2017), 'Out-of-Commerce Works', in: Reto M. Hilty and Valentina Moscon (ed.), *Modernisation of the EU Copyright Rules*, Position Statement of the Max Planck Institute for Innovation and Competition, Max Planck Institute for Innovation and Competition Research Paper No. 17-12, p. 63.
- 25 Commission (2016), *supra* 8, Art. 7(4)(a).

Member States where the CHI's collections in which the works are permanently located is established,²⁶ in both, or in all EU Member States? If this last option were the case, searching all "customary channels of commerce" in all the Member States could be challenging, particularly due to linguistic hurdles involved and the requirement to consider all "translations, versions and manifestations".²⁷ With regard to the need to verify commercial availability of translations, it could be questioned whether the presence in the commercial channels of commerce of a translation into one language has to influence the status of a translation into another language of the same work. Why should the availability of a Polish translation prevent a Swedish translation from being considered out-of-commerce, while the likelihood of hypothetical harm for rightholders through the substitute is negligent?²⁸ However, the DSM Draft Directive does limit possible negative externalities of this indeterminacy by **barring unnecessary and unreasonable licencing—and therefore search—requirements** for out-of-commerce works. According to Article 7(2) of the Directive Proposal:

*Member States shall, in consultation with rightholders, collective management organisations and cultural heritage institutions, ensure that the requirements used to determine whether works and other subject-matter can be licensed in accordance with paragraph 1 do not extend beyond what is necessary and reasonable and do not preclude the possibility to determine the out-of-commerce status of a collection as a whole, when it is reasonable to presume that all works or other subject-matter in the collection are out of commerce.*²⁹

- 9 In particular, the possibility to determine the out-of-commerce status of a collection of works as a whole** might overcome those limitations for mass digitisation projects that the Orphan Works Directive's work-by-work diligent search requirement brought about.³⁰ In any event, according

26 Commission (2016), *supra* 8, Art. 7(4)(c).

27 Conference of European National Librarians (CENL), CENL Statement on Proposal for a Directive in the Digital Single Market, 22 February 2017, p. 2, available at: <<http://www.cenl.org/wp-content/uploads/CENL-DSM-FINAL.pdf>> (considering this obligation impractical).

28 Probably to remedy this situation, Amendment 69 of Parliament's Amendments and of the JURI Report, proposes to delete the reference to all "translations, versions and manifestations" of out-of-commerce works or other subject matter in Article 7(2) of the DSM Draft Directive.

29 Commission (2016), *supra* 8, Art. 7(2).

30 Commission (2016), *supra* 20, Part 2/3, Annex 2B, p. 16 (discussing CHIs' responses to the Public consultation on the review of EU copyright rules highlighting this issue); and EUIPO (2017), Orphan Works Survey 2017: Summary Report, pp. 7 (Executive Summary: "Technical and legal challenges exist mainly in the area of diligent search requirements which are perceived as too complex and as rendering the system unsuitable for mass digitisation."), 14, 19, 20-22, 27, 29, 32 and 37.

to Article 9 of the DSM Draft Directive, a stakeholder dialogue shall also be set up to fine-tune licencing requirements, particularly those mentioned above.

Member States shall ensure a regular dialogue between representative users' and rightholders' organisations, and any other relevant stakeholder organisations, to, on a sector-specific basis, foster the relevance and usability of the licensing mechanisms referred to in Article 7(1), ensure the effectiveness of the safeguards for rightholders referred to in this Chapter, notably as regards publicity measures, and, where applicable, assist in the establishment of the requirements referred to in the second subparagraph of Article 7(2).³¹

C. Implementing EU-Wide Extended Collective Licensing

- 10 Acknowledging—often insurmountable—difficulties for obtaining prior consent to the use of out-of-commerce works, Title III of the DSM Draft Directive would like to promote their use through a **collective management mechanism**.

Member States shall provide that when a collective management organisation, on behalf of its members, concludes a non-exclusive licence for non-commercial purposes with a cultural heritage institution for the digitisation, distribution, communication to the public or making available of out-of-commerce works or other subject-matter permanently in the collection of the institution, such a non-exclusive licence may be extended or presumed to apply to rightholders of the same category as those covered by the licence who are not represented by the collective management organisation [...].³²

- 11 **Extended collective licenses (ECL)** have become a policy option in several jurisdictions to tackle, *inter alia*, the orphan works problem within digitisation projects.³³ They are traditionally applied in various sectors in Denmark, Finland, Norway, Sweden and Iceland.³⁴ More recently the ECL legislation was

adopted in other EU Member States: Hungary,³⁵ Slovakia,³⁶ and the UK³⁷. Proposals to introduce the ECL in important jurisdictions outside of Europe were notably made in China,³⁸ Japan³⁹ and the USA.⁴⁰ The system combines the voluntary transfer of rights from rightholders to a collective management organisation (CMO) with the legal extension of the collective agreement to third parties who are not members of the substantially representative CMO. Use of this mechanism for the digitisation and making available of out-of-commerce works in the EU was approved by the consensus of stakeholders, representing libraries and archives on the one hand, and authors and publishers on the other hand, and witnessed by the European Commissioner for Internal Market and Services.⁴¹ A user may obtain a licence to use all the works included in a certain category. With the exception of the rightholders claiming individual remuneration or opting out from the system, the ECL automatically applies

Schovsbo (2010), 'Extended Collective Licenses and the Nordic Experience - It's a Hybrid but is It a Volvo or a Lemon?', *Columbia Journal of Law and the Arts*, Vol. 33, No. IV, pp. 471-498.

35 Article 87(1) of the Hungarian Copyright Law. Dora Hajdu (2016), *La gestion collective des droits des auteurs : ses formes imposées par la loi hongroise et française*, doctoral thesis, Université Paris-Saclay, France, pp. 17 and 34; and Peter Mezei (2014), 'The New Orphan Works Regulation of Hungary', *IIC*, Vol. 45, No. 8, p. 943.

36 Matej Gera (2016), 'Extended collective licensing under the new Slovak Copyright Act', *JIPLP*, Vol. 11, No. 3, pp. 170-171.

37 The mechanism of extended collective licensing was introduced in the UK law in 2014 through adoption of two statutory instruments, the Copyright (Regulation of Relevant Licensing Bodies) Regulations 2014 (SI 2014/8988) and the Copyright and Rights in Performances (Extended Collective Licensing) Regulations 2014 (SI 2014/2588). Dinusha Mendis and Victoria Stobo (2016), 'Extended collective licensing in the UK - one year on: a review of the law and a look ahead to the future', *EIPR*, Vol. 38, No. 4, pp. 208-220.

38 Fuxiao Jiang and Daniel Gervais (2016), 'Collective Management in China', in: Daniel Gervais (ed.), *Collective Management of Copyright and Related Rights*, 3rd edn., Alphen aan den Rijn, Netherlands: Kluwer Law International, p. 444 and Wenqi Liu (2012), 'Models for Collective Management of Copyright from an International Perspective: Potential Changes for Enhancing Performance', *Journal of Intellectual Property Rights*, Vol. 17, p. 54 (footnote 12).

39 In Japan, the Intellectual Property Promotion Plan ("知的財産推進計画") 2016, p.11, available at: <www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku20160509.pdf>, considered facilitation of copyright licensing through introduction of extended collective licensing.

40 The study of the US Copyright Office recommended establishment of a "pilot" extended collective licensing for mass digitisation projects "serving nonprofit educational and research purposes", US Copyright Office (2015), *Orphan Works and Mass Digitization*, Report of the Register of Copyrights, p. 106.

41 Principle No. 2 "Practical Implementation of Collective Agreements" of the Memorandum of Understanding, *supra* 11.

31 Commission (2016), *supra* 8, Art. 9.

32 Commission (2016), *supra* 8, Art. 7(1).

33 Johan Axhamn and Lucie Guibault (2011), *Cross-border Extended Collective Licencing: a Solution to Online Dissemination of Europe's Cultural Heritage?*, August 2011 (final report prepared for EuropeanaConnect); Marco Ciurcina, Juan Carlos De Martin, Thomas Margoni, Federico Morando and Marco Ricolfi (2009), *Creatività Remunerata, Conoscenza Liberata: File Sharing e Licenze Collettive Estese*, 15 March 2009 (position paper prepared for the NEXA Center for Internet and Society); Alain Strowel (2011) 'The European "Extended Collective Licensing" Model', *Columbia Journal of Law & the Arts*, Vol. 34, No. 4, p. 665.

34 Tarja Koskinen-Olsson and Vigdís Sigurdardóttir (2016), 'Collective management in the Nordic Countries', in: Daniel Gervais (ed.), *Collective Management of Copyright and Related Rights*, 3rd edn., Alphen aan den Rijn, Netherlands: Kluwer Law International, pp. 243-262; and Thomas Riis and Jens

to all domestic, foreign, traceable or untraceable rightholders.

12 In other words, according to the DSM Draft Directive, when a CMO concludes a non-exclusive licence for non-commercial purposes with a CHI for digitising and making available out-of-commerce works, such a licence may be extended to other unrepresented rightholders under the conditions above.⁴² This provision does not oblige Member States to introduce ECL schemes only, but it is open to any alternative models capable of factitiously representing non-members,⁴³ taking pragmatically into account existing national mechanisms.⁴⁴ However, in order to also represent CMOs' non-members, any chosen model must fulfil three mandatory conditions:

- (a) *the collective management organisation is, on the basis of mandates from rightholders, broadly representative of rightholders in the category of works or other subject-matter and of the rights which are the subject of the licence;*
- (b) *equal treatment is guaranteed to all rightholders in relation to the terms of the licence;*
- (c) *all rightholders may at any time object to their works or other subject-matter being deemed to be out of commerce and exclude the application of the licence to their works or other subject-matter.*⁴⁵

13 **Territorial extension of the licences between a CHIs and CMOs does reach the entire EU territory.**⁴⁶

*Works or other subject-matter covered by a licence granted in accordance with Article 7 may be used by the cultural heritage institution in accordance with the terms of the licence in all Member States.*⁴⁷

14 Apparently, the proposal provides CHIs with the capacity of disseminating their collections as widely as possible according to the goals of the DSM whose

achievement promoted the reform. The DSM Draft Directive's Explanatory Memorandum qualifies the need for EU action as follows:

*initiatives [for facilitating dissemination of and access to out-of-commerce works] only exist in some Member States and are only applicable on the national territory. EU intervention is therefore necessary to ensure that licensing mechanisms for the access and dissemination of out-of-commerce works are in place in all Member States and to ensure their cross-border effect.*⁴⁸

15 Finally, the Impact Assessment reinforces this point by noting that “[w]ithout EU intervention, such actions would be limited by national borders (and would happen only in some MS [Member States]).”⁴⁹ Accordingly, Article 8(1) in the DSM Draft Directive does pre-empt territorial limitations as CHIs are granted the right to use licenced works in all Member States. The reference to a use “in accordance to the term of the licence” clearly refers to terms other than territorial limitations. Otherwise, the provision would be meaningless.

16 In order to strengthen legitimacy, only **broadly representative CMOs** would be entitled to conclude ECLs or other similar schemes. Obviously, if interpreted too strictly, this requirement might pose challenges to the practical implementation of the ECL mechanisms. The proposal does introduce some clarifications in determining the representativeness criterion by noting:

Member States shall ensure that the licences referred to in paragraph 1 are sought from a collective management organisation that is representative for the Member State where:

- (a) *the works or phonograms were first published or, in the absence of publication, where they were first broadcast, except for cinematographic and audiovisual works;*
- (b) *the producers of the works have their headquarters or habitual residence, for cinematographic and audiovisual works; or*
- (c) *the cultural heritage institution is established, when a Member State or a third country could not be determined, after reasonable efforts, according to points (a) and (b).*⁵⁰

17 Apparently, representativeness must only be of **national character**, since licences have to be sought from CMOs only *representative in the Member State* where works first originate, unless the country

42 Commission (2016), *supra* 20, Part 3/3, p. 120.

43 Commission (2016), *supra* 8, Recital 23 (“Such mechanisms can include extended collective licensing and presumptions of representation”).

44 Commission (2016), *supra* 20, Part 3/3, Annex 9E, pp. 131-132. New Recital 22a of Parliament's Amendments states: “Several Member States have already adopted extended collective licensing regimes, legal mandates or legal presumptions facilitating the licencing of out-of-commerce works.” (Amendment 23).

45 Commission (2016), *supra* 8, Art. 7(1)(a-c). Lucie Guibault and Simone Schroff (2018), ‘Extended Collective Licensing for the Use of Out-of-Commerce Works in Europe: A Matter of Legitimacy Vis-à-Vis Rights Holders’, *IIC*, Vol. 49, pp. 918 and 937.

46 Opinion of the European Economic and Social Committee, Copyright package, INT/804, adopted 25 January 2017, para. 5.8.

47 Commission (2016), *supra* 8, Art. 8(1) (emphasis added).

48 Commission (2016), *supra* 8, p. 5 (emphasis added).

49 Commission (2016), *supra* 20, Part 1/3, p. 13.

50 Commission (2016), *supra* 8, Art. 7(4).

of origin cannot be determined. However, some clarifications regarding the territorial scope of the notion of representativeness would be welcome. Again, CMOs have to be broadly representative (a) in the **category of works** (or other subject matter) and (b) in the **category of rights**, which are the subject of the licence.⁵¹ Therefore, representativeness needs to also be assessed according to a specific category of works and licenced rights.

- 18 As the Impact Assessment noted, establishing CMOs’ “broad representativeness” for works and rights might be a critical challenge to the effectiveness of the reform as in some Member States there are no CMOs in the audio-visual and visual arts sector—especially photography—to begin with.⁵² How this lack of representativeness can be overcome—or representative CMOs set up if never created given the relevant transaction costs involved⁵³—unfortunately, the reform proposal does not say.⁵⁴ A possible solution might be reliance on existing CMOs for the exercise of rights to remuneration (e.g. private copying and/or reprography)⁵⁵. While these CMOs usually do not manage the rights to making available audiovisual and photographic works, they do however, manage non-exclusive rights over *the same works and of the same rightholders*. Therefore, possibly, also as a solution to minimise transaction costs, **where no CMO representative of “rights” is established, CMOs representative of “works” might be considered to be representative**.
- 19 If necessary collective management arrangements are not in place or if the representativeness of CMOs cannot be established (e.g., due to the lack of cooperation among rightholders) it would be necessary to adopt a new exception for achieving the cultural objectives of the copyright reform.

The European Parliament proposes to leave it up to each Member State to decide whether to adopt a new exception, provided that there is not collective licensing alternative.⁵⁶

- 20 According to the DSM Draft Directive, the possibility for rightholders to **opt out** should be provided prior to and during the licencing term. This provision differentiates the model endorsed by the proposal from the traditional ECL model, where opting out is usually possible only once licences are concluded.⁵⁷ This arrangement should further enhance safeguards to rightholders’ interests when contrasted with Nordic countries’ ECL.

D. Overcoming the Soulier Decision? Introducing General Publicity Obligations Rather Than Individualised

- 21 The proposed change to the EU *acquis* would also help to **overcome some of the consequences of the CJEU’s Soulier decision**.⁵⁸ The CJEU ruled against the French law enabling an approved CMO to authorise the digital reproduction and communication to the public of out-of-commerce books.⁵⁹ Although the law provided authors with an opt-out mechanism and some other safeguards, the CJEU declared the French law uncompliant with European law,⁶⁰ which

51 Commission (2016), *supra* 8, Art. 7(1)(a).

52 Commission (2016), *supra* 20, Part 3/3, Annex 9E, p. 132.

53 Eugene Mopsik (2011), ‘Photographers and Collective Licencing: A Short History with No Ending’, *Columbia J. of L. & the Arts*, Vol. 34, No. 4, pp. 619-622 (discussing practical problems related to the establishment of collective management of rights in photographic works).

54 Considering the representativeness as a “contextual” criterion (the test should not be the same for a just-created CMO as for a well-established CMO) can be helpful in some situations. In favour of this interpretation, Daniel Gervais (2016), ‘Collective Management of Copyright: Theory and Practice in the Digital Age’, in: Daniel Gervais (ed.), *Collective Management of Copyright and Related Rights*, 3rd edn., Alphen aan den Rijn, Netherlands: Kluwer Law International, p. 24 (footnote 64).

55 For a comparative approach on the various existing “limitation-based remuneration rights”, see Christophe Geiger and Oleksandr Bulayenko (2017), ‘General report: Scope and enforcement tools to ensure remuneration’, in: Silke von Lewinski (ed.), *Remuneration for the use of works – Exclusivity vs Other Approaches*, Berlin, Germany: de Gruyter, pp. 112-182 (report for the ALAI Congress 2015).

56 New Article 7(1a) and (1b) and Recital 22a of the Parliament Amendments 23 and 69. This proposal was supported by: Amendments 23 and 69 of the JURI Report, Amendment 57 of the Opinion of the Committee on the Internal Market and Consumer Protection (IMCO) of 14 June 2017, and Amendment 41 of the Opinion of the Committee on Industry, Research and Energy (ITRE) of 1 August 2017. According to the Parliament’s text, rightholders retain the right to opt out from the use of their works under this exception and limitation, like they otherwise would under an ECL.

57 Oleksandr Bulayenko (2016), ‘Permissibility of Non-Voluntary Collective Management of Copyright under EU Law: The Case of the French Law on Out-of-Commerce Books’, *JIPITEC*, Vol. 7, No. 1, pp. 57-58 and 64-65 (discussing the difference between a *priori* and a *posteriori* opt out).

58 As also seen in the *Google Books* case in the USA, courts have expressed hesitations in endorsing mechanisms similar to the ECL without explicit statutory provisions, Giancarlo Frosio (2011), ‘Google Books Rejected: Taking the Orphans to the Digital Public Library of Alexandria’, *Santa Clara Comp. and High Tech. L.J.*, Vol. 28, pp. 81-141.

59 Loi No. 2012-287 du 1er mars 2012 relative à l’exploitation numérique des livres indisponibles du XXe siècle. For analysis of the French mechanism for making available out-of-commerce works, Bulayenko (2016), *supra* 57, pp. 51-68; Jane Ginsburg (2015), ‘Fair Use for Free, or Permitted-but-Paid?’, *Berkeley Tech. L.J.*, Vol. 29, pp. 1425-1430; Franck Macrez (2012), ‘L’exploitation numérique des livres indisponibles : que reste-t-il du droit d’auteur ?’, *Recueil Dalloz*, Vol. 12, pp. 749-757.

60 With the Directive 2001/29/EC of the European Parliament

provides authors—not CMOs—with the right to authorise the reproduction and communication to the public of their works.⁶¹ In particular, the CJEU pointed at the fact that the French legislation *did not include a mechanism ensuring authors are actually and individually informed*.⁶² This requirement might actually render practical implementation of ECL very difficult—due to associated substantial transaction costs—if not impractical.⁶³ In addition, upholding this requirement would threaten the compatibility with EU law of existing ECL schemes.⁶⁴ In the aftermath of *Soulier*, the definition of sufficient information measures for informing rightholders about uses of their works become a bit of a quagmire.

- 22 Given the potentially disruptive effects of the above-mentioned finding of the *Soulier* case, it is advantageous for the digitisation of Europe’s cultural heritage that **the Directive Proposal does not require individualised publicity measures**.⁶⁵ It is desired to specifically mention the **sufficiency of general publicity measures** in the legislation for the avoidance of doubt. Amendment 30 adopted by

and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, 2000 OJ (L 167)10, Arts. 2(a) and 3(1).

61 Judgment in *C-301/15, Marc Soulier Sara Doke v Ministre de la Culture et de la Communication Premier ministre* (16 November 2016), ECLI:EU:C:2016:878, § 52. See also *Opinion of Advocate General Wathelet, C-301/15, Marc Soulier Sara Doke v Ministre de la Culture et de la Communication Premier ministre* (7 July 2016), ECLI:EU:C:2016:536, §§ 38-39 (discussing prior consent and exclusivity).

62 *C-301/15, ibid.*, §§ 38-43.

63 Valérie-Laure Benabou (2017), ‘Pourquoi l’arrêt Soulier et Doke dépasse le cas ReLire : le contrôle par la CJUE des modalités de l’autorisation préalable de l’auteur’, *Dalloz IP/IT*, Vol. 2, pp. 110-112; Caterina Sganga (2017), ‘The eloquent silence of Soulier and Doke and its critical implications for EU copyright law’, *Journal of Intellectual Property Law & Practice*, Vol. 12, No. 4, p. 330 (“the requirement to inform individually each and every author [...] undermines the basis of the balanced mechanism through which ECLs facilitate the market-efficient licensing of whole repertoires by decreasing transaction costs”); and Matej Gera (2017), ‘A tectonic shift in the European system of collective management of copyright? Possible effects of the Soulier & Doke decision’, *EIPR*, Vol. 39, No. 5, pp. 263-264 (“the costs of informing and ensuring that each author is informed and able to decide would be so high as to prevent any meaningful functioning of the schemes”).

64 Commission (2016), *supra* 20, Part 3/3, Annex 9E, pp.131-132 (noting that the requirement of individualised information goes against the currently existing national models in a number of Member States such as Denmark, Finland, Hungary, Poland, Sweden and the UK). See also Franck Macrez (2017), ‘«Soulier» et la résurgence de l’auteur’, *Recueil Dalloz*, Vol. 2, p. 86; Lucie Guibault (2015), ‘Cultural Heritage Online? Settle It in the Country of Origin of the Work’, *JIPITEC*, Vol. 6, No. 3, pp. 174-178.

65 Macrez (2017), *ibid.*, p. 87 and Franck Macrez (2017), *The French Case: From Orphan Books to Out-of-Print Works (and Vice-Versa)*, CEIPI Research Paper No. 2017-14, p. 7, available at: <<https://ssrn.com/abstract=3116783>>.

the European Parliament addresses this issue:

In order to ensure that the licensing mechanisms established for out-of-commerce works are relevant and function properly, that rightholders are adequately protected under those mechanisms, that licences are properly publicised and that legal clarity is ensured with regard to the representativeness of collective management organisations and the categorisation of works, Member States should foster sector-specific stakeholder dialogue.

- 23 In this regard, the proposed reform would require **general publicity measures** on the use of out-of-commerce works for concluding an effective ECL between CMOs and CHIs.⁶⁶ Some Member States already have different transparency/publicity procedures for encoding such information in national public registers.⁶⁷ The DSM Draft Directive would consolidate and harmonise them under EU law, according to the following principles:

Member States shall provide that appropriate publicity measures are taken regarding:

- (a) *the deeming of works or other subject-matter as out of commerce;*
- (b) *the licence, and in particular its application to unrepresented rightholders;*
- (c) *the possibility of rightholders to object, referred to in point (c) of paragraph 1;*

*including during a reasonable period of time before the works or other subject-matter are digitised, distributed, communicated to the public or made available.*⁶⁸

- 24 Article 8(2) of the DSM Draft Directive would also require Member States to ensure that “**information** that allows the identification of works” covered by licences is made accessible **in a single online portal**. This database is to be **established and managed by** the European Union Intellectual Property Office (**EUIPO**), building upon previous EUIPO’s successful implementation of the EU Orphan Works Database.⁶⁹

66 Commission (2016), *supra* 8, Arts. 7(3) and 9. See also Principle 2(2) of the Memorandum of Understanding, *supra* 11 (requiring also that the digital library projects are “widely publicised”).

67 Commission (2016), *supra* 20, Part 3/3, Annex 9E, p. 130.

68 Commission (2016), *supra* 8, Art. 7(3). Parliament’s Amendment 69 replaced “reasonable period of time” by “at least six months”.

69 EUIPO (2017), *supra* 30, p. 37 (Conclusions: “The replies to the survey indicate that there is broad satisfaction amongst users with the overall experience of using the Orphan Works Database”).

Member States shall ensure that information that allows the identification of the works or other subject-matter covered by a licence granted in accordance with Article 7 and information about the possibility of rightholders to object referred to in Article 7(1)(c) are made publicly accessible in a single online portal for at least six months before the works or other subject-matter are digitised, distributed, communicated to the public or made available in Member States other than the one where the licence is granted, and for the whole duration of the licence.⁷⁰

- 25 Finally, the **stakeholder dialogue** set up according to Article 9 of the DSM Draft Directive would be intended, *inter alia*, to ensure the effectiveness of publicity measures to safeguard rightholders referred. Apparently, the stakeholder dialogue might further define publicity measures' substantive and procedural requirements.

E. Do Third-Country Works Need to Be Excluded?

- 26 Finally, the proposal deals with the **effect of the new ECL mechanism over non-EU nationals** by providing that: "Paragraphs 1, 2 and 3 shall not apply to the works or other subject-matter of third country nationals except where points (a) and (b) of paragraph 4 apply."⁷¹
- 27 Apparently, this means that the provisions on the use of out-of-commerce works by CHIs do not apply to non-EU nationals unless: (a) the works were first published or broadcast in a Member State; or (b) for cinematography and audiovisual work, the producer is headquartered or habitually resides in a Member State.⁷²
- 28 The rationale for the exclusion of works of third-country nationals from the ECL mechanism is unclear. The ECL, as it is envisaged in the DSM Draft Directive, is not designed to be an exception or limitation to exclusive rights, as also recognized by dominant doctrine.⁷³ While Recital 26 refers to "reasons of

international comity", this reference remains obscure.⁷⁴ If the mechanism is not an exception or limitation, the three-step test would not apply and there is no issue with regard to the compliance with respective international obligations.

- 29 However, if the mechanism is construed as an exception or limitation, then it would be permitted by the international copyright norms only if it complies with the three-step test.⁷⁵ A group of countries party to the copyright treaties cannot agree among themselves to apply a level of protection below the level of protection guaranteed by the treaties to works originating from those countries.⁷⁶ In any event, even in this latter scenario, which is, as mentioned, residual according to the dominant doctrinal position, Title III, Chapter 1 of the DSM Draft Directive would be compatible with the three-step-test, especially in light of a balanced approach to its interpretation.⁷⁷ First, the proposal does provide

and Access to Information', Report for the Committee on Culture, Science and Education – Parliamentary Assembly, Council of Europe, Strasbourg, October 2009; extended version published in *Intellectual Property Quarterly*, p. 1 (at 10); Bernt Hugenholtz and Ruth Okediji (2008), *Conceiving an International Instrument on Limitations and Exceptions to Copyright*, Final Report, March 2008, p. 19, available at <https://www.ivir.nl/publicaties/download/limitations_exceptions_copyright.pdf>.

- 74 Commission (2016), *supra* 8, Recital 26 (referring specifically to "international comity"). Jørgen Blomqvist, 'International Comity . . . or Triple Error?', *The 1709 Blog*, 31 January 2017, available at: <https://groups.google.com/forum/#!msg/1709-copyright-blog/cxj_fP4XKWg/tdNJ750yAwAJ> (discussing—and criticizing—the way in which international comity has been safeguarded by noting that "if the intention is that the Directive should match the points of attachment of the international Conventions and Treaties, as is suggested by the reference to 'international comity'", it errs by being both too generous and too restrictive).
- 75 E.g., Berne Convention for the Protection of Literary and Artistic Works, Art. 9; Agreement on Trade-Related Aspects of Intellectual Property Rights, Art. 13; Directive 2001/29/EC, *supra* 60, Art. 5(5). On the understanding of this test, see Christophe Geiger, Daniel J. Gervais, and Martin R.F. Senfleben (2014), 'The Three-Step-Test Revisited: How to Use the Test's Flexibility in National Copyright Law', Vol. 29 No. 3, *American University International Law Review*, p. 581.
- 76 Berne Convention, *ibid.*, Art. 20 and Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, Art. 58.
- 77 Christophe Geiger, Jonathan Griffiths and Reto Hilty (2008), 'Towards a Balanced Interpretation of the "Three-Step Test" in Copyright Law', *EIPR*, Vol. 4, pp. 489-496 (noting that all three components of the test should be considered together in a "comprehensive overall assessment" considering the threats that excessive levels of copyright protection pose to, *inter alia*, public interests, notably in scientific progress and cultural, social, or economic development). See also Bernt Hugenholtz and Ruth Okediji (2012), *Conceiving an International Instrument on Limitations and Exceptions to Copyright*, Final Report, 6 March 2008, Executive summary, p. 3 (noting that "limitations and exceptions that (1) are not overly broad, (2) do not rob right holders of a real or

70 Commission (2016), *supra* 8, Art. 8(3).

71 Commission (2016), *supra* 8, Art. 7(5).

72 Commission (2016), *supra* 8, Art. 7(4)(a-b) and Recital 26 (clarifying this interpretation of the provision).

73 See Silke von Lewinski (2004), 'Mandatory Collective Administration of Exclusive Rights – A Case Study on Its Compatibility with International and EC Copyright Law', *e-Copyright Bulletin*, January-March 2004, available at: <portal.unesco.org/culture/en/files/19552/11515904771svl_e.pdf/11515904771svl_e.pdf>; and Christophe Geiger (2007), 'The Role of the Three-Step Test in the Adaptation of Copyright Law to the Information Society', *e-Copyright Bulletin*, January-March 2007, available at: <portal.unesco.org/culture/en/ev.php-URL_ID=34481&URL_DO=DO_TOPIC&URL_SECTION=201.html>; Christophe Geiger (2009), 'The Future of Copyright in Europe: Striking a Fair Balance between Protection

for a special case dealing only with out-of-commerce works and CHIs. Second, the ECL mechanism does not collide with ongoing exploitation, and opt-out would be available for potential future exploitation. Again, rightholders legitimate interests should not be unreasonably prejudiced because works licensed under ECL would be used under conditions actually agreed upon by a significant part of rightholders. If this is the case, however, it would apparently be **unnecessary to exempt third-country works** and other subject matter.⁷⁸

- 30 Especially for languages widely spoken outside Europe, such as English, French, Spanish and Portuguese, it might be difficult to establish the place of first publication and impractical to establish the nationality of authors. Furthermore, at the moment of the first publication of some of the works, several of the EU Member States belonged to countries that do not exist anymore, and whose territory extended beyond the current EU.⁷⁹ In turn, this would actually leave in place considerable transaction costs that prevent digitisation projects today and motivate the present reform.⁸⁰ All in all, the proposal might drop the prohibition of using works of non-EU nationals.⁸¹

F. Conclusions

- 31 Obviously, the European Union has a strong understanding of the social and economic value that could be produced by taking European cultural heritage to the digital network environment. EU policy makers and institutions have set a multiple year agenda to that end,⁸² now further promoted

potential source of income that is substantive, and (3) do not do disproportional harm to the right holders, will pass the test”.); Christophe Geiger, Daniel Gervais and Martin Senftleben, (2014), ‘The Three-Step Test Revisited: How to Use the Test’s Flexibility in National Copyright Law’, *American University International Law Review*, Vol. 29, No. 3, p. 581.

78 Blomqvist, *supra* 74.

79 For example, Estonia, Latvia and Lithuania were a part of the Union of Soviet Socialist Republics (USSR) and Croatia and Slovenia a part of Yugoslavia.

80 CENL, *supra* 27.

81 This change was also supported by Amendment 63 of the Opinion of the Committee on the Internal Market and Consumer Protection (IMCO) of the European Parliament of 14 June 2017.

82 See, e.g., European Commission (2006), Recommendation 2006/585/EC of 31 August 2006 on the Digitisation and Online Accessibility of Cultural Material and Digital Preservation [2006] OJ L237/28; i2010 European Digital Libraries Initiative (2008), High level Expert Group, Copyright Subgroup, Report on Digital Preservation, Orphan works and Out-of-Print Works Selected Implementation Issues (18 April 2008); European Commission (2009), Communication, Copyright in the Knowledge Economy, COM (2009) 532; European Commission (2010), Communication, A Digital Agenda

by the DSM Strategy. The DSM Draft Directive does envision, *inter alia*, a number of synergic actions to facilitate preservation and access to European cultural heritage. Overall, on the issue of out-of-commerce works, the DSM Draft Directive should positively contribute to improving cross-border online access to the cultural heritage in Europe as this paper has highlighted already. However, in conclusion, some further suggestions can be made to strengthen the proposal and bring Europe closer to Pico della Mirandola’s dream of global instantaneous access to knowledge and culture.

- The extension of the notion of “out-of-commerce works” to **works never intended for commercial use** and to works that have **never been in commerce**, as well as the possibility to determine the **out-of-commerce status of a collection of works as a whole** should be pursued.
- **Sufficiency of general publicity measures** should be plainly spelled out. The Directive Proposal does not require Member States to create mechanisms ensuring that rightholders are actually and individually informed of uses of out-of-commerce works. Instead, according to the proposal, general publicity measures would be sufficient for using out-of-commerce works. Hence, the proposal overcomes some of the outcomes of the CJEU’s *Soulier* decision to the advantage of cultural heritage institutions.
- **The scope of the search** to establish the out-of-commerce status of works should be more clearly defined, as this is one of the crucial elements for the fruitful use of the mechanism by cultural heritage institutions.
- **Representativeness of collective management organisations** should be improved by considering alternative solutions where there are no CMOs—and no CMO is likely to be established in the foreseeable future—broadly

for Europe, COM (2010) 245 final; European Commission (2010), Communication, Europe 2020: A Strategy for Smart, Sustainable and Inclusive Growth, COM(2010) 2020; Directive 2012/28/EU of the European Parliament and of the Council of 25 October 2012 on Certain Permitted Uses of Orphan Works, 2012 OJ L299/5 (enabling the use of orphan works after diligent search for public libraries digitisation projects); Europeana: Think Culture <<http://www.europeana.eu/portal>>; Accessible Registries of Rights Information and Orphan Works [ARROW] <<https://joinup.ec.europa.eu/document/accessible-registries-rights-information-and-orphan-works-arrow>> (creating registries of rights information and orphan works). The CJEU seem to support such an approach, see Judgment in C-117/13, *Technische Universität Darmstadt v Eugen Ulmer*, ECLI:EU:C:2014:2196 (11 September 2014) (stating that European libraries may digitise books in their collection without permission from the rightholders with caveats).

representative of rightholders in the category of works and of the rights in some domains (e.g., audiovisual and photographic).

- European Parliament's Amendments offers Member States to provide a **cut-off date** for determining out-of-commerce status of works. While cut-off dates provide for a simple practical criterion, establishment of different cut-off dates for different categories of works in different Member States might lead to undesired consequences.
- Non-mandatory (**back-up**) **exception** for the use of out-of-commerce works when collective licensing mechanisms are not available could offer an alternative to cultural heritage institutions in some Member States. However, the voluntary nature of this exception might further fragment the puzzle of copyright legislation in the EU. Therefore, if a new exception is to be introduced, it would be strongly advisable to make this exception **mandatory**, rather than voluntary.
- Since the **non-application of the mechanism for the use of out-of-commerce works to third-country works** creates transaction costs for European cultural heritage institutions—and since it is not required by the relevant international norms—it is recommended to extend the scope of the mechanism to cover third-country works.

32 The full implementations of the proposed actions—possibly with amendments suggested in this paper—would be essential to European innovation and cultural cohesion. It is vital that the relevant institutions do not depart from this agenda in the path leading to final implementation, but rather strengthen it as far as possible.

Acknowledgements

The positions in this paper do not necessarily reflect the opinions of all scholars working at CEIPI. This is the fourth in a series of opinions issued by the CEIPI on the Digital Single Market Copyright reform. See Christophe Geiger, Oleksandr Bulayenko and Giancarlo Frosio (2017), 'The Introduction of a Neighbouring Right for Press Publisher at EU Level: the Unneeded (and Unwanted) Reform', *EIPR*, Vol. 39, No. 4, pp. 202-210 (CEIPI Research Paper No. 2016-01, available at: <<https://ssrn.com/abstract=2921334>>); Christophe Geiger, Giancarlo Frosio and Oleksandr Bulayenko (2017), 'The EU Commission's Proposal to Reform Copyright Limitations: A Good but Far Too Timid Step in the Right Direction', *EIPR*, Vol. 40, No. 1, pp. 4-15 (CEIPI Research Paper No. 2017-09, available at: <<https://ssrn.com/abstract=3053983>>);

and Christophe Geiger, Giancarlo Frosio and Oleksandr Bulayenko (2018), *The Exception for Text and Data Mining (TDM) in the Proposed Directive on Copyright in the Digital Single Market - Legal Aspects*, In-depth analysis requested by the European Parliament's Committee on Legal Affairs, available at: <[http://www.europarl.europa.eu/RegData/etudes/IDAN/2018/604941/IPOL_IDA\(2018\)604941_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2018/604941/IPOL_IDA(2018)604941_EN.pdf)>; (2018), 'Text and Data Mining in the Proposed Copyright Reform: Making the EU Ready for an Age of Big Data?', *IIC*, Vol. 49, No. 7, p. 814.

The Intersection of 3D Printing and Trademark Law

by **Nina Natalia Baranowska***

Abstract: The paper discusses the possible impact of 3D printing technology on a trademark protection system and argues that, despite some obstacles, selling certificated 3D-printable files by companies can be a reasonable new approach in order to face up to the changes brought about by this new technology. 3D printing (three-dimensional printing, counter crafting), perceived by some as a disruptive technology, is an additive manufacturing technique to create objects by joining or printing layer upon layer of material based on digital models. Certain features of this technology such as democratization and

dissemination of manufacturing process, participation of hobbyists, the role of CAD files, the possibility of introducing modifications into a file, and the worldwide scope of 3D printing based on the Internet connectivity may have an impact on trademark protection to a certain extent. The paper analyzes the cases of this impact and suggests possible solutions: selling 3D-printable certificated files by trademark owners; price regulation; and better educational programs on counterfeit goods. From the hard law perspective, the solution may lie in establishing clear rules of liability for intermediary online platforms.

Keywords: 3D printing; trademark law; trademark protection; disruptive technology; counterfeiting; registration of shapes; platforms; certificated files

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A. Introduction

- 1 “If you are not excited by 3-D printing it is because you are not thinking big enough”.¹ 3D printing is perceived by many authors as a cause of “A Third Industrial Revolution” or at least a significant factor in revolutionizing the world around us.² But

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1 Linda Federico-O’Murchu, “How 3-D printing will radically change the world”, (11 May 2014), online: *CNBC* <<http://www.cnn.com/2014/05/09/will-3-d-technology-radically-change-the-world.html>>.

2 See among others: Christopher Barnatt, “3D Printing: The Next Industrial Revolution”, online: *Explain Future* <<http://explainingthefuture.com/3dprinting.html>>; Kent Roberts, “The Rise of the 3D Printer: Hype or Revolution?”, (25 September 2014), online: *AtlanticNet* <<https://www.atlantic.net/blog/the-rise-of-the-3d-printer-hype-or-revolution/>>; Filemon Schoffer, “Is 3D Printing The Next Industrial Revolution?” in *TechCrunch* (2016); Sam Rega, “How 3D

what makes this technology powerful enough to compare it with the impact of a steam engine and the Industrial Revolution in the XIX century, or the Internet and Digital Revolution? One may say that 3D printing is *just* an additive manufacturing technique to create objects by printing layers of material based on digital models. Although some predictions about 3D printing seem to be exaggerated, this technology is clearly a new phase of technological development, which is transforming our thinking of home printers and putting the manufacturing process onto a more advanced level.

Printing Will Revolutionize Our World”, online: *Bus Insid* <<http://www.businessinsider.com/the-next-industrial-revolution-is-here-3d-printing-2014-8>>; “3D printing: not yet a new industrial revolution, but its impact will be huge”, *The Guardian* (10 December 2013), online: <<https://www.theguardian.com/commentisfree/2013/dec/11/3d-printing-not-yet-a-new-industrial-revolution-but-its-impact-will-be-huge>>; “A third industrial revolution”, *The Economist* (21 April 2012), online: <<http://www.economist.com/node/21552901>>.

- 2 It has to be emphasized that no technology exists in a vacuum. Quite the contrary, almost each new technological advance has a significant impact on society, market and, what is important for this paper – legal regulations. 3D printing is not an exception here. As many commentators observe, 3D printing will force legal scholars and also policy-makers to rethink existing legal concepts within contract law (e.g. the role of prosumers and online platforms, the definition of a “producer”, etc.)³ and tort law (e.g. defining a liable person, proving a causal link, etc.).⁴
- 3 This paper focuses on the intersection of 3D printing and trademark law and examines the boundaries of the impact of 3D printing on the existing trademark law system. As the starting point (Section B), 3D printing is presented as a disruptive technology, which could change the way people currently produce and use products, and which characteristic features could have an impact on trademark law. Among those features are: freedom, easiness, and low cost of designing and printing objects. They lead to democratization and facilitation of the production process and in fact may change or even eliminate the role of the brand as an “intermediary” between a producer and a consumer.
- 4 Next, Section C briefly describes the traditional role of trademark, which is the protection of the products’ identification with a particular quality source by using recognizable signs or expressions. For further deliberations, it is important to highlight two purposes of trademark protection – “consumer protection” and “company incentives”. Those remarks will help to understand the impact of 3D printing on the trademark law system.
- 5 Section D indicates two major areas where the relation between 3D printing and trademark law collides. First of all, the problem whether three-dimensional objects can be registered as trademarks. The greater possibilities of 3D printing will also raise several questions regarding registering three-dimensional objects (shapes) as a trademark, including the role of the trademark law system, the growing scope of registrable subject matter, the reasons for registration of shapes, the enforcement of trademark protection, if the 3D printing would become the norm. Secondly, the problem of whether and to what extent the certain elements of 3D printing such as democratization and dissemination of manufacturing process, participation of hobbyists, the role of CAD file, the

possibility of introducing modifications into a CAD file, and the worldwide scope of 3D printing based on the Internet access could possibly interfere with the trademark law system. In that section, it is stressed that the private reproduction of a trademark is generally not an infringement, which means that the essence of 3D printing, embodied in a homemade production, will not directly and radically affect the core of trademark protection. The current scope of trademark law thus excludes from trademark protection many potential threats to a company’s brand due to a commercially-oriented approach and a blurred line between commercial and non-commercial uses. The section also indicates how realistic it is for 3D printing to become a serious risk for companies from the product sectors. It is explained that the series production is still a cheaper way to produce goods and that the technical and practical limits caused by 3D printing will not play important role in many categories of counterfeited goods. Therefore, the problem of using 3D printing for counterfeiting purposes is currently limited to the certain number of products – mainly luxury goods, which are relatively easily accessible through 3D printing and profitable for counterfeiters. Even if the trademark protection may only apply when commercial uses take place and to only some categories of items, 3D printing opens up further possibilities of counterfeiting goods and enables anyone to become a counterfeiter at his/her home and to take commercial advantages of 3D prints. The section also discusses the cases of printing only the trademark, printing the whole item, to which the trademark is attached, and printing the whole item without the trademark, as well as the blurred line between a producer and a user and the line between commercial and non-commercial activities. Next, the role of a CAD file is explained and based on that the section makes a prediction that in the counterfeiting process the files would be offered online by professional counterfeiters, rather than produced by each individual. Finally, the section presents further problems including the status of a CAD file as a product, enforcing companies’ rights, and territorial limitations of trademarks.

- 6 Section E proposes some solutions including a new approach of companies in order to face up to the changes brought about by this new technology, taking as a reference point the Lessig’s concept of modalities consisting of hard law regulations, market regulations, social norms and “architecture”. I claim that in the area of trademark law, hard law regulation might not be an adequate response to problems presented by 3D printing, mainly because of limited abilities of enforcing rights and high litigation costs. Therefore, the idea of selling 3D printed certificated files by trademark owners will be discussed. Although this idea has some disadvantages (such as losing control over a product and its quality,

3 See for example: Thierry Rayna, Ludmila Striukova & John Darlington, “Co-creation and user innovation: The role of online 3D printing platforms” (2015) 37 J Eng Technol Manag 90.

4 See for example: Patrick J Comerford & Erik P Belt, “3DP, AM, 3DS and product liability.(3D printing, additive manufacturing)” (2015) 55:4 St Clara Law Rev 821.

increasing potential liability for products, confusing consumers, etc.), this solution seems a reasonable and more flexible approach to adjust companies to a new 3D printing reality. Next, I show that the price regulation will be of key importance. I also comment on the necessity of education - a society which is well-informed about detrimental effects of using counterfeit goods can make a wise and conscious decision and even generate social norms regarding whether it wants to contribute to the counterfeit industry. The last solution will be to establish clear rules of liability for intermediary online platforms where it is possible to upload and download unauthorized designs of a trademarked good or trademark itself.

- 7 The following deliberations are not based on a specific legal system, so that the general problems of trademark law as a system of protection companies (and to some extent consumers) can be presented in a model approach. The discussion is, however, supported by references to EU law, the *Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)*, and some examples from the U.S. system.

B. 3D Printing as a Disruptive Technology

- 8 3D printing (three-dimensional printing, counter crafting) is perceived as one of the new disruptive technologies. Jeremy Rifkin, an American economic and social theorist, in his book from 1995 titled *"The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era"*⁵ used the ambiguous term "disruptive technologies" to describe new technological phenomena which, on the one hand, have a huge economic potential, and on the other hand replace previous solutions, causing old businesses and professions to disappear. Indeed, new technologies can quickly reorganize the world where we live and work and create a new order with new range of products, services, but also threats. A report by the *McKinsey Global Institute* from May 2013 titled *"Disruptive technologies: Advances that will transform life, business, and the global economy"* indicated 3D printing as one of the twelve new technologies which by 2025 will demonstrate the greatest commercial potential and exert the largest impact on social and economic changes.⁶ According

to the report, the illustrative pools of economic value that could be impacted by 3D printing include \$11 trillion of global manufacturing GDP and \$85 billion revenue from global toy sales.⁷

- 9 3D printing is defined as additive manufacturing techniques to create objects by joining or printing layer upon layer of material based on digital models.⁸ Additive manufacturing (AM) covers many specific processes which vary in the materials and machine technologies. A report on Standard Terminology for Additive Manufacturing Technologies, published by the American Society for Testing and Materials (ASTM), initially by the group ASTM F42 - Additive Manufacturing in 2012 and then developed by the Subcommittee: F42.91 in 2015, indicates 7 categories of additive manufacturing, which are: VAT Photopolymerisation, Material Jetting, Binder Jetting, Material Extrusion, Powder Bed Fusion, Sheet Lamination, Directed Energy Deposition.⁹
- 10 Additive manufacturing was invented in the 1980s and was initially used for "rapid prototyping" of mechanical models in plastic,¹⁰ and for industrial use. Before 3D printing technology, prototypes were usually made in different geographical areas like India or China so that it required the involvement of time and human and financial resources.¹¹ The base of 3D printing technology is well-known computer aided design programs (CAD), which evolved from the two-dimensional space digital drafting.¹² The

Things, cloud, advanced robotics, autonomous and near-autonomous vehicles, next-generation genomics, energy storage, 3D printing, advanced materials, advanced oil and gas exploration and recovery, renewable energy.

- 7 *Ibid* at 5.
- 8 See for example: Michael Weinberg, *It Will Be Awesome If They Don't Screw it Up: 3D Printing, Intellectual Property, and the Fight Over the Next Great Disruptive Technology* (Public Knowledge, 2010) at 2; Lisa Harouni, "A primer on 3D printing", (November 2011), online: *TEDTalk* <https://www.ted.com/talks/lisa_harouni_a_primer_on_3d_printing>.
- 9 American Society for Testing and Materials (ASTM), Group F42 Additive Manufacturing Technologies, developed by Subcommittee F42.91, "Standard Terminology for Additive Manufacturing Technologies", (2012), online: <http://www.astm.org/DATABASE.CART/REDLINE_PAGES/F2792.htm>. See more Ben Redwood, "Additive Manufacturing Technologies: An Overview", online: *3D Hubs* <<https://www.3dhubs.com/knowledge-base/additive-manufacturing-technologies-overview>>; Additive Manufacturing Research Group, Loughborough University, "The 7 categories of Additive Manufacturing", online: <<http://www.lboro.ac.uk/research/amrg/about/the7categoriesofadditivemanufacturing/>>.
- 10 Barnatt, *supra* note 2.
- 11 Juho Vesanto, "Saving Resources by Prototyping with 3D Printing - A Lamplight Case Study", (30 September 2013), online: *3D Print Ind* <<https://3dprintingindustry.com/news/saving-resources-prototyping-3d-printing-lamplight-case-study-17629/>>.
- 12 See "CAD Software", online: <<https://www.autodesk.com/>>

5 Jeremy Rifkin, *The end of work: the decline of the global labor force and the dawn of the post-market era* (New York: GPPutnam's Sons, 1995).

6 McKinsey Global Institute, "Disruptive technologies: Advances that will transform life, business, and the global economy", (May 2013), online: <<http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/disruptive-technologies>>. These technologies are: mobile Internet, automation of knowledge work, Internet of

years of research, and continuous improvement of technological processes has transformed the AM from an expensive and inaccessible technology to easier and cheaper to acquire and use.¹³ The recent expiry of patent rights over some of the technologies invented in the 1980s, including 3D printing, has sparked consumers' interest in the potential of 3D printing, which is perceived by many as the symbol of the shift towards individualism and creativity.¹⁴

- 11 3D printing allows for the production of day-to-day consumer products (furniture, clothes,¹⁵ footwear,¹⁶ sports gear,¹⁷ kitchen implements, office materials, tools, toys, decorative elements),¹⁸ but can also be applied in mass-scale production and professional use (automotive industry, robotics, architecture, construction, etc).¹⁹ 3D printing technology can also be applied in the food industry.²⁰ This technology is

solutions/cad-software>.

- 13 See Gil Laroya, "3D Printing Can Turn You Into a Designer", (16 December 2013), online: *Huffington Post* <http://www.huffingtonpost.com/gil-laroya/3d-printing-design_b_4440463.html>.
- 14 Hod Lipson & Melba Kurman, *Fabricated: The New World of 3D Printing* (New York: John Wiley & Sons, 2013) at 22, 103; See more: Chris Anderson, *Makers: the new industrial revolution* (London: Random House Business Books, 2013).
- 15 Rachel Hennessey, "3D Printing Hits The Fashion World", (7 August 2013), online: *Forbes* <<http://www.forbes.com/sites/rachelhennessey/2013/08/07/3-d-printed-clothes-could-be-the-next-big-thing-to-hit-fashion/>>.
- 16 Michael Fitzgerald, "With 3-D Printing, the Shoe Really Fits", (15 May 2013), online: *MIT Sloan Manag Rev* <<http://sloanreview.mit.edu/article/with-3-d-printing-the-shoe-really-fits/>>.
- 17 Richard Lai, "EADS's Airbike is a 3D-printed nylon bicycle, actually looks rather decent", (3 September 2011), online: *Engadget* <<https://www.engadget.com/2011/03/09/eads-airbike-is-a-3d-printed-nylon-bicycle-actually-looks-rat/>>.
- 18 See for example: Steven Kurutz, "A Factory on Your Kitchen Counter", *N Y Times* (20 February 2013), online: <<http://www.nytimes.com/2013/02/21/garden/the-3-d-printer-may-be-the-home-appliance-of-the-future.html>>; Dan Nosowitz, "A Smooth, 3-D-Printed, Multicolored, High-Resolution Vase", (19 July 2013), online: *Pop Sci* <<http://www.popsci.com/technology/article/2013-07/smooth-3-d-printed-vase-has-four-times-resolution-makerbot>>.
- 19 Michelle Starr, "Dubai unveils world's first 3D-printed office building", (25 May 2016), online: *CNET* <<https://www.cnet.com/news/dubai-unveils-worlds-first-3d-printed-office-building/>>; Francesca Perry, "Chinese firm creates 'world's tallest 3D-printed building'", *The Guardian* (31 January 2015), online: <<https://www.theguardian.com/cities/2015/jan/31/chinese-firm-creates-worlds-tallest-3d-printed-building>>; Clare Scott, "Saudi Arabian Government Meets With WinSun to Discuss 3D Printing as Part of a Plan to Build 1.5 Million Homes in Five Years", (3 August 2016), online: *3DPrint.com* <<https://3dprint.com/144727/saudi-arabia-winsun-housing/>>.
- 20 Aaron Souppouris, "NASA is funding a 3D food printer, and it'll start with pizza", (21 May 2013), online: *The Verge* <<https://www.theverge.com/2013/5/21/4350948/nasa-funding-3d-food-printer-pizza>>; Bianca Bosker, "3D Printers Could Actually Make Donuts Healthy", *Huffington*

already irreplaceable in medicine, especially in the field of replacement and reconstructive surgery.²¹ Alongside printing of dental implants, prosthetics and hearing aids,²² research is presently focusing on bioprinting. Bioprinting opens up new possibilities in the scope of innovative transplantology methods thanks to the possibility of recreating organs and tissue from human cells using 3D technology.²³

- 12 Significantly, 3D printing can be a key factor in future commercial application,²⁴ but it can also provide individuals with further possibilities to print objects in their own homes and thus become a symbol of the "do-it-yourself" movement ("DIY").²⁵ Lipson and Kurman point out that 3D printing requires less operator skills which, along with a high production capacity, make "3D printers ideal for home use".²⁶ Taking into account the current developments of 3D printing, it is probable that 3D printers will one day be used in the majority of private homes, like computers and 2D printers.²⁷ So far, however, 3D printers intended for home use have not reached the level to print sophisticated forms in materials other than plastic.

Post (24 April 2013), online: <http://www.huffingtonpost.com/2013/04/24/3d-printed-food_n_3148598.html>.

- 21 Sean Gallagher, "Doctors save baby's life with 3D-printed tracheal implant", (24 May 2013), online: *Ars Technica* <<https://arstechnica.com/information-technology/2013/05/doctors-save-babys-life-with-3d-printed-tracheal-implant/>>; Carol Torgan, "3-D Printing of Working Bionic Ears", (13 May 2015), online: *Natl Inst Health NIH* <<https://www.nih.gov/news-events/nih-research-matters/3-d-printing-working-bionic-ears>>.
- 22 Ian Birrell, "3D-printed prosthetic limbs: the next revolution in medicine", (19 February 2017), online: *The Guardian* <<https://www.theguardian.com/technology/2017/feb/19/3d-printed-prosthetic-limbs-revolution-in-medicine>>.
- 23 Liat Clark, "Bioengineer: the heart is one of the easiest organs to bioprint, we'll do it in a decade", (21 November 2013), online: *WIRED UK* <<http://www.wired.co.uk/article/3d-printed-whole-heart>>.
- 24 Kevin Maney, "3-D printing could break China's economic stranglehold and make manufacturing great again", (2 April 2016), online: *Newsweek* <<http://www.newsweek.com/2016/04/15/3d-hubs-3-d-printers-manufacturing-china-443350.html>>.
- 25 See for example: Rhys Jones et al, "RepRap - the Replicating Rapid Prototyper" (2011) 29:1 *Robotica* 177; See also the idea of Maker Movement: "The Maker Movement Manifesto", *PR Newswire* (2013); Amanda Scardamaglia, "Flashpoints in 3D Printing and Trade Mark Law" (2014) 23 *J Law Inf Sci* 30 at 34.
- 26 See ten principles indicated by authors in Chapter 2: Lipson & Kurman, *supra* note 14.
- 27 Compare: Daniel O'Connor, "A 3D Printer in Every Home: Redux", (11 October 2016), online: *TCT Mag* <<http://www.tctmagazine.com/api/content/8908b0b0-8fcc-11e6-bee4-0a161eac8f79/>>; Lipson & Kurman, *supra* note 14 at 20–22.

- 13 Nonetheless, the scope of the application of 3D printing technology is expanding, and constant processes of improvement, application of new materials, and a reduction in prices of the materials and printers²⁸ are facilitating the popularity and accessibility of this technology. 3D printing is also being promoted by the biggest tech companies such as Amazon and Microsoft who are selling 3D printers²⁹ and creating more efficient working environments with this technology.³⁰
- 14 Many commentators see 3D printing not only as a new manufacturing paradigm of the XXI century, but also as a trigger for the changes in society, the environment, trade, the market, entrepreneurship, and of course law.³¹ For example, according to the McKinsey Report, 3D printing technology could be beneficial for small companies by providing them with technological tools so that they can rapidly enter into the market and compete on a more significant scale.³² On the other hand, as the use of 3D printing technology becomes more common, ethical³³ and legal concerns³⁴ are increasingly raised.
- 15 From the legal perspective, 3D printing raises many questions in different areas of law, including contract law (e.g. it challenges the role of prosumers and the definition of a “producer”) and tort law (e.g. who, and to what extent, is liable for damages caused by the 3D printed object, if defects can arise from the initial design, the code, the printer, the material, or in the improper use of the printer and/or materials). 3D printing also has an impact on Intellectual Property Law: patent law,³⁵ copyright

law,³⁶ and trademark law which will be discussed in this paper.

C. The Traditional Role of Trademark Law

- 16 The trademark law system was created in order to ensure that products or services that are identifiable through particular qualities, would have a recognizable sign or expression attributed to it to protect this identification.³⁷ According to the World Intellectual Property Organization, trademark is “a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises”.³⁸ This definition is however somewhat a shortcut. It should be noted that the sign itself is not yet a trademark, but only the element of the trademark concept. The sign has to be associated with the product in a way that creates a complex relation in the public perception between the sign and the product. The core of the trademark is thus the relation between the sign and the product, recognized by consumers. This relation can be created by the constant usage of the sign in relation to certain products or by indicating the list of products to which the sign will be related in a registration form. In practice, though, the notion “trademark” is used just to determine the sign.³⁹ Nowadays, trademarks can take different forms such as pictures, logos, designs, colors, melodies, scents, store layout, menu, etc.⁴⁰
- 17 It means that the primary role of the trademark is to determine the origin (source) of the product. The particular trademark leads to the certain public perception of the product, which allows to individualize the product based on its “commercial” source. What is more, this “commercial” source most frequently creates a consumer perception of the quality of the product or its certain features.

28 Lipson & Kurman, *supra* note 14 at 84.

29 Ian Paul, “Amazon quietly launches complete 3D printing store”, (14 June 2013), online: *PCWorld* <<http://www.pcworld.com/article/2042076/amazon-quietly-launches-complete-3d-printing-store.html>>.

30 Michael Endler, “Microsoft Touts Windows 8.1 3-D Printing”, (8 August 2013), online: *InformationWeek* <<http://www.informationweek.com/hardware/peripherals/microsoft-touts-windows-81-3-d-printing/240159700>>.

31 Lucas S Osborn, “Regulating three-dimensional printing: the converging worlds of bits and atoms” (2014) 51:2 San Diego Law Rev 553 at 560.

32 McKinsey Global Institute, *supra* note 6 at 19.

33 Compare: Jasper L Tran, “To bioprint or not to bioprint” (2016) 17:1 N C J Law Technol 123.; Andy Greenberg, “This Is The World’s First Entirely 3D-Printed Gun”, (3 May 2013), online: *Forbes* <<http://www.forbes.com/sites/andygreenberg/2013/05/03/this-is-the-worlds-first-entirely-3d-printed-gun-photos/>>; Janessa Rivera & Rob van der Meulen, “Gartner Says Uses of 3D Printing Will Ignite Major Debate on Ethics and Regulation”, (29 January 2014), online: *Gartner* <<http://www.gartner.com/newsroom/id/2658315>>.

34 See for example: Nora Freeman Engstrom, “3-D Printing and Product Liability: Identifying the Obstacles” (2013) 162 Univ Pa Law Rev Online 35.

35 See for example: Daniel Harris Brean, “Asserting patents to combat infringement via 3D printing: it’s no ‘use’” (2013)

23:3 Fordham Intellect Prop Media Entertain Law J 771.

36 See among others: S Craig, “Protection for printing: An analysis of copyright protection for 3D printing” (2017) 2017:1 Univ Ill Law Rev 307; Julie Ahrens, “3D Printing and Copyright” (2013) 17:3 Copyr New Media Law News1 3.

37 See 15 U.S. Code § 1127 (2012)

38 “Trademarks”, online: *World Intellect Prop Organ* <<http://www.wipo.int/trademarks/en>>.

39 See for example Article 15 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

40 See for example: Vanessa Mackie, “Scent marks: the future of Canadian trade-mark law” (2005) 18:3 Intellect Prop J 417; José Tizón Mirza, “CJEU expands trade mark law to include the design of a store layout: Apple Inc v Deutsches Patent- und Markenamt (German Patent and Trade Mark Office)” (2014) 36:12 Eur Intellect Prop Rev 813; Richard J Berman, “Color me bad: a new solution to the debate over color trademark registration” (1994) 63:1 George Wash Law Rev 111.

Sometimes the trademark itself can be identified as a symbol of certain characteristics; for example, wealth, social position, fitness and healthy lifestyle. In this sense, trademark plays a quality and advertisement role.

- 18 Generally speaking, trademark law has two purposes. The first is consumer protection, with the goal to prevent consumers from the confusion of the producer of the good, which usually leads to the certain perception of its quality.⁴¹ For example if the consumer buys a pair of Nike shoes, he/she connects in mind the logo and the shoes with the specific producer and then with the certain quality or, more generally, with the symbol of an active lifestyle. However, some commentators claim that this concept is currently declining in importance.⁴² The second purpose concerns company incentives. Protection guaranteed by trademark law, which allows companies to control the use of the mark, encourages them to invest in a brand and thus in the higher quality and probably higher prestige.⁴³

D. The Impact of 3d Printing Technology on the Trademark Law System

- 19 There are two major areas where the relation between 3D printing and trademark law collides. The first one concerns registering three-dimensional objects as trademarks. Secondly, certain elements of 3D printing such as democratization of manufacturing process may pose some threats on the trademark law system.

I. Shape as a Trademark

- 20 According to the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS),⁴⁴

41 Dan L Burk, "Trademark doctrines for global electronic commerce" (1998) 49:4 S C Law Rev 695. At 699-700.

42 Felix S Cohen, "Transcendental Nonsense and the Functional Approach" (1935) 35:6 Columbia Law Rev 809 at 815-818.

43 Osborn, *supra* note 31 at 582. See also: Qualitex Co. v. Jacobson Prods. Co., 514 U.S. 159, 164 (1995) and Park 'N Fly, Inc. v. Dollar Park & Fly, Inc., 469 U.S. 189, 198 (1985).

44 1869 UNTS 299, 33 ILM 1197 (1994). The TRIPS Agreement is Annex 1C of the Marrakesh Agreement, signed in Marrakesh, Morocco on 15 April 1994 and came into effect on 1 January 1995. Currently TRIPS Agreement was adopted by 162 parties (see more: <http://www.wipo.int/wipolex/en/other_treaties/parties.jsp?treaty_id=231&group_id=22>). The TRIPS Agreement establishes a minimum standard, which means that the signatories countries can adopt more protective rules, but they cannot fall below set requirements. See WTO website: "WTO | intellectual

property - overview of TRIPS Agreement", online: <https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm>.

45 OJ L 336, 23.12.2015.

46 Case C215/14, Société des Produits Nestlé SA v Cadbury UK Ltd (16 September 2015) ECLI:EU:C:2015:604. See more: John Murray Brown, "KitKat can be copied as Nestlé loses trademark protection", (15 December 2016), online: *Ir Times* <<http://www.irishtimes.com/business/agribusiness-and-food/kitkat-can-be-copied-as-nestle-loses-trademark-protection-1.2907537>>.

47 Case C48/09 P, , Lego Juris A/S v Office for Harmonisation in the Internal Market (Trade Marks and Designs) (OHIM), (14 September 2010) ECLI:EU:C:2010:516. See more: CNN Wire Staff, "LEGO brick not a trademark, court rules - CNN.com", (15 September 2010), online: <<http://edition.cnn.com/2010/BUSINESS/09/15/eu.lego.trademark/index.html>>. On the other hand, CJEU ruled that Lego's mini three-dimensional figures can be classed as a protected trademark shapes. Case T396/14 Best-Lock (Europe) Ltd v Office for Harmonisation in the Internal Market (Trade Marks and Designs) (OHIM) 16 June 2015, ECLI:EU:T:2015:379.

See more: Sarah Butler, "Lego blocks legal bid to remove

surrounding the registration of shape trademarks exist also under the U.S. law system.⁴⁸ According to the functionality doctrine, the shape eligible to register cannot be essential to the use or purpose of the product and cannot affect the cost or quality of the product.⁴⁹ If the shape does not have utility it can be registered, if it is distinctive. However, the lack of utility will be applied in the minority of the cases, while many of the 3D prints will be functional shapes – excluded from the trademark registration. Among that minority of the cases where a 3D print is distinctive but does not serve a functional purpose it may be registerable.

- 21 Furthermore, taking into account the essence of trademark protection, it should be pointed out that granting trademark protection does not mean that the trademark owner has an exclusive and unlimited right to the sign. Trademark owners have a right to use the sign as their trademark, which means with the connection to the origin of the product. In this minority of cases when a shape can be registered as a trademark, using a shape by a consumer for his/her personal, descriptive or aesthetic reason, infringement of the shape trademark will not take place.⁵⁰
- 22 Nonetheless, the greater possibilities of 3D printing poses, several questions concerning the registration of a trademark consisting of three-dimensional objects (shapes), including the role of the trademark law system, the growing scope of registerable subject matter, the reasons for the registration of shapes, and the enforcement of trademark protection given to shapes if the 3D printing would become the norm.⁵¹

II. The Impact of Certain Elements of 3D Printing Technology on the Trademark Law System

- 23 This section examines the potential impact of certain features of 3D printing on trademark law, and the way it can influence the protection of both companies and consumers. As a consequence, companies will have to rethink their business models

trademark protection for its mini-figures”, (16 June 2015), online: *The Guardian* <<https://www.theguardian.com/lifeandstyle/2015/jun/16/lego-trademark-protection-mini-figures-european-court-justice-best-lock>>.

- 48 *Qualitex Co. v. Jacobson Products Co., Inc.*, 514 U.S. 159, 164-165 (1995).
- 49 Scardamaglia, *supra* note 25 at 39.
- 50 *Ibid* at 41.
- 51 Scardamaglia, *supra* note 25 at 44-45; See more: Mark A Lemley, “IP in a World Without Scarcity” (2015) 90 N Y Univ Law Rev 460.

to protect their brands.

1. Democratization of Production Process

- 24 The main feature of 3D printing is liberalization of the production process. Almost anyone can become a manufacturer, carrying out their own projects or producing items on the basis of designs supplied by others and made accessible via the Internet. The manufacturing process itself is made easier, and it is possible to skip over some stages of production, which means that manufacturing is greatly facilitated. Creation of a product requires only the proper code, materials, and the printer. Allowing private entities to “print” objects blurs the line between the producer and the consumer. This, in turn, leads to considerable threats of printing (in practice – manufacturing) fake trademarked goods by private entities in their homes.

2. Dissemination of Production Process: Participation of Hobbyists

- 25 Along with liberalization, the production process is disseminated. The process may involve many independent entities: the designer of the code; the designer of the printer; the operator of the printer; the supplier of materials; and the seller, who can produce the object him/herself, or can create the product in a printing shop and then sell it. It means that the design, production, and the distribution of products can be “democratized”.⁵² What is more, many of the 3D printer owners use previously generated computer projects and designs which are available on the Internet. The possibility of sharing models and projects creates the new online ecosystem,⁵³ which makes it more difficult for companies to control the use of their products and trademarks. Moreover, taking into account that 3D printing can be a home process without a professional third party, the possibility of producing fake goods is moved from well-organized criminal groups to the domesticity of regular users.⁵⁴
- 26 3D printing is also a very precise technology that enables the production of objects in great resolutions. By using a layer-by-layer method, it is now possible to create objects whose production would be impossible with the use of traditional methods.

52 McKinsey Global Institute, *supra* note 6 at 16.

53 *Ibid* at 14.

54 Compare: Richard Nieva, “Ashes to ashes, peer to peer: An oral history of Napster”, (5 September 2013), online: *Fortune* <<http://fortune.com/2013/09/05/ashes-to-ashes-peer-to-peer-an-oral-history-of-napster/>>.

Home-made 3D printed goods can be of excellent quality, so that it would be difficult to distinguish fake trademarked goods from the originals. One can conclude that this technology might generally improve the quality of faked goods.

3. The Role of CAD File

- 27 It is also common practice to freely share a CAD file over the Internet through online platforms, e-mails, cloud technology, etc. Many of the platforms are used by hobbyists who upload, download and exchange files for free.

4. Modifications

- 28 Another hugely important feature of 3D printing is the possibility of modifying a CAD file, which is the source of a 3D printout. The point of 3D printing is not only “printing” (adding) layer-by-layer to create three-dimensional objects. What is important is that this technology enables the users to download the file, copy it and make modifications. Both a 3D printer and a CAD (digital) file play the essential roles in the printing process. As in the case of 2D printing, in which it is important to have a file (text or drawing file) that is sent to the printer and printed on a piece of paper, in 3D printing it is necessary to have a project that is then “printed” in a spatial form. The difference lies in the higher technological level of the project (more details, higher precision in the case of multiple-element objects, greater knowledge about the software).
- 29 Having a digital file and a suitable computer program enables, in turn, to modify the project. The user basically has two paths leading to the final result in the form of a printed object. Firstly, having a CAD file and program at disposal, the user can create his/her own project. However, this requires some design skills. Nevertheless, the project can be created by a special software through scanning a physically existing object that will be then transformed into a digital file.⁵⁵ Secondly, the user can find already prepared projects on the Internet.⁵⁶ In both cases, a significant issue from the perspective of trademark law is the ability to modify the project. Ready-to-go projects can be personalized by adding, changing or deleting individual items.

55 See online tutorials: <<https://www.instructables.com/id/3d-Scan-Anything-Using-Just-a-Camera/>>, <<https://www.3dhubs.com/talk/t/3d-scanning-what-technologies-to-use-for-3d-printing/1743>>.

56 For example: <<http://www.thingiverse.com/>>.

5. Worldwide Scope

- 30 “Zipping” a physical object into a digital file opens new possibilities for creating objects. By providing the possibility of producing objects from a digital file, 3D printing seems to create a bridge between the digital and the physical world. A digital file also allows one to send, receive, and exchange files freely. The worldwide access to the Internet enables people to share any number of CAD files between users in different parts of the world.⁵⁷
- 31 **How can these characteristics influence trademark law?** Firstly, it has to be emphasized that at least under EU law, the private reproduction of a trademark is not an infringement. This means that the essence of 3D printing, embodied in a homemade production, will not directly and radically affect the core of trademark protection. Nonetheless, 3D printing possibilities may have an impact on companies’ interests. At this point, it is necessary to distinguish between three different scenarios: the individual prints the fake trademarked goods for his/her personal use, he/she distributes it to public, or sells it. In the first case, as mentioned above, an infringement will generally not take place. Printing trademarked goods for personal use (e.g. printing fake trademarked kitchen equipment) will not infringe the rights of the brand because it is not related to selling, distributing or advertising.⁵⁸ However, even if individuals produce goods for personal use, they can distribute (e.g. wear or use) them in public, which may lead to some confusion. Osborn, the American author, observes the problem of post-sale confusion related to 3D printing. Post-sale confusion occurs not at the moment of purchase, but later when the others see someone wearing or using the goods and then get confused about the origin of the products.⁵⁹ He stresses that without the post-sale confusion, “the purchase or use of pirated goods by a knowing buyer would not infringe because they were not confused as to the source”.⁶⁰ While printing the object, individuals have complete knowledge of the origin of the object and that the object does not come from the brand owner source⁶¹

57 *Ibid* at 560.

58 Compare 15 U.S. Code § 11 14(l)(a) (2012). See Art. 20 (1) Trade-marks Act R.S.C., 1985, c. T-13 (Canada).

59 Osborn, *supra* note 31 at 583; See more: Michael J Allen, “The scope of confusion actionable under federal trademark law: who must be confused and when?” (1991) 26:2 Wake For Law Rev 321 at 325–326; Anne M McCarthy, “The post-sale confusion doctrine: why the general public should be included in the likelihood of confusion inquiry” (1999) 67:6 Fordham Law Rev 3337 at 3348–3351.

60 Osborn, *supra* note 31 at 583. See more: Anne M McCarthy, “The post-sale confusion doctrine: why the general public should be included in the likelihood of confusion inquiry” (1999) 67:6 Fordham Law Rev 3337 at 3348–3351.

61 Weinberg, *supra* note 8 at 8.

in cases of fake trademarked goods. However, taking into account the general public protection, in the American doctrine, McCarthy argues that “the use of a trademark likely to cause confusion among the general public in a post-sale context should be actionable under federal trademark law”.⁶² This statement may apply to the case of fake trademarked printed goods which are distributed among the general public. Under EU law it is, however, debatable whether the risk of confusion occurs when the trademark has not been commercially exploited. It would mean that only when the printed good has been sold and distributed by the individual, there might be infringement of the trademark. Even in this case, trademark owners would probably have to prove that the particular individual printed the trademarked good and that it was used in public.⁶³ This, in turn, can be extremely difficult to achieve and in turn renders the trademark protection impossible to enforce.

- 32 Narrowing down the trademark protection only to the cases when the trademark has been commercially exploited is a significant limitation of the role of trademark system, especially in the light of new technological developments. As explained above, the potential of 3D printing is fulfilled by individuals printing objects by themselves. This, however, may bring piracy into private homes. While one or two printed fake trademarked goods are probably not enough to jeopardize the interests of the company, the growing interest in 3D printing may adversely affect the brand’s power. Some authors use the example of the impact of Napster on a music scene.⁶⁴
- 33 3D printing not only changes the role of the brand as an “intermediary” between a producer and its consumers, but also raises questions about the line between a producer and a consumer. At what point does the individual, who reprints objects using his/her 3D printer, become a professional? Does he/she have to sell 3D printed objects? How should we classify the individual who sells these objects only occasionally? How should we classify the individual who distributes these objects for free or only for a symbolic payment? What if he/she does it on a massive scale? These and similar questions lead to a problem that in the case of 3D printing, the current form of trademark protection scope excludes many potential threats to the company’s brand form trademark protection due to a commercially-oriented exploitation and the blurred lines of

commercial uses. The problem will probably grow in the future along with further developments of 3D printing.

- 34 Even if the trademark protection may only apply when commercial uses take place, 3D printing might create and exacerbate problems of trademark’s infringement. 3D printing opens up further possibilities of counterfeiting goods and enables anyone to become a counterfeiter at his/her own home and take commercial advantages of 3D prints. One may say that this is basically the same problem that already exists today. What 3D printing changes is that counterfeiting is becoming easier, faster, more accessible and relatively cheaper (if the price of 3D printers and materials continues to drop). Moreover, the use of CAD files in the online environment and empowering regular users with sophisticated tools of creating objects change the context of counterfeiting. 3D printing may increase the incentive for regular users to create copies of trademarked goods and to start making profit off them.
- 35 The current stage of 3D printing development addresses a practical question concerning how realistic it is for 3D printing to become a serious risk for companies from the product sectors and to threaten the brand’s interests. There are two issues that have to be taken into account. First of all, the main practical obstacle for 3D printing becoming the major way of producing marked goods is the cost. A series production of marked goods (elements, components, etc.) is still a cheaper way for companies to produce goods than using 3D printing technology. As long as the costs of 3D printing remain higher than series production, companies will probably not switch to 3D printing on a regular basis. It may very well be that the series production will remain the mainstream, whereas 3D printing will occupy only margin and niche markets limited to hobbyists’ activities or, on the other hand, highly specialized sectors such as the medical market (e.g. hearing aid and prosthetic production). In that case, the brand infringements through 3D printing will remain at a margin. Nonetheless, it may only be a matter of time before this technology will reach the price level that will turn it into cost-effective method of producing goods. Well-known examples from the past include copy machines and 2D printers. If that happens, the new scheme for the functioning of the production process will have to be adapted to further development. It is also possible that in the future, a consumer would buy a design(model) rather than a complete object. Those predictions may seem visionary, but history has many lessons to teach us about the impact of innovations.

62 McCarthy, “The post-sale confusion doctrine: why the general public should be included in the likelihood of confusion inquiry” (1999) 67:6 Fordham Law Rev 3337 at 3338, 3340.

63 Osborn, *supra* note 31 at 583.

64 Richard Nieva, “Ashes to Ashes, Peer to Peer: An Oral History of Napster”, CNN MONEY (Sept. 5, 2013, 5:00 AM), <<http://tech.fortune.cnn.com/2013/09/05/napsteroral-history>>.

- 36 The second practical consideration regarding 3D printing and trademark law is that 3D printing will not play an important role in many categories of counterfeited goods. One can mention for example, food, cosmetics, and cleaning articles, which consist of ingredients that home printers are not capable of using. Even if it was theoretically possible to print such products, realistically none of the consumers would do this if he/she could buy the same products for a few Euros in the store next door. Again, the price and costs are of key importance in the practical usage of 3D printing. Moreover, the current development of this technology concentrates mainly on printing in certain type of materials, such as plastic or some textiles. It means that 3D printing is currently available only for producing the limited types of goods. This, in turn, means that for trademark considerations reprinting only limited goods could create potential for brand infringement. Therefore, the possibility of counterfeit trademarked goods through 3D printing will concern mainly luxury goods such as watches, handbags, decorative elements, which are relatively accessible through 3D printing and profitable for counterfeiters.
- 37 It is also important to distinguish between three types of printing: printing only the trademark; printing the whole item, to which the trademark is attached; and printing the whole item without the trademark. 3D printing enables all of these possibilities. As mentioned above, trademarks do not protect products as such, but the reference to a certain commercial source, which is connected with a company's good image and quality. Therefore, reprinting products does not infringe the trademark, unless the trademark is affixed to them. From the practical point of view, if a user decided to print the object for personal use, he/she would probably not bother to attach the trademark to it, as they would be more interested in the functional (or decorative) side of the object. Again, the luxury goods will be an exception here. Of course, when the shape was registered as the trademark or when the object consisted of engraved signs which already appeared during the printing process, this could lead to infringement. However, registering functional shapes is hardly possible under existing law and only commercial use would constitute infringement. Furthermore, 3D printing not only enables one to simply copy goods, but also provides the unlimited possibilities of editing files and makes possible the uncontrollable and easy modification of trademarked goods and a trademark itself. Users can for example personalize and customize a file, as well as create fusion or parodies of trademarked goods.⁶⁵ Thus, the user now has the practical possibility to easily remove the trademarked name or logo from products before printing (which, however, does not infringe the trademark as such) or, what is probably more detrimental from the perspective of the company, the trademark (e.g. logo, sign) can be added to the product, which does not come from the trademark owner company. For example, the sign "LV" (standing for the Louis Vuitton brand) can be attached to a no name handbag, which in turn might be sold as an original. As 3D printing can precisely recreate existing products or trademarks, it can easily transform into a new method for counterfeiting goods. Counterfeiting is not a new problem, but now it can be done by anyone at home with a 3D printer and software.
- 38 One of the features of 3D printing which facilitates counterfeiting is that 3D printing is based on a dataset of an object – a CAD file. The online environment enables users to share and exchange files, and to find complete projects of different items on online platforms – many of them are available to download for free. A CAD file can be produced by an individual and then released online. Producing a dataset requires some design skills (if it is created from the beginning by the individual) or a more or less sophisticated scanner technology (scanning options can be offered by 3D printers). The easiness of finding many complete projects online supports the argument that the files will be offered online by professional counterfeiters rather than produced by each individual. Professional counterfeiters are to be understood as persons who counterfeit goods for dishonest or illegal purposes and for commercial reasons. They can offer a dataset free of charge or on payment which will still be cheaper than purchasing an original product. However, further developments of reprinting and scanning technology (more effective and cheaper solutions) may result in more individuals being able to create a dataset. This also shows the more basic problem of 3D printing – this technology empowers regular users with greater tools that, if applied dishonestly, can transform them into counterfeiters and facilitate the brand's infringement. The fact that the sender does not lose his/her possession over the object while sending a file causes additional loss of a company's control over its trademark.⁶⁶ Moreover, 3D printing blurs the line between a producer and a user, as well as the line between commercial and non-commercial activities. As mentioned above, in order to constitute the infringement, the trademark protection requires "use" of the trademark in the commercial sense. In the case of 3D printing it might be difficult to determine when a CAD file or a 3D printed trademarked good is used in commerce. The judicial interpretation based on the factual situation of the specific case will probably play a key role.⁶⁷

65 Osborn, *supra* note 31 at 585–586.

66 Scardamaglia, *supra* note 25 at 33.

67 Case US, *Wickard v. Filburn*, 317 U.S. 111, 128–29 (1942).

39 Taking into account only a CAD file, which includes a project of a trademarked good, the question also arises whether the file can be perceived as a product. It refers to a lively discussion, mainly in the area of product liability law, on the definition of product and the possibility of considering a digital file as a product. Currently many legal scholars, contrary to hard law rules, agree to that interpretation.⁶⁸ However, a trademark will not be used every time with the same digital file. Lucas Osborne highlights that it might happen that a file with a trademark and a design of the object will be separated, but a user will be able to combine those two files and the embedded trademark on the product.⁶⁹

40 Even if the problem of counterfeited reprinted goods may still seem marginal (limited to certain types of 3D printed items commercially exploited), it might be a growing trend along with the further development of 3D printing. It is probably a matter of time, when companies might start losing their control over the use of their trademarks. In that scenario, companies will also face practical problems with enforcing their rights and for most of them enforcement of trademark protection may not be profitable. The costs of a court procedure are generally high, especially when the infringement of the trademark was committed by a single entity acting commercially. Even if the company decides to file a case, in practice there will be many obstacles with proving the infringement of trademark and even finding the infringer on the Internet. In the case of a single infringement of trademark, it may not be lucrative for companies to protect their rights in a court, whereas easiness, speed, and low costs of creating objects in 3D printing technology will probably increase the problem of infringement.

41 Moreover, the scope of trademark protection in the case of a registered trademark is, in principle, territorially limited. When we take into account that Internet connectivity enables us to share the files freely, territorial limitation of trademark might not be a sufficient solution. The international harmonization in terms of a uniform standard of trademark protection and the facilitation of registering trademarks definitely bring benefits to international companies. The Madrid Arrangement Concerning the International Registration of Marks and the Madrid Protocol for the International Registration of Marks (the two treaties forming the so-called Madrid System administered by the International Bureau of the

World Intellectual Property Organization (WIPO) in Geneva) enable the “extension” of a trademark application made in one country to other countries, selected in the application which are the members of the Madrid Union.⁷⁰ The Madrid Union now has 98 members, which cover 114 countries and 80% of world trade.⁷¹ This system improves the scope of trademark protection, but practical problems may arise with the enforcement of trademark owner rights.

E. Optimal Solutions

42 The above considerations show that the issue of the relationship between 3D printing and trademark law is multi-threaded. Even though it is limited only to certain problems (and goods), the growing pace of technological development will probably deepen this interaction. In the literature, a comparison of the current technological state of 3D printing and its impact on IP law can be found within the music market and the emergence of mp3 files and platforms such as Napster.⁷² The significant difference between those examples lies in the possibility of modifying a CAD file, which was not the case with mp3 files. Simply put, even if users exchanged mp3 files or illegally copied them, Beyoncé’s songs would remain Beyoncé’s songs (even when copyright is infringed). 3D printing allows for a lot of interference in both the trademark itself and the trademarked good by manipulating the CAD file (removing or adding trademarks, reprinting whole items).

43 In search of solutions in connection with the development of new technologies, including 3D technology, it is worth referring to the proposed concept by Lessig. According to Lessig, there are four modalities that have an impact on regulating technology: legal norms, social norms, markets, and “architecture”.⁷³ It means that hard law regulations are not the only factor that can provide adequate responses to the threats posed by 3D printing. Lessig claims that social norms can be enforced by a community; the market regulates people’s behavior through prices; the “architecture” of the physical and digital world has an impact on how technology is used – the “architecture” of technology can have

68 See for example on the ground of product liability: Max Loubser & Elspeth Reid, *Product liability in South Africa* (Claremont: Juta, 2012) at 81; Contrary M A (Michael A) Jones et al, *Clerk & Lindsell on torts*, twenty-first edition, ed, Common law library (London: Sweet & Maxwell, 2014) at 847.

69 Osborn, *supra* note 31 at 585.

70 “Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks”, online: *World Intellectual Prop Organ* </treaties/en/registration/madrid_protocol/index.html>.

71 “Members of the Madrid Union”, online: *World Intellectual Prop Organ* <http://www.wipo.int/madrid/en/members/>. See the list of members: <http://www.wipo.int/export/sites/www/treaties/en/documents/pdf/madrid_marks.pdf>.

72 *Ibid* at 603, 612; Scardamaglia, *supra* note 25 at 37.

73 Lawrence Lessig, “The Law of the Horse: What cyberlaw might teach” (1999) 113:2 Harv Law Rev 501 at 507 ff.

an impact on people's behavior, for example if the technology is well-designed and user-friendly it can build people's trust and encourage them to use it more often.⁷⁴

- 44 How can these modalities refer to the case of 3D printing and trademark law? In the case of trademark protection, a lot depends on a company's policy. Strategic management and decision making directly influence the regulatory possibilities of "architecture" and market – for example, how much the company is motivated to protect their trademarks, what precautions it takes to protect them, how it regulates products' prices, etc. Probably, in the case of trademark and 3D printing possibilities, hard law regulations will not be an effective solution. Even if the regulations were stricter, companies would have to use a lot of power to enforce them, for example by "chasing" hobbyists and single private entities who infringe trademark use. Introducing stricter regulations, for example through tougher criminal penalties, would probably not lead to satisfactory results, if again there will be no tools to enforce them. Moreover, it might be against the principle of justice if a hobbyist was treated at the same way as well-organized criminal groups.
- 45 Therefore, the following parts will focus on different solutions; specifically, selling certificated 3D printable files by companies, and hard law regulations focused on liability of online intermediaries that facilitate the sending of files that can infringe trademark rights.

I. Certificated 3D Printable Files

- 46 The first solution is that trademark owners should create their own certificated 3D-printable files.⁷⁵ Offering certificated files for sale would be a way to adjust their business model to the new technological and "3D-printable" reality. The examples from the music and film industry show that their stubborn resistance to necessary changes, as well as looking for solutions only among existing legal rules (for example suing traders and users), and lack of alternative to peer-to-peer platforms do not guarantee an effective level of protection (both for companies and consumers).⁷⁶ To meet the expectations of consumers and to follow the

technological trends, companies may also decide to provide users with the possibility to make changes, personalize and customize a file. This approach may help to keep the pace of technological trends and provide companies with the income, taking into account that some consumers would rather buy certificated files, if their price is reasonable or if consumers obtain additional services and benefits (e.g. access to special platforms). Selling certificated files is also profitable for companies because a company does not have to produce the whole product and in turn pay the full production costs and overheads (materials, labor force, storage costs, etc.). This proposal will be explained below in detail, considering all the advantages and disadvantages and taking into Lessig's concept of "architecture" as regulatory means. The starting point in assessing this solution would be a question: why would companies be interested in authorizing users to print and use their trademarks, if they did not have control over the quality of the product?

- 47 Selling authorized CAD files with a product design and trademark can potentially lead to a loss of control over a production process, the materials used, and the quality of workmanship. 3D printing technology allows users to apply different materials, which may not be the material used by the trademark owner in its production line. As a consequence, 3D printed and trademarked goods could not maintain the required level of quality and the trademarked good could convey a poor reputation for the line of products or the company itself. Therefore, the efforts of the company which has invested in the brand could fail.
- 48 What is more, computer software enables users to make changes in the digital design: color scheme, shape, size, etc. It is also easy to copy the content of the file, including the protected logo or design and use it in another file. Distributing files could also potentially increase the number of counterfeit products.
- 49 The next considerable disadvantage to this proposal concerns consumer protection. The buyer of the certificated file can print the object and use it for personal use only or can start selling the 3D printed goods. Both scenarios can have harmful effect not only for the companies, but also for the public. As mentioned above, the role of the trademark is to prevent consumers from the confusion of the origin of the good. If the trademarked good no longer gives the consumer clear information regarding the source of the product, the trademark law system starts losing its gist. Confusion can occur when the buyer uses the 3D-printed object for personal use (regardless of the fact, whether he/she uses it in public, e.g. shoes, or not, e.g. kitchen gear), as well as when he/she sells 3D-printed and trademarked goods, which can infringe trademark. Buyers

74 Lawrence Lessig, "The Law of the Horse: What cyberlaw might teach" (1999) 113:2 Harv Law Rev 501 at 509.

75 Scardamaglia, *supra* note 25 at 52–53; Osborn, *supra* note 31 at 585–586.

76 Bob Lefsetz, "Lefsetz Letter » Blog Archive » Losing The Press War", (28 November 2005), online: <<http://lefssetz.com/wordpress/2005/11/28/238/>>, <<http://lefssetz.com/wordpress/2005/11/28/238/>>.

purchasing 3D-printed but trademarked goods may wrongly believe that they are buying a product from the trademark owner. Even if 3D-printed and trademarked goods are intended for personal use, in the event of its damage, the public may associate the trademark with low quality, which will have adverse consequences for the trademark owner.

- 50 The problem of increasing the risk of liability for injuries caused by defective products (product liability) is not directly connected with the trademark law system, but can have impact on the company's functioning, business strategies and the general image of the brand. According to a general rule of product liability law, liable entity is a producer. Although it might be problematic to indicate a producer (a company which sells 3D files or a person who prints them), the company distributing certificated files can be involved in a causal link and thus be jointly and severally liable (under contribution or recourse rights).
- 51 Despite the indicated doubts regarding the possibility of selling certificated CAD files, attention should be given to the advantages. The wider possibilities of printing trademarked products at home can completely change the business models. These possibilities are based on the assumption that 3D printing will be more accessible for ordinary people. First of all, if 3D printers are becoming more widespread and companies will allow individuals to use certificated files, the counterfeit market might lose its significance. It would not make sense to buy counterfeit goods, if there is the possibility to print a trademarked good from a certificated file for a good price. Together with the file, a company may sell additional services and provide their users with benefits (e.g. access to an online platform, software, updates). The price of the certificated file and business decisions of companies are thus a crucial element of this proposal.
- 52 Secondly, thanks to 3D technology and certificated file sales opportunities, companies would not have to use international outsourcing.⁷⁷ Currently, a large part of production costs include the labor force. In order to decrease those costs, big companies are moving their business to China or Indonesia.⁷⁸ 3D printing technology switches to distributed manufacturing and allows more local actors to play a role in the production process. Selling certificated files for regular users could thus cut additional costs of producing goods, if the buyers are going to print (manufacture) objects by themselves. Thirdly, selling certificated files may encourage more people to wear trademarked goods, which can be perceived as a good advertisement of a product. And last but

not least, selling certificated files could be the way for companies to increase their income. Taking into account the current rapid development of new technologies, especially those which are Internet-based, it is nearly impossible to control all users who can print out the fake trademarked goods anyway. By selling certificated files, companies can generate an additional income – not selling files will remain the *status quo* in which users get files for free (through hobbyist platforms, scanning software, modifying existing files, sharing files, etc.). In the future, companies and trademark owners may also decide to completely replace their production of pre-made goods and sell only printable files.

- 53 The above-mentioned scenario might sound too visionary; in practice, it might occur that by selling certificated 3D files, companies would lose control over their trademarks and the quality over products and 3D printing technology would be used to produce more counterfeit goods. To avoid further problems, if companies decide to sell their trademarks and designs to individuals, certain “architectural” elements of the files should be considered as a way to prevent the detrimental effects of releasing a trademark. The idea behind the sale of CAD files is that the file can be customized. However, to protect a company's interests, the number and the scope of changes or modifications might be limited. Similarly, in order to maintain the adequate level of quality of the products, the file can be restricted only to use certain types of materials to print certain products. Currently, home printers usually use only basic materials such as plastic; however, it is likely that in a few years individuals will gain more technological possibilities to print in more sophisticated materials. Moreover, 3D printed trademarked goods could have some special characteristics so that the public can recognize that the particular product was 3D printed and not manufactured by a trademark owner. In an attempt to maintain control of the quality of the products, files can be programmed to send data to companies, so that they could analyze how many products have been printed, as well as the location of the print. However, this possibility raises sensitive problems related to privacy protection.

II. Market Rules: Price Policy

- 54 Along with architectural changes, market rules might be also an important factor. The market can regulate people's behaviors through the price of the product.⁷⁹ Trademarked goods are usually more expensive than no-name brands. It can be part of the marketing strategy (paying more can be perceived as something more luxurious or of a higher quality)

⁷⁷ Federico-O'Murchu, *supra* note 1.

⁷⁸ Maney, *supra* note 24.

⁷⁹ Lessig, *supra* note 73.

or it can be justified by the costs invested by a company to create a well-known brand (higher quality, advertising, etc.). Lowering the price of certificated files may prompt more people to start buying original trademarked files.

III. Social Norms: Education

- 55 Social norms in this case basically refer to the users' perception regarding whether or not it is wrong to use counterfeit goods (goods produced by the third party with embedded trademark) in general.⁸⁰ A report of the Organisation for Economic Co-operation and Development (OECD) and the European Union's Intellectual Property Office published on 18 April 2016, "Trade in Counterfeit and Pirated Goods: Mapping the Economic Impact" estimates the value of imported fake goods worldwide at USD 461 billion in 2013.⁸¹ As noted in the report, the trade in counterfeit and pirated goods hit the hardest the US, Italian and French brands and is often proceeded by organized criminal groups.⁸² 3D printing can contribute to further growth of fake goods, although not all of them. The counterfeit market is now expanding its scope from items like shoes or bags, to more sophisticated goods such as pharmaceuticals.⁸³ 3D technology can facilitate the production of certain fake trademarked goods both by private entities and criminal groups. However, regardless of the entity that produces fake goods, the important factor is the reaction of the public and the personal will for buying counterfeit goods. Often the reason for buying or producing counterfeit goods is the lack of knowledge. A society which is well-informed about the detrimental effects of using counterfeit goods can make more conscious decisions and even generate social norms concerning whether it wants to contribute to the counterfeiting industry.

80 "Dan Ariely Explains the Problem With Fake Fashion: Part One", (3 July 2012), online: *High Low* <<http://thehighlow.com/2012/07/dan-ariely-explains-the-particular-problem-with-fake-fashion-part-one/>>.

81 "Trade in Counterfeit and Pirated Goods: Mapping the Economic Impact", online: *OECD ILibrary* <http://www.keepeek.com/Digital-Asset-Management/oecd/governance/trade-in-counterfeit-and-pirated-goods_9789264252653-en>; "Global trade in fake goods worth nearly half a trillion dollars a year - OECD & EUIPO - OECD", online: <<http://www.oecd.org/industry/global-trade-in-fake-goods-worth-nearly-half-a-trillion-dollars-a-year.htm>>.

82 note 80.

83 Steve Hargreaves, "Counterfeit goods market is booming and becoming more dangerous", (27 September 2012), online: *CNNMoney* <<http://money.cnn.com/2012/09/27/news/economy/counterfeit-goods/index.html>>.

IV. The Liability for Intermediary Online Platforms

- 56 The last proposed solution is regulating the liability of intermediary online platforms, where CAD files are uploaded and downloaded. First of all, it is worth mentioning a recent case, *Stichting Brein v Ziggo BV, XS4ALL Internet BV (Case C610/15)*⁸⁴, which was resolved before the Court of Justice of the European Union. The referring court raises "the matter of the liability of operators of indexing sites of peer-to-peer networks for copyright infringements committed in the context of the use of those networks. Can those operators themselves be regarded as being the originators of those infringements, which would mean they are directly liable (first question)? Or, even if they are not directly liable, can an order be made blocking access to their websites, which, as I shall explain below, requires a form of indirect liability (second question)?"⁸⁵ The Court of Justice stated that "the concept of 'communication to the public', within the meaning of Article 3(1) of Directive 2001/29, must be interpreted as covering, in circumstances such as those at issue in the main proceedings, the making available and management, on the internet, of a sharing platform which, by means of indexation of metadata referring to protected works and the provision of a search engine, allows users of that platform to locate those works and to share them in the context of a peer-to-peer network" (para 48).
- 57 Although, the case is based on copyright and Directive 2001/29/EC,⁸⁶ not on trademark law, the concept of online operators' liability from this case could be transferred to online platforms where it is possible to upload and download unauthorized designs of a trademarked good or trademark itself.
- 58 The liability of online platforms (in general) is now widely discussed in the EU,⁸⁷ which is the expected direction of further legislation. The new liability regime for online providers is also discussed under the proposal for a Directive on copyright in the Digital Single Market.⁸⁸ In June 2018, the European Parliament voted in favor of new liability regimes under Article 13 of the proposal, which makes online

84 *Stichting Brein v Ziggo BV, XS4ALL Internet BV (Case C610/15)*, ECLI:EU:C:2017:99.

85 *Ibid.*

86 Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, OJ L 167, 22.6.2001, p. 10-19.

87 "Online Platforms", online: *Eur Comm* <<https://ec.europa.eu/digital-single-market/en/online-platforms-digital-single-market>>.

88 Proposal for a directive on copyright in the Digital Single Market, COM/2016/0593 final - 2016/0280 (COD).

platforms liable for copyrighted material.⁸⁹ In 2019 the final wording of the Directive will be put to the vote.

61 Hopefully, the solutions described above will enable the adjustment of the trademark law system to a new 3D printing reality. Then we can start thinking big, get excited about the great potential of 3D printing, and finally buy our first 3D printer.

F. Conclusions

59 The aim of this paper was to answer the question how, and to what extent, 3D printing can interfere with the trademark law system. To answer it, as a starting point, 3D printing was presented as a new disruptive technology. According to research, this technology with its freedom, easiness, and low costs of designing and printing objects can have a significant impact on society, economy and also law. Trademark law is one of the areas of law which might be influenced by 3D printing. First of all, there is a matter of registering three-dimensional objects as trademarks, which is generally not possible under existing law regulations. Secondly, although one may claim there is no significant potential impact of 3D printing on trademark law, the paper stated that democratization and dissemination of the manufacturing process, participation of hobbyists, the significant importance of CAD file, and the possibility of its modification, and worldwide scope of 3D printing based on the Internet may have an impact on the trademark law system. 3D printing was presented as a technology which empowers regular users with greater tools that, if applied dishonestly, can transform them into counterfeiters and facilitate infringement of a brand. Even though the problem of counterfeited reprinted goods may still seem marginal (limited to a certain types of 3D printed items commercially exploited), it might be a growing trend along with the further development of 3D printing.

60 Next, the paper analyzed possible solutions to prepared companies and consumers for this trend, which are based on Lessig's idea of four modalities: law, market, social norms and architecture. In the area of trademark law, stricter hard law regulation might not be an adequate response, thus we have to look for solutions in selling 3D printed certificated files by trademark owners, price regulation, and better educational programs on counterfeit goods. From the hard law perspective, establishing clear rules of liability for intermediary online platforms seems to be of key importance.

89 See the comments: Matt Reynolds, "What is Article 13? The EU's divisive new copyright plan explained", (7 December 2018), online: *Wired* <<https://www.wired.co.uk/article/what-is-article-13-article-11-european-directive-on-copyright-explained-meme-ban>>; Tom Bedford, Emma Sims, "Article 13 approved: What are the EU copyright law amendments?" (10 December 2018), online at: *Alphr* <<https://www.alphr.com/politics/1009470/article-13-eu-what-is-it-copyright>>.

Intellectual Property under the Scrutiny of Investor-State Tribunals

Legitimacy and New Challenges

by Clara Ducimetière*

Abstract: In 2009, C.S. Gibson was suggesting that: “With this early coverage of intellectual property in BITs, it is perhaps surprising that there has yet to be a publicly reported decision concerning an IPR-centered investment dispute. Given the trajectory of the modern economy, however, in which foreign investments reflect an increasing concentration of intellectual capital invested in knowledge goods protected by IPRs, this could soon change” (Gibson, ‘A Look at the Compulsory License in Investment Arbitration’, 2009). A couple of years later, the first investment cases dealing with IP issues were made public. In this context, this paper first addresses the condi-

tions that have to be fulfilled in order to bring intellectual property claims in investment arbitration, by touching upon the question of the definition of an investment in theory and in practice. It also tries to shed light on some of the implications of recent arbitral awards touching upon this interaction between intellectual property and investment protection, from a legal and regulatory perspective. On the other hand, the specific situation of the European Union is scrutinized, and in particular the project put forward by the European Commission to adapt the dispute settlement system for the protection of investments.

Keywords: Investment protection; international investment agreements (IIAs); right to regulate; TRIPS flexibilities; ICSID; NAFTA; investment court system (ICS); multilateral investment court (MIC); European Union (EU)

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A. Introduction

“Until recently, [...] few or no investment cases involved claims that states had violated their investment obligations with respect to intellectual property. There is still a relative paucity of cases, but those we have are high-profile disputes that implicate most of the controversial issues that beset investment law today.”

Andrea K. Bjorklund¹

- 1 While the system of investor-state dispute settlement (ISDS) emerged in the 1950s as part of bilateral trade and investment agreements,² it is still a quite recent alternative dispute settlement mechanism in the history of international law. As Professor Bjorklund rightly pointed out, the emergence of investment cases involving intellectual property (IP) matters is even more recent, and the scrutiny of IP claims by investor-state tribunals raises new questions and challenges with regard to the legitimacy of this practice.
- 2 Intellectual property rights (IPRs) are exclusive rights granted to inventors and creators for a limited time period. They are negative rights, since they are rights to exclude others from using the invention or creation without the owner’s consent, rather than positive rights to use the protected work or invention. Intellectual property rights were first developed as national, territorial rights, and are becoming increasingly global assets, protected in more countries. The entry into force of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) in 1995 marked a turning point in the globalization of IPRs.³
- 3 Intellectual property offices or domestic courts usually deal with disputes arising from IPRs, when it involves private parties. States also have the possibility to challenge other States’ trade-related measures, including IP, in the World Trade

Organization’s (WTO) Dispute Settlement Body.⁴ Since the 1950s, an alternative dispute settlement mechanism allowing investors from one country to sue the government of another country for breach of its international trade and investment agreements emerged on the international scene. While in the first decades of its existence, ISDS was not very popular, with only a couple of cases per year, its importance grew at the turn of the new millennium with a cumulative number of 767 known ISDS cases in 2016.⁵ The United Nations Conference on Trade and Development (UNCTAD) notes: “In 2015, investors initiated 70 known ISDS cases pursuant to IIAs, which is the highest number of cases ever filed in a single year”.⁶

- 4 ISDS is included in most international investment agreements (IIAs), i.e. bilateral investment treaties and trade agreements with investment provisions, as a possibility for investors to challenge State measures in breach of an IIA to which the host State and the home State of the investor are parties. Traditionally investment tribunals review claims based on the breach of expropriation, national treatment, most-favored-nation, or fair and equitable treatment provisions. Recent cases involving Philip Morris and Eli Lilly raised interesting issues in the field of intellectual property, as these companies brought claims against Uruguay⁷ and Australia⁸ (Philip Morris), and Canada⁹ (Eli Lilly), based inter alia on the alleged violation of their IP assets.¹⁰
- 5 Intellectual property rights have usually been included in investment chapters of IIAs, either directly or indirectly,¹¹ but this protection had always remained rather theoretical. Indeed, already in 1903, the US Friendship Commerce and Navigation Agreement with China included copyright

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1 Foreword from Andrea K. Bjorklund, in: Lukas Vanhonnaeker, *Intellectual Property Rights as Foreign Direct Investments: from Collision to Collaboration* (Edward Elgar Publishing 2015).

2 The Germany-Pakistan BIT is often cited as the world’s first BIT and dates back to 1959. See: Marc Bungenberg, ‘A History of Investment Arbitration and Investor-State Dispute Settlement in Germany’ (2016) CIGI ISA Paper No 12.

3 Daniel Gervais, *The TRIPS Agreement: Drafting History and Analysis* (3rd edn, 2008).

4 This is subject to the requirement that the States are members to the WTO, which is the case for 164 countries since July 2016.

5 UNCTAD, *World Investment Report 2017 Investor Nationality: Policy Challenges*, (2017) xi.

6 UNCTAD, *World Investment Report 2016 Investor Nationality: Policy Challenges*, (2016) 104.

7 *Philip Morris Brand Sàrl (Switzerland), Philip Morris Products S.A. (Switzerland) and Abal Hermanos S.A. (Uruguay) v. Oriental Republic of Uruguay* ICSID Case No ARB/10/7, Request for Arbitration (19 February 2010) Philip Morris Products S.A. (Switzerland).

8 *Philip Morris Asia Limited (Hong Kong) v. The Commonwealth of Australia*, Notice of Arbitration (21 November 2011).

9 *Eli Lilly and Company v. The Government of Canada* UNCITRAL, ICSID Case No UNCT/14/2, Notice of Arbitration (12 September 2013).

10 See section A.I.2. below.

11 Lahra Liberti, ‘Intellectual Property Rights in International Investment Agreements: An Overview’ (2010) 01 OECD Working Papers on International Investment 39 6.

protection.¹² Later, with the expansion of BITs and trade agreements with investment provisions, the reference to IPRs became increasingly common. For instance, in the 2008 German Model BIT, intellectual property rights are listed as “investments”.¹³ In parallel, investor-state dispute settlement chapters were included in these IIAs to allow investors to challenge State measures in breach of these agreements. ISDS became growingly popular, despite strong criticisms with regard to the functioning and legitimacy of these ad hoc tribunals.

- 6 It is important to highlight at this stage that IPRs can usually be found in two different chapters in IIAs: in the intellectual property chapter as such, or as a listed investment in the investment chapter. In this paper, we will only address the latter, that is, when IP is considered a protected investment, which raises specific issues in the field of IP and policy-making.
- 7 In the European Union, the opposition of civil society¹⁴ to agreements including ISDS became highly visible during the negotiations of the Comprehensive Economic and Trade Agreement between the EU and Canada,¹⁵ which was eventually signed in October 2016. One of the main criticisms put forward is the power given to private investors, especially big multinational corporations, to claim high amounts of money for compensation. Indirectly, this questions the impact of these claims on States’ power to regulate in the public interest, in order to safeguard public health for instance. Other flaws of the ISDS system include the lack of legitimacy, lack of consistency and predictability of arbitral decisions, the absence of appeal mechanisms, or the lack of transparency.¹⁶
- 8 The fact that private arbitral tribunals are increasingly interpreting intellectual property provisions raises complex issues. The main question we will try to answer in this paper is whether investor-state tribunals are an appropriate forum for litigating IP disputes. In other words, what is the anchor to review IP provisions in arbitral tribunals and what are the consequences of this review from a legal and regulatory point of view? Since there have been very few ISDS cases involving IP, can we

identify a new trend of litigating IP disputes in ISDS, and is it therefore necessary to adapt and revamp this dispute settlement mechanism?

- 9 The first part of this paper will touch upon some of the main issues arising from the review of intellectual property claims in investor-state arbitrations, by determining, on the one hand, whether investor-state tribunals have jurisdiction over IP disputes and, on the other hand, what the consequences of this review are from a legal and regulatory perspective. This analysis will lead us to a second observation: the need to undertake a profound reform of the system. Therefore, the second part will scrutinize the different ways that have been put forward to reform the ISDS system, especially by revising the relevant provisions in IIAs. We will have a closer look at the landscape of the European Union and the current reforms taking place in the field of investment protection, to finally assess whether there are relevant proposals for the IP system.

B. The controversial review of intellectual property claims by investor-state tribunals

- 10 Traditionally, domestic courts and IP offices deal with IP disputes opposing private parties, while the WTO Dispute Settlement Body is competent for cases involving two States. However, alternative dispute resolution mechanisms, such as arbitration, mediation, or conciliation inter alia, are becoming increasingly important in the field of intellectual property.¹⁷ One particular type of arbitration, investor-state dispute settlement, allows investors to bring claims against States. In terms of the number of cases handled, the most popular institutions are the International Centre for Settlement of Investment Disputes (ICSID), the Permanent Court of Arbitration (PCA), and the Stockholm Chamber of Commerce (SCC)¹⁸.
- 11 The fact that intellectual property claims can feature in investment arbitrations is far from obvious, and indeed, very few cases have been publicly reported so far. It is therefore key to first understand the conditions that have to be fulfilled in order to bring IP claims in investment arbitration, and to have a closer look at the definition of an investment in theory and in practice. Second, we will shed light

¹² Ibid.

¹³ Article 1 of the 2008 German Model Treaty.

¹⁴ See “Statement against Investor Protection in TTIP, CETA, and other trade deals”, February 2016, available at <<http://www.globaljustice.org.uk/civil-society-statement-against-investor-protection-ttip-ceta-and-other-trade-deals>> accessed 18 October 2018.

¹⁵ Comprehensive Economic and Trade Agreement (CETA) between Canada, of the one part, and The European Union and its Member States, 2016.

¹⁶ European Commission, *COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Multilateral reform of investment dispute resolution*, (2017) 11.

¹⁷ Sarah Theurich, ‘Efficient Alternative Dispute Resolution in Intellectual Property’ (2009) 3 WIPO Magazine.

¹⁸ See <<http://investmentpolicyhub.unctad.org/ISDS/FilterByRulesAndInstitution>> accessed 18 October 2018. From 1987 to 2017, the ICSID has been administering 520 cases, the PCA 110 cases and the SCC 41 cases (some are still pending).

on the publicly available IP-related cases, which have had significant implications from a legal and regulatory perspective.

I. Bringing intellectual property claims into investment disputes: what is the necessary anchor?

12 Intellectual property is designed to protect right holders against unauthorized uses by third parties. It is understood as a negative right to exclude, rather than a positive right to “use” the protected invention or creation. Investment protection covers a different range of rights. Investors are protected against expropriation and other unlawful acts or omissions committed by States.

13 Therefore, shifting from a traditional IP protection to an investment protection for intangible rights already seems to be problematic from the point of view of the scope of protection. Nevertheless, intellectual property is protected under most IIAs’ investment chapters, sometimes implicitly, but sometimes also explicitly. This assimilation between IP and investment appears not only in most treaties, but also in some of the important cases that have touched upon this issue.

1. The reference to intellectual property in investment chapters of IIAs

14 There are different ways of making reference to IPRs in international investment agreements. Carlos Correa and Jorge E. Viñuales listed four main possibilities of bringing IPRs within the definition of investment: no express mention of IPRs, with only a reference to “property” or “assets”; a general reference to “IPRs” or “intangible property” without further details; a reference to IPRs with enumeration of the intangible assets covered; and finally, a definition of IPRs that may or may not refer to the law.¹⁹

15 To take an example, in the Comprehensive Economic and Trade Agreement (CETA) between Canada and the EU, Article 8.1 clarifies that “forms that an investment may take include: [...] (g) intellectual property rights”.²⁰ This formulation can be found

19 Carlos Correa and Jorge E. Viñuales, ‘Intellectual Property Rights as Protected Investments: How Open are the Gates?’ (2016) 19 *Journal of International Economic Law* 91.

20 COUNCIL DECISION (EU) 2017/37 of 28 October 2016 on the signing on behalf of the European Union of the Comprehensive Economic and Trade Agreement (CETA) between Canada, of the one part, and the European Union

in most agreements today.²¹ Therefore, for many commentators there is no doubt that intellectual property is indeed protected as an investment under most modern agreements. In this sense, B. Mercurio confirms that “it is almost assumed that IPRs are one way or another included within the scope of IIAs”.²²

16 Despite the rather recent reactions from the IP world against the assimilation of IP to investment, it is worth mentioning that these rights have been covered under the investment chapters since the very first investment agreements. Lahra Liberti shows that already in 1903, the United States included copyright protection in its Friendship Commerce and Navigation Agreement with China.²³ Following this trend, she confirms that most investment agreements make reference to IP, either in their preamble, or explicitly in the definition of investment.²⁴

17 This assimilation remained tremendously unexplored for decades, aside from contributions of few prominent scholars.²⁵ Nevertheless, in recent years, private investors have seen in this correlation between IP and investment a way to challenge States’ measures in private fora such as investor-state tribunals instead of resorting to domestic courts or the WTO. But before looking at some of these cases and their potential impact, it is worth mentioning some of the most important standards of protection contained in IIAs and some interesting trends in treaty drafting.

a.) Expropriation, fair and equitable treatment, and other investment standards of protection

18 Foreign investors are protected in a host State in accordance with minimum standards of treatment, provided they can demonstrate that they are investors that have made an investment in the host country

and its Member States, of the other part Article 8.1.

21 See for instance the 2012 US Model Bilateral Investment Treaty (Article 1) or the 2009 India-Korea CEPA (Article 10.1).

22 B. Mercurio, ‘Awakening the Sleeping Giant: Intellectual Property Rights in International Investment Agreements’ (2012) 15 *Journal of International Economic Law*, 876.

23 See Article XI of the TREATY BETWEEN THE UNITED STATES AND CHINA FOR THE EXTENSION OF THE COMMERCIAL RELATIONS BETWEEN THEM, available at <<http://www.chinaforeignrelations.net/node/209>> accessed 18 October 2018.

24 Libert, ‘Intellectual Property Rights in International Investment Agreements: An Overview’ (n 11) 6.

25 It is worth noting that some scholars had raised their voices in this regard, Carlos Correa in 2004 amongst others (see note 59).

according to a specific investment agreement. One fundamental standard is the protection against unlawful expropriation. A difference should be made between direct and indirect expropriation. Direct expropriations have become less important with time since countries want to attract foreign investments. Direct expropriations refer to cases of taking by a government of an investor's property with a view to transferring ownership of that property to another person - usually the authority that exercised its power to do the taking.²⁶

- 19 Indirect expropriations are more common, and are usually defined as measures which effect is "equivalent" or "tantamount" to direct expropriations. It must be noted that expropriations are not prohibited as such, but they must meet certain conditions to be legal. There seems to be consistency between the treaties on the conditions that have to be met: the measure must be non-discriminatory; enacted for a public purpose; in accordance with due process of law; and against compensation.²⁷
- 20 In the case opposing Philip Morris and Uruguay, the Claimant argued that the single presentation requirement and the 80% health warnings requirement were expropriatory since it banned seven variants of the Claimants' trademarks and diminished the value of the remaining trademarks.²⁸ The tribunal rejected the Claimants' claims, founding that the measure must have "a major adverse impact on the Claimants' investments", amounting to a "substantial deprivation" of the investments' value.²⁹ It then found that the 80% requirement was not expropriatory since "a limitation to 20% of the space available [...] could not have a substantial effect on the claimants' business since it consisted only in a limitation imposed by the law"³⁰ and did not prohibit the use of the trademark. It also found that the single presentation requirement did not deprive the Claimants' from the value of their business and investments, and that the measure was a valid exercise of Uruguay's police powers, and thus rejected the claim for expropriation.³¹
- 21 In this case and other cases involving intellectual property aspects, the investors also relied on other standards of protection; in particular on the fair

and equitable treatment standard (FET). Treaty practice with regards to the FET diverges, and the reference to the standard is usually terse. Newly adopted treaties such as the CETA have defined the standard,³² codifying arbitration practice. Based on the FET standard, tribunals have to determine whether the State's measure is fair and equitable. Other standards have been developed from the FET, such as the protection of the investor's legitimate expectations, due process and denial of justice, or the protection against arbitrary and discriminatory measures. Without entering into the detailed facts of the case, it can be mentioned that a breach of FET is currently being argued by Bridgestone in the case opposing it to Panama, with regards to judicial decisions from the Panamanian courts. The Claimant argues that there was a denial of justice because: "First, there were fundamental breaches of due process. Second, the decision was arbitrary. Third, there was corruption in the process. Fourth, the decision was incompetent."³³ The case is still pending.

- 22 Other standards of protection are available to foreign investors under IIAs, such as national treatment, most-favored-nation, umbrella clauses, full protection and security; however, the most important standards especially in intellectual property cases seem to be those of indirect expropriation and fair and equitable treatment. Before mentioning some of these cases in more detail, we will briefly look at recent treaty practices and open questions in the field of IP, in particular with regards to compulsory licenses, revocation and limitations of IPRs and applications.

b.) New trends in treaty practice and open questions for intellectual property

- 23 Policy makers are progressively attempting to ensure that some IP measures cannot be challenged under the investment chapter of IIAs. This is the case, for instance, of compulsory licenses or the revocation or limitation of IPRs, which some IIAs (partially) exclude from the scope of the expropriation provision.³⁴

26 *S.D. Myers, Inc. v. Government of Canada* UNCITRAL, Partial Award (13 November 2000), para 280.

27 Rudolf Dolzer and Christoph Schreuer, *Principles of International Investment Law* (1st edn, Oxford University Press 2008), 91.

28 *Philip Morris Brand Sàrl (Switzerland), Philip Morris Products S.A. (Switzerland) and Abal Hermanos S.A. (Uruguay) v. Oriental Republic of Uruguay* ICSID Case No ARB/10/7, Award (8 July 2016), para 180.

29 *Ibid.*, para 192.

30 *Ibid.*, para 276.

31 *Ibid.*, paras 284, 287.

32 See CETA Article 8.10.(1): "Each Party shall accord in its territory to covered investments of the other Party and to investors with respect to their covered investments fair and equitable treatment and full protection and security in accordance with paragraphs 2 through 6".

33 *Bridgestone Licensing Services, Inc. and Bridgestone Americas, Inc. v. Republic of Panama* ICSID Case No ARB/16/34, Claimants' Memorial (11 May 2018), para 165.

34 This has not always been the case. On the contrary, compulsory licenses have long been considered as being a possible subject of investment claim in investor-state arbitration. Nevertheless, no arbitration case based on the issuance of a compulsory license has ever been reported to our knowledge. See in this regard, Christopher S. Gibson, 'A

For instance, Article 14.8(6) of the United States-Mexico-Canada Agreement on expropriation and compensation reads: “This Article does not apply to the issuance of compulsory licenses granted in relation to intellectual property rights in accordance with the TRIPS Agreement, or to the revocation, limitation or creation of intellectual property rights, to the extent that the issuance, revocation, limitation or creation is consistent with Chapter 20 (Intellectual Property) and the TRIPS Agreement”.

- 24 Some commentators have considered this only a partial exclusion, since the inconsistency of the measure with the TRIPS Agreement or the IP Chapter of the agreement could open the door to a challenge of the measure in relation to the expropriation standard.³⁵ It also raises the difficult question of the legitimacy and competency of investor-state tribunals to assess the compatibility of a measure with the IP Chapter or WTO Agreements, which are in addition subject to state-to-state dispute resolution.
- 25 On the other hand, the difficult assessment of applications has raised interesting doctrinal debate. The core question is whether patent, trademark or other IP applications can be qualified as “investments”? And if so, are applications *protected investments*?³⁶ This particular question is outside of the scope of this paper,³⁷ but these interrogations should be kept in mind for further analysis of the ISDS system.

Look at the Compulsory License in Investment Arbitration: The Case of Indirect Expropriation’ (2009) 6 Transnational Dispute Management 3.

- 35 With regard to NAFTA Article 1110(7), Sean Flynn contends that “by including the last clause evoking the extent of consistency with Chapter 17, it invites ISDS to be used by private companies to challenge the revocation, limitation or creation of intellectual property rights alleged to be inconsistent with the intellectual property chapter. This opens a backdoor for private companies to essentially enforce the terms of the IP chapter, even though the IP chapter itself makes no allowance for such litigation”. See: Sean Flynn, ‘TTIP Stakeholder Statement: Protect IP from ISDS’ (*infojustice.org*, 23 April 2015) <<http://infojustice.org/archives/34319>> accessed 18 April 2018.
- 36 In this regard, see Mercurio, ‘Awakening the Sleeping Giant: Intellectual Property Rights in International Investment Agreements’ (n 22) 7-8.
- 37 For further analysis of this issue, please see Valentina Vadi, ‘Towards a New Dialectics: Pharmaceutical Patents, Public Health and Foreign Direct Investments’ (2015) 5 NYU J Intell Prop & Ent L 113, 150-2; Henning Grosse Ruse-Khan, *The Protection of Intellectual Property in International Law* (First edn, Oxford University Press 2016), paras 7.10-12.

2. IP protection as an investment: a shy application in practice

- 26 Few publicly available arbitration cases have touched upon the question of the protection of intellectual property as a protected investment,³⁸ but those which have, have been qualified as high-profile cases: Philip Morris v. Uruguay³⁹, Philip Morris v. Australia⁴⁰, Eli Lilly v. Canada⁴¹ and Bridgestone v. Panama⁴², inter alia.⁴³ These cases have been commented to different extents and it is not the purpose of this paper to go into the very details of the facts and arguments of the parties.⁴⁴ It is nevertheless interesting to highlight some key issues for the protection of intellectual property and public policy arising from these arbitral awards.
- 27 Before doing so, it is important to mention that several other publicly available cases involved intellectual property issues.⁴⁵ For instance, in CME

38 In 2009, C. Gibson even noted “With this early coverage of intellectual property in BITS, it is perhaps surprising that there has yet to be a publicly reported decision concerning an IPR-centered investment dispute” (Gibson (n 34) 2).

39 *Philip Morris v. Uruguay*, Award (n 28).

40 *Philip Morris Asia Limited (Hong Kong) v. The Commonwealth of Australia*, PCA Case No 2012-12, Award on Jurisdiction and Admissibility (17 December 2015).

41 *Eli Lilly and Company v. Canada* ICSID Case No UNCT/14/2, Final Award (16 March 2017).

42 *Bridgestone Licensing Services, Inc. and Bridgestone Americas, Inc. v. Republic of Panama* ICSID Case No ARB/16/34, Request for Arbitration (7 October 2016) Inc. and Bridgestone Americas, Inc. v. Republic of Panama </style>ICSID Case No ARB/16/34, Request for Arbitration (7 October 2016).

43 Some commentators also mention the AHS v Niger and Erbli Serter v France cases where IP was the main object of the dispute. See: Gabriele Gagliani, ‘International Economic Disputes, Investment Arbitration and Intellectual Property: Common Descent and Technical Problems’ (2017) 51 Journal of World Trade 335, 344.

44 For an intellectual property perspective on the cases see: Daniel Gervais, ‘Investor-State Dispute Settlement: Human Rights and Regulatory Lessons from Lilly v. Canada’ 8 UC Irvine Law Review 459; Lisa Diependaele, Julian Cockbain and Sigrid Sterckx, ‘Eli Lilly v Canada: the uncomfortable liaison between intellectual property and international investment law’ (2017) 7 Queen Mary Journal of Intellectual Property 283; Mercurio, ‘Awakening the Sleeping Giant: Intellectual Property Rights in International Investment Agreements’ (n 22).

45 For instance, *CME v Czech Republic* UNCITRAL Arbitration Proceedings, Final Award (14 March 2003); *Generation Ukraine, Inc. v. Ukraine* ICSID Case No ARB/00/9, Award (16 September 2003); *Malaysian Historical Salvors, SDN, BHD v. The Government of Malaysia* ICSID Case No ARB/05/10, Award on Jurisdiction (17 May 2007); *Joseph Charles Lemire v. Ukraine* ICSID Case No ARB/06/18, Award (28 March 2011); *Grand River Enterprises Six Nations, Ltd., et al. v. United States of America* UNCITRAL, Award (12 January 2011); *F-W Oil Interests, Inc. v. Republic of Trinidad & Tobago* ICSID Case No ARB/01/14, Award (3 March 2016); *Apotex Inc. v. The Government of the United States of America* ICSID Case No UNCT/10/2, Award on Jurisdiction and Admissibility (14 June 2013).

- v. Czech Republic⁴⁶, the investor CME brought a claim against the Czech Republic for, inter alia, expropriation of both its tangible and intangible assets (including intellectual property rights). In this case, the broadcasting licenses that CME was holding exclusively in Czech Republic are considered as “intellectual property”, and therefore the analysis of the tribunal does not mention IP explicitly, but rather focuses on the licenses.
- 28 In another case opposing F-W Oil Interests, Inc. and the Republic of Trinidad and Tobago,⁴⁷ the tribunal very briefly addressed the intellectual property claim. The investor was claiming that its confidential plans and economic models submitted in the framework of a tender process had been used in a second tender process without the investor’s authorization, therefore resulting in an unlawful appropriation of its IP assets. However, the tribunal rejected the claim, because of the lack of evidence that these assets represented an “investment” and that the investor had suffered a specific loss. Other cases such as *Shell v. Nicaragua* involved intellectual property but were not made public.⁴⁸
- 29 Let us briefly come back to the Philip Morris and Eli Lilly cases. Philip Morris brought claims against the States of Uruguay and Australia to challenge part of their tobacco regulations. In short, these countries undertook reforms to regulate the use of trademarks on cigarette packaging, imposing in particular that the trademark be displayed in a plain and harmonized style, and that health warnings appear on the packaging, therefore reducing the liberty and room for maneuver of trademark owners. Philip Morris challenged these regulations at different levels, from domestic courts to the WTO Dispute Settlement Body,⁴⁹ but also in arbitral tribunals. The WTO Panel circulated the Panel Report on 28 June 2018 where it ruled in favor of Australia, finding no violation of WTO law, and after over 6 years of complex proceedings.⁵⁰ At the time of writing, Honduras and the Dominican Republic notified the Dispute Settlement Body of their decision to appeal certain aspects of the Panel Report.
- 30 In the case opposing Philip Morris to Uruguay, the Claimant challenged the single presentation requirement, the 80% health warning requirement, and the mandatory pictograms to be displayed on cigarette packaging. It argued that these measures were unreasonable and that they constituted an expropriation and a violation of fair and equitable treatment. In particular, it argued that the measures were unreasonable because there was no relationship between them and the public health objectives pursued by Uruguay.⁵¹ The Claimant also contended that it had suffered a denial of justice in relation to the contradictory decisions issued by two of the highest courts of Uruguay: the Tribunal de lo Contencioso Administrativo, and the Supreme Court of Justice. The Tribunal dismissed the claim on expropriation, finding that there is no right to use a trademark but only a right to exclude, and that the measures did not prevent the Claimant to exclude others from using its trademark.⁵² It also found that the measures were reasonably related to a legitimate public policy objective. It also dismissed the FET claim and the denial of justice, finding that the measures were neither arbitrary nor discriminatory, and that the measures did not modify the legal framework above an acceptable margin of change.⁵³
- 31 In the Eli Lilly case, pharmaceutical patents were at issue, and notably the fact that two of Eli Lilly’s patents were cancelled after a stricter interpretation of the utility requirement by Canadian courts. Both Eli Lilly’s Zyprexa and Strattera patents were declared invalid by the Federal Court for lack of utility. The Federal Court of Appeal dismissed the appeals and the Supreme Court refused to leave to appeal the decisions of the Court of Appeal. Eli Lilly subsequently requested the establishment of an arbitration panel under ICSID rules alleging a violation of the minimum standard of treatment and expropriation provisions of NAFTA. This very complex case led to the arbitral award released on 16 March 2017,⁵⁴ whereby the tribunal ruled in favor of the State of Canada.⁵⁵ In particular, the tribunal found that there had been no dramatic change in the utility requirement under Canadian law, which the investor needed to show to establish a violation of legitimate expectations and thus FET.⁵⁶ The tribunal

46 *CME v Czech Republic* (n 45).

47 *F-W Oil v. Trinidad & Tobago* (n 45).

48 *Shell Brands International AG and Shell Nicaragua S.A. v. Republic of Nicaragua* ICSID Case No ARB/06/14, Settled (2006).

49 It is important to note that Philip Morris could not directly challenge domestic regulations at the WTO, since only States can challenge other State’s policies. Therefore, the cases brought against Australia were filed by Ukraine, Honduras, the Dominican Republic, Cuba and Indonesia. For more information on the cases see: <https://www.wto.org/english/tratop_e/dispu_e/find_dispu_cases_e.htm> accessed 18 October 2018.

50 ICTSD, ‘WTO Panel Upholds Australia Plain Packaging Policy for Tobacco Products’ (2018) 22 *Bridges Weekly*.

51 *Philip Morris v. Uruguay, Request for Arbitration* (n 7), para 79.

52 *Philip Morris v. Uruguay, Award* (n 28), paras 180-307.

53 *Ibid*, paras 309-432. It is worth noting that Gary Born, one of the arbitrators, dissented on two aspects of the award: he considered the two contradictory decisions of the highest courts of Uruguay to constitute a denial of justice, and the single presentation requirement to violate Uruguay’s obligation to provide fair and equitable treatment.

54 *Eli Lilly v. Canada, Final Award* (n 41).

55 For a deeper analysis of the case, please see Gervais, ‘Investor-State Dispute Settlement: Human Rights and Regulatory Lessons from Lilly v. Canada’ (n 44).

56 *Eli Lilly v. Canada, Final Award* (n 41) paras 307-382.

also rejected the arbitrariness or discriminatory nature of the utility requirement, and thus dismissed the claims of expropriation or violation of minimum standards of treatment.⁵⁷

- 32 Even though the above-mentioned cases all dismissed the investors' claims on different grounds, the recourse to investor-state arbitration for intellectual property disputes has been widely criticized by the doctrine. While some have argued that a ruling in favor of a State is still a loss for the State eventually, especially from a financial point of view, others have shown that the threat of an investment dispute can deter States from enacting new laws or taking measures for a public purpose.

II. Settling investment disputes with intellectual property claims: what are the legal and regulatory implications?

- 33 Scholars and policy makers have highlighted the potential impacts of these IP-investment cases from a legal and regulatory perspective.⁵⁸ First, these cases constitute a real threat to TRIPS flexibilities and further impact the fragmentation of international IP law. They have also been widely criticized for having a "chilling effect" in relation to public policy reforms and a detrimental impact on the regulatory freedom of States.

1. From threats to TRIPS flexibilities to the fragmentation of international IP law: a review of potential legal implications

- 34 One of the main concerns that was raised after the Philip Morris cases and was confirmed by the Eli Lilly case is the possibility to challenge international IP standards in an investment arbitration tribunal. Cynthia M. Ho shows that the cases brought by Philip Morris and Eli Lilly are likely to have a negative impact on TRIPS flexibilities.⁵⁹ She points out the fact that investors bring up compliance

with international treaties such as the TRIPS Agreement in their claims and therefore, arbitrators are requested to interpret these international IP provisions. Whereas some scholars have recalled that the legitimate forum for settling disputes over the interpretation of WTO Agreements such as TRIPS is the WTO, investors are challenging the compliance of State measures with these agreements and thus threatening the flexibilities they entail in ISDS.⁶⁰ This "threat" to TRIPS flexibilities can have very practical consequences on the regulatory flexibility of States and public health, since investors could challenge State measures implementing these flexibilities, if they consider that their investments have been affected. They could also have legal consequences with regard to the consistency of decisions emanating from different dispute resolution bodies.⁶¹

- 35 Generally, the decisions taken by investment tribunals are binding on the parties including on States.⁶² What would happen if an arbitral award was in direct contradiction with the decision taken by a domestic court or if the investment tribunal decided not to follow the case-law and interpretation of the TRIPS Agreement established by the WTO? The problem of consistency of international IP law is becoming increasingly important as the number of courts and tribunals dealing with IP issues increases. It seems necessary in this regard, to incorporate safeguards to ensure the consistency of decisions touching upon IP, either in the treaties that serve as a basis for the claims, or in the statutes of the arbitral tribunal, to diminish the risk of legal inconsistencies and therefore the adverse impact on TRIPS flexibilities.

⁵⁷ Ibid, paras 418-441.

⁵⁸ Amongst early papers published on the topic, see Carlos Correa, 'Bilateral Investment Agreements: Agents of New Global Standards for the Protection of Intellectual Property Rights?' (2004) 1 *Transnational Dispute Management* 32 and Ermias Tekeste Biadgleng, 'IP Rights under Investment Agreements: the TRIPS-Plus Implications for Enforcement and Protection of Public Interest' (2006) SOUTH CENTRE RESEARCH PAPERS .

⁵⁹ Cynthia M. Ho, 'A Collision Course Between TRIPS Flexibilities and Investor-State Proceedings' (2016) 6 *UC Irvine Law Review* 74.

⁶⁰ The case of compulsory licenses seems to be one of the major concerns in the field. Compulsory licenses are one of the TRIPS flexibilities contained in Article 31. Many authors have asked whether the issuance of a compulsory license for a patent could be regarded as an indirect expropriation and therefore be challenged on the basis of the relevant IIA provisions. The arbitral tribunal would then review the claim based on the IIA provisions, rather than the TRIPS provisions. Some agreements are thus explicitly excluding compulsory licenses from the definition of expropriation, such as NAFTA Article 1110.7. On this issue see: Carlos Correa, 'Investment Protection in Bilateral and Free Trade Agreements: Implications for the Granting of Compulsory Licenses' (2004) 26 *Michigan Journal of International Law* 331, Gibson, 'A Look at the Compulsory License in Investment Arbitration: The Case of Indirect Expropriation' (n 34).

⁶¹ While it is true that the same could be asked about the interpretation of international conventions by national and supra-national courts, it is outside of the scope of this article. On this issue see: Helmut Philipp Aust and Georg Nolte, *The Interpretation of International Law by Domestic Courts: Uniformity, Diversity, Convergence* (Oxford University Press 2016).

⁶² This is the case of ICSID awards following Article 53 and 54 of the ICSID Convention on The Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention).

- 36 In order to balance this statement, the findings of the tribunal in the Eli Lilly case are worth reproducing here: “It is not the task of a NAFTA Chapter Eleven tribunal to review the findings of national courts and considerable deference is to be accorded to the conduct and decisions of such courts. It will accordingly only be in very exceptional circumstance, in which there is clear evidence of egregious and shocking conducts, that it will be appropriate for a NAFTA Chapter Eleven tribunal to assess such conduct against the obligations of the respondent State under NAFTA Article 1105(1)”.⁶³ Thus, the tribunal in this case confirmed the approach already taken by the tribunal in the Philip Morris v Uruguay case, which consists in acknowledging the “margin of appreciation” of States and domestic courts in implementing public policy.
- 37 The threat of contradicting decisions or awards between different bodies leads to what is known as the fragmentation of the law, which is not new in the field of international law.⁶⁴ This means that international law is no longer a harmonized and unique body of rules, but rather that different approaches and interpretations can be adopted for the same legal rule. This raises the question of the impact of contradictory decisions in the field of intellectual property in light of the recent developments. Namely, what would be the legal consequences of arbitral awards involving investors and States that contradict national court decisions?
- 38 It could be argued that, since arbitration tribunals mostly award monetary compensation, the impact on national laws is quite reduced.⁶⁵ The legal impact would therefore be rather indirect, in the sense that these decisions could threaten the parties, which would refrain from taking actions that could lead to the arbitration and payment of monetary compensation. It has been stressed in this regard that “Limiting remedies to ‘only’ monetary compensation is of little solace to countries when remedies can be tens or hundreds of millions of dollars and the average defense of even a successful suit costs almost \$5 million, but has been up to \$40 million to simply

assess jurisdiction.”⁶⁶ This is the issue of the chilling effect of arbitral decisions.

2. Refraining from regulating or the so-called “chilling effect”

- 39 A second class of consequences that these arbitral decisions have on States is the so-called “chilling effect”, which has been raised by scholars in many different fields, including in the field of IP.⁶⁷ Indeed, cases such as the Eli Lilly or the Philip Morris cases are considered to have a “chilling effect” on the governments that want to implement changes in their health policies. In other words, governments could be reluctant to enact new laws to pursue public policy goals, such as the “plain packaging” regulation to reduce the consumption of tobacco, because of the threat of being sued by private investors in ISDS.
- 40 Some commentators have suggested that this regulatory chill could be observed in New Zealand, with regards to the Tobacco Plain Packaging regulation. While in Australia, the Tobacco Plain Packaging Act was adopted in two and a half years, it took over six years for New Zealand to enforce a very similar legislation. Some have interpreted this delay as an example of regulatory chill that could have been caused by different elements, such as the fear of litigation, but also the strong influence of lobbies.⁶⁸
- 41 This issue is even more pressing for developing and least-developed countries, which could probably not afford to pay the costs of arbitration proceedings. To give just one example, in the recent Eli Lilly case, the tribunal decided that the claimant not only had to bear the costs of the arbitration, amounting around USD 750,000, but it also had to cover 75% of respondent’s costs of legal representation and assistance, that equated around CAD 4,500,000.⁶⁹ In total, the claimant, Eli Lilly in this case, had to pay over USD 4,300,000 only for legal fees. The situation is quite different in case the Claimant wins the case and is awarded damages in addition to legal fees: the amounts are then much higher. A report from

63 *Eli Lilly v. Canada, Final Award (n 41) para 224.*

64 For a thorough analysis on the fragmentation of international law see: UN International Law Commission, *Fragmentation of International Law: Difficulties Arising From the Diversification and Expansion of International Law (A/CN.4/L.682, 2006).*

65 Cynthia M. Ho notes that “The United States has also attempted to defend investment claims as consistent with regulatory autonomy because its agreements do not permit tribunals to overturn U.S. law and instead can only award monetary compensation. Although this is technically true, it does not actually address how nations are constrained: some international agreements permit investment tribunals to order injunctive relief that could in fact overturn domestic laws.” (Ho, ‘A Collision Course Between TRIPS Flexibilities and Investor-State Proceedings’ (n 59) 423).

66 *Ibid.*

67 See inter alia: A. Mitchell and E. Sheargold, ‘Protecting the autonomy of states to enact tobacco control measures under trade and investment agreements’ *Tob Control* <<https://www.ncbi.nlm.nih.gov/pubmed/25361743>> accessed 28 March 2018; Jane Kelsey, ‘Regulatory Chill: Learnings From New Zealand’s Plain Packaging Tobacco Law’ (2017) *QUT Law Review*; Peter Yu, ‘The Investment-Related Aspects of Intellectual Property Rights’ (2016) *Research Paper No. 16–35 Texas A&M University School of Law*.

68 See Kelsey, ‘Regulatory Chill: Learnings From New Zealand’s Plain Packaging Tobacco Law’ (n 67).

69 *Eli Lilly v. Canada, Final Award (n 41) para 460.*

the UNCTAD shows that, on average, a successful claimant is awarded USD 522 million.⁷⁰ One can therefore understand that some countries would refrain from enacting legislations that could be challenged by foreign investors.

- 42 A strict correlation between the absence or delay of new public policy regulations and the possibility for investors to bring claims against States is difficult to establish. The States might have different interests involved or other factors might come into play. On the other hand, corporations will not systematically initiate arbitration proceedings if State measures appear to affect their investments; there are many alternative routes for dispute resolution. One could even suggest the existence of a form of chilling effect on investors, once they have lost a case, or other investors have lost cases on similar grounds. Therefore, cautiousness is required when it comes to drawing conclusions in this regard.
- 43 Nonetheless, the reaction of scholars and civil society following the recent cases suggests that reforms of the ISDS system are needed, including from an IP point of view. Rather than abolishing the system or excluding any reference to intellectual property in the investment and ISDS chapters of investment agreements, some proposals are put forward to reform investor-state dispute settlement and tackle the issues that it raises. In the second part of our analysis we will therefore look at the ISDS system and some of the proposals to revamp it, while focusing on the reforms at a European Union level in particular.

C. The necessary metamorphosis of investor-state dispute resolution

- 44 Investor-state dispute settlement has been widely criticized for different reasons that are not specific to intellectual property. Some criticisms are intrinsic to the nature of arbitration, and touch upon, for instance, the transparency, legitimacy, competency, or absence of appeal mechanisms in arbitration.⁷¹ There is a trend towards reforming ISDS promoted by many actors of international arbitration, starting with the United Nations Commission on International Trade Law (UNCITRAL), which established a Working Group for “Investor-State

Dispute Settlement Reform”⁷² in 2017. The task of this Working Group is to identify concerns regarding ISDS and to put forward some proposals.

- 45 The European Commission is also looking at reforms for ISDS included in its trade agreements and has recently published an impact assessment for a multilateral reform of investment dispute resolution.⁷³ These changes could have an impact on IP disputes, and the recent cases involving IP matters might have contributed to raising awareness about the implications of ISDS.
- 46 Before addressing the specific situation of the European Union and the project put forward by the European Commission to adapt the dispute settlement system for the protection of investments, we will expose some possible reforms at the stage of drafting the investment agreements, such as the revision of the relevant chapters or provisions, or the introduction of exceptions and limitations.

I. Revising the relevant provisions in international investment agreements

- 47 Whether or not one considers the adjudication of IP issues in investment tribunals to be legitimate and desirable, reforms seem to be necessary in order to ensure a balance between the interests involved, as well as to tackle some of the issues already highlighted above. Some opponents to the assimilation between IP and investment protection proposed to exclude intellectual property from the definition of investment, and therefore from investment tribunals’ scrutiny.⁷⁴ As an alternative, the integration of exceptions and limitations in IIAs as possible safeguards has been put forward.

70 UNCTAD, ‘Special Update on Investor-state Dispute Settlement: Facts and Figures’ (2017) 3 IIA Issues Note 1.

71 These issues were addressed in particular during the second panel of the CDR Autumn Arbitration Symposium 2017 on “The future of investor-state investment disputes”. See Andrew Mizner, ‘Debating the future of investor-state arbitration’ <<https://www.cdr-news.com/categories/disputes/7780-debating-the-future-of-investor-state-arbitration>> accessed 8 August 2018.

72 More details on the Working Group’s agenda and relevant documents are available at: <http://www.uncitral.org/uncitral/en/commission/working_groups/3Investor_State.html> accessed 18 October 2018.

73 Commission, *COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Multilateral reform of investment dispute resolution* (n 16).

74 The exclusion of intellectual property from the definition of “investment” in IIAs was already suggested in 1997 by several countries during negotiations for the Multilateral Agreement on Investment (MAI). In this regard see: OECD, *Report to the Negotiating Group on Intellectual Property* (Negotiating Group on the Multilateral Agreement on Investment (MAI) DAF/MAI(97)32, 1997).

1. The attempt to exclude IP from ISDS scrutiny: an efficient approach?

- 48 The opponents to the review of intellectual property provisions by investor-state tribunals have proposed to exclude intellectual property from the definition of “investment”. As we have seen, intellectual property is covered under most IIAs’ definition of investment. Therefore, removing any reference to intellectual property or intangible asset would end the debate. However, this is unlikely to happen in light of treaty practice and the importance of intellectual property in the world’s trade and investment flows. Nevertheless, it is possible to limit investor-state tribunals’ jurisdiction over IP matters by appropriately drafting the provisions of investment treaties.
- 49 We have seen before that some IP-related measures, such as compulsory licenses are already excluded from the definition of expropriation in some agreements.⁷⁵ This safeguard is intended to prevent investors from challenging these measures in ISDS. But several observations should be made: first, not all investment treaties foresee such safeguards; second, compulsory licenses or other IP-related measures could be challenged on different grounds (not necessarily expropriation); and third, these provisions excluding IP measures from the scope of expropriation usually require that this measure be taken “in accordance with” the TRIPS Agreement or the IP Chapter of the IIA, thus adding a way out to circumvent this safeguard. Let us briefly come back to the last two points.
- 50 On the one hand, excluding specific IP-related measures from particular investment provisions appears to be quite a limited solution. The measures could be challenged on difference grounds, such as fair and equitable treatment or non-discrimination, and many other measures still fall under the jurisdiction of investor-State tribunals.
- 51 To illustrate these observations, the trade agreement between Canada and the EU is a good example, since it attempts to exclude some IP-related measures from ISDS scrutiny. Article 8.12 (6) of the CETA clarifies what is covered under the concept

of expropriation. This article reads: “For greater certainty, the revocation, limitation or creation of intellectual property rights, to the extent that these measures are consistent with the TRIPS Agreement and Chapter Twenty (Intellectual Property), do not constitute expropriation. Moreover, a determination that these measures are inconsistent with the TRIPS Agreement or Chapter Twenty (Intellectual Property) does not establish an expropriation.”

- 52 The second sentence is an additional safeguard, as it seems that the first part of the article alone would not be sufficient to protect States against claims based on IP protection. Indeed, the NAFTA Article 1110 (7) also excluded “the revocation, limitation or creation of intellectual property rights, to the extent that such issuance, revocation, limitation or creation is consistent with Chapter Seventeen (Intellectual Property)”. However, as illustrated by the *Eli Lilly* case, this wording was not enough to avoid an ISDS dispute based on patent revocation. Therefore, the negotiators of the CETA seemed to be more cautious, by adding this additional sentence as well as the clarification in Annex 8-D. Whether the provision alone will be sufficient to avoid any dispute in the field remains to be seen.
- 53 It is worth noting that the 2018 United States-Mexico-Canada Agreement,⁷⁶ modernizing the NAFTA, does not foresee any possibility for ISDS for future disputes between the United States and Canada. On the other hand, for disputes arising between the United States and Mexico, ISDS is still an option but it has become a rather limited and controlled one. Indeed, the scope of potential claims that can be brought is contained in the Annexes 4-C to E. According to Annex 4-D, Article 3, an investor will only be able to bring a claim for breach of Article 14.4 (National Treatment) and Article 14.5 (Most-Favored-Nation Treatment), except with respect to the establishment or acquisition of an investment, and for breach of Article 14.8 (Expropriation and Compensation), except with respect to indirect expropriation.
- 54 For intellectual property disputes, that would surely limit the possible claims that can be brought since most claims seem to rely on indirect expropriation, breach of fair and equitable treatment, or denial of justice, which seem to be outside of the scope of this new agreement. While intellectual property is still included under the definition of investment, and the agreement entails exceptions and limitations for IP-related measures, such as the issuance of compulsory licenses, or the creation, revocation or limitation of IPRs, any disputes arising thereof would have

⁷⁵ See for instance, 2012 US Model BIT Article 6 (5) or US-Chile FTA Article 10.9 (5) which reads: “This Article does not apply to the issuance of compulsory licenses granted in relation to intellectual property rights in accordance with the TRIPS Agreement”. With regards to the wording used, some scholars have asked whether this would really prevent investors from bringing a claim forward in this case. Indeed, if the claimant was able to prove that the compulsory license has not been granted in accordance with the TRIPS Agreement, i.e. the State did not respect the conditions of Article 31 TRIPS, would the tribunal then be able to review the claim for expropriation? The question is still open.

⁷⁶ See the Agreement Text available at <<https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/united-states-mexico>> accessed 18 October 2018.

to be settled in a state-to-state dispute settlement procedure.

- 55 Nevertheless, most agreements still provide for the possibility of settling IP disputes in investor-state tribunals, and despite some attempts to clarify the scope of investment provisions, many uncertainties remain, and partial exclusions might not be a fully reliable shield against ISDS claims. Therefore, we will address an interesting feature of the Philip Morris and Eli Lilly decisions that can be seen as a tool to achieve balanced decisions: the recognition of States' sovereign power to regulate and their "margin of appreciation".

2. The recognition of States' sovereign right to regulate in the public interest in recent IP disputes

- 56 An alternative way to tackle the issues that were identified before, or in other words, to ensure a certain balance between the rights of investors and public policy considerations, is to reaffirm States' regulatory power by including provisions similar to Article XX GATT in investment agreements. This would protect countries' right to adopt measures "necessary to protect human, animal or plant life or health, or relating to the conservation of natural resources",⁷⁷ without violating investors' rights, or by stating explicitly these sovereign powers in the preamble of the agreement.
- 57 Such a provision would not prevent investors from bringing claims against States for breach of IIA provisions, but it gives an additional safeguard to States against frivolous claims and to regulate in the public interest. Indeed, in cases based on IIAs incorporating such clauses, the tribunal would have to consider them when deciding upon the legitimacy and legality of a measure. It is worth noting that some tribunals have already considered these non-investment concerns, based on the preamble or provisions of a particular treaty, or based on an interpretation relying on international law and the *Salini test* requiring a contribution of the investment to the host State's development.⁷⁸
- 58 On the other hand, some commentators see this approach as rather problematic, at least when explicit reference is made to a WTO treaty. With regard to specific references to the TRIPS Agreement, B. Mercurio notes that: "Asking a tribunal established under a BIT to interpret the

TRIPS Agreement is dangerous as it would mean a tribunal established under one regime would be forced to interpret an agreement established under another regime. The arbitral tribunal may or may not have expertise in WTO law or even be familiar with WTO jurisprudence."⁷⁹ Nevertheless, a tribunal could take into account general principles common to different bodies of law such as investment or trade law without interpreting a specific provision under a WTO treaty. It could therefore assess a State measure in light of these general principles, such as the legitimate safeguard of public interests, which features in recent IIAs as well as in WTO Agreements such as TRIPS.

- 59 In relation to the deference investment tribunals owe to judicial decisions and the need to interpret provisions in accordance with the Vienna Convention, Cynthia Ho observes that: "It remains unclear whether a tribunal of commercial lawyers will accept these arguments given not only a narrow view of intellectual property rights that do not consider public policy, but also a general trend towards viewing intellectual property as solely an asset divorced from its policy foundations."⁸⁰ Nevertheless, the tribunals in the Philip Morris and Eli Lilly cases have referred to the deference due to national authorities and taken into account external provisions by application of the Vienna Convention on the Law of Treaties (VCLT).
- 60 In *Philip Morris v. Uruguay*, the tribunal engaged in a balancing exercise between the investor's rights and Uruguay's sovereign right to regulate. In assessing whether the measures at issue were expropriatory, the tribunal found that "the adoption of the Challenged Measures by Uruguay was a valid exercise of the State's police powers, with the consequence of defeating the claim for expropriation under Article 5(1) of the BIT".⁸¹ The Tribunal recalled that the protection of public health had "long been recognized as an essential manifestation of the State's police power",⁸² relying on the 1961 Harvard Draft Convention on the International Responsibility of States for Injury to Aliens, and the Third Restatement of the Foreign Relations Law of 1987, as well as statements from the OECD.⁸³ It stated that in order for a measure not to constitute an indirect expropriation, it has to be taken in bona fide, for the purpose of protecting public welfare,

77 GATT Article XX.

78 Pia Acconci, 'Is it Time to Integrate Non-investment Concerns into International Investment Law?' (2013) 10 *Transnational Dispute Management*.

79 Mercurio, 'Awakening the Sleeping Giant: Intellectual Property Rights in International Investment Agreements' (n 22) 899-900.

80 Ho, 'A Collision Course Between TRIPS Flexibilities and Investor-State Proceedings' (n 59) 421.

81 *Philip Morris v. Uruguay*, Award (n 28) para 287.

82 *Ibid*, para 291.

83 *Ibid*, paras 292-4.

and be non-discriminatory and proportionate.⁸⁴ It found that in the case at issue, the measures were “not ‘arbitrary and unnecessary’ but rather were potentially ‘effective means to protecting public health’”.⁸⁵

- 61 It is worth noting that the Claimant recognized several times in its submissions the State’s right to regulate. In its notice of Arbitration, the Claimant contended that: “The Claimants do not challenge the Uruguayan Government’s sovereign right to promote and protect public health. However, the Government cannot abuse that right and invoke it as a pretext for disregarding the Claimants’ legal rights.”⁸⁶ The Claimant’s argument was that “the measures were expropriatory, even if enacted in pursuit of public health, because they were unreasonable”,⁸⁷ in that they were not connected to the legitimate public health objective pursued. It was therefore the tribunal’s difficult task to balance the intended public health effects of the measure against the investor’s rights and legitimate expectations, and to decide whether the measure fell within the scope of the accepted right of States to regulate and their ‘margin of appreciation’.
- 62 Despite the growing acceptance of non-investment concerns in investment disputes, the system is still undergoing a major crisis of legitimacy. Proposals for reforming the system have already been put forward at different levels.

II. Proposals for reforming investor-state arbitration: an overview of the EU landscape

- 63 Following the growing concerns with respect to investor-state arbitration amongst all EU stakeholders, the European Commission put forward proposals for a reform of the ISDS system in the EU.⁸⁸ This step forward is particularly visible in the latest draft of the CETA,⁸⁹ but also in internal projects such

as the impact assessment for the establishment of a multilateral investment court.⁹⁰ In parallel, the Court of Justice of the European Union (CJEU) will soon provide guidance on the compatibility of the ISDS chapter in the CETA with the Treaties including fundamental rights, which is likely to have a broader impact, including on the protection of intellectual property.⁹¹ Before giving an overview of the project of a multilateral investment court, the role of the CJEU in this area and the compatibility of investment arbitration with EU primary law will be addressed.

1. The disputed compatibility of ISDS with EU law and the role of the CJEU

- 64 The compatibility of ISDS with EU law is becoming increasingly controversial. Not only are EU institutions having a closer look at the issue, but also scholars and civil society have raised their voice in this regard.
- 65 The proposal of the European Commission, which was implemented in the CETA was to integrate an Investment Court System (ICS) as an alternative to the ISDS system.⁹² Therefore, the ISDS system has been replaced in readiness by this ICS, which did not mitigate the controversy around the compatibility of this system with EU law. Therefore, the Belgian federal government, following the resistance put up by the Walloon against the CETA, sought an Opinion from the CJEU on the compatibility of the ICS with EU Treaties.⁹³ The request was formally submitted in September 2017, and the Opinion of the Court is likely to have an important impact, not only on the

means that, eventually, the CETA negotiators accepted the proposal made by the Commission to establish a permanent arbitral court, which, à l’occurrence, will be constituted according to article 8.27” (Benedetta Cappiello, ‘ISDS in European International Agreements: Alternative Justice or Alternative to Justice?’ (2016) 13 *Transnational Dispute Management* 15).

84 Ibid, para 305.

85 Ibid, para 306.

86 *Philip Morris v. Uruguay, Request for Arbitration (n 7) para 7.*

87 *Philip Morris v. Uruguay, Award (n 28) para 198.*

88 In 2014, the EU launched a public consultation on the EU’s approach to investment protection and ISDS in the TTIP. The public consultation was completed in March 2017. More information available at: <http://trade.ec.europa.eu/consultations/index.cfm?consul_id=233> (last accessed 18 January 2018).

89 Benedetta Cappiello notes that “With regard to procedural rules, article 8.18 states that ‘Without prejudice to the rights and obligations of the Parties under Chapter Twenty-Nine (Dispute Settlement), an investor of a Party may submit to the Tribunal constituted under this section a claim.’ This

90 Commission, *COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Multilateral reform of investment dispute resolution* (n 16).

91 The application to initiate proceedings was lodged on 7 September 2017 by the Kingdom of Belgium and the hearing took place on 26 June 2018. The opinion of the Advocate General is expected to be released in January 2019. See Opinion Avis 1/17 - Accord ECG UE-Canada, available at <<http://curia.europa.eu/juris/fiche>> accessed 18 October 2018.

92 For more information on the context and the differences between the two systems, see: European Parliament, *From Arbitration to the Investment Court System (ICS) - The Evolution of CETA Rules*, 2017).

93 EURATIV with Reuters, ‘Belgium seeks EU court opinion on EU-Canada free trade deal (6 September 2017)’ <<https://www.euractiv.com/section/ceta/news/belgium-seeks-eu-court-opinion-on-eu-canada-free-trade-deal/>> accessed 18 October 2018.

ICS provisions of the CETA, but on the investment court and investor-state systems featuring in many EU IIAs in general.

- 66 In particular, the Belgian government requested an Opinion of the Court on the following aspects: (1) the exclusive competence of the CJEU on the interpretation of EU law; (2) the general principle of equality and effectiveness requirement of EU law; (3) the right to access tribunals; (4) the right to an independent and impartial justice.⁹⁴ This Opinion was not to be expected before at least one or two years, but since the ICS is outside the scope of provisional application of the CETA, it did not jeopardize the rest of the agreement that already partially entered into force on 21 September 2017.
- 67 The impact that this decision is likely to have on intellectual property will also be interesting to further scrutinize. Indeed, if the Court were to decide that it has exclusive competence on the interpretation of EU law, what consequences would arise regarding decisions of investment arbitral tribunals required to interpret EU IP provisions contained in directives or regulations as part of the applicable law? The answer is probably not straightforward. One could argue that, since arbitral awards are only binding on the parties, the effect of the arbitral awards would remain *inter partes*. However, the debate is slightly different when it comes to investor-state disputes, as the decision impacts the governments and therefore, the public.
- 68 The question of the compatibility of ISDS with EU law and the question of the competency of the EU is also extremely complex since the EU does not have an exclusive competency in all areas, as illustrated by the opinion 2/15 of the Court.⁹⁵
- 69 In its opinion dated 15 May 2017, the Court addressed different issues raised by the European Commission with regard to the FTA between the EU and Singapore. The Court touched upon investment and IP questions, which are particularly relevant for our analysis. It is worth noting that the position of the Court is not straightforward, and the decision could be seen as quite complex. Indeed, the Court stated that the provisions on foreign direct investment fall within the common commercial policy, but that non-direct foreign investment falls within a competence shared between the EU and the Member states. Therefore, the EU cannot approve the provisions of Section A (Investment Protection) of Chapter 9 (Investment) of the FTA by itself, “in so far as

they relate to non-direct investment between the European Union and the Republic of Singapore”.⁹⁶ With regards to intellectual property provisions, the Court acknowledged that Chapter 11 (Intellectual Property) falls within the exclusive competence of the EU, even if some provisions are related to moral rights. Finally, the provisions of Section B of Chapter 9 on Investor-State Dispute Settlement also fall within the shared competence.

- 70 In this opinion, the CJEU only answered the question of the competence of the EU to sign and conclude such an agreement. On the contrary, the Court did not touch upon the question of the compatibility of the agreement with EU law,⁹⁷ and this is precisely what the Belgian Government is seeking to clarify with regards to ISDS in its request for Opinion.
- 71 In parallel, or perhaps as a reaction to the general discontent towards ISDS, the European Commission is looking at new proposals regarding the reform of the investor-state arbitration system.

2. Project for the establishment of a multilateral investment court: an appropriate forum for intellectual property?

- 72 The European Commission is currently looking at possibilities for reforming the investment dispute settlement system, particularly in the case of investor-state disputes. In the framework of the CETA between the EU and Canada, the governments have agreed on a “new approach on investment protection and investment dispute settlement”.⁹⁸
- 73 The Commission adopted a “two-step approach” to reform the ISDS system, with the aim of institutionalizing an investment court system for future EU trade and investment agreements and establish an international investment court with an appellate mechanism. In August 2016 it launched an impact assessment “to examine the possible options and impacts of a reform of the ISDS system at multilateral level, including through the establishment of a permanent multilateral investment Court”.⁹⁹ It is interesting to note that this impact assessment was limited to “examining options for reforming at multilateral level the dispute settlement system and does not examine the

94 Royaume de Belgique Affaires étrangères Commerce extérieur et Coopération au développement, *AECG DEMANDE D'AVIS BELGE À LA COUR DE JUSTICE DE L'UNION EUROPÉENNE NOTE EXPLICATIVE* (6 September 2017).

95 *Opinion 2/15 of the Court (Full Court)* (Court of Justice of the European Union).

96 *Ibid*, para 305.

97 *Ibid*, para 30.

98 European Commission, *CETA: EU and Canada agree on new approach on investment in trade agreement* (2016).

99 Commission, *COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT Multilateral reform of investment dispute resolution (n 16) 6ibid*.

substantive investment protection standards, which are not intended to be addressed by this reform”.¹⁰⁰

- 74 While we have seen that the review of intellectual property claims in ISDS raises issues that are common concerns in the field of ISDS, such as the transparency, the absence of appeal, or the cost of procedures, it also raises some substantive issues that would therefore not be covered under this reform. At the same time, it seems that a profound reform of the system would have to start from a revision of the agreements themselves, which are then enforced and interpreted by the investment courts.¹⁰¹
- 75 To tackle some of the shortcomings raised by the ISDS system, as highlighted by public consultations and expert reports, the Commission’s proposal for a multilateral investment court would entail a Tribunal of First Instance and an Appeal Tribunal with permanent tribunal members, and apply the UNCITRAL Rules on Transparency, whereby hearings, documents and findings are made public. This would address some of the main criticisms that the ISDS system is facing, such as the absence of appeal mechanisms and the lack of transparency. However, these proposals have already been criticized by the doctrine as being insufficient and overlooking the essential issues.¹⁰²
- 76 In 2017, the EU joined the broader project for the establishment of a multilateral investment court under the auspices of the UNCITRAL. On 20 March 2018, the Council adopted the negotiating directives for a multilateral investment court, authorizing the Commission to negotiate on behalf of the EU in this field.¹⁰³
- 77 Whether such a multilateral investment court would be a more legitimate forum for IP disputes is an open debate. While it would respond to some of the concerns that were raised after the Philip Morris or Eli Lilly cases in terms of procedure and transparency, some difficulties remain and will have to be addressed. In particular, the competency of the arbitrators in the field of IP, or the coexistence with other IP courts such as the future European Patent Court¹⁰⁴ will not necessarily be tackled by the reform.

¹⁰⁰ Ibid.

¹⁰¹ See above point B.I.2.

¹⁰² Gus Van Harten, ‘Comments on the European Commission’s Approach to Investor-State Arbitration in TTIP and CETA’ (2014) Osgoode Legal Studies Research Paper No 59/2014 .

¹⁰³ Council of the European Union, Negotiating directives for a Convention establishing a multilateral court for the settlement of investment disputes, 20 March 2018, available at <<http://data.consilium.europa.eu/doc/document/ST-12981-2017-ADD-1-DCL-1/en/pdf>> accessed 18 October 2018.

¹⁰⁴ Simon Klopschinski, ‘International Investment Arbitration,

- 78 On the other hand, it is clear that the reform will only touch upon procedural aspects surrounding investor-state dispute settlement and would not be considered under substantial standards of protection, which are a major aspect of the criticism formulated against the current system, particularly for intellectual property. In addition, the questions of the safeguard of the TRIPS flexibilities, or the State’s power to regulate in the IP field will not be specifically addressed by the reform, and it would therefore be desirable that the future system foresees broader safeguards and carve-outs under which specific IP issues could be addressed. Considering the early stage of the reform, it is nevertheless difficult to assess the real impact that it will have on future IP disputes.

D. Conclusion

- 79 In 2009, C.S. Gibson was suggesting that: “With this early coverage of intellectual property in BITs, it is perhaps surprising that there has yet to be a publicly reported decision concerning an IPR-centered investment dispute. Given the trajectory of the modern economy, however, in which foreign investments reflect an increasing concentration of intellectual capital invested in knowledge goods protected by IPRs, this could soon change”.¹⁰⁵ A couple of years later, the first investment cases dealing with IP issues were made public.
- 80 Nevertheless, in practice, there have been very few known cases discussing IP issues in the framework of investment protection. This therefore raises the question of whether we are observing a new “trend” in the field, i.e. whether the number of cases is likely to increase in the coming years, or whether these were isolated cases which will remain rather theoretical. In parallel, scholars are discussing the legitimacy of submitting IP disputes to investor-state arbitrations. While there are still important issues to be tackled, such as the safeguard of the regulatory power of States and the recognition of public policy objectives, the coming reforms in the field might open new legitimate paths for the adjudication of IP disputes.

the European Patent Office, and the Future Unified Patent Court’ (*Kluwer Patent Blog*, August 1, 2018, 2018) <<http://patentblog.kluweriplaw.com/2018/08/01/international-investment-arbitration-extraordinary-remedy-concerning-decisions-european-patent-office-future-unified-patent-court/>> accessed 7 August 2018.

¹⁰⁵ Gibson, ‘A Look at the Compulsory License in Investment Arbitration: The Case of Indirect Expropriation’ (n 34) 3.

- 81 Whether this is an opportunity or a threat, this relatively new alternative to challenge States' IP policies will not be out of the spotlight any time soon.

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A Recent Exploration of Accessing Public Sector Information

Theoretical and Legal Background, with a Special Focus on Hungary

by **Gábor Szalay***

Abstract: The rapid technological advancements we are witnessing have undoubtedly had a great impact on several aspects regarding freedom of information, and the concept of increased governmental transparency on a global scale seems to be inevitable. But how can certain states, governments and societies cope with these new possibilities and challenges? Do state authorities worry about the weakening of their information monopoly? The author wishes to introduce ideas related to these questions through providing an examination of the theoretical and legal background and case law related to the concept of freedom of information; more specifi-

cally, the right to access public sector information at international and European Union levels, as well as the development and current situation in Hungary. As a result of the regulatory attitude and policies shown in recent years, the right to access public sector information has been weakened in Hungary, thus the specific aim of the article is to highlight certain amendments that have been made to related laws and examine them in light of the theoretical foundations, as well as their possible adverse effects exerted on the pursuit towards increased governmental transparency.

Keywords: Governmental transparency; freedom of information; right to access public sector information; freedom of expression; fundamental rights; open government policies

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A. Introduction

- 1 The emergence of the right to access public sector information in the late twentieth and early twenty-first century can be characterised as a necessary tool in many ways. For example, it enables citizens to have sufficient oversight over their government's activities and monitor and participate in public affairs more efficiently, sheds light on possible government abuse of power, and increases the effective functioning of democratic systems in general, in addition to other related features and theoretical concepts aimed at increased governmental transparency, which will be introduced in detail by the paper.
- 2 Accessing public sector information is especially vital if the questions to which we seek answers include public entities exerting perceptible effects on our society and daily life through their activities and management of public funds. If we take into consideration the social contract theory, developed in the seventeenth and eighteenth centuries by scholars such as Jean-Jacques Rousseau, Hugo Grotius, Immanuel Kant, John Locke and Thomas Hobbes, and by virtue of which us, the people authorised such entities to act on our behalf and organise, regulate and manage our society and public funds, the role of implementing this fundamental right in practice increases even further.

- 3 Before assessing the situation in Hungary, the paper discusses the theoretical foundations and the regulatory development of the right to access public sector information, which resulted in it being implemented in core international human rights instruments introduced below. Despite this, however, if one follows the news on public affairs, it quickly becomes apparent that governments, government agencies and other state-affiliated entities are keen to protect sensitive information related to their activities and management of public funds. For example in the case of Sir Ed Davey, the former Energy Secretary of the United Kingdom, whereby he attempted to request the disclosure of an energy report on the costs of certain electricity sources, and accused the Government of the United Kingdom of abuse of power after his request was turned down, rendering the case headline news.¹
- 4 More often than not - also in accordance with the general public's thinking - this behaviour from the government might presuppose the abuse of power occurring within such entities. With their negative connotation in public affairs, privacy and secrecy are likely to cause the distrust of people.² To a certain extent, this approach can be understood and accepted in the case of private entities, where competition plays an important role on the market and the disclosure of sensitive information (business secrets, etc.) can be damaging, as it can give the upper hand to competitors and therefore might distort competition.³ On the other hand, however, companies holding a strong position on a given market while being managed without the necessary degree of transparency and prudent corporate governance policies are exposed to be the hotbeds of abusive market practices. If abusive market practices are followed by leading business participants with strong market positions, the consequences will most likely hurt competition as well.⁴ As a result, the foundations of the free market and the right to free competition are shaken by these types of corporate conduct; not to mention the harm caused to the interests of certain individuals, be them natural or legal persons, being subjected to both financial and moral damage in such situations, hence the viability of their very existence might be endangered.
- 5 Within the aspect of accessing public sector information, the requirement to balance between the disclosure of information and the protection of individuals' personal data should be kept in mind as well. However, the public sphere shall serve the people, it should have no secrets to hide, thus a transparent and accountable functioning model is a basic requirement. A hopeful, but still naïve wish. In practice, the attempt to acquire rather sensitive public sector information from public entities has its strong barriers even in more advanced environments. However, it is especially burdensome in certain Eastern-European states, where the questionable activities of communist regimes prevailing prior to the fall of the Berlin Wall still echo in today's society and political environment, as expressing one's thoughts in such systems was clearly dangerous, therefore having access to public sector information was definitely out of reach.⁵ The public sector fed people with what they believed would serve their ability to effectively control the masses and secure their hold on power. A phenomenon still relevant today, however, in a more subtle and unpredictable way.
- 6 Nevertheless, as a consequence of new trends in international law and in political and ideological tendencies, in the previous two decades the right to access public sector information became recognised even by certain non-democratic states; for example, the People's Republic of China, where the law related to open government information entered into force in 2008.⁶ In part, this is likely to be the consequence of more substantial and clear international standards adopted in this key area in these previous decades, and the fact that the experience acquired from previous laws can be used in the creation of new laws. However, the implementation and precise scope of this fundamental right in practice is still a matter of debate and controversy. It is important to note in this context, that even though the concept of governmental transparency and the transparency of the public sector appears to be elevated to a level where it is recognised as a shared principle among democratic states, the way it is formed in constitutional and administrative law, and how efficiently it can be enforced in practice varies significantly from state to state, and the diversity of national laws and traditions play a crucial role.⁷

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1 Emily Gosden, 'Access denied: Government rejects Sir Ed Davey's request for energy report he ordered' *The Telegraph*, 5 November 2016.

2 Andrea Bianchi and Anne Peters, *Transparency in International Law* (Cambridge University Press, 2013, Cambridge, ISBN-13: 9781107453791) at 2-3.

3 Gábor Szalay, 'Arbitration and Transparency – Relations Between a Private Environment and a Fundamental Requirement' (2017) 6(1) *Slovenian Arbitration Review* 17.

4 Spencer Weber Waller, 'Corporate Governance and Competition Policy' (2011) 18(4) *George Mason Law Review* 849-850, 855, 859-860, 884-885.

5 Attila Péterfalvi and Balázs Révész, 'The Significance of Freedom of Information in the Function of Rule of Law in Hungary' (2017) (2) *Law Review of Kyiv University of Law* 292.

6 Regulations on Open Government Information of the People's Republic of China <<http://www.cecc.gov/resources/legal-provisions/regulations-of-the-peoples-republic-of-china-on-open-government>>.

7 Mireille van Eechoud and Katleen Jansen, 'Right of Access to Public Sector Information' (2012) 6(3) *Masaryk University*

B. Theoretical Foundations

I. Examination of the concept

- 7 In order to understand the nature of this multi-faceted right, it is essential to examine its characteristics in general and the theoretical justifications on which it was founded. According to the definition of Peled and Rabin, these justifications are: a) the political-democratic justification; b) the instrumental justification; c) the proprietary justification; and d) the oversight justification.⁸ The first justification within the concept of the right to information as a fundamental constitutional right embodies its main role played in the appropriate representation of a state's democratic system. Basically, it represents the fundamental requirement based on which the general public is able to acquire information needed to evaluate, and if necessary, shape the democratic functioning of the state through participation in public affairs and political debates. As access to information is essential in the adequate functioning of a democratic state, many scholars, politicians and thinkers consider it a necessary component of democratic environments. James Madison, the fourth president of the United States, already pointed out in his often cited thoughts dated 1822, that a government acting without ensuring the means for access to public sector information is doomed to end in failure, and "people who mean to be their own Governors, must arm themselves with the power which knowledge gives".⁹
- 8 A related and prominent example also took place in the United States, where in 2006 a research institute of the George Washington University requested information from the Pentagon on the number of US troops on Iraqi soil at the time. According to the information provided, the military estimated a number of 5,000, while in reality 134,000 soldiers were still stationed in Iraq when the information was made public, and shortly afterwards President George W. Bush ordered the deployment of an additional 20,000 troops. This misleading information escalated the already fierce public debate in the United States surrounding the Iraq war, and had adverse effects on the reputation of the Bush administration.¹⁰ As it is apparent, this attitude further distanced the people from their elected federal government, and

clearly did not contribute to an increased level of governmental transparency.

- 9 The second theoretical justification of the right to information is that of instrumental justification. In essence, this means that the right to obtain or access information is required for exercising other fundamental human rights. For example, if a government agency holds information in connection with an individual person's rights or obligations, the only way for that person to adequately assess the situation and protect his or her rights, or to become aware of his or her obligations, is the right to information. Therefore, it can be concluded that the right to information is a fundamental human right on which other such rights depend,¹¹ and thus also functions as an instrument needed to exercise other fundamental human rights.
- 10 The third theoretical justification Peled and Rabin emphasised is the proprietary justification, which in the author's point of view, relates strongly to the social contract theory mentioned above. The proprietary justification is based on the theory that information held by public entities in a given state is ultimately in the ownership of the citizens (and residents) of that state. The information stored and managed by public entities is collected or created by public officials whose activities are financed from different taxes paid to the state by the people. In accordance with this structure, individuals should have access to information belonging to their property, especially if we take into account the fact that the collection or creation of such information was financed from their pockets. Therefore, limiting the right of an individual to avail of his or her property; for example, limiting access to public sector information should only be justified if it is necessary for the protection of other owners' rights, i.e. the rights of other individuals in the general public with which the right to access information interferes.¹²
- 11 The fourth theoretical justification is the oversight justification, which can strongly be connected to the political-democratic justification. In this aspect, the constitutionality of the right to access information is not connected to it in terms of its nature as a fundamental right, but as an essential component of good governance in any state that wishes to function within democratic frameworks, since constitutions not only protect the rights of citizens and other persons falling within their scope, but also determine how the government has to be constructed. Therefore, constitutions have the obligation to limit the dangers of granting too much power to a government, and the right to

Journal of Law and Technology 474, 483.

8 Roy Peled and Yoram Rabin, 'The Constitutional Right to Information' (2011) 42(2) *Columbia Human Rights Law Review* 360.

9 Gaillard Hunt (ed.), *The Writings of James Madison* (1910) 103. <<http://oll.libertyfund.org/titles/madison-the-writings-of-james-madison-9-vols>>.

10 Peled and Rabin, *supra* at 361.

11 *Ibid.* at 363-364.

12 *ibid.* at 365.

information is an important device for the fulfilment of such an obligation. Peled and Rabin aptly grasp the concept under examination: “The public’s right to oversee those who serve it resembles the right of beneficiaries to monitor their trustees. Beneficiaries have no need to uncover or even suspect corruption to justify their oversight”.¹³

II. Future tendencies

- 12 In the age of big data and quickly developing surveillance technologies,¹⁴ where a vast array of tools are at the disposal of governments, government agencies and other public entities to collect, store, evaluate, create and use information related to the citizens and residents of a given state, the right to information, more precisely the right to access public sector information, is the primary instrument in developing and upholding appropriate ethics in connection with the management of such information. Which, in the author’s view, if not treated the right way, and apart from the democratic aspects of disastrous consequences of the public being excessively limited in accessing such information, might very well lead to the continuous and high-scale infringement of the right to privacy as well. Especially considering the curious nature of mankind¹⁵ that facilitated the emergence of the right to information in the first place. Therefore, the principle of proportionality must play an important role.
- 13 A related example is the landmark case of *Volker*,¹⁶ in which the Court of Justice of the European Union (CJEU) invalidated certain European Union regulations requiring the publication of information on beneficiaries of agricultural funds on the basis of failure to observe the principle of proportionality in its 2010 judgment. *Bavarian Lager*¹⁷ is another case that can be viewed as decisive with respect to future tendencies. Namely, in 2010 the CJEU specified certain limits of the right to access to documents under the rules for the protection of personal data, as well as the 2011 case of *Scarlet Extended*,¹⁸ where the CJEU had to strike a balance between the freedom of information and the rights to personal

data, intellectual property, and freedom to conduct a business. In *Scarlet Extended* the CJEU assessed issues in connection with certain obligations that can be imposed on Internet service providers in light of the protection of intellectual property rights, and specifically found that European Union law precludes the obligation to be imposed on Internet service providers requiring them to install systems for monitoring electronic communications passing through their services and to collect and identify users’ IP addresses for an unlimited period of time. Furthermore, in *Sweden v Commission*,¹⁹ the CJEU specified certain restrictive conditions under which a Member State may oppose the disclosure of a document originating from its own state, while in *Technische Glaswerke*²⁰ it set the limits of access to documents in procedures for reviewing state aid.

- 14 The quick paradigm shifts by which the digital age affects our daily lives of course carry advantages; considering for example, the increased degree of transparency that cryptocurrencies and blockchain technology might evoke in connection with transactions occurring peer-to-peer,²¹ and the subsequent effects it might have with respect to the disclosure of public sector information in relation to state-affiliated and high-volume transactions. On the other hand, in certain situations, blockchain technology and cryptocurrencies can have the opposite effect and might hurt transparency, originating also from their decentralised nature and the underlying technology. A prominent example is the case of two notorious darknet markets, AlphaBay and Hansa, which were closed down by authorities in 2017. Both used cryptocurrencies as means of payment during the trade of drugs and other illegal products, and ensured that their admins and users remained anonymous.²² Therefore, the importance of the principle of proportionality rises again, and while it is important to embrace progressive concepts and exploit their advantages in every field possible, a necessary amount of caution and protective regulatory attitude seems advisable.
- 15 Furthermore, apart from accessing, the re-use of public sector information (i.e. the use of governmental data left unused by government entities for certain private or commercial

13 *ibid.* at 367.

14 Frank Konkel, ‘Sketching the Big Picture on Big Data’ *FCW*, 15 April 2013.

15 Vivian Hemmelder and Tommy Blanchard, ‘Why Humans Are Hard-Wired For Curiosity’ *Huffington Post*, 14 September 2016.

16 Cases C-92/09 and C-93/09 *Volker und Markus Schecke GbR and Hartmut Eifert v Land Hessen*, judgment of 9 November 2010.

17 Case C-28/08 *Commission v Bavarian Lager*, judgment of 29 June 2010.

18 Case C-70/10 *Scarlet Extended SA*, judgment of 24 November 2011.

19 Case C-64/05 *Sweden v Commission*, judgment of 18 December 2007.

20 Case C-139/07 *Commission v Technische Glaswerke Ilmenau*, judgment of 29 June 2010.

21 Mark Fenwick, Wulf A. Kaal and Erik P.M. Vermeulen, ‘Legal Education in the Blockchain Revolution’ (2017) 20(2) *Vanderbilt Journal of Entertainment & Technology Law* 366.

22 Europol, ‘Massive blow to criminal dark web activities after globally coordinated operation’ Press Release, 20 July 2017 <<https://www.europol.europa.eu/newsroom/news/massive-blow-to-criminal-dark-web-activities-after-globally-coordinated-operation>>.

purposes) has also caught the attention of scholars and practitioners alike. Considering the possible conflicts of this phenomenon with privacy, data protection and intellectual property rights,²³ as well as its potential economic importance,²⁴ the attention paid to it is not surprising at all. The rapid and diverse technological advancements of the 21st century clearly affect and shape the development of the freedom of information, giving rise to new possibilities and of course new challenges as well. But will it turn out to be a concept that was rather facilitated or hindered by these new advancements?

C. Overview of Development at International and European Union Levels

I. Core International Instruments

- 16 Attempts towards the recognition of access to information as a fundamental right was first evoked by international law through certain human rights documents presenting it as part of the right to freedom of expression. In its Article 19, Paragraph 2, the International Covenant on Civil and Political Rights, adopted in 1966, establishes that “Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information...”. However, it did not establish explicit provisions with respect to the right to information. The Council of Europe’s Convention on Access to Official Documents, adopted in 2009, spearheaded the progression of access to public sector information on the international level. Nevertheless, certain European Union legislation preceded the Council of Europe’s 2009 Convention. Approximately since the beginning of the 2000s, an increasing number of domestic legal systems also started to recognise the right to information as a fundamental right, and facilitated its incorporation by adopting related freedom of information acts and amendments. Without doubt, the international and European spread and achievements of the concepts of transparency, accountability, and open governance played a prominent role in positioning the right to information among those considered fundamental.²⁵
- 17 The first comprehensive European Union attempt to promote access to public sector information was Recommendation No. R (81) 19 of the Committee of Ministers of the Council of Europe to Member States on the Access to Information Held by Public Authorities, adopted on 25 November 1981. However, related legislation was already passed beforehand, granting a fertile soil for the development of the right to information and certain of its sub-types. Article 10, Paragraph 1 of the European Convention on Human Rights (ECHR), entered into force on 3 September 1953, and in connection with the right to freedom of expression sets forth that “...this right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority”. Following 1953, the outlines of the concept under examination became more and more visible, however, the real breakthrough had to wait almost until the beginning of the 2000s.
- 18 The Aarhus Convention²⁶, signed on 25 June 1998 by the European Union, its member states, and certain other Asian states, was seeking to increase the importance of the right to access public sector information related to environmental issues and public participation in environmental decision-making. In accordance with the Aarhus Convention, Directive 2003/4/EC was adopted in 2003 and allows and regulates access to environmental information. The Charter of Fundamental Rights of the European Union, gaining full legal effect in 2009 following the entry into force of the Treaty of Lisbon, in its Article 42 titled “Right of access to documents” establishes that “Any citizen of the Union, and any natural or legal person residing or having its registered office in a Member State, has a right of access to European Parliament, Council and Commission documents”.
- 19 It is important to emphasise that the first sentence of Article 15, Paragraph 3 of the Treaty on the Functioning of the European Union also relates to the topic, and sets forth that: “Any citizen of the Union, and any natural or legal person residing or having its registered office in a Member State, shall have a right of access to documents of the Union’s institutions, bodies, offices and agencies...”. Including this right in one of the most influential laws of the European Union clearly indicated the willingness to strengthen its presence.

23 Bart van der Sloot, ‘On the Fabrication of Sausages, or of Open Government and Private Data’ (2011) 3(2) *JeDEM* 1, 3, 4; Furthermore see Heiko Richter, ‘Open Science and Public Sector Information – Reconsidering the exemption for educational and research establishments under the Directive on the re-use of public sector information’ (2018) 9(1) *JIPITEC* 51-52, paras 1-2.

24 Miriam Marcowitz-Bitton, ‘Commercializing Public Sector Information’ (2015) 97(3) *Journal of the Patent and Trademark Office Society* 424-425.

25 Maeve McDonagh, ‘The Right to Information in International Human Rights Law’ (2013) 13(1) *Human Rights Law Review* 26, 28, 53, 55.

26 United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 25 June 1998.

20 Further European Union directives and regulations adopted in the last two and a half decades and related specifically to the concept of the right to access public sector information, also had great impact in this regard. The creation of Regulation (EC) No. 1049/2001 of the European Parliament and of the Council regarding public access to European Parliament, Council and Commission documents, adopted on 30 May 2001, further detailed this right and ensured greater access to official European Union documents. Directive 2003/98/EC on the re-use of public sector information additionally defines the rules to be followed for the purpose of exploiting public sector information. This directive was amended in 2013 by Directive 2013/37/EU. Directive 95/46/EC, more commonly known as the Data Protection Directive, was adopted in 1995 and establishes the protection of individuals in relation to the processing of their personal data and the free movement of such data. Even though the Data Protection Directive does not regulate the right to information explicitly, the degree of accountability and protection it evoked, as well as its spirit, have spread in the European legal environment during the 1990s, influencing the quality and directions of future legislation.²⁷

21 The General Data Protection Regulation²⁸ (GDPR) of the European Union, adopted in 27 April 2016, became applicable as of 25 May 2018. The first striking new feature is that the GDPR is a regulation not a directive, as Directive 95/46/EC was the main instrument for the protection of personal data until the GDPR entered into force. The GDPR became directly applicable, thus member states are not required to pass legislation in that regard, however according to certain opening clauses they have room to manoeuvre in given situations. With respect to the topic of the present research, Article 85 of the GDPR should be examined. The GDPR does not regulate the right of access to information explicitly, but the mentality of Article 85 can very well have certain effects on the future development of the concept. Article 85, Paragraph 1 of the GDPR sets forth that member states have an obligation by virtue of law to reconcile the right to the protection of personal data, in accordance with the GDPR, with the right to freedom of expression and information. This provision also relates to the processing of personal data for the purposes of artistic, literary and academic expression, as well as journalistic

purposes. According to Wagner and Benecke, “Article 85 GDPR appears to be a regulatory task for the member states, rather than an opening clause”.²⁹ However, Article 85, Paragraph 2 allows member states to derogate from its provisions in certain situations, if it is required in order to reconcile the protection of personal data with the freedom of expression and information. Pursuant to Article 85, Paragraph 3, in the event of such derogation, the Commission has to be notified with respect to the provisions of domestic law derogating from the GDPR, as well as any further amendments made. There were numerous preparations for the entering into force of the GDPR, as many companies have structured their portfolio to fit it by the creation of data protection-friendly products and services, and also altered their operational structure for the purpose of compliance.³⁰

22 The GDPR does not bring anything new to the table for the enthusiasts of accessing public sector information; but since it requires increased transparency from companies,³¹ it further strengthens the international body of laws moving towards progressive dimensions, and further emphasises the importance of carefully and fairly upholding the balance between the protection of personal data and the disclosure of information.

II. Decisive case law

23 Apart from the CJEU cases discussed in the previous section, certain landmark judgments delivered by the European Court of Human Rights (ECtHR) have also had a great impact on and shaped the development of the right to access information, guiding its path towards recognition. In the 1979 case of *Sunday Times v United Kingdom*, the ECtHR established that Article 10 of the ECHR, “guarantees not only the freedom of the press to inform the public but also the right of the public to be properly informed.”³² In the 1987 case of *Leander v Sweden*, and also in light of ECHR Article 10, it found that “the right to freedom to receive information basically prohibits a Government from restricting a person from receiving information that

27 Alison White, ‘Control of Transborder Data Flow: Reactions to the European Data Protection Directive’ (1997) 5(2) *International Journal of Law and Information Technology* 230-232, 238-239.

28 Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC, 27 April 2016.

29 Julian Wagner and Alexander Benecke, ‘National Legislation within the Framework of the GDPR – Limits and Opportunities of Member State Data Protection Law’ (2016) 2(3) *European Data Protection Law Review (EDPL)* 356.

30 Jan Philipp Albrecht, ‘How the GDPR Will Change the World’ (2016) 2(3) *European Data Protection Law Review (EDPL)* 288.

31 Axel Freiherr von dem Bussche and Anna Zeiter, ‘Implementing the EU General Data Protection Regulation: A Business Perspective’ (2016) 2(4) *European Data Protection Law Review (EDPL)* 581.

32 *The Sunday Times v The United Kingdom*, Application No. 6538/74, ECtHR, 26 April 1979, para 66.

others wish or may be willing to impart to him”.³³ In 2000, the ECtHR further strengthened the concept of accessing public sector information by ruling in *Özgür Gündem v Turkey* that the genuine effective exercise of the right to freedom of expression “does not depend merely on the State’s duty not to interfere, but may require positive measures of protection, even in the sphere of relations between individuals”.³⁴

- 24 Then in 2009, landmark decisions were delivered by the ECtHR in the *Hungarian Civil Liberties Union v Hungary* case, where it stated that in view of the interest protected by Article 10 of the ECHR, the law cannot allow arbitrary restrictions which have the potential to become a type of indirect censorship, should the authorities obstruct the gathering of information. Moreover, the ECtHR ruled that the role of the press also includes the creation of forums providing the possibility of public debate, and the real-life implementation of this role is not limited to the media or professional journalists. Thus, the Hungarian Civil Liberties Union exercised its public watchdog role through the creation of the forum, which served as a venue for public debate, and as such is essential in democratic societies.³⁵ Therefore, for the first time, a refusal of access to information qualified as a violation of Article 10 ECHR.³⁶ Further important cases include *Kenedi v Hungary*, where in 2009 the ECtHR held that a denial of access to information by the State constituted an interference with the right to freedom of expression,³⁷ and the 2012 case of *Gilberg v Sweden*, in which it assessed issues related to the applicability of access to information laws with regard to research material held by certain universities.³⁸

III. Hungarian Helsinki Committee v Hungary

- 25 One of the most recent and important cases, is the 2016 *Hungarian Helsinki Committee v Hungary* case. The Hungarian Helsinki Committee (hereafter “Committee”) is a non-governmental organisation founded in 1989. It monitors the practical implementation of international human rights laws in Hungary and provides legal representation

to victims of alleged abuses of human rights, as well as legal education in Hungary and abroad. The Committee is active in the following areas: the protection of the rights of asylum seekers and foreigners in need of international protection; and the monitoring of the human rights performance of state authorities and the court system.

- 26 The Committee focuses especially on access to justice, conditions of detention, and the enforcement of the right to defence. In 2008, as part of its examination with respect to the degree of transparency in the police’s method of appointing public defenders, the Committee requested - in accordance with the data protection law applicable at the time - the names of public defenders appointed in that year, as well as the number of assignments given to them.
- 27 In the summer of 2009, two police departments denied to give access to this information, stating that the names of public defenders were not to be disclosed under the applicable data protection law, since they are not members of an organ having public duties, nor does their name qualify as public sector information. As a result, the Committee filed an action against the police departments in September 2009, arguing that since public defenders perform a public duty, and are financed from public funds, the request to know their names and the number of their assignments qualified as public sector information subject to disclosure on the grounds of public interest. The Debrecen District Court ruled in favour of the Committee, and ordered the police departments to provide the information requested by the NGO. On the second-instance, the Hajdú-Bihar County Regional Court overturned the first-instance judgment, finding that public defenders appointed ex officio did not exercise public duties, irrespective of the fact that, ultimately, they were financed by the Hungarian state.

- 28 In September 2010, the Supreme Court of Hungary dismissed the petition for review regarding the second-instance judgment and observed that a prosecutor or an investigative authority indeed performs a public duty when it appoints a public defender, but that this duty ceases to exist with the appointment of the given public defender. Therefore, the Supreme Court of Hungary found that the activities of public defenders qualify as private activities, and the police departments do not have an obligation to provide the requested personal data in their possession under the applicable law. Subsequently, the Committee filed an application to the ECtHR, stating that its right to the freedom of expression pursuant to Article 10 of the ECHR was violated by the denial of information it wished to acquire.

33 *Leander v Sweden*, Application No. 9248/81, ECtHR, 26 March 1987, para 74.

34 *Özgür Gündem v Turkey*, Application No. 23144/93, ECtHR, 16 March 2000, para 43.

35 *Hungarian Civil Liberties Union v Hungary*, Application No. 37374/05, ECtHR, 14 April 2009, para 27.

36 McDonagh supra at 36.

37 *Kenedi v Hungary*, Application No. 31475/05, ECtHR, 26 May 2009.

38 *Gilberg v Sweden*, Application No. 41723/06, ECtHR, 2 November 2010.

29 As a result of the majority decision in *Hungarian Helsinki Committee v Hungary*, the Grand Chamber concluded that Article 10 of the ECHR had been violated in the case. The Grand Chamber first assessed if, and to what extent, the right of access to information held by the state is protected under Article 10 of the ECHR, considering that the specific provision does not refer explicitly to such a right, and found that the question of whether the denial of information in the present case can qualify as falling under Article 10 ECHR has been gradually clarified by the ECtHR's case-law. This question first emerged in the aforementioned *Leander v Sweden* case. In this case, the ECtHR established the so-called Leander Principle, meaning that the freedom to receive information prohibits governments from restricting individuals from receiving information that others wish to disclose to him.

30 Therefore, in accordance with *Leander v Sweden* and the subsequent approach of case-law that followed in its wake, the fundamental right to freedom of expression articulated by Article 10 of the ECHR did not oblige the government to disclose or grant access to such information.

31 The ECtHR assessed comparative international law in the case, and concluded that there had been willingness in the attitude of member states to recognise, under certain circumstances, the right to access information as an inherent element of the freedom to receive and impart information established in Article 10 of the ECHR. However, it relied on and accepted the Leander Principle as its position with respect to the right to access information under the ECHR, which means that the ECtHR was of the opinion that Article 10 ECHR did not ensure the individual's right to access information possessed by public entities, nor did it place an obligation on the government to grant access to such information. After that however, it assessed that such right or obligation may indeed arise, if the obligation to disclose information had been imposed by a final and binding court decision, or if the circumstances of the given case indicate that it is instrumental for the individual to get access to such information in order to exercise his or her rights arising from the freedom of expression, or if denial to such information interferes with the freedom of expression.

32 Afterwards, the ECtHR determined a threshold criterion, through which it established that the information requested by the Committee was necessary to exercise its right to freedom of expression (since it was unable to generate public debate due to the lack of a complete report on the appointment of public defenders). Furthermore, the ECtHR found that the nature of the information requested by the Committee met the public-interest

test as well, and that the Committee was unable to exercise its watchdog function by being denied the requested information.

33 Finally, the Grand Chamber of the ECtHR concluded that the information sought by the Committee should have been ready and available for disclosure; therefore, the Committee's rights under Article 10 of the ECHR had been violated.³⁹

D. Accessing public sector information in Hungary

I. Remarks on the development and current situation

34 The recognition of the right to access and disseminate public sector information is one of the most important achievements of the Hungarian constitutional development. Prior to the system-change of 1989-90, the idea of "transparent citizen – impenetrable government" was forced by the political regime, the starting point of which was that state authorities were collecting as much information on citizens as possible. However, the government was disclosing very little regarding their functioning and activities, and by this behaviour they gravely violated the human dignity of the citizens.

35 Consequently, one of the greatest desires of the democratic system-change was to achieve the transparent functioning of the state and the constitutional establishment of the fundamental right of freedom of information, viewed as a tool in reaching the main aim.⁴⁰ From the perspective of legislation and practical implementation in connection with the freedom of information, Hungary was a leading force in the beginning of the 1990s, despite the fact that several scandals and court cases emerged in this context. Such scandals and cases could also be detected in democracies which were more developed than Hungary at the time.⁴¹

39 *Hungarian Helsinki Committee v Hungary*, Application No. 18030/11, ECtHR, November 8 2016. Furthermore, for the summary of the case see <<https://www.helsinki.hu/en/magyar-helsinki-bizottsag-v-hungary/>>.

40 Péterfalvi and Révész supra at 292. Furthermore see László Majtényi, 'Az információs jogok. (Information rights)' In: Gábor Halmai and Gábor Attila Tóth (szerk.): *Emberi jogok (Human rights)* (Osiris, Budapest, 2008).

41 Zsuzsa Kerekes, 'State of Play – Az információs szabadság Magyarországon 2015 őszén' (2015) 12(64) *Infokommunikáció és Jog* 137.

- 36 The right to request public sector information is enshrined in the Fundamental Law of Hungary, and secondarily in Act CXII of 2011 on the Right of Informational Self-Determination and on Freedom of Information (hereafter “Info Act”), however, the requirement towards public entities to disclose certain information is regulated only by the Info Act and certain sector-specific laws. It is important to distinguish between the two types of accessing and disseminating public sector information in Hungary. According to the Info Act, replacing Act LXIII of 1992 on the Protection of Personal Data and the Publicity of Data of Public Interest, the opportunity to access and disseminate public sector information can occur on the basis of the request of the citizen (and the reply given by the public entity), and secondarily, by way of proactivity. Proactivity in this context means the requirement of disclosure (through electronic means) of public information by public entities related to certain aspects of their functioning.
- 37 The main importance of proactivity is that information related to the functioning of public entities can be accessed easily and by anyone, without any procedure. However, the requirement of disclosure does not cover all aspects of related information, and is limited to the ones determined in laws, or by the head of the given public entity.⁴² In the context of Hungarian legislation related to the freedom of information, Act LXIII of 2012 on the Re-Use of Public Sector Information should be noted as well, as it is intended for the implementation of Directives 2003/98/EC and 2013/37/EU mentioned in the previous section.
- 38 However, considering certain amendments passed in recent years, especially in 2013 and 2015, it can be stated that the rate of development has been broken compared to the period between 1990 and 2010. Since the Info Act entered into force, the provisions on freedom of information were amended more than ten times,⁴³ exceeding the number of amendments made to it in the preceding twenty years, which in itself can be considered as a warning sign. After discussing the related laws, the paper will focus on the more significant amendments and introduce and examine their negative effects exerted on the right to access public sector information and governmental transparency in Hungary.

42 dr. Viktória Végh (ed.), *‘Információszabadság és Nyílt Kormányzás’*, National University of Public Service, Hungary, (2016) 4, 18. <http://www.korrupciomegelozes.kormany.hu/download/9/6f/a1000/informacioszabadsag_szakanyag.pdf>.

43 Kerekes supra at 137.

II. Introduction of related provisions in force

- 39 According to Article VI, Paragraph (2) of the Fundamental Law of Hungary, “Everyone shall have the right to the protection of his or her personal data, as well as to access and disseminate data of public interest”.⁴⁴ Below the Fundamental Law, the Info Act establishes detailed rules to be followed when accessing and disseminating public sector information. The Info Act determines two different types of public sector information, and specifies them as data of public interest and data public on grounds of public interest.
- 40 According to the definition of the Info Act, data of public interest means information or data other than personal data, registered in any mode or form, controlled by the organ or individual performing state or local government duties, as well as other public tasks determined by law, in connection with their activities or generated in the course of performing their public duties, irrespective of the method or format in which it is recorded, or its single or collective nature. In particular this includes: data concerning the scope of authority, competence, organisational structure, professional activities, and the evaluation of such activities covering various aspects thereof; the type of data held and the regulations governing the operations; as well as data concerning financial management and contracts concluded by the given public entity.⁴⁵ Data public on grounds of public interest means “any data, other than public information, that are prescribed by law to be published, made available or otherwise disclosed for the benefit of the general public”.⁴⁶
- 41 The general rules set forth regarding accessing public sector information that any person or organ with state or municipal government duties, or performing other public duties determined in relevant laws, shall allow free access to data of public interest and data public on grounds of public interest under its control to any person, except for certain situations in the event of which it is provided otherwise by the Info Act.⁴⁷ The name of the person undertaking tasks within the scope of responsibilities and authority of the organ with public duties, as well as their scope of responsibilities, scope of work, executive

44 Art. VI para. (2) Fundamental Law of Hungary (official English translation) <www.kormany.hu/download/e/02/00000/The%20New%20Fundamental%20Law%20of%20Hungary.pdf>.

45 Sect. 3 (Definitions) point 5 Info Act <http://www.naih.hu/files/Act-CXII-of-2011_EN_15.11.2016-003-.pdf>.

46 Sect. 3 (Definitions) point 6 Info Act.

47 Sect. 26 para. 1 Info Act.

mandate, and other personal data that is relevant in performing their duties, also qualify as data public on grounds of public interest. Such data may be disseminated in compliance with the principle of purpose limitation.⁴⁸

- 42 The Info Act also lists situations in which access and dissemination of public sector information can be limited. Accordingly, “access to data of public interest or data public on grounds of public interest shall be restricted if it has been classified under the Act on the Protection of Classified Information”.⁴⁹ Furthermore, it specifies situations under which the right to access data of public interest or data public on grounds of public interest may be restricted. Granting access to public sector information can be denied by the competent authority for the following reasons: if it is considered necessary for safeguarding national defence or national security; if it is essential for the prevention and prosecution of criminal offenses; for environmental protection and nature preservation; for the purposes of central financial or foreign exchange policy; for external relations and relations with international organisations; for the purpose of court proceedings or administrative proceedings; and for the protection of intellectual property rights.⁵⁰
- 43 In accordance with the Info Act, “data of public interest shall be made available to anyone upon a request presented verbally, in writing or by electronic means. Access to data public on grounds of public interest shall be governed by the provisions of the Info Act pertaining to data of public interest.”⁵¹ Important elements related to proportionality and to the protection of the requesting party’s personal data are also formulated, setting forth that unless it is provided otherwise by law, the processing of the requesting party’s personal data in connection with any disclosure upon request is permitted only to the extent necessary for the disclosure, for the examination of the request, and for the collection of payment of charges needed for the disclosure. Following the deadline for disclosure and upon receipt of the payment, the personal data of the requesting party must be erased without delay.⁵²
- 44 With respect to legal remedies, in the event of failure to meet the deadline for the refusal or fulfilment of the request for accessing public information, or the deadline extended by the data controller, the requesting party may bring the case before the court.⁵³ The burden of proof to verify the lawfulness

and the reasons of refusal, as well as the reasons for determining the amount of the fee chargeable for the fulfilment of the data request, lies with the data controller.⁵⁴ Actions have to be launched against the organ with public duties that has refused the request, within 30 days from the date of delivery of the refusal, or from the prescribed deadline, or from the deadline for payment of the chargeable fee.⁵⁵

- 45 Furthermore, the Info Act lays down the foundations of proactivity, and lists the sphere of information to be included in the mandatory electronic disclosure in general. It sets forth that organs with public duties shall promote and ensure that the general public are provided with accurate information in a prompt manner in connection with the matters under the competence of the given organ. Such information may include for example, the budgets of the central and municipal governments and the implementation thereof, the management of assets controlled by the central and municipal governments, the appropriation of public funds, and special and exclusive rights conferred upon market actors, private organisations or individuals.⁵⁶
- 46 Formal requirements and certain procedural behaviour to be shown by public entities during disclosure are also determined, as well as the organs having such duty. These organs include the Office of the President of the Republic, the Parliament, the Constitutional Court, the Commissioner for Fundamental Rights, the State Audit Office, the Hungarian Academy of Sciences, the Hungarian Academy of Arts, the National Office for the Judiciary, the Prosecutor General’s Office, central administrative authorities with the exception of governmental committees, national chambers, and county and capital government offices. In accordance with the provisions on mandatory disclosure, access to public sector information, the publication of which is rendered mandatory, shall be made available to the general public without any restriction and free of charge, through the internet and in a digital form, in a manner that prevents the identification of specific individuals, in a form allowing for printing or copying without any loss or distortion of data.⁵⁷ The mandatory disclosure obligation has to be fulfilled through a standard, special or ad-hoc disclosure list. The standard disclosure list can be found in the annex of the Info Act, while the special disclosure lists are determined by certain sector-specific laws. Ad hoc disclosure lists are determined by the head of a given organ with public duties, rendered mandatory with respect to that organ.

48 Sect. 26 para. 2 Info Act.

49 Sect. 27 para. 1 Info Act.

50 Sect. 27 para. 2 Info Act.

51 Sect. 28 para. 1 Info Act.

52 Sect. 28 para. 2 Info Act.

53 Sect. 31 para. 1 Info Act.

54 Sect. 31 para. 2 Info Act.

55 Sect. 31 para. 3 Info Act.

56 Sect. 32 Info Act.

57 Sect.33 para. 1 Info Act.

III. Recent years' major amendments and their adverse effects exerted on the right to access public sector information

47 In April 2013 the Hungarian Parliament adopted an amendment that limited the scope of the Info Act. Surprisingly, the amendment was passed within less than two days from its proposal. Miklós Ligeti, the head of legal affairs for Transparency International Hungary noted that “this amendment is the first step down a slippery slope, at the bottom of which is full state control of public information... it heralds a dark age for democratic governance in Hungary”.⁵⁸

48 Indeed, the amendment introduced limitations to the right to access public sector information, entitling certain public authorities as the only entities holding enough data to carry out so called large audits, as well as requiring the justification of a legitimate interest of requests for information on, among others, decisions of public authorities, personal information of public officials, or court cases, which until then were accessible in the public domain. However, the amendment did not define large audit or legitimate interest, therefore it allows a great extent of discretionary powers to public authorities in deciding whether to reject requests for information by labelling them abusive, being contrary to the principle according to which the people have the right to be informed in connection with the spending of public funds.⁵⁹

49 As a result of the 2015 amendment of the Info Act, the content of Section 29 limits the right to access and disseminate public sector information to a certain extent, but definitely to the benefit of the state. According to Section 29 Paragraph 1, “the body with public service functions that has the data of public interest on record must comply with requests for public information at the earliest opportunity within not more than fifteen days.”⁶⁰ However, Paragraphs 1(a) and 1(b) are the result of the aforementioned 2015 amendment, and establish that the organ with public duties that has the data of public interest on record is not obliged to comply with requests for public information, whereby the request is identical to that which was submitted by the same requesting party within one year and with respect to the same dataset, provided that there were no changes in the

dataset concerned.⁶¹

50 Furthermore, the organ with public duties that has the data of public interest on record is not obliged to comply with requests for public information, if the requesting party does not provide his or her name; or in the case of a legal person, its description and contact details through which the requested dataset or any other information can be provided.⁶² Therefore, information related to an identical dataset cannot be requested twice within one year, and the times of anonymous requests for information have passed as well. Two factors indeed weakening the concept of freedom of information.

51 Section 29, Paragraph 2 gives additional space to manoeuvre for public entities, as it sets forth that if a request for information is substantial in terms of size and volume, or requires a disproportionate workforce, the deadline may be extended by 15 days on one occasion, of which the requesting party shall be informed within 15 days of receiving the request.⁶³ Pursuant to Section 29, Paragraph 5, accessing public sector information in Hungary is not free of charge. Another rule which clearly does not contribute to the more effective implementation of freedom of information. When calculating the fee for access to public sector information, the cost of the data storage device containing the requested information and the delivery fee of the data storage device to the requesting party should be taken into account, and if the fulfilment of the request for information requires a disproportionate workforce, additional labour costs should be considered as well.⁶⁴

52 In order to summarise the detrimental effects of the 2015 amendment to the Info Act, the following changes should be pointed out:

- possibility of anonymous request for public sector information ceased to exist;
- possibility of a repeated request for public sector information has been narrowed down;
- public servant employees dealing with requests get separate remuneration for this type of activity, increasing the overall costs of the procedure;
- rendering higher fees and longer response times in general.⁶⁵

58 Transparency International, 'Hungary: Government Closing Down Freedom of Information' 8 May 2013. <https://www.transparency.org/news/pressrelease/20130508_hungary_government_closing_down_freedom_of_information>.

59 Zsuzsa Kerekes, 'Az Információszabadság Kálváriája' 2013(2) *Fundamentum*. Furthermore, Zsuzsa Kerekes, 'Az Információszabadság a szakadék peremén' 2014(1) *Fundamentum*.

60 Sect. 29 para. 1 Info Act.

61 Sect. 29 para. 1(a) Info Act.

62 Sect. 29 para. 1(b) Info Act

63 Sect. 29 para. 2 Info Act.

64 Sect. 29 para. 5 Info Act.

65 Kerekes supra at 139-141.

53 It is also important to mention that in 2016 the Hungarian Parliament granted new disclosure exemptions for the state-owned postal service and for foundations established by the National Bank of Hungary. It is apparent that embracing the concept of granting access to all information qualifying as public under Hungarian law is not in the interests of entities financed from public funds or having a contractual relationship with the public sector. However, this is not typical to Hungary only, as there are other states of rule of law having to deal with similar issues.⁶⁶ What raises awareness in Hungary is the fact that it is paired with other features aimed at weakening certain fundamental rights, considering for example the 2010 media law and the controversy that followed, as well as the more recent restriction on the freedom of assembly.⁶⁷

E. Concluding remarks

54 Even though at the European Union level it did not receive the necessary amount of attention so far, based on the examinations conducted in the paper it is evident that the current regulatory attitude and governmental policies in Hungary adversely affect the right to access public sector information as well. Instead of withholding increased governmental transparency, it would be welcome if legislation policy would place more emphasis on proactive disclosure, as well as relieving the additional pressure created by the 2015 amendment in particular.

55 From the perspective of the theoretical justifications of Peled and Rabin, the direction towards which Hungary seems to be heading is definitely contrary to open governance and governmental transparency. This is exactly what Hungarian and international NGOs working for the transparency of governments are protesting against. The level of corruption in public entities is high,⁶⁸ not to mention the attitude of society and the current political environment's unwillingness to embrace the concepts of open governance and governmental transparency that reflects in the regulatory attitude discussed above.⁶⁹

56 Therefore, a general increase of openness in the functioning of entities availing of public funds would be welcome, one that could be interpreted not just in a legal, but in a sociological sense as well, and would be able to reduce the communicational and interactional distance existing between the people and the government. The concept of increased governmental transparency, especially taking into account the technological achievements of the 21st century, has to be embraced by governments on a global level, as the further increase of opening up public sector information is inevitable to reach transparent and accountable public entities not just in part, but in full, as well as to facilitate the participation of private individuals in public affairs, therefore making it accessible not just to a narrow group of people.

57 Nevertheless, the situation in Hungary in recent years reflects certain negative examples from which legislation policies should refrain when assessing the right to access public sector information. Moreover, instead of withholding increased governmental transparency, the further opening up of public sector documents and databases, in light of the principle of proportionality, seems to be the advisable path to take in upholding democratic principles and exploiting the opportunities the digital age has to offer to the fullest.

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66 Péterfalvi and Révész *supra* at 295.

67 For comprehensive English language summary see Hungarian Spectrum, 'Hungary's New Law Restricting Freedom of Assembly' 2 October 2018 <<http://hungarianspectrum.org/2018/10/02/hungarys-new-law-restricting-freedom-of-assembly/>>.

68 European Commission, *Hungary - EU Anti-Corruption Report*, COM/2014/38, 3 February 2014 <https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/organized-crime-and-human-trafficking/corruption/anti-corruption-report/docs/2014_acr_hungary_chapter_en.pdf>.

69 Mihály Tóth, 'A Few Remarks about Criminal Corruption in Hungary' 2014(1) *Journal of Eastern-European Criminal Law* 78-79.

Hard Drive Crash

An Examination of Liability for Self-Driving Vehicles

by Keri Grieman*

Abstract: This analysis considers the potential impacts of completely self-driving vehicles on vehicular liability. This begins with examining how such vehicles might be treated under an evolution of the current liability system, and the potential results of attributing liability to an operator, the vehicle itself, different manufacturers, and a government entity.

Discussion then turns to how liability might be altered prospectively in order to incentivize outcomes beneficial to both consumers and creators from a public policy perspective. This includes a proposal of how such a proposal might be structured. Focal points include public policy, social acceptance, and potential incidental problems raised.

Keywords: Self-driving vehicles; self-driving cars; vehicular liability; autonomous vehicles; AVs; artificial intelligence; public policy; AV liability; self-driving vehicle liability

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A. Introduction

- 1 Preventative maintenance is a beneficial concept to many industries - the pre-emptive “repair” of areas that will become problematic in the future. It is, however, a concept that rarely impacts common law jurisdictions, where stare decisis rules the day. Law very seldom pro-actively regulates activities, particularly those of emerging technologies - one cannot regulate what does not exist. How could one have imagined the adaptation of privacy laws before everyone carried a recording device in their pocket? Moreover, regulating pre-emptively can serve to quash the very innovation they attempt to pave the way for.
- 2 Yet there are exceptions to this inability to predict change. Areas that subtly adjust the way that we interact with our world rather than radically altering them. These are changes that we can see coming and can conceivably prepare for without discarding the current system. The self-driving car is such an area: the modern world is already equipped with roads, stoplights, and fuel pumps. We are not attempting to regulate in a new dimension, no flying cars have yet emerged; but the imminent changes would benefit enormously from pre-emptive adaptation.
- 3 If frameworks of legal liability for self-driving or autonomous vehicles (AVs) are held off, the potential benefits of the AVs will be stifled. This is not to say that they will not come, merely that they may come agonizingly slowly, as shareholders limit the monetary risks they are willing to take. Nor is it suggested that the changes required are simple, but that they are necessary. It is important to balance proactivity with over-regulation, and the difficulty of post-ante regulation with administrative efficiency.
- 4 Vehicular liability must be written to incorporate AVs. A system that reflects the underlying differences between AVs and human drivers encourages beneficial change. In order to achieve this change as efficiently and cohesively as possible, AV legislation should be written proactively, rather than allowing the question of liability to bring change incrementally and with crippling uncertainty. Such a legislation system may be best complemented by the creation of an independent public insurance entity.

B. Assumptions

- 5 The central tenet of vehicular laws in many, if not all, common law countries is fault. Who is liable, when they are liable, and why. Rules of the road are written to reflect what one can and cannot do, resulting in fault when one fails to follow them. For this reason, analysis will focus on fully autonomous vehicles - those that do not require a human driver whatsoever, and taking those countries basing liability on fault as a starting point. There are recognized levels of autonomy within the industry: from an entirely human driven vehicle at 0, to an entirely human excluded one at 5.¹ Where a human driver is required or expected to maintain full or partial control of the vehicle, regular conceptions of liability are imperfect, but may be sufficient. Partially autonomous vehicle components can be turned off, as can components of full autonomy, such as self-parking.² Level four autonomous vehicles are indeed fully automated, but are not capable of covering every driving scenario,³ and have already been rolled out in some areas - namely Las Vegas⁴ and Singapore city centre,⁵ although they are limited

to a defined environment. While these vehicles can be used as independent taxis, it will be assumed that they can currently be run under transit-like liability, particularly given that their activity is currently confined to a defined area. The scope of this paper will primarily be concentrated on privately-owned vehicles. It will also be generally assumed that society is in favour of a system that allows for the compensation of victims in vehicular accidents. While no specific jurisdiction will be focused on, Canada provides a helpful, broad set of examples as it employs different insurance systems in each province and territory, but uniformly bases liability on fault.

- 6 Finally, exceptionally rigorous testing will be assumed. In order to be allowed to enter the market, relevant regulators should conduct stringent testing under a variety of conditions for all different manufacturers and models. Cars are heavy machinery, and their destructive potential should not be underestimated. While manufacturers will undoubtedly conduct in-depth testing themselves, an entity independent from the company needs to test the vehicles in question to ensure a sufficient level of safety and driving quality.

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1 Hope Reese, 'Updated: Autonomous driving levels 0 to 5: Understanding the Differences' *TechRepublic* (20 January 2016) <www.techrepublic.com/article/autonomous-driving-levels-0-to-5-understanding-the-differences/> accessed 12 January 2018.

2 *ibid* - breakdown of vehicular autonomy levels

0: The human driver is in complete control.

1: The human driver still holds the majority of control, but a specific function, such as accelerating, may be done by the vehicle.

2: "[A]t least one driver assistance system of both steering and acceleration/deceleration using information about the environment is automated, like cruise control and lane-centering." The driver may be incrementally separated from the operation of the vehicle, but must remain ready to re-take control in an instant.

3.'Safety-critical' functions are taken by the vehicle. While the driver must be able to intervene, they are not required to re-acquire control instantaneously.

4. The vehicle is able to perform all necessary functions, but not under all conditions.

5. The vehicle is able to perform all necessary functions under all conditions considered safe enough for a human to operate a vehicle.

3 Natasha Merat and others, 'Driver behaviour when resuming control from a highly automated vehicle' (Institute for Transport Studies, University of Leeds, 16 October 2014), 280.

4 Saqib Shah, 'Las Vegas' self-driving bus crashes in first hour of service' *Engadget UK* (11 November 2017) <www.engadget.com/2017/11/09/las-vegas-self-driving-shuttle-bus-crash/> accessed 12 January 2018.

5 Andrew J Hawkins, 'Singapore's self-driving cars can now be hailed with a smartphone' *The Verge* (22 September 2016)

C. Technical Aspects

- 7 There are several typical elements that are used by AV manufacturers order to allow the car to function. These include a video camera mounted on or near the front windshield allowing for the detection of traffic lights and moving objects; a rotating sensor on the roof which scans the area in a large radius, creating a three-dimensional map; distance sensors on the bumpers to measure space between various obstacles; smart-navigation maps updating in real time to track accidents, speed limits, and car-to-car communication; and the artificial intelligence that commands the control centre.⁶ These methods are, as yet, imperfect - sensors struggle with inclement weather, and the roof sensor aka LIDAR (light detection and ranging) faces problems with bright sunlight.⁷ The technology in the marketplace has not

<www.theverge.com/2016/9/22/13019688/singapore-self-driving-car-nutonomy-grab-ride-hail-test> accessed 12 January 2018.

6 Muhammad Amat, Dr Clemens Schumayer, 'Self Driving Cars: Future has already begun' (Institute of Transport and Logistics, Vienna University of Economics and Business, 7 May 2015) <http://www.ioeb.at/fileadmin/ioeb/dateiliste/dokumente/Downloads__Links/WS_IV_-_Azmat_Schumayer_-_The_future_has_already_begun_.pdf> accessed 1 January 2018, 8.

7 *ibid* 5; A fatal crash occurred where a Tesla detected bright sunlight reflecting off a truck as a cloud rather than an obstacle. While the driver was supposed to be able to regain control, and the Autopilot feature was not intended to

yet reached level 5, though when it does, accidents are still to be expected. While it is possible and indeed likely that adaptations and new technologies will emerge, the aforementioned will serve as a minimum level of AV “competency” – that full AVs will have at least these levels of technology available to them.

D. Public Policy

8 The changes brought about by AVs will impact society in many ways, and not all of them will be positive. Challenges may be obscure - a decrease in car accidents has the potential to result in an even greater shortage of organs available for donation.⁸ Impacts have been noted to range as far as the airline and hotel industries, predicting that as long-distance automobile transit becomes more convenient and comfortable, air travel will become less competitive.⁹ More directly, automation will bring about the loss of work for many, including professional drivers. In 2014, it was reported that more than 4.4 million persons in the United States alone worked as drivers.¹⁰ While it may in turn bring new jobs, the specifics of such work remain to be seen. In terms of hired driving services, some stakeholders are already making their investments – in 2015 then CEO of Uber, Travis Kalnick, stated the intention to replace human drivers with AVs.¹¹ Undoubtedly, there will be opposition to AVs for various reasons, and astute commentators note that unions for drivers will likely respond to the challenge to their

profession by raising doubt about AV safety, and lobbying against them.¹² AVs are likely to face more opposition than most changes, given that humans appear to have an inherent distrust of non-human intelligence. While evidence-based algorithms are shown to be more accurate than humans, people lose confidence in the algorithm more quickly than humans, and continue to prefer the human even where the algorithm consistently outperforms the human.¹³

9 AVs are indisputably on their way. Both traditional and disruptive automakers are steering into the skid of AVs – even by 2012, Google’s AV had completed over 300,000 miles of accident-free self-driving.¹⁴ AVs are already in commercial use: AV trucks transport mining materials in the Australian outback, and self-driving tractors are already in the field.¹⁵ Moreover, autopilot systems have been used by commercial jets for many years, aiding in maneuvering, navigation, and landing, lending “a significant amount of automated assistance,” and allowing planes to land in conditions that were “previously difficult for human pilots.”¹⁶

10 Accident reduction is a crucial potential benefit. While AVs are imperfect, they lack the failings endemic to human drivers: limited scope of vision; ability to be distracted; inability to focus on multiple areas at once; etc. Even more importantly, they lack the ability to be affected by the same level of choice as humans in terms of driving; namely, humans can and do drive when tired, ill, or impaired. Advocates of AV note that more than 90% of traffic collisions are caused by human error¹⁷ - while AVs are imperfect,

replace human senses, it does demonstrate the problem for future vehicles and their sensors. Neal Boudette, ‘Tesla’s Self-Driving System Cleared in Deadly Crash’ *New York Times* (New York, 19 January 2017) <www.nytimes.com/2017/01/19/business/tesla-model-s-autopilot-fatalcrash.html?_r=0> accessed 1 January 2018.

- 8 Ian Adams, Anne Hobson, ‘Self-Driving Cars Will Make Organ Shortages Even Worse’ *Future Tense* (30 December 2016) <www.slate.com/articles/technology/future_tense/2016/12/self_driving_cars_will_exacerbate_organ_shortages.html> accessed 1 January 2018.
- 9 Kevin LaRoche, Robert Love, ‘Autonomous vehicles: Revolutionizing Our World’ *Borden Ladner Gervais LLP* (2016) <blg.com/en/News-And-Publications/Documents/Autonomous-Vehicles2016.pdf> accessed 18 June 2017, citing ‘Autonomous cars will make domestic flights run for the money: Audi’ *Telematics Wire* (27 November 2015) <telematicswire.net/autonomouscars-will-make-domestic-flights-run-for-themoney-audi/> accessed 18 June 2017.
- 10 Mark Fahey, ‘Driverless cars will kill the most jobs in select US states’ *CNBC* (2 September 2016) <www.cnbc.com/2016/09/02/driverless-cars-will-kill-the-most-jobs-in-select-us-states.html> accessed 4 January 2017.
- 11 Stephen Edelstein, ‘Uber CEO to Tesla: Sell me half a million autonomous electric cars in 2020’ *Green Car Reports* (7 July 2015) <www.greencarreports.com/news/1098997_uber-ceo-to-tesla-sell-me-half-a-million-autonomous-electric-cars-in-2020> accessed 18 June 2018.

- 12 Ratan Hudda and others, ‘Self Driving Cars’ (Fung Institute for Engineering Leadership, UC Berkeley College of Engineering, 29 May 2013) <https://ikhlaqsidhu.files.wordpress.com/2013/06/self_driving_cars.pdf> accessed 1 January 2018, 9.
- 13 Berkeley J Dietvorst, Joseph P Simmons, Cade Massey, ‘Algorithm Aversion: People Erroneously Avoid Algorithms after Seeing Them Err’ (July 2014) *Journal of Experimental Psychology: General*, forthcoming <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2466040> accessed 2 January 2018.
- 14 *ibid.*
- 15 David Robson, ‘The Truth About Driverless Vehicles’ *BBC* (London, 13 October 2014) <www.bbc.com/future/story/20141013-convoy-of-huge-zombie-truck> accessed 30 December 2017.
- 16 Harry Surden, Mary-Anne Williams, ‘Technological Opacity, Predictability, and Self-Driving Cars’ (2016) *Cardozo Law Review* 38:121 <<http://scholar.law.colorado.edu/articles/24>> accessed 30 December 2018, citing Simon Wood, ‘Flight Crew Reliance on Automation’ *Federal Aviation Administration Advanced Avionics Handbook (UK Civil Aviation Authority, 2009)* <publicapps.caa.co.uk/docs/33/2004_10.PDF.157>
- 17 Emily Chung, ‘Autonomous cars could save Canadians \$65B a year’ *CBC News* (Toronto, 21 January 2015) <www.cbc.ca/news/technology/autonomous-cars-could-save-canadians-

they will not eliminate these accidents immediately, but they have the potential to greatly reduce such accidents. Currently, the World Health Organization estimates that injuries caused by road traffic will become the worldwide fifth leading cause of death by 2030.¹⁸ In the United States, automobile accidents are “the lead cause of death for people between the ages of 3 and 34,” with a death every 30 seconds.¹⁹ It is estimated that in the United States alone, AVs could save 300,000 lives per decade - 29,447 lives per year,²⁰ and as much as \$190 billion USD per year in health costs.²¹ However desirable these miraculous predictions, they depend on a minimum level of widespread adoption of AVs.²²

- 11 Infrastructure efficiency and cost will be directly impacted. Worldwide, the cost of traffic congestion is estimated to reach \$2,200 billion USD per year.²³ In northern North America, self-driving cars have been predicted to save \$65 billion CAD by reducing traffic congestion, fuel costs, and “time wasted behind the wheel.”²⁴ In reducing the need for car ownership, \$5 billion CAD can be saved on congestion costs alone.²⁵ Google has already built the largest traffic jam surveillance network in the world by providing over 500 million smart phones with an operating system - the mapping function allows Google to track trends over time.²⁶ Independent researchers have modelled an algorithm that allows significant alleviation of traffic jams by multi-vehicle routing, and requires only 10% of vehicles on the road to follow the algorithm.²⁷ In other words, benefits of AVs need not reach a majority before they produce tangible infrastructure benefits - only a minimum point of saturation.

65b-a-year-1.2926795> accessed 1 January 2018; Berkeley J Dietvorst, Joseph P Simmons, Cade Massey, ‘Algorithm Aversion: People Erroneously Avoid Algorithms after Seeing Them Err’ (n 13) 6.

- 18 Ratan Hudda and others, ‘Self Driving Cars’ (n 12) 5-6.
 19 *ibid* 0.
 20 Adrienne LaFrance, ‘Self-Driving Cars Could Save 300,000 Lives Per Decade in America’ *The Atlantic* (29 September 2015) <www.theatlantic.com/technology/archive/2015/09/self-driving-cars-could-save-300000-lives-per-decade-in-america/407956/> accessed 1 January 2018.
 21 *ibid*.
 22 *ibid*.
 23 Hongliang Guo and others, ‘Routing Multiple Vehicles Cooperatively: Minimizing Road Network Breakdown Probability,’ (2017) 1/2 *IEEE Transactions on Emerging Topics in Computational Intelligence*.
 24 Vijay Gill and others, ‘Automated Vehicles: The Coming of the Next Disruptive Technology’ *The Conference Board of Canada* (21 January 2015) <www.conferenceboard.ca/e-library/abstract.aspx?did=6744> accessed 1 January 2018.
 25 Emily Chung, ‘Autonomous cars could save Canadians \$65B a year’ (n 18) 1.
 26 Ratan Hudda and others, ‘Self Driving Cars’ (n 12).
 27 Hongliang Guo and others, ‘Routing Multiple Vehicles Cooperatively’ (n 23) 121.

- 12 In terms of accessibility, AVs would open an entire world to those unable to drive themselves. Many individuals are, for reasons of age, physical ability, or current state, unable to drive. These individuals are dependent on either public transit, expensive private means of transport, such as taxis, or family and friends. It has been noted that allowing these individuals increased access to transportation has the potential to increase total vehicle transit by up to 11%.²⁸ While this obviously increases demand, it is cause for celebration as these individuals evidently do not have the freedom or capability to travel as much as their able-bodied counterparts.

- 13 Ecologically, there are also several benefits. Even with the current state of technology that is expected to improve, projections have placed the reduction of oil consumption and related greenhouse gas emissions at 2 to 4%.²⁹ These predictions were based on the use of technologies such as “adaptive cruise control, eco-navigation, and wireless communications.”³⁰ The ease of incorporating AVs with other technologies has even greater potential, with “car to infrastructure communication”³¹ - one “smart” parking system reduced time spent looking for spaces by 21%.³² Additionally, AVs do not need to park in a space that is convenient or easily accessible - they can park underground or remotely, and the driver can summon the car when required. A traffic signal synchronization program saved “31.2 million hours of travel time, 38 million gallons of fuel and 337,000 metric tonnes of carbon dioxide per year.”³³ Furthermore, most cars are unused for 95% of their lifespan, but AVs have the potential to reduce the amount of cars on the roads overall, as AVs can be farmed out for others when not in use by the owner.³⁴ Car sharing programs have led to less car ownership, and a reduction of emissions in cities,³⁵

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- 28 Todd Litman, ‘Autonomous Vehicle Implementation Predictions: Implications for Transport Planning’ Victoria Transport Policy Institute (22 December 2017) <<http://www.vtpi.org/avip.pdf>> accessed 1 January 2018 13; citing Michael Sivak, Brandon Schoettle, ‘Road Safety With Self-Driving Vehicles: General Limitations And Road Sharing With Conventional Vehicles, Sustainable Worldwide Transportation Program’ *University of Michigan* (2015) <www.umich.edu/~umtriswt/>.

- 29 Julia Pyper, ‘Self-Driving cars Could Cut Greenhouse Gas Pollution’ (15 September 2014) *Scientific American* <<https://www.scientificamerican.com/article/self-driving-cars-could-cut-greenhouse-gas-pollution/>> accessed 1 January 2018.
 30 *ibid*.
 31 Muhammad Amat, Dr Clemens Schumayer, ‘Self Driving Cars: Future has already begun’ (n 6) 13.
 32 *ibid*.
 33 *ibid*.
 34 Ratan Hudda and others, ‘Self Driving Cars’ (n 12).
 35 Darrell Etherington, ‘Car sharing leads to reduced car ownership and emissions in cities, study finds’ *Tech Crunch* (19 July 2016) <<https://techcrunch.com/2016/07/19/car->

a benefit which is likely to increase as it cuts into the requirements for taxis and other chauffeuring needs. Finally, there is the simplest benefit of all: not having to drive.

- 14 Whilst the advantages are numerous, the technology remains vulnerable to smothering by the tyranny of the immediate - the defence of the bottom line in companies protecting themselves from liability, and legislation in taking a “wait and see” approach.

E. Liability

- 15 For all the many benefits of AVs, they are imperfect. Accidents will still happen, particularly in the early years. It is thus important to determine what party is potentially liable; specifically, who should pay for any damages incurred as well as compensation to the victim. While current liability systems will need to be tweaked to allow for integrated AI driving; i.e. for vehicles between levels 1 and 5, their setup still allows for and generally requires a human driver to take control. In aiming to fully achieve their full societal benefit, level 5 vehicles should have no interaction from the driver. This raises the obvious question as to who should be liable and how.
- 16 Informed commentators have suggested that parties potentially liable for AV accidents could include the user, the owner, the manufacturer, the manufacturer of AV components, or a government entity. Methods such as product liability have the potential to cause difficulties both in the expense incurred through the legal process in determining liability, and in determining how and why an AV made the “decision” that it did; class action suits are too cumbersome for something as ordinary as auto accidents. What mechanism, therefore, should be used to allocate liability? As will be examined, negligence under our current conception of the notion, has the potential to prove problematic in allocation of liability.

I. Potential Liability Allocated to the Operator

- 17 Given that one of the potential benefits of AVs is increased car-sharing, it is possible that the user and owner may be different individuals. The user might simply be someone who has independently hired the car through, say, a taxi service app. The owner is the person who has technical ownership of the AV. For the purposes of legal application, one can treat the

user, owner, or general occupant as one entity, as they run into the same potential concerns. For the sake of discussion, these entities can be refined into one, the “operator” – the definition of which should rely on the individual determining the destination.

- 18 In a liability context, the operator is the entity who is most closely aligned with current fault attribution. While each country differs slightly in their application of the law, vehicular liability generally relies on the individual who has control of the vehicle. In Canada, for example, section 214 of the Canadian Criminal Code states that to operate “means, in respect of a motor vehicle, to drive the vehicle.”³⁶ Crimes such as operating under the influence rely on this definition of operation, and on the concept of “the care or control of a motor vehicle... whether it is in motion or not.”³⁷ “Care and control” has included situations such as a passenger grabbing the steering wheel,³⁸ sitting in the driver’s seat “braking and steering an inoperable vehicle,”³⁹ or using the steering wheel while being towed, as noted by Osler PJ in *R v Morton*:⁴⁰

when, though the means of propulsion is under the control of the driver of a towing vehicle, there is a person in charge of the towed vehicle who is manipulating the steering wheel and brakes and exercising a significant measure of control over the direction and movement of that vehicle, I consider that person can be said to be operating or driving the motor vehicle.

- 19 In other words, determining liability of an operator has centred around their intent and ability to influence the movement of a vehicle through functions in the province of a driver. Many jurisdictions are willing to find drivers liable for driving under the influence of intoxicants even if they were not in the driver’s seat, nor piloting the car, but were in the car and had access to the keys. The capacity to direct the car, whether or not in current use, has been used to determine care and control, and thus liability. This approach does not make sense for AVs. The intent of a fully autonomous vehicle is that the occupant will not have control, and thus will not be able to direct the specific movements of the vehicle. The occupant may have the ability to direct the car generally - they are, after all, determining the end destination of the AV. However, “care and control” does not make this distinction.

36 ‘An Act respecting the criminal law’ (RSC 1985) c C-46, ‘Canadian Criminal Code’ section 214.

37 *ibid* section 2(a).

38 *R v Belanger*, [1970] 10 CRNS 373 (SCC).

39 *R v Flemming* [1980], 43 NSR (2d) 249 (NS Co Ct), cited in *R v Danji*, [2005] ONCJ 70, 16 18 MVR (5th) 1.

40 *R v Morton* [1970], 12 CRNS 76 (BCPC).

sharing-leads-to-reduced-car-ownership-and-emissions-in-cities-study-finds/> accessed 1 January 2018.

- 20 An operator of an AV is analogous to the passenger of a bus. They have an ultimate destination in mind. They are capable of influencing the vehicle's path by asking the driver to stop, potentially by pushing a button or pulling a cord. If the bus were to be in an accident, however, even if the bus is inarguably at fault, the bus passenger is in no way responsible for that accident or the damages resulting from it. Operators of an AV have no less a duty of care to the occupants of other vehicle than an ordinary human driver does, but attempting to extend liability does not, from a logical standpoint, make sense. The duty of care may include not interfering with drivers, or distracting them, but should not overextend to include the "but for" test - i.e. "but for" the occupant choosing to use the AV, the accident would not have occurred. This is simply too broad to be functional.
- 21 In the case of an accident between an AV and a human driver, the legal result would depend on which vehicle were at fault. If the AV were at fault, the previous issue arises: the occupant is unlikely to have acted negligently or unreasonably. If the human driver were at fault, all current laws are easily applicable. If fault is mixed, the court can apportion damage based on contribution to the harm, as is common in many areas of law, but the AV portion should not fall on the operator.
- 22 There are cases where traditional conceptions of liability should apply, namely where the operator had previous knowledge of a potential issue with the AV. AVs have the potential to learn, and better their "driving". This is a desirable feature of AVs - not only can AVs learn from their own behaviour, but potentially the behaviour of other vehicles capable of communicating with them. Such a system is likely to function on an update system, similar to updates on a computer or smart phone. This could result in a situation where an operator, or an owner, were confronted with a notice warning them of a defect with the car's programming, or a potential update. If the operator were to ignore this warning and continue to use the vehicle, they can and should be found liable for an accident resulting from the lapse in update. This may be an extreme outlier scenario but serves to sufficiently include the operator's negligence.
- 23 Additionally, if an individual - whether owner, user, operator, or unrelated party - were found to have tampered with any programming impacting the AV's ability to function safely, this could produce a range of liability. This range should run from negligence to attempted murder, depending on what happened and how, such as if it was intended to affect another operator. This does limit the operator's freedom to adjust their vehicle's programming as they would like, but such a step is crucial to the uniformity and thus predictability of AVs - a necessary requirement

for ensuring the safety potential of the vehicle.

- 24 Despite these minor exceptions, conceptions of liability surrounding the vehicle's operator must be updated to reflect the reality that the operator does not, and should not, affect the "decision making" of the vehicle. This is the societally desirable outcome - removing the operator from the second-to-second decision making process is what allows the AV to drive in a way that avoids human failings. In the same way that a taxi passenger has made a responsible decision and thus should not be charged with driving under the influence, neither should an AV operator be at the mercy of decisions which are not their own.

II. Potential Liability Allocated to the AV Itself

- 25 The AV itself is not a logical successor to the human driver in terms of liability, although it may at first glance appear to be so. The entity that best fits current conceptions of liability in terms of "driving" and "care and control" of the vehicle is the artificial intelligence entity that enables the AV. For simplicity's sake, the AI and the AV will be treated as a singular entity given their inseparability for the purpose in question.
- 26 Determining whether the AV has made a "wrong" decision may require extensive evaluation of the way in which it makes decisions. It may require a comprehensive understanding of how decisions were made, and what information was available. Requiring the AV to take on responsibility for actions taken implies a level of responsibility. However, there are two problems with this: first, from a functional standpoint, the AV has no assets except, potentially, itself. In an accident, the victim is to be compensated for damage to the vehicle, injury, etc. However, without delving into an analysis of robo-slavery, it is clear that an AV does not own anything, whether or not it owns itself. Accordingly, whether or not the AV owns itself, depriving the owner of the AV is detrimental to the owner, rather than the AV.⁴¹ Second, the AV's decision making originally depends on how it was programmed. While it may "learn", its key input is given before it ever hits the road

41 Interestingly, a robot has been already been 'arrested' for its actions. A robot in Switzerland was created by a group of artists and given a bitcoin budget per week to randomly purchase from the dark web, with the intention of displaying the items purchased. The robot was confiscated along with its purchases, which included a passport and ecstasy tablets, but was returned three months later with all purchases except the Ecstasy. Arjun Kharpal, 'Robot with \$100 bitcoin buys drugs, gets arrested' *CBC Tech Transformers* (Ottawa, 22 April 2015) <www.cbc.com/2015/04/21/robot-with-100-bitcoin-buys-drugs-gets-arrested.html> accessed 1 January 2018.

- it does not inherently “choose” to do something wrong, it follows directions that it has been given. This is not the sort of “guilty mind” or mens rea envisioned by current legal regimes. Moreover, this approach to liability would assume that the AV both can and does “think” like a human, and thus could be assessed to the same standards. Even the ways that the AV “learns”, or what it “learns” about, are initiated by its programming, and are not inherently based on human thought patterns. The AV’s “decisions” are not the same as human ones. This evokes the question of whether the party that originally programmed the AV should be liable for what the AV is programmed to do.

III. Potential Liability Allocated to the Manufacturer - parts

27 Manufacturing can be separated into two parts: the main manufacturer or assembler, and parts manufacturers. Consider first the parts themselves. Continuing to treat parts manufacturers under traditional common law liability understandings does not seem particularly problematic - main manufacturers maintain the duty to check parts they buy to a reasonable standard, and the parts manufacturers maintains the duty to manufacture them to the standard promised. Individual parts currently account for relatively few accidents, and there is no reason to believe the relatively low rate of product liability suits or issues would increase. While machinery for AVs may be more complicated, even vehicles that are not fully autonomous are improving at tasks like diagnosing parts or physical issues with vehicles. While product liability suits are slow and costly, the relatively small-scale requirements for individual faulty parts means that this is likely still a functional way to address the problem without a systemic overhaul.

IV. Potential Liability Allocated to the Manufacturer - programming

28 First, some definitional clarification. It has been suggested that Google is likely to license a developed version of its AV software to car manufacturers, allowing for a prospective licensing industry alongside the AV market.⁴² However, given that Google has a successful AV of its own, and major automotive manufacturers are creating their own AVs, discussion will focus around manufacturers as having produced and programmed their own AVs.

29 In the current state of the market, most manufacturers selling vehicles that have AV features state that the driver must be able to take control at all times, and that any autonomous features are not in fact self-driving; thus by using the vehicle, the “driver” confirms that they will always be “driving”, even if the car is able to function in any way on its own. This appears to be an attempt to potentially contract out of liability in favour of having the driver agree to assume it. Whether or not this will hold up to substantial legal challenges remains to be seen, either in tort liability or contractual restrictions, but it nonetheless appears to be the current method attempted. The current state of the liability union is divided - automotive companies and Google have lobbied governments to absolve them of liability - to negative effect in California, but positive effect in Nevada.⁴³ Volvo has already made public its willingness to accept full liability, whereas Tesla has stated that it will accept liability only for design failure.⁴⁴

30 Whether liability should fall on major manufacturers through the decisions made by their agents in programming an AV, and on the subsequent decisions of the AVs acting on that programming, opens an obvious chain of questioning. While removed from the immediacy of the road, programming largely fits the conception of “control” over the vehicle - how it is driven, when and where it stops, how to react to changes in the environment. Programmers for manufacturers, acting in their professional capacity, could be treated as creating liability for the manufacturer in embedding their decisions, even if it is an initial step in a machine learning process. This is compounded by the “black box” problem - it is often difficult for artificial intelligence to “explain” why it did what it did - the AV in question might have weighed many factors, and learned from many sources, which ultimately resulted in a particular action. Elon Musk, co-founder, CEO and Product Architect at Tesla, used the following analogy:

*Point of views on autonomous cars are much like being stuck in an elevator in a building. Does the Otis [Elevator Company] take responsibility for all elevators around the world, no they don't.*⁴⁵

31 This presents an interesting point. Programming the way something works has not previously resulted in major liability. Nor has it prevented society from doing away with elevator attendants, or in the case of cars, drivers. However, not only do the number of

42 Ratan Hudda and others, ‘Self Driving Cars’ (n 12).

43 Ratan Hudda and others, ‘Self Driving Cars’ (n 12) 6.

44 Danielle Muoio, ‘Elon Musk: Tesla not liable for driverless car crashes unless it’s design related’ *Business Insider* (Sydney, 20 October 2016) <www.businessinsider.com.au/elon-musk-tesla-liable-driverless-car-crashes-2016-10> accessed 1 January 2018.

45 *ibid.*

elevator accidents pale in comparison to the number of car accidents - even proportionately - the elevator deals with a pre-set course with no obstacles or other players, programmed or otherwise. Cars must deal with a great deal more and put more lives at risk than just those inside of it, and there is an inherent level of “decision making” involved.

- 32 Priorities for the AV are set in advance. This often brings to mind philosophical debates such as the trolley problem, wherein one must choose whether to divert a trolley hitting three people instead of hitting one person. However, problems like this do not address what AVs are, or are intended to do: AVs are not intended to make a choice of the amount of humans tied to the train track to kill. They are intended to stop the trolley. Treating AV “decisions” as identical to human ones ignores the reality that AVs can work with far more input than humans can: 360 degrees of vision, multiple heights and layers of sensors, and a lack of distractions. If AVs can communicate with one another, and there are enough to do so, they could provide information in real time; for example, “up-coming pothole” and “group of joggers on road shoulder” are not particularly difficult messages to transmit. This translates into larger concepts as well, such as “human-sized entity darting into traffic”. The world is not tied to two tracks and no breaks, and reducing the decisions to be made to such a scenario fetters our understanding of what could be.
- 33 Statutorily pinning liability on manufacturers forces them to prioritize liability. This does not mean that manufacturers would place it as a first priority - human life is likely to forever hold the primary spot, if only because cases of deaths may kill public favour of AVs. But it does inevitably affect priorities as a whole. Damage to property is certainly preferable to damage to humans, yet focusing on liability may shift this emphasis. It is entirely possible to be both in the right legally, yet making the wrong decision. While measures such as the strict liability approach of capping the amount of damages to be paid may be reasonable stopgaps, they present their own domino issues - potentially neither covering the full amount of damages, nor removing the incentive to de-prioritize physical damage in favour of safety.
- 34 Consider a situation wherein an AV is suddenly faced with an obstacle it can either hit lightly, causing no injury, or stop immediately and cause the human car speeding behind it to injure either the AV and the speeding car’s occupants. In a case where liability is not in question, and human safety is the highest priority, the AV hits the obstacle - damaging the AV, but neither set of passengers. If liability is a priority, the AV avoids liability by coming to a stop as the human driver would be in the wrong through speeding, and being unable to make

a safe stop without hitting the AV. However, this is not the societally desirable outcome: car parts are replaceable, human health is not. It is quite possible to be correct in law but not in morality, and the concern for liability means the prioritization of cost and correctness over better outcomes. Mandating liability means incentivizing the wrong priorities. As for the trolley problem, we want the AV to stop the trolley, even if it means breaking said trolley.

- 35 While instances such as negligent or malevolent programming should still be considered, from a public policy perspective, governments should encourage manufacturers to take safety of all parties as the highest consideration. As AVs reach a point of saturation, these priorities will have an increasing impact and importance. Statutorily mandated liability on manufacturers does not make vehicles safer in and of themselves - it reinforces the priority of doing the legally correct action, rather than the socially beneficial one. Allocation of liability for non-human damage simply does not produce the best incentivized outcome for social priorities.
- 36 Furthermore, if liability is focused on manufacturers, risk is concentrated onto a concerning small number of entities, who will simply increase product prices to cover the risk at an even greater rate considering the unknown cost to the manufacturer themselves. The current system of liability and spreading liability cost, transfers the price to a later point in the transaction, but allows for greater predictability and a greater sharing of the smaller, more predictable cost.

V. Potential Liability Allocated to a Government Entity

- 37 Ultimately, insurance will still be necessary for AVs. There will be accidents, and thus accident victims. An insurance infrastructure will ensure compensation for these victims and help to establish the viability of AVs as an institution. As previously discussed, naming one or a combination of the previous actors and stakeholders presents many problems. Liability needs to be apportioned without a concept of “blame” - damage has occurred, and the damage needs to be fixed or compensated for. A strict liability regime is a functional way to accomplish this and legislating it pre-emptively for level five AVs has the significant benefit of predictability.
- 38 AV manufacturers are understandably concerned with the extent to which they will be liable, and in what ways. Companies have been easing slowly into full automation by using automated features, being careful to mandate that the driver must still be in control - thus avoiding liability. A “wait and see”

approach to legislation means that manufacturers are understandably hesitant to be the first to throw their hat into the ring with commercial, fully automated vehicles. It also means that smaller companies are struck from the automation race completely, as they lack the war chest to fund costly litigation when an accident occurs. Providing assurances allows manufacturers to bring an actual product to market - the societally desirable, completely hands-off, AVs.

- 39 How, then, should this system be structured? Ideally, at least initially, as a government-run, AV-mandated single-pool insurance entity through which all AVs must be insured. First, such an entity has the initial benefit of actually providing insurance rather than waiting for the private sector to enter the market. Second, time and profiteering can be avoided by circumventing the private insurance sector. Third, it allows for a specialized entity to deal with the information created by accidents; specifically, assessing it, and passing it along to the necessary parties, such as the manufacturer, when there is a clear problem with the AV system. Fourth, it allows for the reduction of administrative work - no time and effort is spent resolving damages between AV insurance providers; rather the costs are simply paid and the accident can be analyzed from a systemic perspective, i.e. could the AV have made a better “decision”? While non-AV insurance providers will still have dealings between themselves, they too benefit from a single-system for AVs, such as a standardized system that specializes in how AVs function, and can thus concentrate on, for example, provision of crash footage in the case of a combined AV/human accident. This is not to say that AVs should suddenly become liable for all accidents they are involved in, but rather those where a human driver would similarly be found at fault.

1. Avoiding the private insurance sector

- 40 Single pool compensation has been employed in other areas to good effect. One example is New Zealand’s ACC, a crown-corporation accidental injury insurance board. The fund is paid into by everyone in New Zealand who “works and owns a business,” and through levies on vehicle licensing payment and car fuel filling.⁴⁶ The levies provide a fund that pays out in cases involving accidental injury. This coverage applies to everyone in New Zealand, regardless of age or employment status, and even includes visitors to New Zealand.⁴⁷ While there are various incentives implemented, such as a slight discount on levies for

companies with excellent workplace injury rates, the overall structure is a no-fault, community approach to accidents.

- 41 Outside of accident insurance, single-pool or single-payer insurance has been most visible in the healthcare sector. The United States is a noted hold-out against such a system, and spends “more than twice as much on health care as the average of other developed nations, all of which boast universal coverage ... [while] more than 41 million Americans have no health insurance [and] [m]any more are underinsured.”⁴⁸ In 2003 experts estimated⁴⁹ that converting the United States would “save at least \$200 billion [USD] annually (more than enough to cover all of the uninsured) by eliminating the high overhead and profits of the private, investor-owned insurance industry and reducing spending for marketing and satellite services.”⁵⁰ From a purely logical perspective, this makes sense - an industry run for profit is intended to *make* a profit, and must do so by either over-charging or under-providing. It is not intended to be a zero-sum game that provides the greatest amount of care at the lowest cost, it is intended to create a gap between what is paid by the insured, and what is paid to the provider. Without this gap, there is no profit. In addition to this, money is spent on advertising for the insurance company, fighting claims both from providers and the insured, and “avoiding unprofitable patients.”⁵¹ While it is often argued that a private insurance market allows individuals to suit coverage to suit their needs, this inherently provides a problem for “unprofitable patients.”⁵²
- 42 Returning to automotive insurance, Canada provides an interesting comparison as some provinces have mandated government insurance, whilst others have not. British Columbia, Manitoba, and Saskatchewan all have a “one-stop shop” approach to insurance, but differ in their exact coverage, and Quebec drivers all have personal injury insured through the government, while private insurers cover the rest.⁵³ Direct cost comparisons are difficult, as the provinces have different challenges; for example, more extreme weather in central Canada, and a

46 Accidental Compensation Corporation ‘What we do’ (2018) <<https://www.acc.co.nz/about-us/who-we-are/what-we-do/>> accessed 1 January 2018.

47 *ibid.*

48 S Woolhandler and others, ‘Proposal of the Physicians’ Working Group for Single-Payer National Insurance’ (1 August 2003) *Journal of the American Medical Association* 290/6 798

49 *ie*, before both the roll-out and subsequent roll-in of ‘Obamacare’.

50 S Woolhandler and others, ‘Proposal of the Physicians’ Working Group for Single-Payer National Insurance’ (n 48).

51 *ibid.*

52 *ibid.*

53 Karen Aho, ‘When the government sells car insurance’ *Nasdaq* (25 March 2013) <<http://www.nasdaq.com/article/when-the-government-sells-car-insurance-cm230568>> accessed 12 January 2018.

greater amount of drivers in British Columbia, Ontario, and Quebec. However, one study compared the same city - one which straddled a government insurance and a private insured province - and found that those with government coverage paid less.⁵⁴ Additionally, net income from public insurance, at least in British Columbia, goes into reserves, rather than exiting the system as a shareholder dividend.⁵⁵ It has also been suggested that high costs are the reason for the difference in percentage of uninsured. For example, in 2002 Ontario (the province with the highest average insurance rates) had an estimated 10-20% of drivers uninsured, whereas British Columbia had 0.26% uninsured drivers.⁵⁶

- 43 These arguments are not intended to frame the free market as inherently negative or bad. What this system aims to accomplish is to set aside, at least temporarily, the profit of the insurance sector to pave the way for the AV sector, for the simple reason that AVs offer more direct societal benefits.

2. No-fault

- 44 No-fault insurance is not a new concept to the automotive world. Policy-holders and passengers are reimbursed for accidents and damage through their own insurer, rather than tort insurance, where fault is assigned to a party. No-fault insurance usually only covers up to a particular sum and precludes individuals from pursuing the other party in court. Unfortunately, it does not typically mean the absence of attribution of fault, rather that the insurance company or companies will determine between them which party is at fault, and potentially increase that party's future insurance rates.⁵⁷ Fault can be attributed by percentage, wherein both parties may see future increases in rates.⁵⁸

- 45 As previously discussed, the attribution of actual fault is difficult in scenarios solely involving AVs, given the difficulty of deconstructing the decision-making process. What the future of AVs require is to give up the concept of fault in actuality rather than in name. This is not an easy thing to do - not only are the rules of the road set up to determine fault, but humans like blame, and we do not trust intelligences we don't understand. This is true even if the non-

human intelligence is demonstrably better at the task at hand.⁵⁹ In essence, giving up fault is a leap of faith: it requires letting go of the idea of an "intuitive and automatic" desire to conceive of blame.⁶⁰ It is, however, a necessary step to improvement - the move to acknowledgement of an undesirable consequence rather than the attribution of the individual entity responsible. There will be a period of time where fault will still be apportioned, for example, where accidents have occurred between AVs and human drivers. This is necessary in order to allow for incremental integration of AVs, rather than wholesale substitution. However, AVs will inherently make fault determination between AV and non-AVs easier to determine, as AVs can provide their own surveillance footage.

- 46 Moreover, as Reed et al. point out, common law is not unfamiliar with strict liability for inherently dangerous activities, such as the keeping of dangerous animals, or ownership and use of aircraft.⁶¹ These difficulties have not quashed either activity but serve to account for the dangers inherent to them. Strict liability tends to invoke the opposite conception of no-fault, as it incurs fault no matter how careful or reasonable the activities of the individual in question - "the person responsible is required to indemnify the remainder of society."⁶² However, the result and acknowledgement are the same: accidents do occur, and must be accounted for, no matter the reasonability of the actors in question.

3. Structure

- 47 Even given a singular pool insurance provider, there are many potential iterations of how insurance may be structured. It is not unreasonable to leave the consumer with a regular insurance cost that covers damage - there is no indication that the cost involved will be higher than a human driver, particularly

54 *ibid.*

55 Lucy Lazarony, 'Public vs. private auto insurance' *Bankrate* (22 July 2002) <<https://www.bankrate.com/auto/public-vs-private-auto-insurance/>> accessed 12 January 2018.

56 *ibid.*

57 'No-Fault Insurance: What it Really Means to You' *Insurance Hotline* (11 November 2011) <<https://www.insurancehotline.com/no-fault-insurance-what-it-really-means-to-you/>> accessed 1 January 2018.

58 *ibid.*

59 Berkeley J Dietvorst, Joseph P Simmons, Cade Massey, 'Algorithm Aversion: People Erroneously Avoid Algorithms after Seeing Them Err' (n 13). Rather than debating what truly constitutes intelligence, non-human intelligence should be understood here as the computation behind the AV's decision making.

60 Janice Nadler, Mary-Hunter McDonnell 'Moral Character, Motive, and the Psychology of Blame' (2012) 97/255 *Cornell Law Review* <<https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?referer=https://www.google.ca/&httpsredir=1&article=3290&context=clr>> accessed 11 January 2018 257

61 Chris Reed, Elizabeth Kennedy, Sara Nogueira Silva 'Responsibility, Autonomy and Accountability: legal liability for machine learning' (Third Annual Symposium for the Microsoft Cloud Computing Research Centre, 8-9 September 2016) <<https://ssrn.com/abstract=2853462>> accessed 11 January 2018, 5.

62 *ibid.*

given that Google cars drove 1.3 million miles in seven years before causing an accident.⁶³ Reed et al. suggest that the identifiable party to insure is, pragmatically, the keeper of the vehicle, and that this allocation follows the precedent of aircraft owners, where it has invoked no serious problems.⁶⁴ This has the additional benefit of not disrupting the current vehicular liability requirements, as vehicles must already be insured by their owners.⁶⁵ The amount to be paid for insurance can initially reflect the average rates for their human driver counterparts, but should not involve typical factoring characteristics such as the driving record, where the owner lives, driving experience, age, gender, or vehicle type. The aim of the AV is to make these irrelevant, and to exclude bias when pricing the coverage.⁶⁶ It should also provide an initial overhead for damage coverage as the potential damage-reduction possibilities of the AV bear fruit.

48 However, there should be another sector of contribution to the singular fund - a per-car entry cost from the manufacturer. While the initial amount will be arbitrary, what the amount should eventually reflect is injury and related costs compensation for AV accidents. This amount will require buffering before a minimum level of saturation for AVs, as if there is only one AV on the road which causes an accident worth an accident pay-out of three million dollars, this is unreasonably punitive. However, as more and more AVs are put onto the road, the injury pay-out amounts should be split between their manufacturers on, for example, a year-to-year determination basis. This means that when manufacturer A causes an accident that produces injury, that cost is split communally amongst all manufacturers.

49 This should not be seen as a shift or allocation of blame, nor changing the insuring party. It is analogous to collecting levies from, for example, blank CD sales. Rather than requiring the time or public resources to go after individual problematic activity, it is the acknowledgment that an undesirable result occurs, and is made possible by the manufacturer. The levy is neither a punishment, nor an allocation of liability, but a recognition that the end result is enabled by the party in question. For the music industry, this is the assumption that blank CDs are used to enable industry-undesirable sharing. For AVs, this is the assumption that no matter how well-designed AVs are, accidents will, at least initially, occur and cause injury. In both cases, costs are ultimately borne by consumers, whether or not the purchase in question actually enabled an undesirable result. The industry simply passes costs along to its purchasers. While damage may be sufficiently and reasonably covered through traditional insurance by AV owners, the levy serves both a social purpose, of acknowledging the enabling of these types of accidents, and a monetary one, through compensation for injury caused. Even if manufacturers are not held liable, it is beneficial that the consequences of design be acknowledged. While collecting societies may have acquired a negative reputation, the levy in itself is not necessarily a negative way to address this problem - particularly where manufacturers have both the motivation and the capability of reducing this amount by decreasing injury.

50 This may seem an arbitrary approach that punishes manufacturers who produce vehicles that do not cause injury. However, it incentivizes manufacturers in societally beneficial ways. First, it places injury reduction as the ultimate cost-saving priority to manufacturers; specifically, they can reduce costs by placing it at the top of the decision-making process for the car, rather than avoiding liability. Second, it promotes co-operation and standardization between companies. Every manufacturer gains when they collectively reduce injury costs. Standardized reactions from AVs not only allow for predictability for human drivers who share the road with AVs but foster better interaction between different manufacturers. It also encourages car to car communication - rather than building an intra-company network of communication, manufacturers are incentivized to communicate cross-brand. The success of one company is the success of all companies. Third, it reduces the potential for manufacturers to hold monopolies over AVs. Requiring an entry cost to enter the market would mean that a company must be of a certain worth to even attempt to compete. When fiscal giants like technology companies and traditional auto manufacturers are involved, this is likely to be an unassailable moat. Placing the cost per-car means that the success of then-current market players reduces the potential

63 Alex Davies, 'Google's Self-Driving Car Caused Its First Crash' *Get Wired Magazine* (29 February 2016) <www.wired.com/2016/02/googles-self-driving-car-may-caused-first-crash/> 2 January 2018.

64 Chris Reed, Elizabeth Kennedy, Sara Nogueira Silva 'Responsibility, Autonomy and Accountability: legal liability for machine learning' (n 61) 29.

65 *ibid*, and further noting that "This approach is supported by the Draft Report with recommendations to the Commission on Civil Law Rules on Robotics" (2015/2103(INL), European Parliament Committee on Legal Affairs 31 May 2016) paras 29-31.

66 These are commonly factored in features of auto insurance - 'Compare car insurance quotes to get the lowest rates in Saskatchewan' (*LowestRates.ca*) <www.lowestrates.ca/insurance/auto/saskatchewan> citing David Marshall, 'Fair Benefits Fairly Delivered: A Review of the Auto Insurance System in Ontario' (*Ontario Ministry of Finance*, 2017) <www.fin.gov.on.ca/en/autoinsurance/fair-benefits.html> accessed 1 January 2018; 'Compare Auto Insurance Quotes in Ontario' (*LowestRates.ca*) <www.lowestrates.ca/insurance/auto/ontario> accessed 1 January 2018.

cost per entry for new manufacturers, lowering the entry to effective competition. Fourth, it means that companies can fold in the one-time cost per car into the purchase price, rather than being liable in perpetuity for an unpredictable cost. Fifth, it does not remove the benefits of branding from individual companies as car buyers “frequently cite safety as the most important factor in selecting a car.”⁶⁷ There is no reason to believe that this would change and is in fact likely to be reinforced as drivers hand control over to an AV. Overall, there should still be the potential for pursuing a particular company in extreme cases, such as egregious negligence. For example, if it can be demonstrated that a company had knowledge of a dangerous vulnerability and ignored it - such as a design flaw that made any crash likely to ignite the vehicle - they should bear the full cost for that oversight. While this may seem like an unclear standard, the law has dealt with such standards before, given that tort law is built on the concept of a “reasonable person”.

- 51 It is possible that many of these incentives could be achieved by allowing the insurance fund, or other parties, to pursue manufacturers for negligence. Even co-operation could be encouraged by allowing manufacturers to be pursued as a single entity. However, this places a greater burden on either the consumer or insurance entity to undergo the necessary litigation, or at least legwork, to show the manufacturer’s negligence. One of the problems unique to machine learning is that the decision-making process of artificial intelligence can be particularly opaque - consumers may find it difficult if not impossible to understand “black box” decision-making.⁶⁸ It may be that the consumer attempts to recover before having proper knowledge of whether the AV was in fact negligent. Additionally, litigation puts further strain on the court system. Allowing for the levy to provide these incentives - except in extreme cases - means that there is a strict liability approach to a no-fault problem, namely, the acknowledgment of blameless enablement, but the ultimate injury caused.

4. Implementation:

- 52 When allowing manufacturers to side-step strict liability, it is naturally important to hold high standards to entry. This is not to say that the entry requirements should have monetary value, as previously mentioned, but should include such areas as rigorous testing. Strict requirements can

reasonably be placed on manufactures as the AV is still a multi-tonne machine that will be piloted amongst unarmored pedestrians. The possibility for co-ordination is also a positive one between manufacturer and government, since co-ordination such as car to infrastructure, or car to transit, have the potential to benefit both parties. Car to infrastructure communication, such as traffic lights, or road closures, have the ability to make the AV more efficient, and to alleviate strains on infrastructure such as traffic jams. Even more crucially, requiring predictable procedures for emergency vehicles could result in reduced emergency response times, as AVs part like the Red Sea as required.

- 53 Car to transit communication can not only help avoid collision, but also allows for better co-ordination in timing, particularly when AVs are used to fill a gap in transportation rather than replace an individually owned vehicle. Implementation should also allow communication between the government insurer and manufacturers - where damage is tracked to a particular problem, the government entity has the ability to convey this to the manufacturer, and the power to demand a solution. It is unlikely to reach this level, as manufacturers are incentivized to better their vehicles regardless, but it nonetheless allows for a two-factor system of tracking issues with the AVs.
- 54 A further requirement could also be standardized signaling to third parties. One particularly prescient analysis notes that while AVs are technically more predictable than their human counterparts, this does not mean that they are more predictable to third parties - i.e., those who have not programmed them.⁶⁹ Pedestrians have indications as to whether a human driver has noticed them. This can include eye contact, a hand-wave, or, in extreme cases, a rude gesture. This sort of communication has not yet been indicated by AV manufacturers, but could grow to be included in the “price to entry” in order to qualify to enter the market. This could be as simple as unique blinking indicators in the pedestrian’s direction, or as complex as screens on various parts of the car, but overall serves to show that there needs to be a consistent dialogue between the regulator and manufacturers.

F. Public Policy Part Two

- 55 What a public policy approach to AVs aims to achieve is incentivizing better questions. Rather than demanding manufacturers wait on the answer to “how liable will the company be?”, a proactive

67 Ratan Hudda and others, ‘Self Driving Cars’ (n 12) 7.

68 Chris Reed, Elizabeth Kennedy, Sara Nogueira Silva ‘Responsibility, Autonomy and Accountability: legal liability for machine learning’ (n 61) 13-14.

69 Harry Surden, Mary-Anne Williams, ‘Technological Opacity, Predictability, and Self-Driving Cars’ (n 16).

public policy approach, such as the one described, forces companies to instead ask “what is the best possible way to reduce injury?”.

- 56 Many billions have been put into researching and developing fully autonomous vehicles, not to mention the many stages of partial-autonomy along the way. The industry growth rate is currently 16% and is expected to be over \$1 trillion by 2025.⁷⁰ One policy benefit of the proposal thus far discussed is that rather than stockpiling capital against the eventuality of a lawsuit, companies can focus on putting funds towards other areas such as increasing fuel efficiency, reducing vehicle cost, and improving accessibility. This has the potential for positive economic impact since research and development is encouraged, rather than stifled or put on hold to wait for potential legal impacts. While there is still an indeterminate amount of time to wait before manufacturers are ready to put consumer-model AVs on the road, the reluctance to assume responsibility is palpable as all consumer available automated features require that there be a licensed human in the driver seat in order to take control the instant it becomes necessary - and preferably even before.
- 57 This paper’s proposal encourages the introduction of AVs, while interfering minimally with the current regime of road rules and liability. It does not require the scrapping of an entirely workable system, and simultaneously allows for the incremental introduction of AVs on the road with a majority of human drivers. While current automated features on cars do still require a human driver, it is unnecessary to allow for a change in liability where the human driver must still be able to step in.
- 58 A Public Prosecution Service of Canada working group has produced a report on the Future of Automated Vehicles in Canada.⁷¹ While the report is naturally focused on implementation of semi and full AVs in Canada specifically, it provides a helpful list on “The Role of Governments”:
- Regulate vehicle safety;
 - Harmonize standards [between countries];
 - Encourage innovation;
 - Protect privacy of individual vehicle users;
 - Educate the public;
- Build data expertise and capacity;
 - Develop and enforce traffic laws;
 - Oversee insurance and liability;
 - Ensure a safe and smooth transition;
 - Build and upgrade transportation infrastructure.⁷²
- 59 While many of these areas have been discussed in this paper, it is a helpful reminder that a government’s role is not simply to mandate legal change from a removed perspective, but to aid transition in a variety of areas and elements. Insurance and liability are naturally important, but if laws are not enforced, or the public remain unconvinced, then the potential benefits will not be realized in full.
- 60 Public policy is an important tool to achieve social acceptance. Transparency and clarity of legislation will be key to sufficient initial confidence in consumers to start building positive interaction – personal experience being the ultimate key to social acceptance, both by the individual themselves and word of mouth. If the policy is to achieve the aforementioned benefits of AVs, it must have the public on board. Changes inherently bring opposition, but this has not stopped legislating in favour of change in the past; for example, high occupancy vehicle lanes encourage car-sharing, tax incentives for electric and hybrid vehicles incentivize greener purchases, and seat-belt and airbags have forced societal change directly.⁷³
- 61 Testing and safety are priority concerns. Social acceptance will never be achieved unless there is a belief in the safety of AVs. Consumers have good reasons to be skeptical of the automotive industry, and safety records in particular, especially given the Ford Pinto’s transmission problems, Firestone tire blowouts, the Takata airbag recall, and the Volkswagen emission scandal, which all suggest that profit may have been prioritized over safety. AVs cannot afford this type of profit post-mortem. Testing must be particularly stringent, and indeed better than the average driver to overcome the concerns over non-human drivers. The adoption of the aforementioned levy approach is beneficial as consumers could not only avoid liability, but it would ensure that companies are serious enough about the vehicle’s safety capacity passengers to “put their money where their mouth is” in terms of human safety.

70 Muhammad Amat, Dr Clemens Schumayer, ‘Self Driving Cars: Future has already begun’ (n 6) 18.

71 Public Prosecution Services of Canada ‘The Future of Automated Vehicles in Canada’ (29 January 2018) <<https://comt.ca/reports/autovehicle2018.pdf>> accessed 23 June 2018.

72 *ibid* 14.

73 Ratan Hudda and others, ‘Self Driving Cars’ (n 12).

- 62 Two potential ways to foster social acceptance are publicizing existing uses and creating pilot programs. The public already interacts with AI transportation, such as Masdar and Heathrow airport shuttles, the Milan driverless metro, and driverless trucks in Australian and Chilean mines.⁷⁴ A simple step is to make the public more aware that these transportation methods are already in use, safely, efficiently, and successfully. Pilot programs to provide AVs to impoverished communities or those underserved by current transit initiatives can be a way to allow for optional adoption and demonstrable benefit, though particular care should be taken to show that this is not a testing ground. Initiatives for the visually impaired, for example, would demonstrate that unlike AI levels below five, fully autonomous AVs make car travel accessible to all. Both publicization and pilot programs have significant potential in terms of building positive personal experiences, promoting both personal acceptance and word of mouth recognition.
- 63 Social acceptance of AVs through public policy methods faces unique challenges. Seatbelt adoption, for example, used a variety of methods in the United States: policies and mandates such as laws regarding use; incentives and rewards based on use; signs politely reminding seatbelt use; and feedback on community performance.⁷⁵ These methods are not easily transportable to AV adoption. While laws regarding use are naturally important in terms of regulation, AVs present unique challenges; for example, although wearing a seatbelt or not is a distinct choice, it is still possible to drive without one. If one is in an AV, the choice is not whether or not to drive, since by the time an individual has made the choice to use an AV, they have accepted the overarching function of the AV, rather than deciding whether or not to wear a seatbelt while still using the car in a way they are familiar. The role of public policy in the case of AVs is to remove uncertainties which might disincentivize use, rather than attempt to force a particular choice. Public policy should not be focused on forcing the adoption of AVs, but on removing the barriers to those in the position to adopt their use, such as uncertainties like liability. No car owner wants to be unsure of whether or not they will be liable for an accident over which they had no control, even if they were

aware that the probability of an accident occurring was much lower.

G. Challenges – Legal and Technical

- 64 There are many challenges to be faced in introducing AVs. There are uncountable minor changes that must be introduced - everything from regulations requiring hands on the wheel, to how vehicles are fueled. There are much more impactful challenges to be faced, however. Manufacturers must be discouraged from attempting to allow their car to game the system and offering consumers a vehicle that disadvantages either other AVs or human drivers.
- 65 Where AVs can communicate between themselves and infrastructure, the ability of third parties to hack the system for their own potential malicious ends is a concern, particularly in a nexus with personal privacy. Personal privacy has already become a crucial battle in the 21st century, and AVs will accelerate the race between laws protecting privacy of data, and companies using that data for their own means. AV data can not only identify a person and their current whereabouts, but likely a great deal of telling information about their habits, friends, and lifestyle. Beyond hacking, connections between vehicles and with infrastructure and the manufacturer could still be used to collect and transmit personal data. Unless forced to do so, manufacturers are unlikely to allow consumers to opt out of data transmission since a great deal of the data will likely be used for positive means, such as optimizing function and driving patterns. However, there is still the danger that information released could identify an individual. Collection has significant benefits, and the problem must be addressed by controlling use and disclosure. This is done through data protection law. The question remains whether existing data protection law is sufficient. While some jurisdictions have unified their approach to data protection, such as the European Union's General Data Protection Regulation, there is no global unity on issues such as what constitutes personal data; who can use what, and how; what protection should be in place; or how to properly anonymize that data. Common data protection issues and proffered solutions can be seen in other areas such as medical data; data is crucial for research, but there is a significant threat to privacy if data is insufficiently anonymized or used in ways that were not foreseen at collection. Addressing such issues for AVs might follow practices similar to medical data collection or may be found to require a customized regime that can be updated faster than traditional data protection law.

74 Alain L Kornhauser, 'Smart Driving Cars: Where Are We Going? Why Are We Going? Where Are We Now? What Is In It for Whom? How Might We Get There? Where Might We End Up?' (2013) (Princeton University TransAction Conference, 18 April 2013) <http://orfe.princeton.edu/~alaink/Presentations/ITE_SmartDrivingCars/TransAction2013_SmartDrivingCars_041113.pdf> accessed 22 June 2018 24.

75 E Scott Geller, Timothy D Ludwig, 'A conceptual framework for developing and evaluating behavior change interventions for injury control' (Health Education Research, 1990) DOI: 10.1093/her/5.2.125.

- 66 While the system suggested should, on the whole, be able to integrate with current systems, there may be unforeseen challenges. For example, it has been suggested that both the Geneva and Vienna Conventions may not allow for a vehicle that does not permit a human driver to resume control.⁷⁶ Individual jurisdictions, not to mention countries, may have legislation or precedents that negatively impact, or currently do not allow for, the integration of AVs.
- 67 Functionally, AVs still have hurdles to overcome. They are expensive, perhaps prohibitively so as, the extra equipment that allows the AV to drive itself are not cheap, and their cost is in addition to the vehicle itself. Extensive testing is also expensive and is a cost that is likely to remain. AVs still struggle with weather, and while testing is being carried out to overcome this,⁷⁷ accidents have occurred on the basis of weather conditions.⁷⁸ Additionally, the lack of opacity is a barrier to trust. While AVs have much to offer, it is a legitimate complaint that the “decisions” made by AVs can be difficult to understand, particularly from a lay-person’s perspective. This lack of clarity can carry through to lawsuits and will challenge the technical expertise of those who may be ill-equipped to evaluate such decisions.
- 68 Even with the suggested changes, there are will be systemic issues to be addressed. While co-operation between companies in terms of life-saving measures, predictability, and integration is positive, it inherently raises concerns about competition and collusion. Companies may be motivated to, for example, find a system that works well enough between them and keep to it, rather than striving for better, safer, or more efficient advancements.
- a parking space in urban areas.⁸⁰ Time, energy, and stress are expended on commutes that could be spent in better, or at least more relaxing, ways. Even better use of land is a possibility, as concepts such as a “park and ride” for airports need no longer take up space.⁸¹
- 70 AVs have the potential to remove every human failing from the province of transportation. This has an impact beyond human choices, such as driving while intoxicated or tired. Vehicles can see further than human eyes and communicate on many more levels. A car that needs no human driver can avoid a traditional vehicle’s security liabilities - with no need for human eyes, there is no need for a vulnerable glass portal at the front of the car. AVs have the potential to become metaphorical tanks, as they need not account for a driver’s ability to see from various angles.
- 71 Current liability conceptions are deeply problematic for AVs. Not only are they uncertain in terms of introducing AVs, but the current jurisprudence provides no promising answers as to where liability may fall. Pinning liability on parties who have no control, or on parties who will make it a primary priority over more important concerns, is likely have the effect of chilling the market before it can really begin. Ignoring liability questions and assuming that the market will develop and flourish when left alone is optimistic at best, and at worst enables a monopolistic and limited-benefits system.
- 72 It is important that public policies regarding AVs are scalable. It needs to be capable of addressing a slow trickle of AVs as they enter the market, and an increasing majority as they become more affordable and marketable. The regime needs to ensure that victims are not left out in the cold, and manufacturers not incentivized to prioritize fiscal vulnerability ahead of human safety.

H. Conclusion

- 69 There is a world of potential to be unlocked by AVs. On a purely ethical basis, it would be very difficult to ignore their lifesaving potential. Beyond this, there are countless other, if lesser, benefits. A car is an expensive investment that sits unused an estimated 95% of its life.⁷⁹ Currently, 40% of fuel is used finding
- 73 It is crucial that we incentivize better questions - how to achieve a perfect no-injury record, rather than where liability should fall on a scale of priorities. How to improve access for individuals with mobility issues, rather than how to inch forward without invoking liability. Regulation should aim to encourage one particular future: where accidents are unusual, and vehicular deaths non-existent. But this needs to start somewhere and needs law reform action to put the wheels in motion.
- 74 Ultimately, liability conceptions need to evolve in order to fully realize the potential benefits of AVs on a societal level. This is best achieved by letting

76 Jonathan Margolis, ‘Self-driving cars still face multiple roadblocks’ *Financial Times* (New York, 11 January 2017) <www.ft.com/content/f9847198-d40b-11e6-b06b-680c49b4b4c0> accessed 2 January 2018.

77 snow - Ford Media, ‘Ford’s Industry first autonomous vehicle tests in snow’ (YouTube, 11 January 2016) <www.youtube.com/watch?v=vShi-xx6ze8> accessed 2 January 2018.

78 Neal Boudette, ‘Tesla’s Self-Driving System Cleared in Deadly Crash’ (n 7).

79 Muhammad Amat, Dr Clemens Schumayer, ‘Self Driving

Cars: Future has already begun’ (n 6) 11.

80 *ibid.*

81 *ibid* 18.

go of traditional liability conceptions and blame. There needs to be strict liability as damage needs to be reimbursed, and no-one should face financial hardship for decisions beyond their control. This strict liability needs to be placed without fault. Attempting to place fault and blame results in inevitable time, money, and litigation spent, when such energies are better focused on remedying the problem, compensating the victim, and improving the AVs. It also sidesteps the problem of incentivizing avoidance of liability rather than the prevention of harm. Compulsory insurance is already required in most if not all countries currently developing AVs, and this insurance setup can and should be expanded to cover AV accidents. Doing so from a single pool allows for streamlined claims, a direct dialogue between claim evaluators and manufacturers, and co-operation regarding AV issues. Such a system could be realized through an independent government entity and augmented by a manufacturer levy.

- 75 “May you live in exciting times” is often cited to be a curse. Yet these are indeed exciting times – we are at a crossroads of design, manufacturing, and vision. We have the unique opportunity to foresee innovation, and to level the field in preparation of its arrival. We have a distinct moment to celebrate one of humanity’s greatest qualities, the prerequisite of all innovation: drive. Let’s put the pedal to the metal.

Data Governance in Connected Cars

The Problem of Access to In-Vehicle Data

by **Wolfgang Kerber***

Abstract: Through the application of the technological solution of the “extended vehicle” concept, the car manufacturers can capture exclusive control of the data of connected cars leading to serious concerns about negative effects on competition, innovation and consumer choice on the markets for aftermarket and other complementary services in the ecosystem of connected and automated driving. Therefore, a controversial policy discussion has emerged in the EU about access to in-vehicle data and the connected car for independent service providers in the automotive industry. This paper claims that this problem should be seen as part of the general question of the optimal governance of data in

the ecosystem of connected and automated mobility. The paper offers an overview about this policy discussion and analyzes this problem from an economic perspective by utilizing a market failure analysis. Besides competition problems (especially on markets for aftermarket and other services in the connected car) and market failures in regard to technological choice (extended vehicle vs. interoperable on-board application platform), information and privacy problems (“notice and consent” solutions) can emerge, leading to the question of appropriate regulatory solutions. The paper discusses solutions through data portability, data rights, competition law, and recommends a sector-specific regulatory approach.

Keywords: Data governance; connected cars; data economy; data access

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A. Introduction

1 Connected, automated (and later autonomous) cars can lead to large benefits both to users of cars and to society, such as more convenience, reduction of accidents, congestion and emissions. Connected and automated driving is a technological revolution not only for the automotive industry (and their business models) but also for the mobility in society. Therefore, a policy discussion has emerged in the EU and within the Member States on how to enable connected and automated driving. The recent EU Communication “On the road to automated mobility: An EU strategy for mobility of the future” offers a broad overview about the challenges and problems that have to be solved.¹ There are many open regulatory questions

regarding safety and cybersecurity risks, liability problems, ethical questions, standardization and interoperability problems, privacy concerns, and the governance of data, especially data access.

2 This article focuses on the question of the governance of the huge mass of data produced in connected cars. An important part of this data governance problem is the current controversial policy discussion

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1 See EU Commission, A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility, 30.11.2016, COM(2016) 766 fin.; EU Commission, On the road to automated mobility: An EU strategy for mobility of the future, 17.5.2018, COM(2018) 283 fin.; Bundesregierung, Strategy for Automated and Connected Driving, 2015.

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about “access to in-vehicle data and resources” for independent providers of services within the ecosystem of connected and automated mobility.² The car manufacturers (OEMs: original equipment manufacturers) use the so called “extended vehicle concept” that implies transmitting all data produced in the car directly to proprietary servers of the OEMs granting them an exclusive (“monopolistic”) control of these data. Many firms within the ecosystem of connected and automated mobility could provide a wide range of services to the cars owners and drivers if they also have access to the in-vehicle data. These independent service providers – as well as consumer associations – are concerned that this “privileged” position of the OEMs allows them to control the automotive aftermarkets and adjacent services leading to less competition, less consumer choice and less innovation. Therefore, the current policy discussion focuses on this conflict between the OEMs, who defend their extended vehicle concept with safety and security arguments, and the many independent service providers, who demand regulatory solutions regarding access to in-vehicle data and connected cars for ensuring fair and undistorted competition concerning the provision of services in the ecosystem of connected driving. The most important proposals are either – in the short-term - a non-discriminatory governance solution for the in-vehicle data (e.g., a “shared server”) or in the long-term, the transition to another technological solution (on-board application platform), which would allow the car owners to control access to in-vehicle data and the car. Although the EU Commission acknowledges the problem that the “centralisation of in-vehicle” data in the extended vehicle concept might trigger a competition problem and wants to improve access to these data, so far only a recommendation with guidance on non-binding principles for access to in-vehicle data has been planned.³

- 3 Although the current policy discussion is primarily about access to in-vehicle data and resources for independent service providers, the problem of finding an appropriate governance solution for data in the ecosystem of connected and automated mobility is a much more complex problem. One important problem is the fact that most in-vehicle data are also personal data that are subject to the requirements of EU data protection law. Due to non-rivalry in the use of data - i.e. that many firms can use the same data for their services and innovations

- the question arises whether an exclusive control of in-vehicle data through one stakeholder in such a complex ecosystem of connected driving with so many different stakeholders is an economically efficient governance solution for these data. Or should a more sophisticated data governance solution be chosen, which allows more stakeholders to get access to these data as a valuable input for their services and innovations? This economics of data perspective is directly linked to the recent discussion about data rights and the efforts of the EU Commission for better data access and reuse.⁴ However, any solution has to also comply with EU data protection law for protecting the privacy of the car users. This article claims that the problem of access to in-vehicle data should be seen as part of the more general question concerning how a comprehensive governance solution for the data that are produced in the ecosystem of connected and automated mobility should look like.

- 4 The objective of this article is to provide (1) an overview about the current discussion about access to data in the connected car (section B), (2) an economic analysis of the data governance problem that asks for potential market failure problems (section C), and (3) a discussion about possible policy approaches for dealing with the data governance problems (section D).
- 5 The analytical approach used in this article is an economic analysis of potential market failures that can arise in the ecosystem of connected driving and which might make regulatory activities necessary for solving the data governance problems. One of the potential market failure problems are certainly the competition problems that might be caused by the exclusive control of in-vehicle data in the extended vehicle concept on the markets for aftermarket and complementary services. In that respect, an analysis of competition between OEMs is also necessary. A second potential market failure refers to the question of whether it can be expected that OEMs choose technological solutions that are optimal for the entire ecosystem of connected and automated driving, such as, the extended vehicle concept or the on-board application platform. Based upon the insights of the economics of interoperability and standardization, serious doubts arise concerning whether OEMs have the right incentives for making optimal technological decisions. An additional third concern is that car users as consumers might run

² See C-ITS Platform, Final Report, 2016; TRL, Access to In-Vehicle Data and Resources – Final Report, 18.05.2017; and as overview Specht/Kerber, Datenrechte – Eine rechts- und sozialwissenschaftliche Analyse im Vergleich Deutschland – USA, 2018, available at: <<http://www.abida.de/de/blog-item/gutachten-datenrechte-eine-rechts-und-sozialwissenschaftliche-analyse-im-vergleich>>, 169-192.

³ EU Commission 2018 (n 1) 13.

⁴ See EU Commission, Building a European data economy, 10.1.2017, COM(2017) 9 fin.; EU Commission, Towards a common European data space, 25.4.2018, COM(2018) 232 fin.; and as overview Kerber, Rights on Data: The EU Communication “Building a European Data Economy” from an Economic Perspective, in: Lohsse/Schulze/Staudenmayer, Trading Data in the Digital Economy: Legal Concepts and Tools, 2017, 109-133.

into similar problems of protecting and dealing properly with their personal data and their privacy as they are well-known with respect to other internet service providers, where it is doubtful whether and to what extent consumers can make well-informed rational decisions about the provision of data to digital companies. In all three cases the preliminary assessment in this paper suggests that serious market failures can exist, although much more research is necessary. Therefore, the results of this analysis raise serious doubts about the currently used extended vehicle concept of the OEMs, which might be both a wrong technological solution, especially in the long term, and lead to negative effects regarding competition on markets for aftermarket and complementary services. It will also be shown that safety and security concerns cannot justify the exclusive control of data of OEMs and their power to appropriate the value of in-vehicle data through this monopolistic gatekeeper position. The development of an on-board application platform (as an open interoperable telematics platform) would avoid many of the disadvantages of the extended vehicle concept and might also be more compatible with the needs of the long-term architecture of an integrated ecosystem of connected and automated mobility.

- 6 Due to the complexity of the technological and data governance problem, this article cannot offer a clear-cut policy proposal with regards to connected driving. However, in an overview about recent discussions of possible policy approaches to solve data access and data governance solutions, section D discusses the right to data portability (Art. 20 GDPR), the general introduction of explicit data rights in civil law, as well as possible solutions in competition law, for example, data access rights as remedies for the refusal to grant access to data as abusive behavior of firms with market power (as, e.g., Art. 102 TFEU). However, this article concludes with the suggestion that due to the large complexity of this problem, looking for a sector-specific regulatory solution might be the most suitable path for solving the data governance problem in the ecosystem of connected and automated driving.

B. Access to in-vehicle data and resources: A policy discussion in the EU

- 7 In the connected and automated car many different kinds of data are produced, particularly through sensors. This can be technical data regarding the car and its components, data about the road, weather and traffic conditions, the driving behavior of the car drivers, location data, as well as data concerning the

use of entertainment, navigation and many other services by the car users. Through the connectivity of the car via mobile communication, these data can be transmitted in real-time to external entities, for example, to an external server of the OEMs, but also a direct exchange of data is possible that allows the downloading of software and updates. The connectivity and the in-vehicle data allow for many new (and innovative) services that can be offered to car users. They can include new forms of repair and maintenance services such as remote diagnostics and maintenance, navigation services, parking apps, search services for hotels and restaurants, entertainment, online-shopping, as well as new insurance schemes (used-based insurance), among others.⁵ The providers of these services however often need access to the in-vehicle data and/or to the connected car for providing these services (and for communication with the car users) for being capable to enter the markets for aftermarket and complementary services.⁶ A part of these new services would also require real-time access to these data and the car.⁷

- 8 As part of its “Cooperative Intelligent Transport Systems” initiative for solving problems of connected and automated driving, the EU Commission has brought together all stakeholders on the C-ITS

5 See generally about connected and automated cars OECD/ITF, *Automated and Autonomous Driving. Regulation under uncertainty. Corporate Partnership Report*, 2015; Anderson et al., *Autonomous Vehicle Technology – A Guide for Policymakers*, 2016; Alonso Raposo et al., *The revolution of driving: from Connected Vehicles to Coordinated Automated Road Transport (C-ART)*, European Commission JRC Science for Policy Report, Part I: Framework for a safe & efficient Coordinated Automated Road Transport (C-ART) system, 2017; for the new business opportunities through the connected car see McKinsey, *Competing for the connected customer: Perspectives on the opportunities created by car connectivity and automation*, McKinsey & Company, Advanced Industries, September 2015; McKinsey, *Car data: Paving the way to value-creating mobility – Perspectives on a new automotive business model*, McKinsey & Company, Advanced Industries, March 2016; BVDW, *Connected Cars – ein Diskussionspapier zum Thema Services*, 2015; BVDW, *Connected Cars – Geschäftsmodelle. Diskussionspapier*, 23.05.2016; BVDW, *Connected Cars – Chancen und Risiken für die künftigen Anbieter im Automobilmarkt*, 2016.

6 The data of connected cars are also interesting for public authorities, e.g. for traffic safety and regulation or law enforcement.

7 Access to the connected car means independent service providers have mobile access to (1) the IT system of the car for either downloading data (“read”) or also uploading data or providing services in the connected car (“write”) as remote diagnosis or software updates, and (2) the Human-Machine-Interface (HMI or dashboard) for direct communication with the car drivers. If OEMs control this access, they can block direct interaction between car drivers and independent service providers. See for the technical details TRL (n 2) 75-92; Martens/Mueller-Langer, *Access to digital car data and competition in aftersales services*, Digital Economy Working Paper 2018-0X, JRC Technical Reports, 2018, 7-10.

platform.⁸ In this context the problem of access to these data for independent service providers was already discussed very clearly. An important result for the ensuing policy discussion was a consensus regarding five guiding principles that should apply to access to in-vehicle data. Besides solving safety and security problems such as “tamper-proof access and liability”, the compliance with data protection and data privacy, and standardized access / interoperability for facilitating use of the same vehicle data, two other important principles were introduced: The right of car users to decide if data are provided and to whom (consent), and that “all service providers should be in an equal, fair, reasonable and non-discriminatory position to offer services” to the car users - “fair and undistorted competition”.⁹ Especially in the Working group 6 of the C-ITS platform, which dealt with technological solutions about access to in-vehicle data, the conflict between OEMs and independent service providers became very apparent,¹⁰ because – as we will see later in more detail (section C.II.) – technological solutions can deeply influence the governance of data.

- 9 On the C-ITS platform three technological solutions were discussed. For the following analysis and discussion, it is sufficient to focus on two basic technological solutions.¹¹ The first one, the “external server” solution, implies that all in-vehicle data are transmitted to an external server (outside of the car) and access to these data is only possible via this external server. The “extended vehicle” concept of the OEMs is one variant of this “external server” solution, in which this is a proprietary server of the OEMs that lead to their exclusive control of the data.¹² Another variant of the “external server” solution is the “shared server” concept. It is technologically the same solution, however is not under the exclusive control of the OEMs but under the governance of a neutral entity that can give access to these data to all stakeholders on non-discriminatory terms. The second main technological solution is the “on-board application platform”. In this solution the car itself would be the platform on which the data are stored, and the car owners can decide directly whom

to grant access to the in-vehicle data and who can get access to the car for providing services to the car users. Since this technological solution leads to a much more “open” version of the connected car, this solution can also be seen as an open interoperable telematic platform. Thus, the technological choice between these two basic options is important (1) for the question who has control of the data, and (2) for the choice between a more interoperable “open” or a more “closed” model of connected cars.¹³

- 10 In the following, the positions of the OEMs and the independent service providers in this policy discussion are briefly summarized.¹⁴ The European car manufacturers are mainly using the extended vehicle concept in their connected cars and are claiming via their associations that this model is the only suitable model for access to in-vehicle data and the connected car.¹⁵ The main argument of the OEMs is that the exclusive control of the access to in-vehicle data and the car is necessary, because it is the only way to ensure the very high standard of safety and security that is necessary for connected (and automated) cars. Due to the risks of cyber-attacks, manipulation, compromising the integrity of the functions of the connected cars etc., all technological solutions that would allow a direct exchange of data with independent service providers would be too dangerous for the safety and security of the car. The responsibility of the OEMs for safety and security is also directly linked to their liability regarding the connected car. Therefore, safety and security concerns are the reason why the connected car has to be a closed system under the exclusive control of the OEMs. The car manufacturers claim that they are willing to grant access to in-vehicle data on their proprietary servers, but only on the basis of freely negotiated B2B-contracts with independent service providers, and in that respect they will distinguish different categories of data.¹⁶ The OEMs also claim that the extended vehicle concept allows the car owner to freely choose between all service providers that have contracts with the OEM with regards to

8 See EU Commission 2016 (n 1); C-ITS Platform (n 2).

9 For these five principles, see C-ITS Platform (n 2) 75.

10 See C-ITS Platform (n 2) 78-89.

11 For an explanation and analysis of the technological solutions, see C-ITS Platform (n 2) 72-90; TRL (n 2) 32-49; and Martens/Mueller-Langer (n 7), 7-13. The third solution, the “in-vehicle interface”, is the currently existing On-Board Diagnostic (OBD) Adapter, which is used for transmitting data for emissions control and repair and maintenance services. However, it is not such a basic solution as the two solutions described in the following.

12 In recent publications this variant has also been called “central data server platform” (Martens/Mueller-Langer [n 7] 8) or “centralization of in-vehicle data” (EU Commission 2018 [n 1] 13).

13 For a very detailed analysis of the advantages and problems of an “open” vs. a “closed” model of connected cars see Determann/Perens, *Open Cars*, Berkeley Technology Law Journal, 2017, 915-988.

14 For a deeper analysis of the positions and arguments of the different groups of stakeholders in the ecosystem of connected driving, see Specht/Kerber (n 2) 49-55.

15 See, in particular, ACEA, *Access to vehicle data for third-party services*. ACEA Position Paper, Brussels, December 2016a; ACEA, *ACEA Strategy Paper on Connectivity*, Brussels, April 2016b; and VDA, *Position. Zugang zum Fahrzeug und zu im Fahrzeug generierten Daten*. Berlin, 2016.

16 See VDA (n 15) 6 et seq. There are three exceptions regarding access to data via free B2B-contracts: personal data only with explicit consent of the car owners, repair and maintenance information according to the regulated access of the type approval regulation (see below in this section), and anonymized data for the improvement of traffic safety for public authorities.

necessary data or access to the car. It is less clear how the OEMs defend their exclusive control of the in-vehicle data. Only rather general remarks about the huge investments into the development and the operating costs of connected cars can be found in the position papers.¹⁷

- 11 Despite the heterogeneity of the different groups of independent service providers, there is a large consensus concerning their critique of the OEMs and their extended vehicle concept and possible solutions.¹⁸ Repair and maintenance service providers in particular, have emphasized the importance of access to in-vehicle data and the possibility to use their knowhow directly in the vehicle, i.e. that they can get direct access to the connected car.¹⁹ Especially important is that independent service providers can develop and offer many new innovative services (such as, e.g. remote monitoring and maintenance) in the automotive aftermarkets and in markets for complementary services.²⁰ They are concerned that the exclusive control of OEMs regarding access to in-vehicle data and the connected car can impede competition and innovation on these markets. Access via an external server can also impede innovation because certain new services need access in real-time (whereas the external server leads to time lags). Moreover, access to raw data and not only aggregated or already processed data can be important for new innovative services. Another alleged problem is that OEMs can observe the data access of independent service providers and therefore monitor their transactions with the car owners. These data can lead to a competitive advantage of the OEMs concerning their own services to the car users.²¹ These arguments are also relevant for many other independent service

providers. Therefore, nearly all other stakeholders reject the extended vehicle concept and the “privileged” position of the OEMs, and demand in the short term, non-discriminatory access to the data, and, in the long term, the transition to an “open telematics system“ (on-board application platform) that would give the car users direct control of the access to the data and the connected car. This is also in line with the position of the consumer associations who insist on fair and undistorted competition with regards to aftermarket and complementary services and the right of car users to choose freely between all service providers (consumer choice).²² The consumer associations also demand a clarification about the rights of car owners with regards to the data - including the non-personal data.²³

- 12 Parallel to this policy discussion, the EU enacted a reform of the type approval regulation for vehicles in 2018.²⁴ For a long time, competition law had to deal with strategies of the OEMs that tried to foreclose independent service providers from the often highly profitable automotive aftermarkets. Since the 1980s, the EU competition policy had implemented regulatory provisions; first in a sector-specific block exemption regulation, and since 2007 in the type approval regulation of vehicles that should ensure that competition on these automotive aftermarkets between the OEMs and the independent service providers is not distorted or eliminated through a lack of access to necessary technical information for repair and maintenance services.²⁵ The main regulatory instrument for achieving this objective was the introduction of an obligation of the OEMs to grant the same access about necessary

17 See ACEA 2016b (n 16) 7. Very interesting but not clearly elaborated are also hints about the danger of market dominance through large tech companies if data are made as accessible as possible according to the principle of “free flow of data” (ibid, 1).

18 See FIGIEFA, Commission Communication on “Free Flow of Data”. Input from the Independent Automotive Aftermarket, 23 December 2016, AFCAR, Insurance, leasing, dealers, vehicle inspection, automotive aftermarket and consumers coalition: Keeping the principles of the Treaty of Rome alive in the automotive digital age, Press Release, Brussels, 23 March 2017, ADPA et al, EC Mobility Package outlines vision for automated mobility but fails to set out a clear plan for access to in-vehicle data. Press statement, 17 May 2018.

19 See for the following FIGIEFA (n 18) 14-17.

20 See FIGIEFA (n 18) 3: “Foreseeable use cases are for example the proactive monitoring of safety-critical vehicle systems, the predictive ... maintenance in the workshop, remote monitoring of operations to prevent defects, remote maintenance through software updates or reconfiguration and automated services in case of a breakdown on the road”.

21 See FIGIEFA (n 18) 14. These and other critical arguments have already been discussed clearly in the Working Group 6 of the C-ITS platform (n 2, 78).

22 See BEUC, Protecting European Consumers with connected and automated cars. Position paper, Brussels, 11.12.2017; FIA, Policy Position on Car Connectivity, Brussels, 2016a; FIA, What Europeans think about connected cars, Brussels, January 2016b.

23 See, e.g., BEUC (n 22) 8. In a survey of European car owners about connected cars, 90% of the participants said that the data produced in connected cars should be “owned” by the car owners or the car drivers. See FIA 2016b (n 22) 1.

24 Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC.

25 Regulation (EC) 715/2007 of the European Parliament and of the Council of 20 June 2007 on the type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information. Regulation (EU) 461/2010 of 27 May 2010 on the application of Article 101(3) of the Treaty on the Functioning of the European Union to categories of vertical agreements and concerted practices in the motor vehicle sector. See for this regulation also Becker/Simon, GVO Nr. 461/2010 (Kfz-GVO) Vertriebs- und Kundendienstvereinbarungen im Kfz-Sektor, in: Bornkamm/Montag/Säcker, Münchner Kommentar Europäisches und Deutsches Wettbewerbsrecht (Kartellrecht), 2015, 1173-1234.

information for repair and maintenance services to independent service providers as to their own service providers. Therefore, concerning repair and maintenance services, independent providers have already regulated access rights to essential technical information and diagnostic data via the on-board diagnostic (OBD) adapter for a long time. This solution of “regulated access” to necessary technical information for safeguarding fair and undistorted competition on the aftermarkets for repair and maintenance service providers, is a broadly accepted regulation that has fulfilled its task successfully.²⁶ Although the reform of the type approval regulation was triggered by the emissions scandal in the automotive industry, it also led to some adaptation of the rules about this regulated access of independent service providers. This reform did not take into account all the implications of the transition from traditional to connected cars, but the extent of the regulated access of independent service providers regarding data and the car under these new technological conditions, e.g. also for providing new services (by using remote access), was also discussed in this context. In the end, the respective changes in the type approval regulation have remained rather limited, but it is clear that this regulatory access solution will be subject to further regulatory discussions in the future with the same conflict between the OEMs and independent service providers.²⁷

- 13 In the C-ITS platform discussions, as the conflict between OEMs and independent service providers about access to in-vehicle data and resources could not be resolved between the stakeholders, it was a logical next step that the EU Commission initiated a study aiming to investigate to what extent the different technological solutions are compatible with the above-mentioned five C-ITS guiding principles about access to in-vehicle data and resources (TRL 2017). This (the most comprehensive to date) study about this access problem led to the following results.²⁸ All technological solutions are technically and legally feasible (also when it comes to safety and security), but they each have different advantages and problems. Although no solution is superior, the study comes to the conclusion that the “on-board application platform” is the relatively best solution. Particularly important for this result is that the extended vehicle concept is assessed as being incompatible with the principle of fair and undistorted competition. The study

discusses a number of possible policy measures which differ with regards to the time horizon and the depth of policy intervention. This discussion clearly suggests that in the short-term (under the current technological “external server” solution), the variant of the “shared server” would lead to more compatibility with the principle of fair and undistorted competition. However, in order to ensure a far-reaching compatibility with this principle, the interoperable on-board application platform is recommended in the long-term. The study acknowledges the safety and security challenges of this solution but deems them to be solvable. The study recommends encouraging the development of a single interoperable platform, but in the end does not go so far as to recommend making such a platform mandatory for the OEMs.²⁹

- 14 What is the state of the current policy discussion? Despite the results of the TRL study, the conflict between OEMs and the independent service providers could not be resolved. Whereas the independent service providers still demand legislative action, especially concerning a “shared server” and interoperable platforms solutions, the OEMs reject legislative measures and want to stick to their extended vehicle concept. In February 2018, the European Parliament demanded that the Commission publishes a legislative proposal on access to in-vehicle data and resources with the explicit objectives of maximum security and a level-playing-field for access for all third-parties “... to protect consumer rights, promote innovation and ensure fair, non-discriminatory competition on this market ...”.³⁰ In its Communication “On the road to automated mobility” (May 2018), the Commission acknowledged the competition problems and that the “centralisation of in-vehicle” data in the extended vehicle concept might “not be sufficient to ensure fair and undistorted competition between service providers”.³¹ However, the Commission seems to be reluctant to address this problem, and therefore is not planning legislative actions with binding rules. It rather wants to solve the problems by publishing a recommendation with “guidance on a data governance framework for access to and sharing of data generated by connected vehicles” based upon non-binding principles.³²

26 See European Commission, Study on the operation of the system of access to vehicle repair and maintenance information, Final report, 2014.

27 Important changes of the type approval regulation refer to rules about the support of repair and maintenance services through wireless networks and the access to remote diagnosis services of the OEMs.

28 See TRL (n 2) 8-16.

29 See TRL (n 2) 160.

30 See EP, Report on a European strategy on Cooperative Intelligent Transport Systems (2017/2067(INI)). Committee on Transport and Tourism (PE610.712v02-00), 2018, 10.

31 EU Commission 2018 (n 1) 13.

32 See EU Commission, Roadmap Cooperative, Connected and Automated Mobility (CCAM), Ref. Ares(2018)5386378 – 19/10/2018, 2.

C. Data Governance in Connected Cars: An Economic Analysis of Potential Market Failures

I. Introduction

- 15 Can we rely on the market for finding appropriate solutions for the governance of data in the ecosystem of connected and automated mobility, or do serious market failure problems exist that require policy solutions? This section has the task of identifying and discussing potential market failure problems concerning the data governance problem from an economic perspective.³³ Although the policy discussion about access to data has focused primarily on the conflict between OEMs and independent service providers, the policy problems regarding the governance of in-vehicle data and connected cars are much more complex.
- 16 For the analysis of this complex data governance problem, the law and economics of data also have to be taken into account. Important from a legal and normative perspective is first that most of the data in the connected car are personal data that are subject to European data protection law, which grants the data subjects (i.e. the car users) a set of strong rights in relation to these data in order to protect their privacy. Therefore OEMs, but also other firms that would like to use their data, need the consent of the car users³⁴ for the processing and use of these data.³⁵ Thus, it is also necessary to discuss whether the car users are capable of making rational and well-informed decisions about permitting the OEMs (or other firms) the use of their personal data, and whether they are offered sufficient privacy options

for being able to protect their privacy. Secondly, in the case of non-personal in-vehicle data - which might be certain kinds of technical data and, in particular, the huge mass of anonymized data - no clear legal rights exist, especially no property rights for data.³⁶ The discussion about data rights however, has shown that an exclusive de facto control of non-personal data by a data holder from an economic perspective leads to a de facto (but not legal) "ownership" of these data. But due to the non-rivalry in the use of data, it is unclear whether such an exclusive "ownership" of data is an economically efficient governance solution. Especially in multi-stakeholder situations, such as the ecosystem of connected and automated driving, in which the same in-vehicle data can be used for the value creation of many service providers, it is very doubtful whether the exclusive (monopolistic) control of these data by one stakeholder leads to an efficient way of using the data.³⁷ Therefore, the specific economic characteristics of the data and the data economy are also an important input for the following analysis concerning appropriate solutions for the governance of the in-vehicle data of connected cars.³⁸

- 17 The analysis in this section is structured as follows. In section II we will analyze how the technological decisions of the OEMs - as choosing the extended vehicle concept or the on-board application platform - determine who has de facto control of the in-vehicle data and might therefore be able to appropriate the benefits of these data. Section III offers a critical analysis of the main argument of the OEMs, that the extended vehicle concept with its exclusive control of the access to data and the car is necessary for ensuring the necessary high level of safety and security of connected driving. Section IV analyzes the potential negative effects of the extended vehicle on competition and innovation on the markets for aftermarket and complementary services. In section V it will be shown that competition between OEMs does not necessarily lead to optimal technological decisions with regards to interoperability and standardization leading to a potential market failure concerning technological choice. This is followed

33 Kerber/Frank, Data Governance Regimes in the Digital Economy: The Example of Connected Cars, 2017, available at: <<https://ssrn.com/abstract=3064794>>, and Martens/Mueller-Langer (n 7) seem to be the only papers that have analyzed this access to in-vehicle data problem from an economic perspective. The TRL study (n 2)) also takes economic effects into account, but does not analyze market failures. For a theoretical framework for the analysis of data governance problems from an economic perspective see Kerber/Frank (n 33) 9-17.

34 For some (mostly legal) issues (e.g., data protection), it is necessary to distinguish between car owners, car drivers, and car passengers. In this paper we cannot go into the details of this problem. We therefore will mostly use the general term 'car users' and only in some specific contexts use explicitly the terms car owners or car drivers, where this particular role is relevant (e.g. in relation to buying a car).

35 For the relevance of European data protection law for data in connected cars, see Hornung, Verfügungsrechte an fahrzeugbezogenen Daten. Das vernetzte Automobil zwischen Wertschöpfung und Persönlichkeitsschutz. Datenschutz und Datensicherheit, 2015, 359-366, Hornung/Goeble, "Data Ownership" im vernetzten Automobil. Computer und Recht 2015, 265-273.

36 These data might be subject to trade secret protection, but this does not grant a property-like legal position. See for this discussion, Zech, A Legal Framework for a Data Economy in the European Digital Single Market: Rights to Use Data. Journal of Intellectual Property Law & Practice, 2016, 460-470, and in more detail section D.II.

37 See Kerber (n 4)109-133.

38 See for contributions about the economics of data and the data economy, OECD, Data-driven innovation: Big data for growth and well-being, 2015; Kerber, A new (intellectual) property right for non-personal data? An economic analysis. GRURInt, 2016, 989-998; Duch-Brown/Martens/Mueller-Langer, The economics of ownership, access and trade in digital data. EC JRC Technical Reports Working Paper 2017-01, 2017; Kerber (n 4) 109-133; Schweitzer/Peitz, Datenmärkte: Funktionsweise und Regelungsbedarf. Diskussionspapier 17-043, Mannheim: ZEW, 2017.

by an analysis of potential market failures due to information and behavioral problems of car users vis-à-vis their consent to the use of their personal data and the protection of their privacy (section VI). Section VII offers a brief analysis probing to what extent these potential market failures might be mitigated by competition between the manufacturers of connected cars (section VII). The results of section C are summarized in the concluding section VIII.

II. Technological decisions and de facto control of data and access to the car

18 What are the economic implications of the technological decision of OEMs for the “extended vehicle”? Since all in-vehicle data are transmitted directly to proprietary servers of the OEMs, they are obtaining de facto exclusive control of these data. Neither the car users nor other stakeholders can get access to these data without the consent of the OEMs. In that respect, the OEMs have gotten the de facto (but not legal) “ownership” of these data and might therefore be capable of appropriating the economic value of these data.³⁹ Additionally, the extended vehicle concept also implies that the OEMs have the exclusive control of the access to the connected car; specifically, without the consent of the OEMs, independent service providers cannot exchange data with the connected car, nor communicate with the car drivers via the integrated Human-Machine-Interface (HMI). Therefore, the connected car is a closed system (similar to Apple’s iPhone). As far as the OEMs have exclusive control of in-vehicle data and the access to the connected car, all independent service providers who would like to offer services to the car users need the consent (and therefore contracts) with the OEMs for being granted access to: (1) in-vehicle data that they need as indispensable input for their services; and/or (2) to the connected car, if they need access either to the IT system or the HMI of the car for providing these services and/or communicating with the car users.⁴⁰ As far as OEMs

have exclusive control, the consumers can also only choose between those service providers who have contracts with the OEMs. Since the connected car is an expensive durable good, the car owners are “locked in” the closed system of the OEMs. Therefore, the OEMs are in a “monopolistic” gatekeeper position with regards to the in-vehicle data⁴¹ and the connected car and can increase their profits by “selling” access to the users of the connected car to the independent service providers.

19 Technological alternatives would lead to different data governance solutions. The “on-board application platform” – the technological architecture favored both by the TRL study and independent service providers⁴² – would offer the possibility that car users can decide where the data are stored and whom they grant access to the in-vehicle data and/or the connected car. Therefore, it would be the car users who have the exclusive control. In this case they can choose freely between all service providers without the need to have contracts with the OEMs. As a consequence, the car users would be the de facto “owners” of these data and can use them for their own benefit, either through choosing the most attractive offer from service providers and/or by “selling” these data to the highest bidder. With this technological solution, the OEMs would have lost their “monopolistic” gatekeeper position regarding in-vehicle data. Hence, from an economic perspective the technological solution determines the initial allocation of the de facto exclusive control of data and thus the initial allocation of the de facto “ownership” of data.⁴³ It also decides to what extent the connected car is a “closed” or an “open” system, i.e. whether the manufacturer of a primary product (here the connected car) does also exclusively control the access to the connected car for aftermarket and complementary service providers, and whether and to what extent the consumers are “locked in” (see below section IV).⁴⁴

39 This de facto exclusive control of these data is only limited by: (1) the regulated access for repair and maintenance information (type approval regulation), and (2) by the rights of the car users regarding their personal data, but these rights do not extend to non-personal data (and therefore the anonymized data sets from these personal data).

40 These distinctions are important, because the exclusivity of the control of the access to the in-vehicle data and the car by the OEMs is limited by alternative channels for getting data and/or for communication with the car users (as, e.g. through smartphones). Therefore, e.g., location data and data about the traffic situation might not be exclusive, because this information might also be obtained from the smartphones of the car users or from connected cars from other brands. The importance of the number of data access channels is emphasized by Kerber/Frank (n 33), 41 and

Martens/Mueller-Langer (n 7) 24.

41 See also Martens/Mueller-Langer (n 7) 14.

42 See section B.

43 See Kerber/Frank (n 33) 28. It is important however to take into account that through contractual arrangements between the car owners and the OEMs this position of exclusive control of data and therefore the de facto “ownership” can be traded between the contracting parties; see also section C.VI.

44 See Determann/Perens (n 13).

III. Justification of the “extended vehicle” through safety and security concerns?

- 20 The OEMs defend the extended vehicle concept with the argument that only through this technological solution (with an external server) a maximum standard of safety and security can be ensured.⁴⁵ There can be no doubt that safety and security issues are very important when it comes to connected and (automated) driving, especially for the car users. In the current policy discussion, the problem of access to in-vehicle data and resources has primarily been seen as a trade-off problem between safety and security on the one hand, and fair and undistorted competition on the other hand. However, it can be asked whether and to what extent such a trade-off exists. We will analyze this problem in two steps.
- 21 In a first step, we ask whether the external server solution (as part of the extended vehicle concept) and the on-board application platform can solve the safety and security problem. This is a technological question that has to be answered by technical and IT experts. The TRL report came to the conclusion that both the on-board application platform and the external server solution can solve the safety and security problems, although there might be cost advantages for the external server solution.⁴⁶ Among IT experts there is a wide-spread opinion that closed proprietary systems need not be more secure than well-designed open systems; on the contrary, the often multi-layered architecture of interoperable open systems might even offer better protection against cybersecurity attacks.⁴⁷ Since OEMs also offer direct access to their connected cars to some service providers with whom they have contractual arrangements, ensuring a sufficiently high level of safety and security seems to also be possible for direct access to the connected car. However, it is clear that an open interoperable telematics (on-board application) platform need the implementation of a sophisticated safety and cybersecurity system. One part of the solution might be the separation of safety- and security-sensitive functions and data from the vast amount of other data, which are not related to safety and security.⁴⁸ It is particularly important, however, to strictly control whether independent service providers who want to offer their services to the car users fulfill certain standards for safety

and security of their services; for example, when it comes to apps and software that are uploaded to the connected car. This can be implemented by requiring a certification of these service providers.⁴⁹ In addition to that, the medium- and long-term development of integrated mobility systems with connected, automated, and later autonomous cars would require in any case the development of a comprehensive safety and security architecture with interoperable brand-independent industry-wide interfaces between connected cars and other entities. Therefore, solving the safety and security problems of interoperable telematics platforms, by for example, establishing a comprehensive system of certifications for safety and security, is in any case one of the important tasks for achieving the policy objective of a future integrated mobility system of connected and automated driving.^{50 51}

- 22 Most important for the governance of the in-vehicle data is, however, that safety and security concerns do not lead to a justification for the exclusive economic control of the in-vehicle data through the OEMs.⁵² Even if we assume that it is necessary that all data have to be transmitted to an “external server” and the OEMs must have exclusive control of the access to the IT system of the car due to safety and security reasons, this does not lead to a justification that they also need to be the de facto exclusive “owners” of these data with the right to exploit these data commercially. With regard to connected cars, the OEMs can also be seen as service providers of IT security who have the task of keeping the car and its data safe and secure, whereas the car users still retain the right to decide who should get access to the in-vehicle data of the car or to “sell” these data to other firms. Therefore even if safety/security problems make it necessary that the OEMs exclusively control the access to the car and the data, it is not clear at all, why the OEMs should also have the right to decide freely and according to their own interests who can get access to the car and/or the data, and who can exploit these decisions about access to increase their profits. The extended vehicle concept thus entails a bundling of the task of providing safety and security services with the transfer of de facto ownership rights of the data to the OEMs, which is not necessary and lacks economic justification. These

45 Safety and security refer to the safety of the car but also to cybersecurity of the connected car, which also can encompass the security of the personal data, see ACEA 2016b (n 15) 5.

46 See TRL (n 2) 77.

47 See in more detail TRL (n 2) 75-79; Determann/Perens (n 13) 939-942, and Martens/Mueller-Langer (n 7) 12.

48 This could be achieved by using so-called hypervisor technologies (TRL [n 2] 8).

49 Certification was also the regulatory solution concerning solving quality concerns with regards to the products of independent spare part producers in the automotive industry.

50 See EU Commission 2018 (n 1) 9.

51 Particularly important is the solving of liability problems. See also, Determann/Perens (n 13) 984-986, concerning the general problems with liability in the case of open systems. This is however no serious argument against interoperable telematics systems. If the safety and security problems can be solved, then also suitable solutions for the assignment of risks in tort law can be found.

52 See also Kerber/Frank (n 33) 54.

are two different roles that can easily be separated and unbundled.⁵³ One simple “unbundling” solution in the case of an “external server” solution is the already much discussed “shared server” solution, in which the external server is not under the exclusive control of the OEM but under the control of an entity that is independent from the OEMs. This entity then can give access to these data on a non-discriminatory basis according to certain general principles (e.g. FRAND conditions) and would therefore eliminate the privileged position of the OEMs vis-à-vis the data. In the case of the “on-board application platform”, it is clear that it is the car user who has de facto “ownership” of the data and the right to decide on the access to the car, and the OEMs are “only” service providers for the safety and security of the car.

23 Therefore, this section leads to the following results:

- (1) The exclusive (“monopolistic”) control of the in-vehicle data in the extended vehicle concept that allows the OEMs to appropriate the economic value of the data cannot be defended through safety and security concerns. Even if exclusive control of the access for solving safety and security problems is necessary, this does not imply that the provider of safety and security also needs to have the right to exploit the commercial value of the data. Both roles can be easily unbundled.
- (2) However, it is also very doubtful whether an external server solution and the car as a closed system with the exclusive control of the OEMs concerning the access to the car is necessary at all for safety and security. There seem to be good reasons to believe that the same (or even a higher) level of safety and security can also be achieved by using an “on-board application platform” with a sophisticated safety and security system.
- (3) As a consequence, the basic assumption of the current policy discussion that there is a fundamental trade-off between the objectives of safety/security and fair and undistorted competition is deeply flawed. There is definitely no such trade-off with regards to the access to the in-vehicle data, and it is also very doubtful whether there is such a trade-off related to access to the connected car.

- (4) Another conclusion is that it is necessary to analyze the safety and security problems as part of the medium- and long-term technological architecture of an integrated ecosystem of connected and automated mobility (see below section C.V.).

IV. Competition problems on aftermarket and complementary markets

- 24 In section B we have seen that both the independent service providers and the consumers are very concerned that the exclusive control of the OEMs regarding the data and access to the connected car can impede competition and innovation on the markets for aftermarket services and complementary services in the ecosystem of connected driving. The problem of ensuring fair and undistorted competition for independent service providers has been raised in the Working Group 6 of the C-ITS platform, confirmed by the TRL study, and has been acknowledged by the EU Commission as an unsolved problem.⁵⁴ From a competition economics perspective, the competition concerns have to be taken very seriously. As far as independent service providers need access to in-vehicle data and/or the access to the connected car, the OEMs can control a necessary (“essential”) resource for providing these services. This position allows them to foreclose independent service providers. This is an old well-known competition problem in the automotive industry,⁵⁵ and the long-existing regulatory efforts of European competition policy for protecting competition on markets for automotive repair and maintenance services and spare parts, which led to the solution of a “regulated access” to necessary technical information (see section B), have always focused on exactly this problem. Since many more new and innovative services are expected to be offered in the context of connected driving, the problem of foreclosing competition and leveraging market power has gotten much more important than in the traditional case of repair and maintenance services. It is also important that the problem is not limited to automotive aftermarket services, but also encompasses the wide range of many other innovative services for the users of connected cars,

⁵³ A firm who hires a security service firm for the task to control the access to this firm (either physically or concerning its IT system) does not simultaneously give the security firm the right to decide freely whom to give access to the firm and whom not, and therefore allowing the security firm to “sell” access to this firm. The right to decide who gets access will remain with the firm. The security firm has only the right (and duty) to deny access in the case of clearly defined safety and security risks.

⁵⁴ See EU Commission 2018 (n 1) 13.

⁵⁵ For the economics of aftermarkets and its discussion in competition law see, Shapiro, *Aftermarkets and Consumer Welfare: Making Sense of Kodak*, *Antitrust Law Journal*, 1995, 483-511; Borenstein/MayKie-Mason/Netz, *Exercising Market Power in Proprietary Aftermarkets*, *Journal of Economics & Management Strategy* 9, 2000, 157; Bauer, *Antitrust Implications of Aftermarkets*, *Antitrust Bulletin* 52, 2007, 31, and Bishop/Walker, *The Economics of EC Competition Law*, 2010, 150-152, 245-249.

such as complementary services,⁵⁶ which are also often the result of new data-driven innovation.

- 25 The exclusive control of the data and the car allows the OEMs several options for increasing their profits through this gatekeeper position. One option is to deny access in order to block the entry of service providers for specific kinds of services, which then could be offered exclusively by the OEMs themselves. If these markets promise particularly high profits, then monopolizing these markets can be one strategy for making profits through foreclosure strategies. Another option is to “sell” access to these data and the car to independent service providers who would like to enter these markets. This can be done by concluding B2B-agreements with service providers who, for a certain price, can get access to data and / or the IT system of the car, which can be interpreted as an entry fee into the relevant markets. This can also lead to exclusivity agreements; namely, that such a “license” to sell services in the connected car is granted only to one service provider for a high “fee” that allows the OEMs to reap the profits from such an exclusive position of providing a specific service for the cars of a particular brand. But even if the OEMs grant access to a number of service providers, the OEMs remain in control of the aftermarket and complementary services via their contractual relationships with these firms. Irrespective of the option the OEMs choose for maximizing their profits,⁵⁷ there are no independent markets for aftermarket and complementary services any more, and the OEMs can reap all (or most) of the profits. Moreover, the concern that such market control can lead to less innovation of new services has to be taken very seriously from an innovation economics perspective, because it enables the OEMs to filter which innovative services are offered to the car users. An additional way of monetizing the data is the selling of (anonymized) data sets for all kinds of other uses outside of the automotive industry and the ecosystem of connected and automated driving. Since many of these data sets are unique and not replicable, there is a danger that the ensuing monopolistic prices will lead to welfare losses through an under-utilization of these data in the data economy.⁵⁸

56 The term “complementary services” encompasses all services that are useful for the car users only in connection with the connected car, especially during driving. Therefore, the car and these services are economically complements. In that respect, there is no difference between aftermarket services and other complementary services from an economic perspective.

57 Please note that the OEMs with their extended vehicle concept insist on freely negotiated B2B agreements (ACEA 2016a [n 15]), i.e. that it is in their discretion what kind of profit-maximizing strategy they use.

58 See Martens/Mueller-Langer (n 7) 14-17, who also analyze pricing strategies of OEMs for selling access to data (monopoly pricing, price discrimination).

- 26 Furthermore, other variants of the external server solution have been discussed. One variant is that “neutral servers” - operated by independent entities - might be established, which provide in-vehicle data to other stakeholders under non-discriminatory terms. This neutral server solution however, suffers from the problem that the in-vehicle data are still first transmitted exclusively to a proprietary server of the OEMs, who are free to decide what data they make available under what conditions in free B2B-agreements to the operators of these neutral servers. Therefore, the OEMs can still apply the same strategies as described in the last paragraph. The only difference is that the OEMs cannot make direct contracts with the users of those data that are made available to the neutral servers, which limits their options for controlling the use of these data to some extent.⁵⁹ Whereas such a neutral server solution is not a solution for the competition problems, this is different for the already mentioned “shared server” solution. Since in this case the in-vehicle data are transmitted directly to an external server operated by a neutral entity, the OEMs lose their monopolistic gatekeeper position regarding in-vehicle data. This leads to a level playing field with regards to the access to the data, and therefore removes one important hurdle for ensuring fair and undistorted competition on the markets for aftermarket and complementary services. However, a shared server would not necessarily solve all competition problems on these markets, because the OEMs might still block independent service providers via their exclusive control of the access to the car. A transition to an open on-board application platform might also solve this problem.

- 27 Therefore, from a competition economics perspective, there can be no doubt that the OEMs can eliminate competition on markets for aftermarkets and complementary services due to their exclusive control of the in-vehicle data and the access to the car. In that respect, the concerns of the independent service providers about the implications of the extended vehicle concept are justified. However,

59 One benefit of this neutral server solution can be that it might help to mitigate the concern of the independent service providers, that by monitoring their proprietary server the OEMs can observe the transactions between car users and independent service providers, which might give them an advantage regarding the offering of their own services. This is a wide-spread concern of independent service providers. See C-ITS Platform (n 2) 79. Please note that the same competition problem is discussed currently in the context of transaction and user data on platforms such as Amazon. Here the concern is that those platforms can use these data for favoring their own services (see Schweitzer/Haucap/Kerber/Welker, *Modernisierung der Missbrauchsaufsicht für marktmächtige Unternehmen*, 2018, 142), as well as the current Amazon investigation of the EU Commission (see <<https://www.businessinsider.de/amazon-investigated-by-eu-commissioner-margrethe-vestager-2018-9?r=US&IR=T>>).

from an economic perspective an important counterargument has to be considered. It also should be asked whether competition between the OEMs is capable of solving the problem of ensuring an efficient provision of aftermarket and complementary services and with prices on a competitive level, even if the OEMs have exclusive control of these markets. Competition between OEMs can also be seen as competition between connected cars as bundles of the car itself and a set of aftermarket and complementary services (“system competition”). It can be argued that if competition between OEMs works very well, then they might be under enough competitive pressure for offering attractive bundles of cars and services at competitive prices. Otherwise car buyers would switch to the connected cars of other brands. This is a standard argument in the economic theory of aftermarkets. This question has also emerged in competition law with respect to defining the relevant markets in the automotive industry. Is the relevant market an aftermarket for a specific brand because consumers are “locked in” after they bought a particular car? This would lead to the conclusion that an OEM is a dominant firm in regard to aftermarkets and complementary services, which depend on the access to the data or the car. Or do the car buyers decide between different bundles of cars and services of OEMs leading to the definition of “system markets”?

- 28 Can competition between bundles of OEMs and aftermarket and complementary services work well enough for solving the problems of exclusive control of OEMs? This problem has been discussed in competition economics extensively,⁶⁰ for example in the context of the well-known printer/toner problem. If we assume that the consumers are rational and well-informed about the future costs of the specific toner they need before buying a printer, then the ensuing result that the buyers are getting locked-in regarding the toner is no problem, because they would already have taken this into account in their decision to buy the printer. However, even in this relatively simple lock-in problem, consumers seem to have considerable problems in dealing with it. These problems are much larger for the car buyers in the case of connected and automated mobility. It is very hard for car buyers to make reliable estimates about the future costs of being locked into such a bundle. The car buyers cannot know what kinds of services with what prices the OEMs will offer during the lifetime of a connected car. In the same way, they will not know what kind of choice between different service providers the OEMs will offer them in two, five, or eight years.⁶¹ Therefore it is very doubtful

60 See Shapiro/Teece, *Systems Competition and Aftermarkets: An Economic Analysis of Kodak*, *Antitrust Bulletin*, 1994, Shapiro (n 55), Borenstein et al (n 55), Bauer (n 55), Bishop/Walker (n 55) 150 et seq., 249 et seq.

61 Selling the connected car in the case that OEMs later

whether the car buyers can appropriately calculate the long-term costs and benefits of the aftermarket and complementary services that are part of this bundle. As a consequence, it is very unclear whether system competition between OEMs can work sufficiently for solving the competition and innovation problems on the markets for aftermarket and complementary services. It should be noted that if system competition between OEMs would have worked effectively in the past, the decades-long efforts in competition law for protecting competition in the markets for repair and maintenance services (as well as spare parts) would not have been necessary. Since connected and automated cars are much more complex in regard to services than traditional cars, we should be very cautious in relying on the effectiveness of systems competition between OEMs in regard to these services.

V. Market failures in regard to technological choice: interoperability and standardization problems

- 29 In economics we usually assume that the firms should be free to decide on the technological design of their innovations and that the market is capable of selecting the superior technologies. If the OEMs choose the extended vehicle concept and this solution also prevails in the markets (as it is widely expected without regulatory intervention),⁶² the question arises whether it is also the most efficient technological solution or whether there might be a market failure problem about technological choice. The TRL study came to the conclusion that in the long-term the on-board application platform would be superior to the extended vehicle concept (with its external server)⁶³ and also our analysis will suggest a similar result. Economic research has identified a number of cases, in which profit-maximizing firms can choose inefficient technologies and/or markets are not capable of selecting the best technologies.⁶⁴ Since in the future ecosystem of connected and automated mobility, interconnectivity and real-

diminish the choice or increase prices for these services is not a solution, because this will lead to lower prices of the used cars.

62 See TRL (n 2) 13.

63 See TRL (n 2) 170.

64 In one group of cases dynamic economies of scale (learning effects) or network effects can lead to path dependencies which might result in the lock-in of old technologies which are hard to be replaced with newer more efficient ones. The famous QWERTY-problem is another example. See, e.g., Katz/Shapiro, *Network Externalities, Competition and Compatibility*, *American Economic Review* 75, 1985, 424; David, *Clio and the Economics of QWERTY*, *American Economic Review* 78, 1988, 332.

time exchange of data between cars, infrastructure, private firms, and public institutions will be necessary for a well-functioning integrated mobility system, interoperability and standardization are important issues in this mobility ecosystem. Therefore, it can be asked whether there could be potential market failure problems with regards to interoperability and standardization.

- 30 One interoperability issue refers to the question whether OEMs choose a proprietary and closed technological system for the connected car or an open interoperable system, in which the car users can decide about the access to the connected car. The economics of interoperability shows that both open and closed systems can have benefits and costs, and that a deeper economic analysis is necessary for answering the question of which one is superior in a specific case.⁶⁵ Our discussion about the effects of the extended vehicle concept vs. the on-board application platform can be seen as part of such an assessment of the advantages and costs of interoperability in the case of connected driving. Since one of the benefits of interoperability can be more innovation, the question arises whether a closed system would lead to more innovative solutions (e.g., due to synergies between the connected car and other services within the system) or whether it can be expected that, due to open interfaces, an open system that allows for independent innovation activities of service providers would lead to more innovative services within the ecosystem of connected and automated mobility. So far, the OEMs have not claimed that their closed systems will lead to more innovation in aftermarket and complementary services, whereas the independent service providers are emphasizing the huge potential of new innovative services. Therefore, it is necessary to carry out a much deeper analysis of the advantages and costs of interoperability to decide which degree of closeness or openness of the connected car would be optimal. If competition between entire systems (bundles of cars and services) does not work well with connected cars, as we suggested in the previous section, then it is doubtful whether individual profit-maximizing decisions of the manufacturers of the primary products (here: the connected cars) lead to

optimal decisions about interoperability regarding complementary services. Rather the firms tend to choose a proprietary closed system too often.⁶⁶

- 31 However, interoperability is also very relevant at the level of the entire integrated ecosystem of connected and automated mobility. Due to the long-term need for direct communication and data exchange between vehicles, infrastructure, private firms and public institutions, far-reaching standardization processes concerning communication, data formats and categorization, safety and cybersecurity issues and other technological features are necessary, which require industry-wide standardized interfaces between the vehicles and the overall technical architecture of the mobility system. The connected, automated and later autonomous car must be an integral part of this system, specifically, the cars have to fit into the overall architecture and therefore have to comply with standardized technical interfaces in order to be capable to interoperate with many other parts of this ecosystem. Therefore an (to some extent) open and interoperable on-board application platform has to be developed in any case in the next steps of the automation of the connected cars.⁶⁷ The economics of standard-setting has shown that these kinds of uniform standards at the level of the entire mobility system cannot emerge in market competition.⁶⁸ Although the decisions of the OEMs for the extended vehicle concept might seem to be profit-maximizing - at least in the short- or medium-term - in such situations their individual incentives might lead them to technological decisions that are not optimal for the entire ecosystem. Therefore, it is necessary to find a solution for this market failure problem. This can be done by a collaboration of all relevant stakeholders in this ecosystem in order to develop the most suitable technological standards and interfaces.⁶⁹

65 On the one hand, more open systems with more interoperability can offer the consumers more choice, innovation and competition between complementary products and services that they can use in combination with this system. On the other hand, closed systems might have advantages in terms of more differentiation and a higher quality of services due to a better integration between the system and these complementary services. See for the economics of interoperability Choi/Whinston, Benefits and requirements for interoperability in the electronic marketplace, *Technology in Society* 22, 2000, 33; Gasser, Interoperability in the Digital Ecosystem, 2015, 9-17; available at: <<http://ssrn.com/abstract=2639210>>, and as overview Kerber/Schweitzer, Interoperability in the Digital Economy, *JIPITEC*, 2017, 39, 41 et seq.

66 For the general complaint in the digital economy about too many proprietary solutions and not enough interoperability see, e.g., PwC, Cross-cutting Business Models für IoT. Final report (SMART number 2017/0027), Brussels, 2017, 132.

67 See Martens/Mueller-Langer (n 7) 13 regarding the necessity of on-board application platforms for automated and autonomous driving.

68 Due to the advantages of compatibility, often only one uniform (and monopolistic) standard can exist. In the economics of standard-setting it has been shown that markets encounter large problems when it comes to finding and establishing efficient standards in an uncoordinated way. The main problem is that profit-maximizing individual firms often have incentives to choose technological standards that are not aligned with the overall welfare effects of these standards. Due to these market failure problems, many standards are developed through standard-setting organizations (SSO), in which firms collaborate to create new standards. For an overview about the economics of (the market failure problems of) standard-setting see, Farrell/Simcoe, Four Paths to Compatibility, in: Peitz/Waldfoegel, *The Oxford Handbook of the Digital Economy*, 2012, 34-58.

69 Efforts for standardization for improving interoperability

VI. Information and privacy problems of consumers

32 The discussion on the governance of in-vehicle data has been dominated by the conflict between the OEMs and independent service providers about access to in-vehicle data. Much less attention has been paid to potential market failures concerning the interests of the consumers, i.e. the car users. First it is important to understand that buying a connected and automated car requires not only a traditional sales contract but also contracts about services (and software updates etc.), as well as contractual provisions about the consent of the car users for the processing and the use of personal data in the connected car. Therefore, both parties are de facto in a long-term relationship, which implies a much larger “lock-in” problem for the car owners than for traditional cars. This “lock-in” problem does also exist in the solution of the “on-board application platform” but is much more serious in the “extended vehicle” concept, where the OEMs also can control additionally many aftermarket and complementary services and the consumers are “locked-in” in the entire bundle of car and services (see section C.IV.). However, in the following, we want to focus on the problem whether there might be a market failure problem when giving consent for using personal data and the protection of privacy. The following reasonings refer again mainly to the extended vehicle concept.

33 In the discussion about privacy problems in the digital economy and the issue of “data as counter-performance” for “free services” as in the case of the Google search engine or social media (Facebook), serious concerns have been raised, whether the “notice and consent” solutions in standard form contracts for giving digital companies permission to use their personal data work in a satisfactory way.⁷⁰ This refers to the problem of transparency regarding the extent of data collection and the use of the data, whether users are aware of the value of their data, as well as the problem of whether there is a real choice if without giving consent these services cannot be used. Related to that, also whether enough privacy options are offered, i.e. that users can make granular decisions about providing personal data according to their specific privacy preferences. All of these problems are also relevant in relation to the

are already taking place both at the EU and the international level. See TRL (n 2) 58-67, and EU Commission 2018 (n 1) 4-8.

70 See, e.g., European Data Protection Supervisor, Privacy and competitiveness in the age of big data: The interplay between data protection, competition law and consumer protection in the Digital Economy, Preliminary Opinion, 2014; Borgesius, Behavioural Sciences and the Regulation of Privacy on the Internet, in: Alemanno/Sibony, Nudging and the Law – What can EU Law learn from Behavioural Sciences?, 2015, 179-207.

personal data of the connected cars. In the context of the “privacy paradox” discussion it has been argued that due to information and behavioral problems, users might often not be capable of making rational, well-informed decisions about providing personal data and protecting their privacy.⁷¹ Therefore, it is necessary to conduct further research into the contractual arrangements between car owners and OEMs vis-à-vis the provision of personal data and the possibilities for protecting their privacy, and also ask whether also in this context market failure problems and unsolved privacy problems exist.⁷²

34 In the current policy discussion surrounding data governance in connected cars, there is a consensus that the privacy of the car users has to be protected. However, so far not much specific discussion can be found regarding how this should be achieved. In a recent survey, car owners in the EU were very concerned about disclosure and commercial use of personal data in connected cars, and emphasized their wishes for the ability to make more granular decisions about the provision of personal data.⁷³ This can imply that car users do not have to generally give consent to the processing and use of personal data, but that, for example, car users can decide for each ride whether location data are transmitted or not. The experiences with the privacy policies in other digital contexts do not support the belief that competition between OEMs might be enough in order to lead to privacy-friendly solutions for car users. Therefore, a discussion about additional regulatory solutions (perhaps also in the form of self-regulation) might be necessary for supporting privacy-by-default solutions and offering sufficient choice between different privacy options.⁷⁴

71 For the privacy paradox, and the (behavioral) economics perspective see, Norberg/Horne/Horne, The privacy paradox: Personal information disclosure intentions versus behaviors. *Journal of Consumer Affairs*, 2007, 100-126, Kokolakis, Privacy attitudes and privacy behavior: A review of current research on the privacy paradox phenomenon. *Computers & Security*, 2015, 122-134, Hermstrüwer, Contracting around privacy: The (Behavioral) Law and Economics of Consent and Big Data. *JIPITEC*, 2017, 9-26, and Acquisti/Wagman/Taylor, The Economics of Privacy, *Journal of Economic Literature*, 2016, 479.

72 See also Metzger, Digitale Mobilität - Verträge über Nutzerdaten, forthcoming in: GRUR 2019 (2). For a skeptical view about individual consent with regards to protecting privacy in connected cars, see from a U.S. perspective, Akalu, Privacy, consent and vehicular ad hoc networks (VANETs). *Computer Law & Security Review*, 2018, 37.

73 See FIA 2016b (n 22) 15.

74 In that respect also, the discussion about Personal Information Management Systems (PIMS) may be relevant. See European Data Protection Supervisor, EDPS Opinion on Personal Information Management Systems. Opinion 9/2016.

35 Another very interesting question is whether the car users should also have rights concerning the non-personal data of their cars, especially, also the anonymized sets of (their) data, and to what extent they get a (fair) share of the value of the data of their connected car.⁷⁵ This is a very difficult problem that cannot be analyzed here in detail. Therefore only a few remarks can be made. There is a widespread opinion that the owner of a car should also “own” the data which are produced in the car (“MyCarMyData”).⁷⁶ However, from an economic perspective, it should be taken into account that providing data to the OEMs can be seen as an example of “data as counter-performance” as part of the contractual arrangements between OEM and the car owners, which from an economic perspective might lead under competitive conditions on the car market to lower prices for the car and its services. In this case the car owners might indirectly participate in the value of the data. However, it also has to be taken into account whether this mechanism really works sufficiently.⁷⁷ All of these questions require much more research. They also arise to some extent with the technological solution of the “on-board application platform” solution; however, in this case the car users could also “sell” their data directly to other firms than the OEMs.

VII. Can competition between car manufacturers solve the market failure problems?

36 Competition between OEMs can only have a very limited effect on market failures through information and behavioral problems of consumers when giving their consent to the provision of data and protecting privacy. Competition between OEMs can also not solve the potential market failure problems in the case of choosing the optimal technologies concerning technical standards and interoperability with regards to an optimal technological architecture for an integrated ecosystem of connected and automated mobility. Since there are good reasons to be skeptical about the effectiveness of systems competition between OEMs, it also cannot be expected that this competition would solve the competition problems on the market for aftermarket and complementary services that are caused by the exclusive control of the access to the in-vehicle data and the car in the extended vehicle concept. But from a competition economics perspective, the question of the impact

of competition between OEMs is very important and requires much more research. In that respect it is also important that competitive pressure on the OEMs can also come from outside the automotive industry. Large digital companies such as Google, Apple, and others, also want to enter this ecosystem of connected and automated mobility, either with their own connected and automated cars, or with their huge competence concerning data analytics and artificial intelligence and the provision of many digital services.⁷⁸ Especially strategic alliances between traditional OEMs and large digital companies have the potential to intensify competition between OEMs and might break up the old business model of the OEMs. Therefore, a careful monitoring of the business strategies of the OEMs is important.

37 However, there might also be competition problems between OEMs through collusive, cartel-like behavior of the OEMs. It can even be asked whether the extended vehicle concept itself - as it has been developed by OEMs and defended by their associations in Europe - can be seen as an anti-competitive horizontal agreement about decisions on technology and governance of in-vehicle data in connected and automated cars. All OEMs that apply the extended vehicle concept (1) use the same technological solution of a proprietary server to which all in-vehicle data are transmitted (leading to their exclusive control of the in-vehicle data), and (2) design the connected car as a closed system (with exclusive control of the access to the car). Therefore, the monopolistic gatekeeper position of the OEMs is an integral part of the extended vehicle concept. It would also be interesting to investigate to what extent the OEMs with the extended vehicle concept have also agreed upon (3) the categories of data that they are making accessible under certain conditions to other stakeholders, and (4) on contractual provisions concerning (personal) data and privacy options in their contracts with car owners. As far as the OEMs have de facto agreed on these and perhaps also other aspects of their technological or data governance solutions, competition in regard to these solutions would have been eliminated.⁷⁹ There would

75 See e.g., BEUC (n 23) 8; Specht/Kerber (n 2) 190.

76 See FIA 2016b (n 22) 1.

77 For the problem of whether the provision of data to the OEMs would lead to lower prices for connected cars, see Kerber/Frank (n 33) 28.

78 Martens/Mueller-Langer (n 7) 20-23 make the important argument that if platforms such as media and entertainment platforms with large network effects offer car versions of their (for the car users very attractive) services (Apple iOSCarPlay or Android Auto), then OEMs might be under competitive pressure to install those media systems in their cars as part of the entire bundle they are offering to their customers. This would allow the large digital companies to enter the markets of aftermarket and complementary services and use their huge competitive advantages with regards to data and data analytics on these markets.

79 In that respect also, a closer analysis of the effects of the standard-setting process in regard to the “Extended Vehicle Standard” (ISO 20078) might be relevant (for more information see, <<https://www.iso.org/standard/66978.html>>). In regard to technological collusion between OEMs in the automotive industry see also the current

be, in particular, no competition regarding other technological solutions such as the interoperable on-board application platform. Since, however, the business strategies of OEMs also differ to some degree,⁸⁰ it would be necessary to investigate the extent to which the extended vehicle concept leads to collusion between the OEMs in regarding the design of technological and data governance solutions in the ecosystem of connected and automated driving.⁸¹

VIII. Conclusions

38 In this section we have analyzed what kind of market failure problems might emerge concerning the data governance in the ecosystem of connected and automated mobility and offered a preliminary assessment of these market failures, which however requires much more (and primarily empirical) research:

- (1) Competition problems:** By using the extended vehicle concept with its exclusive control of the access to the data and the car, the OEMs can foreclose independent service providers and control and monopolize aftermarket and complementary services. This can lead to too high prices, not enough consumer choice, and less innovation. These competition problems cannot be sufficiently mitigated through systems competition between OEMs.
- (2) Interoperability and standardization problems:** Within this complex integrated ecosystem of connected and automated mobility, it cannot be expected that the individual profit-maximizing decisions of OEMs on technology lead to optimal solutions when it comes to interoperability and standardization for the entire system.
- (3) Information and privacy problems of car users:** Especially important is research into whether and to what extent there might also be a market failure problem regarding the decisions of the car users to give their consent to the processing and use of their personal data. This would also require an analysis of the provisions on data in (standard form) contracts and the options the OEMs offer the car users for granular decisions about protecting their privacy.

investigation of the EU Commission into possible collusion on clean emission technology (see press release IP/18/5822, 18 September 2018).

⁸⁰ See TRL (n 2) 67-72.

⁸¹ Then the question of a cartel exemption can be discussed (see below section D.III.).

(4) Safety and cybersecurity: These concerns are very important but do not lead to a justification of the extended vehicle concept, because they can also be solved with the on-board application platform. In any case, safety and cybersecurity concerns cannot justify the exclusive control and therefore de facto ownership of the in-vehicle data by the OEMs.

39 What are the conclusions for the current discussion between OEMs and the independent service providers about access to in-vehicle data? Although there is still considerable need for further research, the preliminary results of our analyses of potential market failure problems suggest that the concerns of the independent service providers regarding the impact of the extended vehicle concept on competition and innovation on the markets for services in the ecosystem of connected driving are justified. Since the extended vehicle concept with its exclusive control of the in-vehicle data cannot be defended by safety and cybersecurity concerns, the trade-off between competition and cybersecurity does not exist in relation to in-vehicle data. Safety and security concerns also seem to be solvable with the on-board application platform, which would allow the provision of control of the access to the connected car and the in-vehicle data to the car users. Both the “shared server” in the case of the current technological solution of the “external server” and the on-board application platform would allow for a “level playing field” in terms of the access to in-vehicle data, and can therefore contribute to the protection of competition on the markets for services within the ecosystem of connected and automated mobility.

D. Governance of in-vehicle data: Discussion of policy approaches

I. Complexity of the data governance problem

40 Although the conclusions in the last section seem to support the position of the independent service providers, the data governance problem in this ecosystem of connected driving is much more complex. Whereas both the “shared server” and the “on-board application platform” offer the chance to eliminate the exclusive control of the OEMs regarding the in-vehicle data, they are themselves neither a clear nor a comprehensive solution for the governance of the in-vehicle data. There are many open questions; namely, who should operate a shared server and how should it grant access to what kinds of data, and under what conditions?

Should all data that are produced in the car be transmitted to this server, or do OEMs and, e.g., component suppliers have direct access to certain kinds of technical data (safety and cybersecurity reasons, business secrets)? How should one deal with data that are costly to produce compared to those with negligible costs? Should there be one shared server for each OEM or might it be better to pool the in-vehicle in one industry-wide shared server for a better exploitation of the advantages of data aggregation? Also, the proposal to transition to an interoperable on-board application platform does not clarify how the governance of the in-vehicle data will look like under this technological solution. These policy proposals also do not take into account the potential market failure problems when it comes to information and privacy problems of car users concerning the provision of personal data and the protection of their privacy. They also do not consider the question of whether and how car users should participate in the value of the data. In addition to that, there may be many more proposals for solving the problems, such as voluntary measures like principles for the access to data.

- 41 These questions should only emphasize that the data governance problem in the ecosystem of connected and automated mobility is a very complex problem that requires much more research from a technological, economic and legal perspective.⁸² This paper does not claim to have a clear policy proposal about the governance of these data, although it clearly suggests that the currently existing extended vehicle concept is not a suitable concept and that it is therefore necessary to think about (perhaps far-reaching) policy solutions. In the following, we will present an overview about some current policy discussions regarding the governance of data and ask to what extent they might be helpful for solving problems of access to in-vehicle data in the ecosystem of connected and automated mobility. Section II will ask whether the current discussions surrounding the introduction of data rights or the use of the data portability right (Art. 20 GDPR) can offer solutions. This will be followed by an analysis of whether and how competition law might help independent service providers to get access to in-vehicle data (section III). The final section IV will suggest that a comprehensive sector-specific regulatory solution of the governance of in-vehicle data might be the most promising way for solving the problems.

⁸² This problem is also not solved in the U.S.; see for the U.S. discussion concerning data governance in connected cars, e.g., Fagnant/Kockelman, Preparing a nation for autonomous vehicles: opportunities, barriers and policy recommendations. *Transport Research Part A* 77, 2015, 167, 178-180; Anderson et al (n 5) 146; Determann/Perens (n 13) 978-984; Akalu (n 72) 37.

II. Data rights and data portability

- 42 One group of options for solving data access problems to in-vehicle data are based upon the possibility of defining and assigning generally legal rights on data, which can then also be used for the data of the connected cars. Due to the many open questions surrounding the governance of data, broad policy discussions have emerged about data rights and the necessity of further legislative initiatives in that respect. In this section we will focus primarily on two discussions about possible solutions: (1) The data portability right of European data protection law, and (2) the general introduction of new exclusive and/or access rights on data.
- 43 According to Art. 20 of the new General Data Protection Regulation (GDPR), data subjects have a right to data portability that allows the data subject to receive their personal data from a data controller in a structured, commonly used and machine-readable format, or have them transmitted directly from one data controller to another. This right should give the data subjects more control of their personal data, but also should foster competition between service providers by lowering switching costs.⁸³ Can this data portability right be an instrument for solving the data access problems of independent service providers in those cases, in which the OEMs have exclusive control of the in-vehicle data?⁸⁴ There are at least three main problems associated with this solution. A first general problem of data portability is that the technical feasibility concerning the meaning of commonly used formats and interoperability is so far very unclear. This problem might be solvable when it comes to data in connected cars, because standardization regarding in-vehicle data might be necessary anyhow. A second more difficult problem is that it is legally very unclear what kinds of in-vehicle data this right of data portability would encompass, because most of them are not uploaded data as in social media but are produced in the car (often under participation of the OEMs or component suppliers), or are anonymized data or business secrets. It is also very doubtful whether the data portability right would allow for a fast or even real-time data portability, which would be

⁸³ See Article 29 Data Protection Working Party, Guidelines on the right to data portability (13 December 2016; rev. on 5 April 2017), 1. For the data portability right as a possible solution for competition problems caused by exclusive control of data see Schweitzer/Haucap/Kerber/Welker (n 59) 183, and, more generally, Graef/Husovec/Purtova, Data Portability and Data Control: Lessons for an Emerging Concept in EU Law (TILEC Discussion Paper, 2017-041).

⁸⁴ Martens/Mueller-Langer (n 7) 25, see the data portability right as one of the main options for solving the data access problem to in-vehicle data; for a more general discussion in regard to the Internet of Things see Urquhart/Sailaja/McAuley, Realising the right to data portability for the domestic Internet of Things, *Personal and Ubiquitous Computing*, 2017.

important for many of the new services in terms of connected driving.⁸⁵ A third important problem is that this solution might lead to very high transaction costs, both for the car owners for exercising their right as well as for the independent service providers for convincing a sufficiently large number of car owners to use this right for making market entry profitable.⁸⁶ Therefore the new data portability right of the GDPR is theoretically a very interesting option for solving competition problems due to a lack of access to in-vehicle data, but there are still too many open technical and legal problems for making this solution workable in the next years. It might presumably also require sophisticated regulatory solutions for lowering the transaction costs sufficiently.⁸⁷

44 Does the recent general discussion concerning the introduction of a new property-like right on machine-generated data or new mandatory access rights to data offer a solution for the access problems to in-vehicle data? The intensive discussion surrounding a new IP-like exclusive right on machine-generated data with the ensuing proposal of the EU Commission of a “data producer right” that should be assigned to the owner or user of a smart device has led to a broad consensus that the introduction of such an exclusive right cannot be recommended.⁸⁸ After a consultation the EU Commission has also decided not to pursue this proposal of such a general “data producer right”. In the same way, the proposal of a general mandatory access right to privately held data (under FRAND conditions) was much criticized and abandoned by the Commission, although the basic idea of facilitating more access and reuse of data has been broadly welcomed both in the academic discussion and by stakeholders in the consultation. One important result of this discussion is reluctance surrounding mandatory solutions compared to much more favored voluntary solutions for facilitating

contractual solutions about more access to data.⁸⁹ The other important conclusion is that the economic benefits and costs of both exclusive rights and/or access rights are so different between different sectors and business models that finding general solutions for defining and assigning new data rights seem to be extremely difficult or even impossible. Therefore a broad opinion has emerged that prefer more sector-specific tailor-made data governance solutions (see section IV).⁹⁰ Therefore, the general discussion about the introduction of data rights do not seem to offer a clear perspective for solving the problems of access to in-vehicle data.⁹¹

III. Competition law

45 Since the controversial discussion about the access to in-vehicle data in the extended vehicle concept focuses on competition problems on the markets for aftermarket and complementary services, competition law seems to be an obvious candidate for finding a suitable policy solution. It is surprising that so far competition law solutions for granting access to data have not played a prominent role in the policy discussion about in-vehicle data.⁹² This section can only present a brief overview about the options that competition law might offer.

46 In section C.IV. we have seen that in the extended vehicle concept, the exclusive (monopolistic) control of the OEMs about the access to the in-vehicle data

85 For a discussion of legal problems of data portability of in-vehicle data, see Störing, What EU legislation says about car data, Legal Memorandum on connected vehicles and data, 2017.

86 See Schweitzer/Haucap/Kerber/Welker (n 59) 183.

87 In the telecommunication sector the portability of phone numbers is facilitated through specific rules in telecommunication regulation.

88 For this discussion, see Zech (n 36), Drexl, Designing competitive markets for industrial data: Between proprietisation and access, Max Planck Institute for Innovation and Competition Research Paper No. 16-13, 2016, Wiebe, Protection of industrial data - a new property right for the digital economy? GRURInt, 2016, 877-884 from a legal perspective, and Kerber, A new (intellectual) property right for non-personal data? An economic analysis. GRURInt, 2016, 989-998 from an economic perspective; for in-vehicle data see Hornung/Gooble (n 35), and more general for mobility data BMVI, Eigentumsordnung für Mobilitätsdaten? Eine Studie aus technischer, ökonomischer und rechtlicher Perspektive, 02.08.2017.

89 For these proposals in the Communication, see “Building a European data economy”, the ensuing consultation and discussion EU Commission 2017 (n 4), EU Commission, Synopsis report. Consultation on the “Building a European data economy” Initiative, 2017, EU Commission 2018 (n 4), Drexl, Neue Regeln für die Europäische Datenwirtschaft? Ein Plädoyer für einen wettbewerbspolitischen Ansatz, NZKart, 2017, 339 (Part 1) and 415 (Part 2), Kerber (n 4), Schweitzer/Peitz, Ein neuer Ordnungsrahmen für Datenmärkte? Neue Juristische Wochenschrift, 2018, 275-280, and Specht/Kerber (n 2) 69-99, 151-169.

90 See Drexl (n 89) 415, 419, and Kerber (n 4), 109, 133.

91 It will be interesting to see whether the emerging discussion concerning mandatory access to large anonymized data sets for training algorithms in the context of artificial intelligence (AI) and machine-learning will lead to new legislative efforts for introducing general access rights for these purposes. For a proposal of mandatory data-sharing, see Mayer-Schönberger/Ramge, Reinventing Capitalism in the Age of Big Data, 2018, 166-171.

92 However, the results of the consultation about the Communication “Building a European data economy” have shown that many firms who have problems with regards to access to data are skeptical about the extent that competition law can help to solve data access problems, especially for small firms in situations with “unequal bargaining power”. The results of the consultation suggest that this kind of problem emerges especially in the automotive sector. See EU Commission, Annex to the synopsis report. Detailed analysis on the public online consultation result on “Building a European data economy”, 2017, 13.

(and/or the car) can foreclose competition on the markets for those aftermarket and complementary services for which this access is necessary. If – as our preliminary analysis suggests – systems competition between entire bundles of connected cars and services does not work sufficiently, then no undistorted competition on these markets for aftermarket and complementary services can be expected, and an obligation of the OEMs for granting access to the in-vehicle data (e.g., under FRAND-conditions) might be an appropriate remedy from a competition economics perspective. The existing sector-specific obligation of OEMs for granting non-discriminatory access to repair and maintenance information in the type approval regulation is already such a solution (see section B). It can be asked whether this solution of mandatory access rights to in-vehicle data for independent service providers can also be achieved by applying the general rules of competition law in order to protect competition on markets for all aftermarket and complementary services. Although so far no competition law cases exist concerning obligations to grant access to data, the increasing interest in the role of data in the digital economy has led to new discussions about solutions for data access problems in competition law. In a recent study about “Modernizing the law on abuse of market power”, the author (jointly with Heike Schweitzer, Justus Haucap, and Robert Welker) analyzed to what extent current European and German competition law might lead to obligations for granting access to data in digital contexts, especially also in IoT-applications (as the connected car).⁹³ The following paragraphs try to apply the results of this study to the problem of access to in-vehicle data.

- 47 Can the refusal of an OEM to grant access to exclusively held in-vehicle data be an abusive behavior according to Art. 102 TFEU by applying the essential facility doctrine? Whereas there is a well-established case group of applying Art. 102 TFEU to refusals to grant access to physical essential facilities (as infrastructure) and to license IP rights, the essential facility doctrine has so far not been applied to the refusal to grant access to “essential” data sets.⁹⁴ Usually the requirements for applying the essential facility doctrine are very high. However due to the economic characteristics of data, especially non-rivalry in use and the fact that the incentives for data production are often much less important than in the case of physical infrastructure and innovations, the essential facility doctrine can be applied much more flexibly when it comes to data.⁹⁵ Besides the requirement of market

dominance of the data holder, the data have to be indispensable for offering the service, and the refusal has to lead to a threatening of the elimination of competition. If we assume that the relevant market are the brand-specific markets for aftermarket and complementary services (i.e. no system markets exist), the OEMs can be seen as dominant firms, and their exclusive control of the in-vehicle data can eliminate competition on these markets.⁹⁶ The additional criterion of a “new product” might not be a problem because of the new innovative services that are expected to be offered by the independent service providers. The last criterion is whether the OEMs have a justification for the refusal of access. We have seen that safety and cybersecurity concerns do not provide such a justification. More difficult is the question concerning the incentives for producing the data and covering the operating costs of the entire communication infrastructure. Since the car users are also participating in generating the data and have paid for the car and for additional services (of the OEMs), it is not clear whether and to what extent such an obligation would lower the incentives for data production. In addition to that, OEMs can also be compensated for their (operating) costs. Much more important is that the consent of the car users is often necessary for complying with EU data protection law. Overall, it can be concluded that it might be possible that the refusal of OEMs to grant access to in-vehicle data to other stakeholders in the ecosystem of connected driving can be an abusive behavior according to Art. 102 TFEU.⁹⁷

- 48 However, since the requirements for the “essential facility” doctrine regarding data are still high (despite the possibility of more flexibility), the question arises whether there are other options in competition law. In the above-mentioned study we particularly analyzed whether § 20 (1) GWB of the German competition law can also be used for claiming access to data. § 20 (1) GWB extends the prohibition of abusive behavior of dominant firms in German competition law also to firms with so-called “relative market power”; namely, firms from which other small or medium-sized firms are dependent, because they have not sufficient and reasonable possibilities of switching to other firms. This provision of German competition law has been used for a long time in order to solve specific market power problems below the threshold of market dominance. One of the case groups are firms (as authorized dealers)

93 See Schweitzer/Haucap/Kerber/Welker (n 59) 158-191.

94 See, e.g., *Autorité de la Concurrence / Bundeskartellamt, Competition Law and Data*, 2017, 18; Schweitzer/Peitz (n 89) 81; Drexel (n 88) 46.

95 See Schweitzer/Haucap/Kerber/Welker (n 59) 171.

96 For an overview about court decisions in regard to market dominance of OEMs in aftermarkets and the reluctance of courts to accept system markets in the automotive industry, see Schweitzer/Haucap/Kerber/Welker (n 59) 167-180.

97 It is also possible to ask whether the exclusive control of the OEMs to the connected car, which impedes interoperability (“closed” car), might be under certain conditions an abusive behavior of a dominant firm. For such an “interoperability obstruction”, which also increases lock-in problems, see Kerber/Schweitzer (n 65) 55.

that have specifically invested into the relationship with another firm, and therefore have become dependent on this firm (“unternehmensbedingte Abhängigkeit”).⁹⁸ Can the refusal of OEMs to grant access to in-vehicle data to independent providers of aftermarket and complementary services also be an infringement of § 20 (1) GWB? Whilst no cases regarding access to data exist so far, it can be argued that under certain conditions firms on aftermarkets and in IoT-contexts with several stakeholders that need access to the same data for offering valuable services might claim access to the data that one stakeholder holds exclusively. In that respect a new case group relating to access to data in value creation networks (as in connected cars) might be possible. The advantage of using this provision is that the data holder need not be deemed as dominant according to Art. 102 TFEU or § 18 GWB (in German competition law). However, it will require much more research in order to clarify the specific conditions under which such an obligation for granting access according to § 20 (1) GWB can be justified.⁹⁹ Therefore, in Germany § 20 (1) GWB might offer another way for solving data access problems in the ecosystem of connected driving.

- 49 Therefore, competition law might offer interesting options for solving problems of access to in-vehicle data in those cases, in which the OEMs have exclusive control of these data, e.g. through the application of the extended vehicle concept. However, these case groups still have to be developed and it will need time to clarify the criteria that have to be taken into account for the necessary balancing of the potential positive and negative effects of mandatory data access rights that are based upon either European or German competition law provisions against abusive behavior of firms with market power. Another serious problem is that it might be difficult and expensive, especially for small- and medium-sized companies, to enforce access to in-vehicle data in private litigation. Although more public enforcement through competition authorities would be helpful, the instrument of ex-post control of abusive behavior of powerful firms is always a difficult and lengthy process for solving problems. Therefore, it can be asked whether competition law can also provide instruments outside the control of abusive behavior. One approach might be the use

98 For this provision in German competition law and its application, see Nothdurft, *Relative Marktmacht: Gutachten zu Grundlagen, Bedeutung, Wirkung und Praxis der deutschen Missbrauchsverbote gegenüber relativ marktmächtigen Unternehmen*, 2015, available at <<http://www.faire-importpreise.ch/pdf/gutachten.pdf>>.

99 For a deeper discussion, see Schweitzer/Haucap/Kerber/Welker (n 59) 172-191; due to a possible gap and for clarification we have made a proposal for amending § 20 (1) GWB of the German competition law for facilitating data access solutions, especially in Internet of Things constellations (as also the connected car). See *ibid.* 191.

of the instrument of a block exemption regulation according to Art. 101 (3) TFEU, in which problems of data access, such as complex multi-stakeholder situations of IoT applications, might be addressed, either more generally or in a more sector-specific way.¹⁰⁰ It can also be asked whether competition law could directly challenge the exclusive control of data by the OEMs in the extended vehicle concept. If the application of the extended vehicle concept by the OEMs can be seen as a horizontal agreement between the OEMs about technological and data governance solutions after an investigation (as discussed in section C.VII.), the question of the fulfillment of the criteria for exempting this horizontal agreement according to Art. 101 (3) TFEU will arise. As part of such an assessment, the competition authorities could ask about the efficiency effects of such an agreement and whether the exclusive control of in-vehicle data through OEMs with its negative effects on competition is necessary for achieving these benefits. The results of our analysis might raise serious doubts whether the exclusive control of in-vehicle data can be justified in such an assessment.

IV. Sector-specific regulatory solution

- 50 The last two sections have shown that the already existing data portability right, as well as competition law, might help to find solutions for data access problems that arise through the exclusive control of in-vehicle data by the OEMs. However, all of these policy options are still more theoretical ideas, which so far have not been tried out and which will need much more research, effort and time for implementation. Even if the instruments data portability and granting the right to access data as remedy against abusive behavior in competition law can be applied in the ecosystem of connected driving, it is not clear whether these options can be used broadly and fast enough for safeguarding competition on markets for aftermarket and complementary services. In addition to that, these policy instruments cannot help much when it comes to market failures concerning technological solutions and information and privacy problems of consumers (sections C.VI. and C.VII.). Although there is an option to try to solve the different market failure problems through applications of remedies from different legal fields such as competition law, data protection law, consumer law etc., the complexity of the technological and data governance problems in this ecosystem is so large that it is very unclear whether this leads to a satisfactory solution. Therefore, it might be more promising to try to

100 Block exemption regulations also have the advantage of allowing the publication of more specific guidelines that can deal with different kinds of problems.

develop a tailor-made sector-specific regulatory data governance solution.

51 It can be suggested that the following problems should be addressed in a sector-specific regulatory framework:

- (1) Technological framework: Due to the huge impact of technological decisions on the question of who has de facto control of data and can decide on (the conditions of) their use, a regulatory framework should encompass policies for promoting technologies that support a better use of data, less competition problems, and also more privacy-friendly solutions regarding the protection of personal data. In that respect, the development of solutions for interoperable on-board application platforms might be particularly important. These technological solutions should be seen as part of the long-term development of the over-arching technological architecture of connected, automated and later autonomous mobility. This will require far-reaching solutions when it comes to interoperability and standardization (especially also concerning safety and cybersecurity problems). Due to the ongoing and technological evolution, a sophisticated strategy is necessary for enabling the benefits of interoperability and standardization without impeding innovation.
- (2) Data access: Depending on the developing technological solutions, specific regulatory solutions about the governance of the in-vehicle data might be appropriate. As long as external server solutions for the in-vehicle data are applied, regulatory solutions regarding the access to these data might be necessary for solving competition problems on market for aftermarkets and complementary services. One option can be a broadening of the current regulated access solution for repair and maintenance information to all service providers that need in-vehicle data in the ecosystem of connected driving. Another option is the already much discussed “shared server” solution, which would put all the in-vehicle data under the control of a neutral entity with the idea of granting non-discriminatory access. The question concerning the institutional design of such a “shared server” also opens up the discussion about larger data pool solutions that can also be linked to new ideas of data trustee solutions. Another solution might be sector-specific regulations for making the data portability right an effective instrument for solving data access problems.¹⁰¹ Also sector-

specific rules about access to certain kinds of in-vehicle data for public authorities (traffic regulation, law enforcement etc.) might be part of these data access rules.

- (3) Data economy and privacy: Different technological solutions such as the on-board application platform would also enable different kinds of markets for data, since access to data could be obtained directly from the car users leading to new platforms for trading data. Therefore, the regulatory framework for in-vehicle data could support the emergence of these trading platforms. However, even if the privileged position of the OEMs is eliminated, complex problems related to dealing with different types of data have to be solved. This refers first and foremost to personal data and the protection of the privacy of car users, where the aforementioned market failure problem might lead to the need of regulatory solutions for contracts regarding the provision of data and a minimum of privacy options for car users. But also, sector-specific rules about data that can be deemed as business secrets might be helpful. A sector-specific approach would also allow regulatory solutions for exploiting the advantages of data aggregation; specifically, that data analytics and AI can get access to a large pool of in-vehicle data to increase the quality of the results (e.g., relating to traffic safety) or for a better training of algorithms.

52 The advantage of a sector-specific regulatory framework is that all of these questions are interrelated with each other, and that therefore the complex trade-offs between the costs and benefits of different solutions for the governance of these data might be solved better in an integrated approach.

E. Perspectives

53 The discussion surrounding access to in-vehicle data and resources is a very important policy discussion, because it raises many questions that are relevant in other areas of the digital economy, and especially in the future world of the “Internet of Things”, in which the production of sensor data will be nearly ubiquitous in the offline world. Smart manufacturing and smart retailing, smart home, and smart cities are some of the most important examples in that respect. In all of these areas it is so far very unclear how an appropriate data governance framework should look like. However, in all of these contexts very similar questions will arise as they have been discussed

¹⁰¹ See, e.g., the sector-specific solution in the second Payment Services Directive (PSD2), through which third-party payment service providers with the consent of the account

owners might get access to bank account data for offering their services to the consumers.

here with regards to the data in the ecosystem of connected and automated cars.

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Gustavo Ghidini, Rethinking Intellectual Property

Balancing Conflicts of Interest in the Constitutional Paradigm, Edward Elgar, 2018, 421 p.

Book Review

by **Séverine Dusollier**, Sciences Po Paris, Law School.

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- 1 Some books have the ambition of rethinking the whole regime of a legal field, despite its complexities and expansive realm. Gustavo Ghidini's last book belongs to such endeavours. Armed with his comprehensive knowledge of all fields of intellectual property, his long experience, and his savvy incursions in the economics and competition dimensions of creation and innovation, Professor Ghidini succeeds in convincing his readers that something is wrong in the IP kingdom, but also that it could be repaired with some changes and adjustments.
- 2 From the freedom of economic enterprise and the freedom of expression, two constitutional principles that underpin modern IP law and promote a pro-dynamic innovation, intellectual property has increasingly integrated mere protectionist tendencies, such as the extension of the scope of protection afforded by the exclusive rights, the replacement, in the IT-sector, of patent protection by the copyright regime that is more pro-monopolistic, or the extension of duration of rights, notably in copyright and related rights. Ghidini opposes such excessively protectionist trends that bear the risk of (over)protecting a few dominant enterprises and slow down the dynamic processes of innovation. He pleads instead for a balanced reconstruction of IP regimes on the grounds of key underlying paradigms which should guide a consistent interpretation *within* and *across* each IP right and a renewed attention to the dialectic between exclusion and access. A first line followed by Ghidini is holistic and aims at analysing the discrete IP rights in their mutual connections in order to avoid contradictions. This contrasts with the increasingly separate evolution of each IP right with no transversal examination of the impact any change in one IP system could have on others. A second line is more functional: it addresses the conflict of interests arising in each IP right in a systemic consistency with the satisfaction of what is proposed as the two main goals of the overall IP system: the promotion of "sciences and useful arts" for copyright and patent, and the pursuit of effective market transparency through reliable information for trademark.
- 3 The demonstration is then carried out in the three main fields of IP, patent, copyright and trademark, which constitute three key chapters, before concluding on the topic of the interface between IP and competition law, in which Ghidini is an expert. An overview of the architecture and underlying principles justifying and organising each field is provided, and its evolution is outlined and sometimes criticized, before a conclusion in the form of recommendations and legislative reforms is drawn. Each chapter concludes with an extensive bibliographical list, which is valuable to pursue the reflection and research.

- 4 Patent law's function is to ensure a competitive dynamic of technological innovation. On the one hand, the already achieved innovation should be protected, on the other it should coexist with the incentive for subsequent future innovation. A balance between exclusion and access should then be achieved, and an over protectionist interpretation and exercise of patent rights should be defeated. On the side of the balance, Ghidini insists on the combination achieved by patent law, of a privatization of the economic exploitation of research results, and the liberalization of its knowledge. The requirement of sufficient disclosure is thus crucial in achieving the role of the patent spreading technological knowledge.
- 5 Many other rules can be similarly justified through the need to regulate the dialectic between exclusion and access. For example, the non-patentability of the results of basic research compared to the privatization of the outcomes of applied research, for epistemological and economic reasons, the limitations to the patent rights, justified for pro-competitive motives, as the private or experimental use, the limited duration of the patent, or the different cases of compulsory licenses, and finally the assessment of the inventiveness of the invention, whose level has been progressively lowered, which Ghidini deplors.
- 6 Other features of patent law aim to enhance dynamic competition but are sometimes threatened by recent evolutions. For instance, the protection for trade secrets if it is conceived as an intellectual property right, instead of a tort-based protection, would replace the "exclusivity for knowledge" trade-off that is essential to the patent regime.
- 7 Not contenting himself with a pro-competitive interpretation of patent law rules, Ghidini proposes some legislative reform "to better satisfy societal interests in promoting technological developments, while preventing both overprotection and discouragement of innovation". A first cluster of proposals aims to transform patent rights from property to liability in some cases. Amongst those, a more frequent recourse to an obligation for the patent holder to grant FRAND terms, on the model of what has been set up for SEPs, at the difference that the law would determine the criteria *ex ante* of the conditions and fees for such imposition, and for the subsisting injunction availability. Cross-licenses and FRAND licenses are interesting options to further explore for dependent patents beyond cases of important technical advance and for patents related to products or processes related to public needs such as health, nutrition and environment protection. Some current rules could also be amended, as a reduction of the time for publication of patent, clearer rules for employee's inventions or a legal enactment of the stock-piling exception. Patentability should be more open to computer programs, that could be compensated by a repeal of copyright protection. A more radical suggestion is offered by Ghidini, consisting of replacing the *winner-takes-all* model by a different paradigm where simultaneous inventors could be granted parallel exclusive rights, to reward all investments in innovation and not only the firm that has been the quickest to file for patents. The second or third inventor could exercise a more limited exclusive right, or even a compulsory cross-license, after the first patentee could benefit from his patent for one or two years. Here, Ghidini does not elaborate much on what the position of the user of the invention on his radical shift of regime would be. Specifically, would he need to get a license from several patent holders?
- 8 From technical solutions to aesthetic creations protected by copyright, the issue of the relation between right *v.* access resonates too. Ghidini rejoices here the many scholars rejecting the imbalance that has been progressively installed in copyright in favour of the means of copyright protection (the exclusive rights) over the end of dissemination of culture and information. As he will explore later on for trademarks, the protection in the form of a proprietary right has become an end in itself. His perspective - as he reckons - is an industrial one that focuses on copyrights exploited and exercised by firms upon acquisition from authors, which stays in line with his pro-competition program for IP. Therefore, in his development about the copyright paradigm striking a balance between exploitation and access, the perspective of creators in terms of proper remuneration and protection of their works, is somewhat invisible, which I personally regret. That being said and keeping that dimension in mind, that does not invalidate the soundness of his analysis and proposals. After having revisited the key features of "classic" copyright, from the subject-matter and conditions for protection to the rights conferred, he suggests some reforms, namely to the regime of derivative works in order not to hinder the circulation of new cultural contributions or to extend the principle of exhaustion to all types of acts of disposition after the first sale, in whatever format the work is carried on. The regime of exceptions, especially in the digital environment, is also the object of a vivid critique leading to some recommendations for change. What is particularly worrisome is "that the dynamics of diffusion of information and culture, at the international level, are heading towards a feudal-type structure dominated by an elite of web oligarchs, who will - as in large part they already have - successfully dethrone the previous *domini*, the traditional publishers, increasingly destined to the role of new vassals, bound to willy-nilly accept the conditions

dictated by the new rulers”. Here it is suggested that the author is becoming a marginal player, whose capacity to earn an equitable share of the overall revenues is jeopardized. Strangely enough, Ghidini does not express much recommendations for reform here, and appears to be rather (perhaps overly) confident in the promises made by recent EU proposals (the directive on digital single market and the Communication on Online Platforms) for a fairer level playing field.

- 9 The discussion then moves to technological copyright, prompted in the last 30 years, by its extension to industrially produced utilitarian works like software or databases, but also industrial designs. Coming from Italy, where copyright and design rights were more strictly separated, Prof. Ghidini has some trouble accepting such cumulation pushed by European harmonisation and refers back to its conditions and risks. He suggests an interpretation of the Design Directive “to allow the *parallel* co-existence of the two types of protection, each with its own specific scope to be determined on the basis of the difference in the objective *market use* of the work of design”, which would be better in line with the enhancement of dynamic competition and the interests of consumers.
- 10 With regard to computer programs, Prof Ghidini advises the exclusion of them from copyright protection altogether, ending what he calls “a total fiction”, for software is intrinsically technology and consists in a merge between expression and function that does not encompass any aesthetic or expressive feature. The extension of copyright over derivative versions is also considered as problematic to follow-on innovation in the field of software. Should software still be protected by copyright, it should at least justify introducing a patent-like FRAND compulsory licensing system to the benefit of technical improvements. The protection of databases also does not resist his critique.
- 11 The last IP right that is thoroughly debated is trademark. Here the critique focuses on the evolution towards a protection of trademarks as goods per se and not only as informational tools whose function is to safeguard market transparency against confusions. When properly reflected in the trademark regime, the latter endows such an IP right with a strong pro-competitive profile. Conversely, when trademarks are protected as “an asset in itself”, particularly for famous trademarks, the protection they enjoy against different products and services, thus sometimes in distant markets, but also within the same or similar category of products or services, where a risk of confusion is then not required, is detrimental to fair competition and such an over-protectionist line should be rejected. One key argument, on which one should concur, is the direct protection of investment (namely in promotional activities) that this evolution entails and that should not have its place in intellectual property. Notoriety could end up being protected as such and not anymore in relation to a misleading perception induced in consumer’s minds.
- 12 A final chapter explores the relationship between IP and competition, including both unfair competition and antitrust analysis. He distinguishes between three phases in the antitrust interference on IP: the first one curbing contractual exercises of IP owners’ power to dispose of their rights (e.g. through market partitioning); the second one related to their power to exclude third parties (e.g. the development of case law on IP and refusal to license and the possible abuses in standard-essential patents); and finally the interference on the acquisition of the IPR entitlement itself (e.g. the *AstraZeneca* case). The issue of FRAND licensing is thoroughly developed. In unfair competition, Ghidini pleads for a convergence and possibly an integration with antitrust law along the objective of consumer welfare, with inspiration from the German Model.
- 13 This last chapter on the intersection between IP and competition law perfectly illustrates the pro-competition and pro-innovation anchor of the book. The complication of balancing interests of similar constitutional rank that is announced in the title and is developed in the introductory chapter, using the tests of hierarchy and proportionality, has been somewhat lost along the way, as it was less and less visible when progressing through trademarks and then competition law. It does not reduce the relevance of the analysis however. For anyone interested not primarily with a technical knowledge of intellectual property, but to a reflective systematisation of what protection of innovation means, this book is an essential read. The breadth of the issues covered, the richness of its cross-analysis and the radicality of some of his proposals deserve our attention as IP scholars or practitioners who struggle to make sense of an increasingly complex, inconsistent and unbalanced legal regime.

Towards a Purposive Copyright System

Review of the book of Daniel J. Gervais,
(Re)structuring Copyright, Edward Elgar, 2017

Book Review

by **Alain Strowel**, Professor UCLouvain and Université Saint-Louis, KULeuven, Munich Intellectual Property Law Centre – Avocat (Brussels).

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- 1 In his aptly titled book, *(Re)structuring Copyright*, Professor Daniel Gervais aims to (re)design a copyright system fit for the information age and the knowledge economy. This important and ambitious task attempts to remedy “the deficient structure of copyright” and its “current lack of equilibrium” (p. XII). It is to be achieved by bringing forward the purpose of copyright, as the US Constitution does. For Daniel Gervais, this purpose is nothing less than “human progress, its emancipation through science and the arts” (p. XIII). It is difficult not to agree with this purposive view, but to put it into practice is another thing.
- 2 *(Re)structuring Copyright* is thus a policy-oriented book on copyright. It is also a book very much centered on the international developments in the field of copyright. While some books and academic initiatives over the last years have tried to redefine copyright within the US or European context,¹ this book is unique by its amplitude as its aim is to reshape copyright from an international and comparative

law perspective. (For instance, a book edited in 2018 by Prof. Hugenholtz, *Copyright Reconstructed, Rethinking Copyright’s Economic Rights in a Time of Highly Dynamic Technological and Economic Change* [Wolters Kluwer] also aims to redesign copyright, but only its economic rights and in the EU context).²

- 3 Although the book has a strong normative approach, it also contains more descriptive chapters which shed light on many recent developments. Part I of the book presents the concepts and doctrines of international copyright law in order to identify the structural issues of copyright. Some chapters delve into the history of copyright (Chapter 1 on the common law tradition and Chapter 2 in the international context). This permits to demonstrate that copyright, and its complex fragmentation of the rights (p. 24), was meant to deal with commercial exploitation and was thus directed towards professionals. The issue today is that copyright affects the users and has become a system encroaching on their freedom and, potentially, their creativity. In its review of the flexibility of the three-step test, Chapter 3 compares its application in many national systems, and thus applies the comparative law method, another red line of the book. Chapter 4 contains a review of the protection thresholds (originality and fixation) in a comparative perspective, however,

¹ Some of those books and initiatives are mentioned or discussed in Daniel Gervais’ book, such as the Copyright Principles Project initiated by Prof. Pamela Samuelson (see for example, p. 186-187), and among many others, the book of Prof. Jessica Litman, *Digital Copyright* (Prometheus books, 2006, 2nd ed.) (and its comment by Prof. J. Ginsburg; see p. 211 ff.). *(Re)structuring copyright* also reviews some of the proposals made in Europe such as the Wittem’s group’s proposed European Copyright Code (for ex. on p. 181 ff).

² The book edited by P. Bernt Hugenholtz is also reviewed in this issue of JIPITEC.

with an accent on the common law jurisdictions; thus, the lessons of the Court of Justice of the EU, now of utmost importance for the continental copyright lawyers, are not factored in the analysis. Under an adequate, but somewhat mysterious, title (Vicarious and participative creativity), Chapter 5 tackles the core issue of copyright which arguably prompted Daniel Gervais to write his book: how to deal with user-generated content and the rise of the non-professional user. This leads to interesting reflections on the interplay between copyright rules and various social norms (p. 128 ff). The pages (p. 136 ff.) devoted to the evolution of the adaptation right (a difficult and rarely tackled topic) in national and international copyright law are very interesting. Chapters 6 and 7 aim to define the place of the authors and the users in a well-structured copyright system. They contain illuminating reflections on what value creation means and what type of property should exist in the online context - Daniel Gervais is rather critical about the role of intermediaries, the big filters of the present age. In the chapters which rely on previous articles published by Professor Daniel Gervais; namely, in nine out of the book's 13 chapters, the descriptive component is more prominent with a higher level of detail than in the additional chapters, such as Chapters 6 and 7, which are more policy-oriented and focused on the book's thesis.

- 4 Even though some chapters in Part I looked towards the future, Part II is the more forward-looking section of the book. For example, Chapter 8 presents the “quadrants of authorship”, which accurately remind us that in many instances and for many authors, copyright is not about controlling some uses, but is seen as an entitlement to a share of a revenue pie.
- 5 Part II also contains a series of policy prescriptions that form the core of the book; namely on the best structure of the rights (Chapter 9) and on the exceptions and limitations (Chapter 10). Professor Gervais' proposal is that copyright's economic component should be “a right to prohibit uses that demonstrably interfere with actual and predictable commercial exploitation” (p. 213), which, in turn, requires that copyright be structured teleologically rather than technologically. How to get rid of the technology-dependent delineation of the rights (such as the right of reproduction which, in the digital machine, is often disconnected from real exploitation) remains a huge task however. As to the limitations and exceptions (E&Ls), the book offers to categorize them according to their purpose and role so as to derive principled E&Ls. Particular attention is paid to the application of those E&Ls in the education sector (p. 224 ff.).
- 6 Chapters 11 and 12 examine how to facilitate the licensing of copyright – as Daniel Gervais wants to show that copyright is not mainly a “right to exclude”, but a “right to conclude” contracts. A tool that might help is collective and extended licensing, a topic that Daniel Gervais knows well, not only as an academic, but as a former copyright practitioner. Collective Management Organizations are adequately presented in the book as “cultural agents”, performing diverse cultural functions; however, they are often just perceived as businesses handling large sums of money. Formalities (discussed in Chapter 12) are also potentially a way to facilitate licensing if the focus is not on work registration (on which many proposals were made in the recent years), but on the recordation of transfers – in addition, those last formalities have the advantage to be Berne-permissible. Thus (*Re*)structuring Copyright might require “reform(aliz)ing” it,³ but within the constraints of the existing international framework.
- 7 The last chapter highlights the role copyright may play in development, defined in terms of economic and human development. Relying on a nice definition of development by Nobel price economist Amartya Sen, Daniel Gervais also quotes the words of Professor Okediji for whom development is “a pseudonym for a complex network of benefits associated with economic growth and human social capital” (p. 281).
- 8 The book is not theoretical as it ends – in the Epilogue – with the draft provisions for a New Berne Convention. This re-orchestrated Berne Convention definitely offers food for thought and should be compared with similar attempts to draft new copyright principles, such as the Wittem/European Copyright Code discussed at several occasions in Prof. Daniel Gervais' book.
- 9 Professor Gervais' book greatly benefits from the impressive international career and exposure of the author: he studied in Montréal, Canada, a country which combines a common law and a civil law approach, he then worked at the GATT and WIPO in Geneva, before moving to the US, where, after serving at the Copyright Clearance Centre (Massachusetts), he is now holding the Milton R Underwood Chair in Law at Vanderbilt University Law School, which he joined in 2008. This highly international career, which has also been reflected in previous books authored by Daniel Gervais (including his best-seller on *The TRIPS Agreement: Drafting History and Analysis*, 2018, 5th ed.) explains his 2017 appointment as professor of Information Law, specializing in trade and investment related aspects of the information society at the University of Amsterdam's Faculty

³ I use here the term of Christopher Sprigman in a 2004 Stanford Law Review article commented by Daniel Gervais on pages 264 ff.

of Law. The trade and other economic realities behind the legal veil of copyright were indeed the focus of many of Daniel Gervais' scientific writings. They are also central to the reviewed book. Trying to find a compromise between the "pro-IP" groups which pushed for ACTA, TPP, TTIP, and other TRIPS-Plus agreements and the "anti-IP" lobbies pushing for multilateral agreements to lower protection, Professor Gervais proposes "both higher and/or clearer protection of copyright where needed and new limitations to reflect changes" (p. 295), which happened since the last revision of the Berne Convention in 1971.

- 10 The book is very rich in part because it combines a very normative and well-articulated objective, specifically to restructure copyright, and detailed historical developments. This is evident in Chapter 12, which focuses on formalities. Is the best future not to be built on the lessons of the past?

P. Bernt Hugenholtz (ed.), Copyright Reconstructed

Rethinking Copyright's Economic Rights in a Time of Highly Dynamic Technological and Economic Change,
Information Law Series, Vol. 41, Wolters Kluwer, Alphen aan den Rijn, 2018

Book Review

by **Thomas Dreier**, Prof. Dr. iur.; M.C.J. (New York University); Director, Center for Applied Legal Studies at the Karlsruhe Institute of Technology (KIT), Karlsruhe, and Honorary Professor at the University of Freiburg, Germany.

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1 The fact that copyright law is coming under pressure due to digital technology and, in particular, the networking of an increasing number of mobile devices has not only recently been acknowledged. Moreover, the economic, as well as cultural importance of copyright, copyrighted subject matter and the copyright industries has consistently risen over the last few decades (with copyright-intensive industries representing almost 11.6 million of jobs – 5.4% of employment in the EU – and 6.8% of EU GDP; see Factsheet, European Commission, 2018). However, up until today, copyright statutes use legal terms and contain rules that have their roots in the early days of book printing (“reproduction”) and of sound records, as well as of broadcasting (“public communication”). The use of an essentially scholastic method applied to interpret these terms and rules with regard to problems of digitization and networking, however, sometimes leads to strange results. Above all, this does not do justice to neither the economic current framework for the exploitation of copyrighted works and related subject matter, nor to the economic business models and technical configurations based on them. In the

words of the promotional flyer of the book: “The historical evolution of copyright has led to a growing disconnect between the legal definitions of economic rights and the business and technological realities they regulate, eroding copyright’s normative content and distorting the scope of its economic rights.” This is all well known, and yet there are not many studies that undertake, or at least aim at, a comprehensive reconstruction of existing rights with regard to copyrighted works. However, undertaking such an exercise is of major importance, particularly since the CJEU got itself entangled in interpreting the existing exclusive rights without being able to design a coherent picture which could satisfy the needs of the digital environment – which was mainly due to the isolated cases that are being referred. Moreover, the European legislature does no longer seem to have the political power to design and implement a legal system which constitutes an adequate response to digital challenges, but rather contends itself right from the outset with what is politically feasible, as it is well demonstrated by the rather restricted scope of the EU Commission’s proposal on a Directive on Copyright in the Digital Market.

- 2 Before beginning this book review, a caveat seems appropriate, since the editor and co-author of the opening and closing chapters of the book to be reviewed and the writer of the present review are both co-editors of the Concise Commentary on European Copyright Law (also by Wolters Kluwer, now in its second edition, 2016). Such proximity may seem rather unusual for a book review. But it can easily be explained by the fact that a considerable number of European specialists in copyright law have contributed a chapter to the book to be reviewed, while others who did not participate are busy working on other projects and therefore did not deem themselves in a position to accept writing a review of such a rich book at short notice. Although it is hoped that this fact does not bias the judgement of the reviewer, the reader might wish to keep it in mind while reading the present review. Also, it seems worth mentioning that – as stated in the promotional flyer – the book “is the result of a collaborative research project ‘Reconstructing Rights’ funded by Microsoft Europe that ran from the Autumn of 2014 to the Summer of 2017 and normatively examined the core economic rights protected under EU copyright law, with the aim of realigning these rights with economic and technological realities.” Of course, funding by one of the players of the area to be explored might be problematic. However, as the editor ensures the reader in the preface of the book, the sponsor let the research be carried out “with complete academic independence”.
- 3 The starting point and basic assumption on which the reconstruction work is based is that “the existing set of economic rights granted to right holders under EU copyright law [...] has become disordered”. The reproduction right “already covers every imaginable act of (digital) copying”, and “recent CJEU decisions have also stretched the right of distribution to include acts of online dissemination of software”, whereas at the same time the CJEU “has very narrowly construed the right of communication to the public in cases of distribution of broadcast television programme-carrying signals to signals redistributors”. As a consequence, “the scope of copyright protection in the EU has become increasingly difficult to predict, at the expense of legal certainty, and EU’s delicate structure of rights and exceptions is becoming”, as the editor of the book explains, “gradually unbalanced”. As a result, it is claimed, “the natural link with economic exploitation” has been lost, “leading to cases of over- as well as of under-protection”, and is therefore “likely to act as a disincentive for investment in innovative content and information services”.
- 4 While the premise of the book was that “we must return to a more intuitive starting point”, and while the authors who have contributed individual chapters to the book share the common belief that “in an ideal copyright system the scope of copyrights’ economic rights should more adequately reflect the justifications of copyright protection”, the book does not propose one single solitary solution. Rather, each author proposes his or her own model to reconstruct copyright’s structure of exclusive rights. Hence, not all of the proposals made with regard to the five areas selected (namely, digital resale, private copying, hyperlinking and embedding, cable retransmission, and text and data mining), “are mutually compatible, nor are they meant to be”. Rather than developing a blueprint ready to be followed by any well-meaning legislature, the project was primarily intended as “a theoretical, ‘utopian’ exercise”.
- 5 However, the book has several parts that are not labelled as such, but which can easily be discerned. The first chapter contains a project synthesis as well as recommendations (*Hugenholtz/Kretschmer*), the second chapter (*Quintais/Poort*) retells a brief history of pre-internet value gaps and how copyright was modified to close them. Chapters 3 to 8 (*Bechtold, Ohly, Rognstadt/Poort, Dusollier, Strowel, Hugenholtz/Quintais*) present a variety of models for reconstructing copyright’s economic rights. The final chapter (*Poort*) examines what the proper scope of economic rights should be from a perspective of welfare economics. Since the other chapters refer to this economic analysis, it may well be said that the book “follows an interdisciplinary approach, combining economic and legal methods”, as it has been emphasized once again in the promotional flyer.
- 6 As summarized in the first chapter, the different approaches presented in the book can be labelled in the following way. One approach would be to rely on a “regulatory toolbox” (*Bechtold*), i.e. on a “more open and malleable structure”, which can be found in competition law and used in order to “shape rights by an empirically testable link between scope of protection and intended purpose”. Similar flexibility could be achieved by modelling copyright as a “right to prevent unfair uses” (*Ohly*), thus creating “a three-tiered system of rights and exceptions [...] and acts that are to be considered unfair”. This approach seems to borrow largely from the model of the black, white and grey lists as they are known from, and form an integral part of many laws against unfair competition. In contrast, another approach suggests replacing the existing layer of different exploitation rights which no longer appropriately describes the economic importance of single acts by one unified exclusive right to control acts that conflict with the economic interests of the right holder (*Rognstadt/Poort*). This idea goes back to an earlier proposal already made some years ago by Rognstad, together with the late Professor Jon Bing. Another approach might be to place the emphasis on the control of the dissemination of works in the public sphere, including the exploitation of derivative works

(*Dusollier*), or on the control of communicative as opposed to non-communicative uses such as, for example, text and data mining (*Strowel*). In view of what has already been implemented in several laws in order to cure market failure, it is also proposed to “convert economic rights into compensation schemes”, where exclusive rights are unenforceable (*Hugenholtz/Quintais*). Here, it might be added that a similar idea was already proposed in the WITTEM-Draft of a European Copyright Code (www.ivir.nl/copyrightcode/introduction/), not only for situations of market failure, but for all cases where the right holders’ main interest lay in remuneration rather than control, and where access and use interests of users prevailed over the limited control interests of right holders.

- 7 The final economic chapter by *Poort* intends to determine the optimum scope of exclusive rights from a welfare economic perspective, according to which the optimum “follows from the optimum long-term effect it has on total social welfare, taking account of the dynamic effects of copyright on the creation and quality of works, and on the incentives it provides for their active protection”. In other words, the public good market failure, which would result if no exclusive protection was granted to right holders is corrected by way of shaping the exclusive rights in a way that takes into account incentives to create and exploit copyrighted works as well as transaction cost and dead weight losses that come with the granting of exclusive rights. What is thereby suggested is to treat copyright markets “no differently from other markets”. Of course, as such, this approach is not new. Applying it to digitization and the scope of exclusive rights, however, *Poort* arrives at the conclusion that currently copyright “extends to acts that lack the underlying market failure to justify protection”. He identifies acts such as, “digital resale, most copying for private use, linking to unauthorized content, text and data mining in data bases a user has legitimate access to, and even retransmission of free-to-air television and radio stations within the reception area of the signal”. Likewise, as the author concludes “economic arguments remain valid to somehow prevent linking to unauthorized content”, and “the potentially negative effect of embedding on the exploitation opportunities for a right holder is acknowledged.” Of course, any solution, the author emphasizes, has to “take account of transaction cost and dead-weight losses, which dictates opt-out solutions for right holders that do not want to be embedded”.
- 8 It is well known that the economic approach of law and economics is based on a rather utilitarian understanding of copyright, and hence is closer to the Anglo-American approach to copyright than to the human (natural) rights approach, which is generally found in continental Europe. Yet, leaving

moral rights aside, on the one hand it should be noted that even the continental European human (natural) rights approach does not release legislatures and courts from the obligation to define the limits of the exclusive rights granted or to be granted to right holders. On the other hand, it might surprise a reader who grew up in a human (natural) rights jurisdiction that the economic analysis undertaken in this book arrives at conclusions which by and large mirror existing European exceptions and limitations to copyright. Or at least exceptions which are currently under discussion, such as the exception for text and data mining – including its restriction to databases to which the person undertaking the text and data mining has legitimate access – as proposed by the Commission in its text for a Directive on copyright in the digital single market. This does not only add an important argument in favor of these exceptions, as well as provide a solid basis on which the decisions of the CJEU could rely. It likewise points into the direction of not leaving their adoption as optional limitations to Member States, but of declaring these exceptions as mandatory. In this regard, the Commission seems to pursue the right way – if only in the limited instances listed on the new Directive’s proposal, as well as for the wrong reason of trying to achieve legal unity instead of harmonization within the EU.

- 9 Of course, under the present political conditions, the chances that the proposals made in this book regarding a re-conceptualizing of copyright’s exclusive rights are most likely minimal. In addition to restrictions based on political reasons, the issue of flexibility versus legal security most likely needs further exploration. Yet, pursuing the aim of achieving a more adequate definition of copyright’s exclusive rights based on a convincing rationale, seems worth the effort. After all, it is quite possible that some of the original thinking of the book will indeed find its way into the process of future law making. Also, future generations might be interested to read and rediscover what their ancestors have already thought through. In sum, as the authors *Hugenholtz* and *Kretschmer* rightly conclude at the end of their introductory chapter, “reconstructing copyright is not for the impatient or the faint-hearted; there remains much work to be done.”

Abbe E.L. Brown, Charlotte Waelde (ed.), Research Handbook on Intellectual Property and Creative Industries

Edward Elgar, Cheltenham, UK/Northampton, MA, USA, 2018

Book Review

by **Veronika Fischer**, Dr. jur., attorney at law in Karlsruhe, research assistant at the Center for Applied Legal studies, Karlsruhe Institute of Technology (KIT), and Secretary General of the German Association for Law and Informatics (DGRI).

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- 1 The collection was initiated in the series “Research Handbooks on Intellectual Property” by Edward Elgar. It follows an international and comparative approach and brings together practitioners and scholars to examine current issues in intellectual property law and related fields such as life sciences, geographical indications, indigenous intellectual property, intellectual property exhaustion and parallel imports, and so forth.
- 2 The editors of the volume, Abbe E.L. Brown (School of Law, University of Aberdeen) and Charlotte Waelde (Centre for Dance Research, Coventry University) intend to investigate the significance of intellectual property law for the creative industries. In doing so, they are faced with the challenge of defining the term of the creative industries and at the same time complementing the extensive literature on this topic. For this purpose, the editors identified particular regions and aspects that have been less highlighted in the debate. Furthermore, they added some selected interdisciplinary views. The focus is on proving the legal framework against the backdrop of disruptive technologies, the development of new business models, and legal policy objectives.
- 3 The volume is divided into six parts. **Part I: Setting the Scene**, forms the basis for further investigation in the context of the challenges posed by digitization. *Philip Schlesinger (University of Glasgow)* recalls the discussion about the economization aspect of the creative industries on the one hand and the identity-creating effect of the so-called cultural industries on the other. He then discusses relevant developments in European legislation, in particular the regulation of cross-border portability of online content and the Digital Single Market Strategy, which form a part of an economically oriented Agenda.
- 4 Afterwards, *Mathilde Pavis, Hasan Kadir Yilmaztekin (University of Exeter) and Stina Teilmann-Lock (University of Southern Denmark)* give an introduction to the various intellectual property rights and their respective objectives. While Pavis focuses on copyright and related rights, Teilmann-Lock explores designs, utility models and patents, and Yilmaztekin deals with trademarks, passing off and unfair competition.
- 5 *Christian Handke (Erasmus University Rotterdam)* explores the economic perspective. He addresses resource allocation, market failure and the challenges

of dealing with non-rivalising goods. Meanwhile, the optimal level of protection varies with changing market conditions, the legislator is called upon to balance conflicting interests, fostering creativity on the one hand and facilitating access to protected works for the public welfare on the other hand. In order to provide the legislator with a better basis for decision-making, Handke recommends intensifying empirical research, which is already more advanced in patent law than in copyright law.

- 6 **Part II: National and Regional Perspectives** examines the impact of new technologies and business models in different jurisdictions. *Kristofer Erickson (University of Leeds)* describes various activities by the New Labour UK government since 1997. He notes a significant change in the previously author-centered understanding of copyright and argues for a more balanced approach with the aim of establishing IP as innovation driver.
- 7 In contrast, *Enyinna Nwauche (University of Fort Hare)*, who explores the importance of IP law for the African region, focuses on enhancing the impact of intellectual property rights to fight piracy and counterfeiting. He considers that an increased level of protection could contribute to the development of the cultural industries, although current and reliable figures on their importance are lacking. Additional challenges arise from different cultural traditions and strong market fragmentation. *Yudhishtir Raj Isar (American University of Paris and University of Ahmedabad)* describes the opposite approach for India, where the creative industries, namely the film industry and the contemporary visual arts market are developing without significant efforts to ensure effective IP-protection. Recent legislative activities have focused on broadening limitations and exceptions as well as strengthening the moral rights.
- 8 *Julia Reda (Member of the European Parliament)* is addressing the copyright reform of the European Union. These efforts must be seen in the context of the EU's Digital Single Market Strategy (DSMS) and are aimed much more at creating a single market than harmonizing copyright law. Accordingly, the creative industries are moving into the focus, namely publishing, the film and music industry, as narrowly defined, excluding authors. Meanwhile, in Japan, the Cool Japan Strategy (CJS) programme was set up to boost growth rates in the creative sector. *Emiko Kakiuchi (National Graduate Institute for Policy Studies)*, however, notes that growth is limited, except in software and computing services, including industries that combine hardware and software, such as the automotive industry.
- 9 **Part III: IP, Creativity and Reward** deals with the key issues of sharing and enforcement.
- 10 *Andres Guadamuz (University of Sussex)* traces the emergence of Open Access Strategies. He discusses the different licensing models (e.g., Creative Commons, GNU, and so forth) and their specific conditions (public domain dedications, academic licences, copyleft, non-commercial licences, no derivative works) and examines whether the open access approach is transferable to registry rights. The paper also mentions regulatory approaches such as the EU-Public Sector Information (PSI) Directive.
- 11 *Nagla Rizk (American University of Cairo)* also explores the idea of sharing using the example of the independent music scene in Egypt. On the basis of a collection of interviews, she works out different distribution channels and alternative sources of income, for example through performances and concerts.
- 12 The contribution of *Jane Cornwell (University of Edinburgh)* is based on empirical research in the US, Australia, England, Scotland and Wales concerning IP litigation activity. The data reveal, though incomplete, that a high volume of copyright action is brought by major media companies and collecting societies. *Abbe E.L. Brown (University of Aberdeen)* explores the remedies that may be awarded in the event of success.
- 13 **Part IV: Case Studies: Coping with Legal, Social and Technical Change** examines the relationship between IP and selected sectors of the creative industry, including cultural heritage, dance productions, computer-generated works and museums.
- 14 *Smita Kheria (University of Edinburgh)* opens the chapter with an investigation into the sources of income of visual artists. On the basis of a comprehensive empirical study, she discusses the relevance of copyright exploitation on the one hand and the possibility of excluding third parties from the use of protected works on the other.
- 15 *Amalia Sabiescu (Loughborough University London)*, *Stephen Collins (University of the West of Scotland)*, and *Susy Frankel (Victoria University of Wellington)* discuss the protectability of traditional cultural expressions (TCE). Sabiescu uses the example of the traditional "Romanian blouse" to illustrate the effects that the appropriation of these forms of national identity by the fashion industry has on the individual and the community. Against this background, she argues for a kind of collective protection in favour of traditional crafts (namely geographical indications). Collins recalls various approaches to anchoring the protection of folklore at the international level and the challenges relating thereto, such as the clarification of definitions. They have not yet been implemented in a binding manner but have become

a role model function for some countries. The complexity in establishing protection for traditional knowledge is further substantiated by Frankel using the example of Maori culture and its possibilities of abuse.

- 16 *Charlotte Waelde and Sarah Whatley (both from Coventry University)* discuss the concept of originality in dance on the basis of some case studies. Due to the improved accessibility through new technologies, they propose the establishment of a collecting society for dance productions.
- 17 *Roger Burt (Chartered Institute of Patent Agents) and Colin Davies (independent Intellectual Property Consultant)* explore artificial intelligence systems in the context of intellectual property law. They attribute the authorship of computer-generated works to the program, which in their view, should be recognized as a legal entity by analogy with patent law.
- 18 In a practical report, *Amalyah Keshet (Israel Museum)* clarifies the complexity of the legal issues that museums have to deal with in fulfilling their tasks of acquiring, preserving and promoting their collections. Due to its openness, the fair use clause does not provide a reliable basis and leads to legal uncertainty. Moreover, not all legal systems are familiar with a comparable instrument, thus making international partnerships more difficult. There is a number of community-developed Codes of Best Practices, which can serve as guidelines for museums when dealing with works protected by copyright. Nevertheless, in order to cover their most fundamental tasks, he argues for clear limitations and exceptions, along the lines of those already existing for libraries and archives.
- 19 **Part V: Cross-Sector Issues** turns to related disciplines in order to shed light on the theoretical and philosophical foundations of the IP system. *Jaime Stapleton (formerly of Birkbeck University of London and Christiana Research Group, Copenhagen)* examines in a historical overview how the concept of creativity and the legal framework have changed over time. In doing so, he establishes links to the significant technical achievements, beginning with the early privileges, which regulated printing, up to the digital transformation and the internet, including data economy and its culture of sharing and surveillance.
- 20 The article by *Gregory N. Mandel (Temple Law School)* is based on various studies on the rationales of intellectual property law. The perceptions of the IP system can have an impact on its effectiveness, he argues, and examines both attorney's and lay perceptions. He found that, from a lay perspective, IP is mainly used as a tool to prevent plagiarism while the experts concentrate on the reward function. Natural rights conceptions and expressive theories on the other hand play a negligible role. From these findings he draws conclusions for the design of a functioning system of intellectual property rights.
- 21 *Henning Berthold, Melinda Grewar, Shiona Chillas and Barbara Townley (University of St Andrews)* show the impact of digitization on business models and value creation, in particular how new ventures and businesses are being financed (e.g., crowd funding), work and production is being re-organized (e.g., co-working spaces), and goods are being delivered (e.g., demand-based, direct publishing). The authors agree that distribution mechanisms are the key factor for value creation, and recommend that legislative activities should focus on cultural distribution rather than production.
- 22 *Abbe E.L. Brown (University of Aberdeen), Nicolas Gervassis and Rumbidzai Mukonoweshuro (both of Plymouth University)* draw attention to the links between corporate social responsibility (CSR) and IP. They introduce CSR, provide some examples of its implementation on the subject of sustainability, and recommend a new approach as to the power and enforcement of IP-rights considering the resulting opportunities.
- 23 The collection closes with **Part VI: Foresighting** issues, which should be given greater consideration in the debate on IP law and creative industries. *Nicola Searle (Goldsmiths, University of London)* underlines the importance of economic analysis. Although criticism is not new, she predicts that increasingly available data will lead to improved analysis.
- 24 Another underexplored issue is mentioned by *Irene Calboli (Texas A&M University School of Law and Singapore Management University School of Law)*. She calls for a more diversity-friendly analysis of legal issues, including, but not limited to, race and gender, sexual orientation, religion, nationality, physical and mental disability, age and social status. Initial approaches are to be found at the international level, e.g. the adoption of the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled.
- 25 *John Hartley (Curtin University)* illuminates the tension between economic and cultural values. In arguing for creative freedom, he draws comparisons with the model of language. New meanings, in his view, are being created through communication, just as copying functions as cultural group-based learning. From this, he concludes to concentrate on so-called knowledge groups instead of individuals, works and property.

- 26 Starting from some reflections on Greek mythology and folklore, *Valdimar Tr. Hafstein (University of Iceland)* also defines creativity as a cumulative process. He points out, that the Gutenberg era is rather a brief exceptional phase, while cultural practices such as copying, borrowing, remixing and sharing have a long tradition.
- 27 In summary, the collection addresses the challenges associated with digital transformation and offers the opportunity to place them in a larger context. Following the idea of globalization, the international comparison provides new insights. In addition, some aspects are recalled which were partly superimposed in the recent debate on intellectual property rights. The volume also looks at countries and regions outside the transcontinental and Anglo-European legal sphere, thus adding an additional dimension to the intellectual property rights debate. The same approach is reflected in the investigation of previously neglected fields beyond the traditional and well-known categories of protected works in the area of literature, music and film. In some cases, the volume offers pragmatic and effective solutions, without making use of legal instruments. Philosophical, economic and ethical contributions pave the way for a change of perspective and encourage us to think out of the box.

Thomas Eger, Marc Scheufen: The Economics of Open Access

On the Future of Academic Publishing. – Cheltenham, UK; Northampton, MA: Elgar, 2018. – X, 156 p.

Book Review

by **Eric W. Steinhauer**, Prof. Dr. jur.; deputy director Universitätsbibliothek Hagen, FernUni in Hagen / Humboldt-Universität zu Berlin.

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- 1 Open Access has been under discussion for over 20 years, when the Internet began its triumphal march as a medium of communication in science and humanities. Driven by the technical possibilities of a very simple and fast dissemination of scientific publications, consideration was given to replacing the previous publishing practice, which was dominated primarily by journals of a few major international publishers. The considerations in favour of Open Access were also fuelled by enormously increased subscription prices for academic journals, which not only place a heavy burden on libraries' acquisition budgets, but have also led to access problems to scientific publications, particularly at smaller or financially weak institutions.
- 2 In view of these problems, the advantages of Open Access are obvious. Nevertheless, it cannot be said that free access to scientific publications has established itself as the standard. It is not only the publishers who are blocking a change in their lucrative business model, there is also considerable resistance to Open Access within the scientific community itself.
- 3 This is where the study by Eger and Scheufen comes in. In a comprehensive survey conducted between 2012 and 2015, both authors interviewed almost 10,500 scientists from 25 countries about their practices and attitudes towards Open Access. The results of the survey may indicate how the various strategies and activities to promote and implement Open Access can be successful. Eger and Scheufen also consider respect for academic freedom as an important condition for a successful Open Access strategy.
- 4 The study consists of five parts. After a brief introduction, the market for academic publications and the Open Access movement in its history and actors are presented in detail. This is followed by an analysis of the survey results, which distinguishes between the golden and the green paths according to disciplines and countries. The following chapter then draws conclusions for the further Open Access strategy. The presentation concludes with a summary and outlook. Several annexes also contain statistical material and the study questionnaire.
- 5 Eger and Scheufen's introduction to the academic publishing market and the Open Access movement is solid and informative. It can also be read independently of the study as an introductory overview of the topic. It should be emphasised that Eger and Scheufen are not themselves actors in the Open Access movement, in contrast to academic

libraries, for example. Both are clearly striving for a balanced presentation, especially of the so-called journal crisis, which is an important impulse for libraries in particular to participate in the promotion of Open Access.

- 6 In presenting the various ways and approaches for promoting Open Access, it is worth noting that authors also transfer the rights necessary for publication to an Open Access journal. This is common practice, but not necessary. If an author himself provides his publication with a suitable CC licence, the journal can also publish on the basis of this licence without having to obtain further rights.
- 7 The presentation of the function and significance of the impact factor takes up quite a lot of space. Both authors take a critical view of this form of reputation measurement but point to the actual significance of the impact factor for scientific careers, for example. With regard to science management in particular, they also stress that the impact factor cannot be compared across disciplinary boundaries because of different citation cultures. The relatively low impact factors in the humanities are probably due precisely to the fact that science communication takes place not only via journal articles, but also to a large extent via books and anthologies.
- 8 When describing the different concepts of Gold and Green Open Access, it is noticeable that long-term archiving is only mentioned as a particular problem in the Green Way. The long-term availability of content is also likely to be a challenge in the Golden Way, especially as Eger and Scheufen always point out in the course of their study that commercial providers could withdraw from the market if a journal is not profitable. In this case, who will keep the published content available?
- 9 In their study on the practice of Open Access, Eger and Scheufen emphasise the importance of English as the lingua franca of academic communication. One consequence of this very international orientation of scientific publications was that there are hardly any national differences in the use of Open Access, apart from a somewhat higher use in emerging countries. However, for the humanities, which still publish quite frequently in the respective national language, the result is that there are country-specific peculiarities.
- 10 The economy of Open Access also includes the legal and financial framework conditions for research. Here, Eger and Scheufen present legal measures such as the indispensable secondary publication law in Germany (§ 38 Abs. 4 UrhG) and comparable regulations in other countries. They also deal with Open Access mandates in connection with public research funding.
- 11 The evaluation of the Open Access survey in 25 different countries has shown that it is not possible to talk about Open Access in general, but that the question of freely accessible publishing must be viewed in discipline-specific terms. Three clusters of cultures can be distinguished, namely Gold, Green and Grey. In the case of gold and green cultures, one path is particularly favoured, while no particular preference is discernible in the case of grey cultures, which include the humanities in particular. The impact factor, which plays an important role in the respective disciplines, is decisive for the classification in Gold or Green. If there are open access journals with a high impact factor, as is the case above all in the life sciences, there is a preference for the golden way. Where traditional paid journals with a high impact factor predominate, such as in mathematics, physics or economics, the green path tends to be followed.
- 12 When it comes to questions as to why scientists decide in favour of or against Open Access at all, Eger and Scheufen were able to identify an existing awareness of the possibilities of Open Access, but in the end it is the reputation that a publication conveys that is really decisive for the choice of publication route, and in many disciplines this depends crucially on the impact factor.
- 13 On the basis of the findings of their studies, Eger and Scheufen discuss the various instruments for promoting Open Access. They point out in advance that competition law instruments, as they are often called for, are not suitable means, for example, of solving access problems to publications as a result of excessive subscription prices.
- 14 One focus in the analysis of possible instruments for the promotion of Open Access is on transformation processes in which the subscription of journals is converted to the payment of article processing charges (APC). Eger and Scheufen see some risks here. First of all, there is the danger of bureaucratisation if, after the review process, the own administration must also be convinced of the necessity of a publication, especially when the funds for publications threaten to become scarce. From the perspective of journals, they see this as a potential threat to quality because additional articles always means additional income, thus fewer excellent contributions may be published. At the end of this development is the problem of predatory journals. Only casually the problem is mentioned that in some disciplines relevant authors do not necessarily belong to a university or research institution, one thinks only of jurisprudence with its many authors from the judiciary. If in the future the publication of articles has to be paid for, will such authors no longer be found in academic journals?

- 15 When comparing the costs of traditional publishing to Open Access publication, it is interesting to note that Eger and Scheufen point out that a large part of the specific costs of traditional journals are due to licensing and access control. These aspects naturally do not apply to Open Access titles.
- 16 Eger and Scheufen see a danger that interesting content will not be published due to lack of funding if authors have to pay APCs for publication. This objection is not convincing, since every academic author will always have the green way open free of charge, so that publication remains possible in any case. However, quality control and visibility in the professional public will then be lacking. This function has been taken over by traditional journals and must also be available in an Open Access environment. In addition to replacing the reputation measurement that is so important for a career in many disciplines with impact factors, the authors also see this as the greatest challenge that any Open Access strategy must face. In addition, any strategy that really wants to serve science must respect academic freedom. In general, the two authors are critical of a legal obligation for Open Access.
- 17 Overall, Eger and Scheufen have published a stimulating book that not only provides information on the background to Open Access, but also, based on empirical findings, calls for a prudent approach that takes into account the actual motives of scientists and scholars in publishing. In addition to striving for reputation, this also includes quality control, the lack of which leads to a great deal of research effort for readers. Both authors obviously have solutions in mind that closely follow the established structures of journals and review procedures. This is understandable, especially since the proposals are discussed as a reaction to a survey, which of course reflects the use of current structures whose absence leads to great research and evaluation effort for readers.
- 18 But perhaps this result is too conservative. On the one hand, the survey period between 2012 and 2015 has to be considered. For Germany, the answers were submitted in 2012. It is doubtful whether this will reliably describe current publication behaviour. Here we need only think of the sharp rise in the use of social media since then. Perhaps it would also make sense to consider to what extent the journal format is still suitable for labelling publications as scientifically relevant. This question is all the more urgent since journals do not play such a central role in the humanities. Monographs are important here, which can of course also be published openly. Monographs, however, have been completely ignored Eger and Scheufen. By the way, the counterpart to journals would in this case be the publishing house. If you think all this through to the end, Open Access would be nothing more than an author-financed event, with the same publishers and the same journal titles all the time. Eger and Scheufen stress that Open Access is ultimately about readers finding the best and most relevant content. It is more about distinction and visibility structures. No empirical study can answer the question of how this is best achieved in an open publishing world. This calls for the power of visionary thinking, which in turn must be empirically supported so that it does not ignore the needs of practice.
- 19 Even if the transformation to APC while retaining classic journal formats probably does not represent the future of scientific publishing that corresponds to the possibilities of the Internet, the criteria developed by Eger and Scheufen for the success of Open Access remain valid in any case: relevant content must be quality-checked, searchable and permanently accessible, and at the same time convey the deserved academic reputation to its authors.

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