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Compliance of National TDM Rules with International Copyright Law: An Overrated Nonissue?

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Compliance of National TDM Rules with International Copyright Law – An Overrated Nonissue?

*Martin Senftleben**

ABSTRACT

Seeking to devise an adequate regulatory framework for text and data mining (TDM), countries around the globe have adopted different approaches. While considerable room for TDM can follow from the application of fair use provisions (US) and broad statutory exemptions (Japan), countries in the EU rely on a more restrictive regulation that is based on specific copyright exceptions. Surveying this spectrum of existing approaches, lawmakers in countries seeking to devise an appropriate TDM regime may wonder whether the adoption of a restrictive approach is necessary in light of international copyright law. In particular, they may feel obliged to ensure compliance with the three-step test laid down in Article 9(2) of the Berne Convention, Article 13 of the TRIPS Agreement, and Article 10 of the WIPO Copyright Treaty. Against this background, the analysis raises the question whether international copyright law covers TDM activities at all. TDM does not concern a traditional category of use that could have been contemplated at the diplomatic conferences leading to the current texts of the Berne Convention, the TRIPS Agreement, or the WIPO Copyright Treaty. It is an automated, analytical type of use that does not affect the expressive core of literary and artistic works. Arguably, TDM constitutes a new category of copying that falls outside the scope of international copyright harmonization altogether.

Keywords: text and data mining; artificial intelligence; right to research; three-step test; concept of reproduction; temporary copying

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I. INTRODUCTION	2
II. THREE-STEP TEST CONTROVERSY	3
III. SCOPE OF THE INTERNATIONAL RIGHT OF REPRODUCTION	8
<i>A. Lessons From the 1996 WIPO Diplomatic Conference.....</i>	<i>9</i>
<i>B. Application of the Conference Experiences to TDM</i>	<i>14</i>
IV. CONCLUSION.....	27

I. INTRODUCTION

Seeking to devise an adequate regulatory framework for text and data mining (TDM), countries around the globe have adopted different approaches. While considerable room for TDM can follow from the application of fair use provisions (US)¹ and broad statutory exemptions (Japan),² countries in the EU rely on a more restrictive regulation that is based on specific copyright exceptions.³ The EU approach leads to considerable complexity and legal uncertainty. The invocation of available exceptions depends on individual criteria, such as use for scientific research purposes and the absence of a rights reservation by copyright owners.⁴

Surveying this spectrum of existing approaches, lawmakers in countries seeking to devise an appropriate TDM regime may wonder whether the adoption of a restrictive approach is necessary in the light of international copyright law. In particular, they may be exposed to allegations of non-compliance with the three-step test laid down in Article 9(2) of the Berne Convention for the Protection of Literary and Artistic Works (“Berne Convention” or “BC”), Article 13 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS Agreement” or “TRIPS”) and Article 10 of the WIPO Copyright Treaty (WCT).⁵ An imbalanced, restrictive interpretation of the three-step test,

¹ Cf. Sag 2009, 1607-1682.

² Cf. Ueno 2021, 145-152.

³ Articles 3 and 4 of Directive 2019/790 of the European Parliament and of the Council of 17 April 2019 on Copyright and Related Rights in the Digital Single Market and Amending Directives 96/9/EC and 2001/29/EC, *Official Journal* 2019 L 130, 92. For an overview of the different regulatory approaches, see Senftleben/Margoni et al. 2022, 72-73.

⁴ For an overview of complicating factors, see Senftleben 2022, 36-47. For a critique of the approach chosen in the EU, see Griffiths/Synodinou/Xalabarder 2022, 12-14; Ducato/Strowel 2021, 322-329; Margoni/Kretschmer 2021, 26; Geiger 2021, 383-394; Geiger/Schönherr 2021, §11.109; Geiger/Frosio/Bulayenko 2018, 837-838; Hilty/Richter 2017, 7-8; Handke/Guibault/Vallbé 2015, 120-130.

⁵ For a more detailed discussion of the different criteria of the three-step test and the transformation of the three-step test into a general yardstick for assessing national limitations and exceptions, see Senftleben 2004. For a discussion of compliance questions leading to legal uncertainty in national policymaking and a “ceilings” approach as a potential countermeasure, see Kur 2016, 133; Kur/Große Ruse-Khan 2011, 359-407; Große Ruse-Khan 2009, 56-102.

however, can lead to an overly cautious approach that stifles TDM and makes broad inroads into the fundamental right to research that supports the freedom of researchers to apply modern technologies for research purposes.⁶ Instead of providing breathing space for TDM and establishing a proper balance between copyright protection and the right to research,⁷ national legislation may place unnecessary constraints on the use of TDM in research contexts.

Against this background, the following analysis raises the question of whether international copyright law, including the three-step test (section II), covers TDM activities at all. TDM does not concern a traditional category of use that could have been contemplated at the diplomatic conferences leading to the current texts of the Berne Convention, the TRIPS Agreement, and the WCT. It is an automated, analytical type of use that does not affect the expressive core of literary and artistic works.⁸ Arguably, TDM falls outside the scope of international copyright harmonization altogether. From this perspective, the discussion about compliance with international copyright norms is a nonissue (section IIA). International copyright law does not limit the freedom of national policymakers to devise appropriate domestic solutions to reconcile copyright protection with the right to research that underlies TDM activities (section IIB).

II. THREE-STEP TEST CONTROVERSY

As already indicated, the three-step test in international copyright law – known from Article 9(2) BC, Article 13 TRIPS, and Article 10 WCT – is often invoked to cast doubt upon the compliance of national copyright exceptions and limitations with international law.⁹ With its open-ended criteria, the three-step test adds considerable complexity to the assessment of use in the context of TDM research. At the international level, the decision of a WTO Panel in *United States – Section 110(5) of the US Copyright Act* yielded a detailed discussion and interpretation of the test criteria.¹⁰ The WTO Panel discussed the three-step test laid down in Article 13 TRIPS which stipulates that WTO Members:

⁶ For a more detailed discussion of the right to research in the EU Charter of Fundamental Rights, see Van Daalen 2022, 231-245; Geiger/Jütte 2022a; Geiger/Jütte 2022b.

⁷ The CJEU has recognized the need to strike a proper balance between copyright protection and competing fundamental rights, in particular freedom of expression and information, in several cases. See CJEU, 29 July 2019, case C-516/17, *Spiegel Online*, para. 54; CJEU, 29 July 2019, case C-469/17, *Funke Medien NRW*, para. 70; CJEU, 1 December 2011, case C-145/10, *Painer*, para. 134; CJEU, 3 September 2014, case C-201/13, *Deckmyn*, para. 27; CJEU, 11 September 2014, case C-117/13, *TU Darmstadt*, para. 43. Cf. Geiger/Izyumenko 2020, 292-298; Geiger 2006, 371.

⁸ Carroll 2019, 954; Ducato/Strowel 2021, 334; Ueno 2021, 150-151.

⁹ For a more detailed analysis of this development, see Senftleben 2004, 118-124.

¹⁰ World Trade Organization, 15 June 2000, *United States – Section 110(5) of the US Copyright Act*, Report of the Panel, WTO Document WT/DS160/R. For a discussion of this WTO Dispute Settlement decision, see Geiger/Gervais/Senftleben 2014, 593-597; Senftleben 2006, 407; Senftleben 2004, 134-230; Ficsor 2002, 111; Oliver 2002, 119; Brennan 2002, 213; Ginsburg 2001, 13.

shall confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder.¹¹

Evidently, the text of the provision offers several starting points for questioning the permissibility of a copyright limitation or exception that has been introduced in national law. Does a given form of TDM research constitute a “special case” in the sense of Article 13 TRIPS? What is a “normal” exploitation of literary and artistic works? When does use for TDM purposes enter into “conflict” with a normal exploitation? Which interests of copyright holders must be deemed “legitimate”? When does a prejudice to these legitimate interests reach an impermissible, “unreasonable” level?

In the absence of sufficient legal guidance on the right interpretation of these elastic criteria, the three-step test can easily become a source of legal uncertainty that can impede, or even frustrate, the development of sufficiently flexible limitations and exceptions for TDM at the national level. Against this background, it is important to examine the guidance for the interpretation of the test criteria that can be derived from the aforementioned WTO Panel decision.¹²

With regard to the first test (“certain special cases”), the WTO Panel distinguished between the word “certain” and the word “special”. It understood the term “certain” to mean that a copyright limitation had to be clearly defined, while there was no need “to identify explicitly each and every possible situation to which the exception could apply, provided that the scope of the exception was known and particularised.”¹³ From the term “special,” the Panel inferred the additional requirement that a limitation should be narrow in a quantitative as well as a qualitative sense.¹⁴ It summarized this twofold requirement as narrowness in “scope and reach.”¹⁵ The application to Section 110(5) of the US Copyright Act shows that pursuant to the Panel’s conception, it is, for example, the number of potential beneficiaries that must be sufficiently limited in order to comply with the quantitative aspect of speciality.¹⁶ As to the qualitative aspect, the Panel eschewed an inquiry into the legitimacy of the public policy purpose underlying the adoption of a limitation.¹⁷ In the Panel’s view, the qualitative aspect of speciality does not have a normative connotation. A limitation need not serve a special purpose to be qualified

¹¹ Article 13 TRIPS. Explanation in brackets added by the author.

¹² For additional guidelines based on a broader analysis of relevant policy issues, see Geiger/Gervais/Senftleben 2014, 581-626; Geiger/Griffiths/Hilty 2008, 707.

¹³ Report of the WTO Panel, *id.*, para. 6.108.

¹⁴ Report of the WTO Panel, *id.*, para. 6.109. Cf. Lucas 2001, 430, who insists on the combination of both aspects of speciality to ensure a sufficiently rigid standard of control.

¹⁵ Report of the WTO Panel, *id.*, para. 6.112.

¹⁶ Report of the WTO Panel, *id.*, para. 6.127 and 6.143.

¹⁷ Report of the WTO Panel, *id.*, para. 6.111.

as a special case in the sense of Article 13 TRIPS.¹⁸ Instead, the Panel raised conceptual issues, such as the categories of works affected by a copyright limitation and the circumstances under which it may be invoked. In this vein, the Panel lent weight to the fact that one of the use privileges flowing from Section 110(5) of the US Copyright Act was found limited to dramatic renditions of operas and homestyle receiving apparatus.¹⁹

Turning to the second test (“conflict with a normal exploitation”), the WTO Panel interpreted the term “exploitation” as a reference to “the activity by which copyright owners employ the exclusive rights conferred on them to extract economic value from their rights to [musical] works.”²⁰ In this context, the Panel distinguished between an empirical and a normative meaning of the word “normal.” While the first connotation of the term “normal” appeared to be “of an empirical nature, i.e. what is regular, usual, typical or ordinary”, the second connotation reflected “a somewhat more normative, if not dynamic, approach, i.e., conforming to a type or standard.”²¹ With regard to the empirical aspect, the WTO Panel accepted the US approach asking “whether there are areas of the market in which the copyright owner would ordinarily expect to exploit the work, but which are not available for exploitation because of [the exemption at issue].”²² Accordingly, uses from which an owner would not ordinarily expect to receive compensation were not regarded as parts of a normal exploitation. Seeking to give meaning also to the normative aspect of the word “normal”, the Panel had recourse to the work of a study group preparing the 1967 Stockholm Conference for the revision of the Berne Convention.²³ In particular, it attached importance to the conclusion that “all forms of exploiting a work, which have, or are likely to acquire, considerable economic or practical importance, must be reserved to the authors.”²⁴ The Panel inferred from this formula that it was appropriate to consider

in addition to those forms of exploitation that currently generate significant or tangible revenue, those forms of exploitation which, with a certain degree of likelihood and plausibility, could acquire considerable economic or practical importance.²⁵

¹⁸ Report of the WTO Panel, *id.*, para. 6.112. For literature statements supporting this view, see Ginsburg 2001, 13; Ricketson 2002, 31. For comments insisting on the importance of a policy analysis already at this first step of the test procedure, see Ficsor 2002, 129-133; 223-229; Senftleben 2004, 138-152, who propose to require that limitations be justified by some clear reason of public policy.

¹⁹ Report of the WTO Panel, *id.*, para. 6.145, 6.146 and 6.159.

²⁰ Report of the WTO Panel, *id.*, para. 6.165.

²¹ Report of the WTO Panel, *id.*, para. 6.166.

²² Report of the WTO Panel, *id.*, para. 6.177 – 6.178.

²³ For a description of the work of the study group, see Ficsor 2002, 115-121.

²⁴ Report of the WTO Panel, *id.*, para. 6.179. The study group was composed of representatives of the Swedish government and the United International Bureau for the Protection of Intellectual Property (BIRPI).

²⁵ Report of the WTO Panel, *id.*, para. 6.180.

On its merits, the normative aspect, therefore, served as a vehicle to widen the perspective. It allowed the Panel to factor into the equation both currently existing and potential future markets when determining a conflict with “a normal exploitation of the work.”

Finally, the WTO Panel’s analysis of the test of “no unreasonable prejudice to legitimate interests” remained limited to the interest in the economic value of the exclusive rights conferred by copyright. In the absence of any objections raised by the parties, the Panel could readily qualify this interest as legitimate.²⁶ With regard to the expression “not unreasonably prejudice,” the Panel noted that any copyright limitation, by definition, caused some detriment to right holders because it reduced the scope of exclusive rights. This led to the insight that in order not to erode copyright limitations altogether, “a certain amount of prejudice has to be presumed justified as ‘not unreasonable’.”²⁷ The Panel concluded that “prejudice to the legitimate interests of right holders reaches an unreasonable level if an exception or limitation causes or has the potential to cause an unreasonable loss of income to the copyright owner.”²⁸

As this overview of assessment factors shows, the open-ended criteria flowing from the three-step test offer various starting points for right holders to challenge the compliance of a given national TDM exemption with Article 13 TRIPS. For instance, it may be argued that TDM research – requiring large-scale use of copyrighted data resources and affecting various categories of literary and artistic creations²⁹ – cannot be qualified as a special case in the sense of the first test (“certain special cases”) because the use is not sufficiently confined from the quantitative perspective which the WTO Panel introduced.

At the same time, the openness of the test criteria offers room for counterarguments. While, in TDM cases, the number of works may be high and the spectrum of affected work categories may be broad, the circle of beneficiaries – researchers using TDM tools – is narrowly drawn and highly specific. From a normative perspective, it can be added that use for scientific TDM research, by definition, constitutes a special case in the sense of the three-step test because breathing space for use in this category is indispensable to arrive at a proper balance between copyright protection and the freedom of expression and information, and freedom of sciences, which researchers can invoke.³⁰

²⁶ Report of the WTO Panel, id., para. 6.226.

²⁷ Report of the WTO Panel, id., para. 6.229.

²⁸ Report of the WTO Panel, id., para. 6.229.

²⁹ Cf. Senftleben/Margoni et al. 2022, 70-71.

³⁰ As to the recognition of the right to research as a fundamental right in the EU, see Articles 11 and 13 of the Charter of Fundamental Rights of the European Union, *Official Journal* 2000 C 364, 1, and the literature references, supra note 6. See also the recognition of a need to establish a proper balance in CJEU, 29 July 2019, case C-516/17, Spiegel Online, para. 54; CJEU, 29 July 2019, case C-469/17, Funke Medien NRW, para. 70; CJEU, 1 December 2011, case C-145/10, Painer, para. 134; CJEU, 3 September 2014, case C-201/13, Deckmyn, para. 27; CJEU, 11 September 2014, case C-117/13, TU Darmstadt, para. 43. For a more detailed discussion of the fundamental

Another recurring theme in the three-step test debate is the argument that exemptions of research use cause a conflict with the normal exploitation of works that are specifically made for research use, such as academic publications. Again, counterarguments are conceivable. The use of academic publications for TDM research does not aim at providing alternative access to scientific publications and undermining the market for the original information products. Instead, protected publications are only used in the framework of an automated, computational analysis.³¹ If TDM datasets containing protected works are shared within a group of researchers belonging to a research consortium, this is merely done to jointly carry out the research project. To enable replicability studies confirming the validity of TDM results, selected members of the broader academic community may obtain access – again without eroding the primary market for publications used as source materials. Insofar as final research publications contain traces of protected works used for the TDM analysis, these traces are also unlikely to substitute the original publications and erode the primary market. Because of the specific research context, TDM researchers will thus be able to dispel concerns about an erosion of the normal exploitation.

In the case of academic publications, it must also be considered that publishers of academic books and journals benefit greatly from the work of researchers in scientific projects, including TDM projects.³² Without paying for the research work, they can reap the benefits of research results by publishing books and articles that share the new knowledge – once again without paying for the time invested in the drafting and reviewing of publications. Against this background, the use of existing academic publications as data sources for TDM projects – leading to new knowledge for new publications – appears as a good investment in the continuous evolution of publishable material. The cyclic process in which new knowledge arises from the analysis of pre-existing academic sources³³ begs the question whether academic publishers have any legitimate interests at all in the sense of the three-step test (see the final step prohibiting use that “unreasonably prejudice[s] the legitimate interests of the right holder”)³⁴ that could be asserted against national TDM exemptions in the discussion about compliance with the three-step test.³⁵ Following this line of reasoning, arguments based on an erosion of the market for academic publications appear unfounded from the outset.

rights impact, see Geiger/Gervais/Senftleben 2014, 581-626; Geiger/Griffiths/Hilty 2008, 707; Geiger/Izyumenko 2020, 292-298; Geiger 2006, 371.

³¹ Carroll 2019, 954.

³² For a more detailed analysis of this point, see Peukert 2012, 146-148.

³³ For a discussion of the role of copyright law in enabling cyclic innovation in the literary and artistic sector, see Senftleben 2020, 26-35.

³⁴ Article 13 TRIPS.

³⁵ As to the validity of this argument, see WTO Panel, 17 March 2000, WTO Document WT/DS114/R, Canada – Patent Protection of Pharmaceutical Products, para. 7.69, stating that both society and the scientist have a legitimate interest in using the patent disclosure to support the advance of science and technology. Hence, it has already been recognized in WTO jurisprudence that exclusive intellectual property rights must not

These examples of potential lines of reasoning show that the three-step test is an effervescent source of both compliance and non-compliance arguments. While strong arguments against allegations of incompatibility are available, the criteria of the test can be used strategically to cast doubt upon exemptions of TDM use in domestic copyright law and destabilize national legislative efforts to create breathing space for TDM. Article 13 TRIPS creates legal uncertainty that can have a corrosive effect on national legislative initiatives seeking to offer room for TDM research. Even if non-compliance arguments can finally be rebutted, the three-step test gives right holders munition to attack TDM exemptions and the legal position of researchers.

III. Scope of the International Right of Reproduction

Considering the problems that can arise from an obligation to ensure compliance with the three-step test, it is important to clarify whether copies made in the context of TDM research have copyright relevance at all. If TDM copying does not amount to a relevant act of reproduction in the first instance, there is no need to introduce a limitation or exception to justify the use, and there is no need to defend this limitation or exception against allegations of incompletion with the three-step test. At first glance, however, international copyright law seems to leave little room for assuming that copies made in the context of TDM fall outside the scope of the right of reproduction that has been recognized in Article 9(1) BC. The provision is often understood to grant a broad, flexible right of reproduction – an exclusive right capable of absorbing whatever new form of copying arises as a result of technological developments.³⁶ Article 9(1) BC reads as follows:

Authors of literary and artistic works protected by this Convention shall have the exclusive right of authorizing the reproduction of these works, in any manner or form.

A closer look at the international discussion surrounding Article 9(1) BC, however, reveals that in the light of new settings for the making of copies, Berne Union Members did not agree on a broad, “general” scope. In fact, the right of reproduction has been understood as a much less comprehensive exclusive right than the words “in any manner or form” may suggest. The deliberations at the 1996 WIPO Diplomatic Conference on Certain Copyright and Neighboring Rights Questions, which led to the adoption of the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty (WPPT), offer important insights in this respect (section 3.1). These insights can be put to good use in the context of the current debate on TDM (section 3.2).

thwart the achievement of overarching societal goals in the field of research use. Cf. Senftleben 2011, 162-163.

³⁶ Cf. Goldstein/Hugenholtz 2019, 286, referring to WIPO 1978, 54, para. 9.2, which argues for a broad and flexible interpretation of the right of reproduction.

A. Lessons From the 1996 WIPO Diplomatic Conference

Article 7(1) of the Basic Proposal for the international treaty that finally became the WCT contained a provision that sought to confirm the comprehensive nature of Article 9(1) BC and fortify the position of copyright holders in respect of forms of copying that were deemed new at the time of the 1996 Diplomatic Conference.³⁷ These new forms included in particular temporary acts of copying that are inherent in technical processes, such as streaming, caching, and browsing:

The exclusive right accorded to authors of literary and artistic works in Article 9(1) of the Berne Convention of authorizing the reproduction of their works shall include direct and indirect reproduction of their works, whether permanent or temporary, in any manner or form.³⁸

Articles 7(1) and 14(1) of the Basic Proposal for the later WPPT set forth corresponding provisions for performers and phonogram producers. The notes accompanying Article 7(1) of the WCT Basic Proposal pointed out that:

[t]he scope of the right of reproduction is already broad. The expression “in any manner or form” could not be more expansive in scope. It clearly includes the storage of a work in any electronic medium; it likewise includes such acts as uploading and downloading a work to or from the memory of a computer. Digitization, i.e. the transfer of a work embodied in an analog medium to a digital one constitutes always an act of reproduction.³⁹

The notes also reflected the intention to clarify the “widely held”⁴⁰ understanding that both permanent and temporary reproduction constituted reproduction within the meaning of Article 9(1) BC.⁴¹ The confirmation that temporary copying falls within the scope of the right of reproduction was seen as the “only way”⁴² to harmonize effectively the interpretation of the scope of the right.⁴³ More specifically, the notes accompanying Article 7(1) of the WCT Basic Proposal pointed out that, on the one hand, the result of reproduction may be “a tangible, permanent copy like a book, a recording or a CD-ROM.”⁴⁴ On the other hand, it may as well be “a copy of the work on the hard disk of a PC, or in the working

³⁷ Reinbothe/von Lewinski 2015, para. 7.1.38; Ricketson/Ginsburg 2006, para. 11.70; Sheinblatt 1998, 541; Samuelson 1997, 382-384.

³⁸ WIPO 1999, Vol. 1, 8.

³⁹ WIPO 1999, Vol. 1, Document CRNR/DC/4, 188, para. 7.01.

⁴⁰ WIPO 1999, Vol. 1, 188, para. 7.05. As to the preparatory work in expert committees, see Reinbothe/von Lewinski 2015, para. 7.1.31-7.1.36.

⁴¹ Cf. Ricketson/Ginsburg 2006, para. 11.72, who point out that “implicit in the call for effective harmonization may be a recognition that the scope of the application of the reproduction right to digital media was not completely ‘obvious’.” As to the critique, see Litman 1994, 39-42; Sheinblatt 1998, 541.

⁴² WIPO 1999, Vol. 1, 192, para. 7.16.

⁴³ Cf. Samuelson 1997, 384.

⁴⁴ WIPO 1999, Vol. 1, 188, para. 7.05.

memory of a computer.”⁴⁵ A work stored for “a very short time may be reproduced or communicated further, or it may be made perceptible by an appropriate device.”⁴⁶

As a counterbalance to the confirmation and recognition of this broad right of reproduction, Article 7(2) of the WCT Basic Proposal allowed for the introduction of limitations within the confines of the international three-step test.⁴⁷ The notes explained in this respect that

it would be a matter for the legislation of Contracting Parties to limit the right of reproduction in the case of temporary reproduction of a work, in whole or in part, in certain specific cases, namely where the purpose of the temporary reproduction is solely to make the work perceptible or where the reproduction is of a transient or incidental nature. Moreover, the temporary reproduction must always take place in the course of use of the work that is authorized by the author or permitted by law.⁴⁸

The negotiations at the 1996 WIPO Diplomatic Conference, however, showed that the position described in the notes accompanying Article 7(1) of the WCT Basic Proposal was less widely shared than expected.⁴⁹ As a guideline for the deliberations in Main Committee I – the Committee dealing with the substantive provisions of the proposed WIPO “Internet” treaties – the President, Esther Mshai Tolle, had highlighted in her opening speech the urgent need to adjust copyright protection which had evolved in response to earlier technologies, “to the new means of exploitation that resulted from digital technology and global information networks.”⁵⁰ Member state delegations, however, did not unanimously share the opinion expressed in the WCT Basic Proposal that the adaptation of copyright law to the new digital environment necessitated the recognition of an all-embracing, comprehensive right of reproduction.⁵¹ Singapore stated instead that the inclusion of temporary reproduction in the reproduction right “had far reaching consequences, in that fair use rights in the areas of researchers, libraries and private use

⁴⁵ WIPO 1999, Vol. 1, 188, para. 7.05. Cf. Reinbothe/von Lewinski 2015, para. 7.1.38.

⁴⁶ WIPO 1999, Vol. 1, 188, para. 7.05.

⁴⁷ WIPO 1999, Vol. 1., id., 8.

⁴⁸ WIPO 1999, Vol. 1, 188-190, para. 7.07. As to the policy rationale underlying the last element of this provision, requiring the authorization of copyright holders, see Samuelson 1997, 385: “However, it was sufficiently narrowly drawn that it would not, for example, have relieved telephone companies or online service providers from potential liability for temporary copies of infringing material made in company equipment as the material passed through their systems en route from sender to recipient. Such copies would, of course, meet the transient or incidental standard of draft article 7(2), but they would not have ‘take[n] place in the course of use of the work that [wa]s authorized by the author or permitted by law.’” As to concerns of the telecommunication industry and internet services providers, see Goldstein/Hugenholtz 2019, 367; Ricketson/Ginsburg 2006, para. 11.73; von Lewinski 2008, para. 17.53; Sheinblatt 1998, 542; von Lewinski/Gaster 1997, 624-625; Vinje 1996, 588.

⁴⁹ Reinbothe/von Lewinski 2015, para. 7.1.29; Samuelson 1997, 388.

⁵⁰ WIPO 1999, Vol. 2, 597, para. 311. Cf. Ricketson/Ginsburg 2006, para. 11.68.

⁵¹ Reinbothe/von Lewinski 2015, para. 7.1.42-7.1.44.

were in danger of being curtailed.”⁵² Departing from the Basic Proposal, Singapore expressed the view that the digital environment did not require such a broad extension of the right of reproduction. On the contrary, the delegation felt that it should be made clear that:

temporary reproduction of works should be permissible when the reproduction merely made perceptible works which would otherwise be imperceptible, when it was of a transient or incidental nature, or when it facilitated transmission of a work and had no economic value independent from facilitating transmission.⁵³

In the work of Main Committee I, this position received support from Scandinavian countries. Interestingly, the discussion also became more fundamental in the sense of addressing the concept of “reproduction” as such. While Singapore had expressed concerns about the loss of “fair use rights,”⁵⁴ Denmark explained in Main Committee I that temporary reproduction made for the sole purpose of making a work perceptible, or reproduction of a purely transient or incidental character, as part of a technical process, “did not constitute reproduction within the meaning of Article 9(1) of the Berne Convention.”⁵⁵ Sweden confirmed that these temporary acts of reproduction “were not really reproductions.”⁵⁶ In the same vein, Norway stated that, instead of merely allowing for the adoption of copyright limitations to keep acts of temporary copying free, it should be made clear in the text of the future treaty that temporary reproduction made for the sole purpose of making a work perceptible, or of a purely transient or incidental character as a part of a technical process, “did not as such constitute a reproduction within the meaning of Article 9(1) of the Berne Convention.”⁵⁷ To better illustrate its position, Norway tabled a concrete proposal for amending Article 7(1) of the WCT Basic Proposal which consisted of adding the following sentence:

Temporary reproduction made for the sole purpose of making a work perceptible, or which are of a purely transient or incidental character as part of a technical process, does not as such constitute a reproduction within the meaning of Article 9(1) of the Berne Convention.⁵⁸

The negotiations in Main Committee I, thus, did not confirm the broad, unlimited scope of the right of reproduction laid down in Article 9(1) BC. As explained, the Basic Proposal for the later WCT sought to establish the comprehensive, general scope of the right of reproduction and create breathing space for temporary acts of copying only in the form of narrowly-defined exceptions satisfying all requirements of the three-

⁵² WIPO 1999, Vol. 2, 612, para. 404.

⁵³ WIPO 1999, Vol. 2, 612, para. 404.

⁵⁴ WIPO 1999, Vol. 2, 612, para. 404.

⁵⁵ WIPO 1999, Vol. 2, 669, para. 256.

⁵⁶ WIPO 1999, Vol. 2, 670, para. 263.

⁵⁷ WIPO 1999, Vol. 2, 672, para. 274.

⁵⁸ WIPO 1999, Vol. 1, 407, Document CRNR/DC/22. Cf. Samuelson 1997, 389.

step test.⁵⁹ In the discussion in Main Committee I, however, this proposal gave rise to the question whether the right of reproduction – and the underlying concept of “reproduction” – could be understood to cover temporary copying at all.⁶⁰ Instead of confirming the broad scope of the right, several delegations cast doubt upon the comprehensive nature of Article 9(1) BC.

The position taken by the Scandinavian countries did not remain an outlier. Switzerland declared that it shared the concerns expressed by the delegations of Denmark, Sweden, and Norway.⁶¹ Australia proposed an amendment to Article 7 of the WCT Basic Proposal that pointed in the same direction as the proposal made by Norway: instead of providing limited room for the introduction of copyright exceptions, it was advisable to make a statement clarifying that temporary copying fell outside the scope of the right of reproduction altogether.⁶² The African Group synthesized this approach by proposing a new Article 7(2) for the later WCT that would replace the mere possibility for contracting parties to adopt copyright exceptions in the original Article 7(2) of the WCT Basis Proposal:

Temporary reproduction does not as such constitute a reproduction within the meaning of Article 9(1) of the Berne Convention and this Treaty where –

- (i) such temporary reproduction is made for the sole purpose of making a work perceptible, or
- (ii) such temporary reproduction is part of a technical process incidental to the transmission or utilization of the work concerned; or
- (iii) such reproduction is incidental to the use of the work as authorized by the right holder concerned or permitted by law.⁶³

In an explanatory note, the Group of Latin American and Caribbean Countries described the need for this remarkable change of course as follows:

Article 9(1) of the Berne Convention establishes the right of reproduction “...in any manner or form.” In view of the fact that new technology has broadened traditional “forms” and “manners,” it has become necessary to redefine the scope of the right of reproduction and exclude

⁵⁹ WIPO 1999, Vol. 1, 8. As to the impact of the three-step test, see Samuelson 1997, 388-389.

⁶⁰ Reinbothe/von Lewinski 2015, para. 7.1.29 and 7.1.46. For a more detailed discussion and critique of proposals to include temporary copying in the concept of reproduction, see Litman, 1994, 39-42; Spoor 1996, 67.

⁶¹ WIPO 1999, Vol. 2, 673, para. 281.

⁶² WIPO 1999, Vol. 1, 433-434, Document CRNR/DC/53.

⁶³ WIPO 1999, Vol. 1, 445, Document CRNR/DC/56.

from it those reproductions that are technically necessary for making the work perceptible or form part of a technical process and do not in themselves constitute the production of originals or copies of the work.

If the foregoing is not expressly stated, it could give rise to one-sided, excessively broad interpretations of the scope of Article 9(1) of the Berne Convention.⁶⁴

Therefore, the deliberations at the 1996 Diplomatic Conference culminated in statements and proposals that, instead of confirming the comprehensive scope of the right of reproduction at the international level, did not hesitate to articulate the need for a redefinition of the conceptual contours and reach of the exclusive right granted in Article 9(1) BC in the light of technological developments.⁶⁵

With initiatives seeking to carve out temporary copying from the scope of the right of reproduction altogether, a consensus on Article 7 of the WCT Basic Proposal was beyond reach. Against this background, Main Committee I decided to delete the proposed Article 7 of the WCT Basic Proposal altogether.⁶⁶ With regard to the right of reproduction, the final treaty text only contains the following Agreed Statement accompanying Article 1(4) WCT:

The reproduction right, as set out in Article 9 of the Berne Convention, and the exceptions permitted thereunder, fully apply in the digital environment, in particular to the use of works in digital form. It is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of Article 9 of the Berne Convention.

The impact and interpretative authority⁶⁷ of this Agreed Statement is limited because it has not been adopted by consensus.⁶⁸ The Statement was established with 51 votes in favour, 5 against, and 30 abstentions.⁶⁹ Explaining the reasons for its vote against the Agreed Statement, Brazil pointed out that the Diplomatic Conference had not managed to reach consensus on the definition of the term “storage.”⁷⁰ It was the understanding of Brazil that neither the access to make a work perceptible by browsing nor the transmission of a work through a computer network

⁶⁴ WIPO 1999, Vol. 1, 492-493, Document CRNR/DC/73.

⁶⁵ Reinbothe/von Lewinski 2015, para. 7.1.46.

⁶⁶ WIPO 1999, Vol. 2, 764, para. 877-881. Cf. Goldstein/Hugenoltz 2019, 287; Ricketson/Ginsburg 2006, para. 11.68 and 11.74; Samuelson 1997, 389-390.

⁶⁷ Cf. Reinbothe/von Lewinski 2015, para. 7.1.29, who refer to “interpretative value” in the absence of the “status of an Article of the WCT.”

⁶⁸ For a more detailed description of the circumstances leading to the adoption of the Agreed Statement at the Conference, see Samuelson 1997, 390-391.

⁶⁹ WIPO 1999, Vol. 1, 628, para. 497. Cf. Reinbothe/von Lewinski 2015, para. 7.1.50; Samuelson 1997, 390-391.

⁷⁰ For a more detailed discussion of use of the word “storage” in the Agreed Statement, see Ricketson/Ginsburg 2006, para. 11.75.

in the occurrence of a temporary or non-temporary storage resulting from a technical procedure infringed the exclusive right of reproduction within the meaning of the Berne Convention.⁷¹ Korea explained that it had opposed the Agreed Statement because reproductions that were not relevant in economic terms should not be considered as reproductions all the time. The acts of browsing or providing telecommunication facilities had an economic value in a number of cases. It was, however, difficult to distinguish acts which had an economic significance from those which had not. Against this background, Korea believed that “acts of browsing should not be covered by the exclusive right of reproduction without exceptions.”⁷²

B. Application of the Conference Experiences to TDM

Quite clearly, the discussion about temporary copying that emerged with regard to browsing, caching, and streaming at the 1996 Diplomatic Conference is not directly applicable to the current TDM discussion. TDM research does not always remain limited to temporary copying. TDM may require the establishment of a stable “corpus” of source material for the computational analysis – a corpus that is not of a mere temporary or transient nature.⁷³ If the TDM corpus includes (parts of) works that enjoy copyright protection, it cannot be said that the negotiations at the 1996 Diplomatic Conference offer clear guidance on how to deal with the question of potential infringement in the light of the international right of reproduction laid down in Article 9(1) BC. As explained, Article 9(1) BC covers reproduction “in any manner or form.” In line with Article 31(1) of the Vienna Convention on the Law of Treaties (“Vienna Convention” or “VCLT”), this text of the provision plays a central role:

A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.

With this formula, Article 31(1) of the Vienna Convention establishes the primacy of the text as the basis for its interpretation. The starting point of treaty interpretation is the elucidation of the meaning of the text. The parties are to be presumed to have the intention that appears from the ordinary meaning of the terms which they used.⁷⁴ Admittedly, these terms are not to be determined in the abstract. Article 31(1) VCLT does not demand a purely grammatical or linguistic analysis. The interpreter is obliged to consider the ordinary meaning of the term at issue systematically, in the context of the whole treaty, and in the light of its object and purpose. Together with this context, several further sources are to be considered in accordance with Article 31(3) VCLT. These additional

⁷¹ WIPO 1999, Vol. 1, 628, para. 499.

⁷² WIPO 1999, Vol. 1, 628, para. 501.

⁷³ Cf. Caspers/Guibault et al. 2017, 9-10.

⁷⁴ Cf. Rauschnig 1978, 252-253; Sinclair 1984, 115; Bernhardt 1967, 497.

sources include “any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions.”⁷⁵

The crucial point resulting from the debate at the 1996 Diplomatic Conference, however, is the absence of agreement.⁷⁶ While Article 7(1) of the WCT Basic Proposal sought to confirm the comprehensive scope of the right of reproduction with regard to the digital environment and digital modes of reproduction, the Conference did not yield a clear result. An agreement in the sense of Article 31(3) VCLT is missing.

Nonetheless, it is possible to lend weight to the fact that the scope of the right of reproduction in Article 9(1) BC was deemed less “expansive” at the Conference than the Basic Proposal for the later WCT assumed.⁷⁷ The Vienna Convention does not inhibit interpreters from consulting extrinsic material besides the mere terms of a treaty. Separated from the described general rules set out in Article 31(1) and (3) VCLT, the rules for going beyond the terms of the treaty are laid down in Article 32 VCLT:

Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31:

- (a) leaves the meaning ambiguous or obscure; or
- (b) leads to a result which is manifestly absurd or unreasonable.

Access to material besides the mere treaty text is thus allowed. The formulation “*including* the preparatory work of the treaty...” (emphasis added) leaves no doubt that relevant external sources are not limited to the *travaux préparatoires* of the relevant international provision itself. As a supplementary means of interpretation, the discussion at the 1996 Diplomatic Conference can play a role as well. As Ian Sinclair has pointed out:

it is clear that no would-be interpreter of a treaty, whatever his doctrinal point of departure, will deliberately ignore any material which can usefully serve as a guide towards establishing the meaning of the text with which he is confronted.⁷⁸

As encouraging as this statement may appear, it is important to point out that a cautious approach is necessary. The clear distinction between the general rules of interpretation, set out in Article 31 VCLT, and the rules concerning supplementary means, laid down in Article 32 VCLT, underlines that the supplementary sources should not be misused to

⁷⁵ Article 31(3)(a) VCLT.

⁷⁶ Cf. Samuelson 1997, 390-392.

⁷⁷ WIPO 1999, Vol. 1, 188, para. 7.01.

⁷⁸ Sinclair 1984, 116.

establish an alternative, autonomous method of interpretation. Article 32 is no loophole for undermining the primacy of the treaty text by switching to a subjective approach that aligns the treaty interpretation with intentions of the parties that have not made their way into the treaty text itself. Recourse to supplementary sources may only serve as a means to aid an interpretation governed by the principles set forth in Article 31.⁷⁹ More concretely, this implies that it is indispensable to identify a gap in the treaty text: an “ambiguous or obscure”⁸⁰ meaning that requires the consultation of supplementary sources to obtain a proper understanding of the international provision under examination.

The rules of the Vienna Convention, thus, give rise to the question whether the text of Article 9(1) BC contains an ambiguous or obscure element that requires recourse to supplementary means of interpretation, such as the records of the 1996 Diplomatic Conference reflecting the described controversy concerning the scope of the right of reproduction. The expression “in any manner or form” features prominently in Article 9(1) BC. These words, however, seem to offer hardly any starting point for establishing an ambiguity. Once it is clear what “reproduction” is, Article 9(1) BC seeks to give authors control over all manners and all forms of reproduction.

Therefore, the ambiguous and obscure element is not the expression “in any manner or form.” It is the very concept of “reproduction” that lacks precision.⁸¹ At the 1996 Diplomatic Conference, it was conceded in the notes accompanying the Basic Proposal for the later WPPT that “no definition of ‘reproduction’ has been proposed. This is because the meaning of the term is developed fully in Articles 7 and 14.”⁸² Articles 7 and 14 of the WPPT Basic Proposal, however, did not contain a definition of “reproduction.”⁸³ Instead, these provisions were fully aligned with the clarification of the right of reproduction that had been proposed in Article 7(1) of the WCT Basic Proposal.⁸⁴ Article 7(1) WPPT Basic Proposal read as follows:

Performers shall enjoy the exclusive right of authorizing the direct or indirect reproduction, whether permanent or temporary, of their

Alternative A: musical performances fixed in phonograms,

Alternative B: performances fixed in any medium, in any manner or form.⁸⁵

⁷⁹ Cf. Rauschnig 1978, 255.

⁸⁰ Article 32(a) VCLT.

⁸¹ Cf. Ricketson/Ginsburg 2006, para. 11.69.

⁸² WIPO 1999, Vol. 1, Document CRNR/DC/5, 246, para. 2.10.

⁸³ See Ricketson/Ginsburg 2006, para. 11.69, discussing the absence of a definition of the term “reproduction” in the Paris text of the Berne Convention and the need for further clarification.

⁸⁴ WIPO 1999, Vol. 1, 8.

⁸⁵ WIPO 1999, Vol. 1, 50.

Article 14 WPPT Basic Proposal comprised the same central elements: “direct or indirect,” “permanent or temporary” and “in any manner or form.”⁸⁶ As indicated, these building blocks could also be found in the corresponding copyright provision in Article 7(1) WCT Basic Proposal.⁸⁷ A comparison with Article 9(1) BC shows that this family of draft provisions in which the concept of reproduction had been “developed fully”⁸⁸ – to such an extent that a separate definition was deemed unnecessary – contains the additional element “permanent or temporary.”

Hence, the Basic Proposal for the later WCT and WPPT, indeed, sought to remove an ambiguity in the sense of Article 32(a) VCLT: the text of Article 9(1) BC had been adopted at the 1967 Stockholm Conference for the revision of the Berne Convention.⁸⁹ At the time, acts of temporary copying in the digital environment, such as browsing, caching, and streaming, did not exist. Accordingly, the 1967 Stockholm Conference did not address this phenomenon. Therefore, it was an open question whether Article 9(1) BC could be understood to cover not only permanent but also temporary copying. As a supplementary means of interpretation in the sense of Article 32(a) VCLT, the records of the 1996 Diplomatic Conference demonstrate that no agreement on this question could be established. The ambiguity which the text of Article 9(1) BC has in this respect remained unresolved.⁹⁰ To add a further example of Member State positions, it is of particular interest that China proposed an amendment of Article 7(1) WCT Basic Proposal that avoided any reference to temporary copying:

The exclusive right accorded to authors of literary and artistic works in Article 9(1) of the Berne Convention of authorizing the reproduction of their works in any manner or form shall include direct and indirect permanent reproduction of their works.⁹¹

In sum, the concept of “reproduction” underlying Article 9(1) BC is ambiguous and obscure in the sense of Article 32(a) VCLT. While the text of Article 9(1) BC gives evidence of the intention to include reproduction “in any manner or form” known at the time of the 1967 Stockholm Conference, the status of new categories of reproduction that emerged after the adoption of the current text of Article 9(1) BC, such as the category of temporary copying in electronic networks, remains unclear. As a supplementary source of interpretation, the deliberations at the 1996 Diplomatic Conference shed light on this ambiguity. The implementation practice of Berne Union Members also shows that countries avail themselves of the flexibility that arises from this unclear

⁸⁶ WIPO 1999, Vol. 1, 54.

⁸⁷ WIPO 1999, Vol. 1, 8.

⁸⁸ WIPO 1999, Vol. 1, 246, para. 2.10, Document CRNR/DC/5.

⁸⁹ WIPO 1971, Document S/1, 113. Cf. Senftleben 2004, 47.

⁹⁰ Ricketson/Ginsburg 2006, para. 11.71 and 11.75; Samuelson 1997, 392; Sheinblatt 1998, 550.

⁹¹ WIPO 1999, Vol. 1, 485, Document CRNR/DC/55.

status of temporary copying. Article 13a of the Copyright Act of the Netherlands (*Auteurswet*), for instance, contains the following “carve out” of temporary acts of reproduction:

The reproduction of a literary, scientific, or artistic work does not include the temporary reproduction that is transient or incidental and an integral and essential part of a technological process, the sole purpose of which is to enable:

(a) a transmission in a network between third parties by an intermediary, or

(b) a lawful use of a work to be made, and which has no independent economic significance.⁹²

With regard to TDM, these insights raise the question whether copying for the purposes of an automated, computational TDM analysis can also be qualified as a reproduction category that falls outside the scope of the general right of reproduction that was adopted and enshrined in Article 9(1) BC in 1967. Obviously, it is necessary to walk a fine line in this regard. The mere fact that modern technology for carrying out a certain form of reproduction was not known in 1967 can hardly be sufficient. Otherwise, Article 9(1) BC would be rendered incapable of keeping pace with technological developments and become outdated and meaningless.⁹³ At the 1967 Stockholm Conference, for instance, photocopying played an important role in the discussion about the right of reproduction.⁹⁴ Therefore, this form of copying clearly falls within the scope of the concept of “reproduction” underlying Article 9(1) BC. The fact that photocopying technology has evolved since 1967 and may differ quite substantially from the photocopying machines known at the time of the Stockholm Conference does not change the equation.

For TDM to fall outside the province of Article 9(1) BC, it is thus necessary to demonstrate that this is a new *category* of copying – a category that, like temporary copying, has not been considered and included in the reproduction concept in 1967. Arguably, this threshold for assuming an outright “carve out” does not pose major difficulties. The parallels between the fundamental discussion of the conceptual contours of reproduction at the 1996 Diplomatic Conference and the current TDM debate are striking. As the President of the 1996 Conference for the WIPO “Internet” Treaties recalled, the negotiations aimed at developing an appropriate regulatory response to challenges that had arisen from new technologies.⁹⁵ The same can be said about the questions raised by TDM technology: questions about an unprecedented and formerly unknown

⁹² Van Eechoud 2012, 511-512; Spoor 2012, 204.

⁹³ Cf. Spoor 2012, 205.

⁹⁴ WIPO 1971, Document S/1, 112, footnote 1, and Report on the Work of Main Committee I, 1145-1146.

⁹⁵ WIPO 1999, Vol. 2, 597, para. 311.

type of using copyrighted source material in the context of an automated analytical process.

Even more importantly, there is also a parallel to be drawn with regard to the crucial conceptual question relating to the scope of the right of reproduction laid down in Article 9(1) BC. At the 1996 Diplomatic Conference leading to the WIPO “Internet” Treaties, acts of temporary copying, forming part of browsing, caching, and streaming activities, triggered fundamental questions about the Berne Convention concept of reproduction and the corresponding scope of the international right of reproduction. As discussed, the proposal to bring temporary copying under the umbrella of Article 9(1) BC had no success. Many delegations rejected the proposal and, instead, insisted on a clarification that this new category of making copies fell outside the scope of the right of reproduction altogether.⁹⁶

In the TDM debate, similar points – underlining the fundamentally different nature of TDM copies and the lack of a relevant act of reproduction in the traditional sense of making copies for the purpose of consulting and enjoying a work – have been made around the globe. From a US perspective, Michael Carroll has pointed out that in the context of TDM:

copies are made only for computational research and the durable outputs of any text and data mining analysis would be factual data and would not contain enough of the original expression in the analysed articles to be copies that count.⁹⁷

Explaining the outright exemption of TDM activities in Article 30-4(ii) of the Japanese Copyright Act, Tatsuhiro Ueno has pointed out that:

if an exploitation of a work is aimed at neither enjoying it nor causing another person to enjoy it (e.g., text-and-data mining, reverse engineering), there is no need to guarantee the opportunity of an author or copyright holder to receive compensation and thus copyright does not need to cover such exploitation. In other words, exploitation of this kind does not prejudice the copyright holder’s interests protected by a copyright law.⁹⁸

Criticizing the restrictive regulation of TDM in the EU, Rosanna Ducato and Alain Strowel described the following alternative approach:

when acts of reproduction are carried out for the purpose of search and TDM, the work, although it might be

⁹⁶ WIPO 1999, Vol. 2, 764, para. 877-881. Cf. Goldstein/Hugenholz 2019, 287; Ricketson/Ginsburg 2006, para. 11.68, 11.71 and 11.74; Samuelson 1997, 392; Sheinblatt 1998, 550.

⁹⁷ Carroll 2019, 954.

⁹⁸ Ueno 2021, 150-151.

reproduced in part, is not used as a work: the work only serves as a tool or data for deriving other relevant information. The expressive features of the work are not used, and there is no public to enjoy the work, as the work is only an input in a process for searching a corpus and identifying occurrences and possible trends or patterns.⁹⁹

In fact, the distinction between “works as works” and “works as data” is not entirely new in the European copyright debate. In 2011, Mauricio Borghi and Stavroula Karapapa already developed the concept of “de-intellectualized use”¹⁰⁰ against the background of mass digitization projects, such as the Google Book Search. As Borghi and Karapapa point out, mass digitization turns protected content into mere data – with the result that “the expression of the idea embodied in the work is not primarily used to communicate the ‘speech’ of the author to the public but rather to form the basis of machine-workable algorithms.”¹⁰¹

Considering these comments and observations, it becomes apparent that TDM raises issues that concern the conceptual core of the right of reproduction: the question whether a relevant category of reproduction can be assumed in TDM cases *at all*. Hence, it is important to recall that the negotiators at the 1996 Diplomatic Conference leading to the WCT and the WPPT did not jump to the conclusion that, because of the reference to reproduction “in any manner or form” in Article 9(1) BC, the grant of the right of reproduction at the international level, by definition, must be understood to cover each and every form of reproduction, regardless of the individual circumstances surrounding the use. By contrast, many delegations preferred a nuanced approach and sought to leave room for “carve outs” that place new categories of copying, such as temporary copying, outside the scope of the international right of reproduction.¹⁰²

Additional support for this position can be derived from the preparatory work for the 1996 Diplomatic Conference. Seeking to clarify the scope of the international right of reproduction prior to the Conference, the 1992 WIPO Committee of Experts on a Possible Protocol to the Berne Convention proposed, as one option for tracing the conceptual contours of the right of reproduction in Article 9(1) BC, to determine whether a protected work “with the aid of a machine or other device can be so perceived [by seeing or hearing it] and, if so desired,

⁹⁹ Ducato/Strowel 2021, 334.

¹⁰⁰ Borghi/Karapapa 2011, 45.

¹⁰¹ Borghi/Karapapa 2011, 44-45. Their solution for rights clearance, however, is based on a comparison with the regulation of the use of personal data in the light of the principle of proportionality: “Indeed, the application of the proportionality principle would mean that copying for automated processing should be relevant and not excessive in relation to the purpose for which works are normally published; this includes the enhancement of accessibility through indexing and search. Yet, there is an implicit limit here: accessibility should not affect the author’s exploitative rights, namely it should not go beyond the modes of exploitation that the author is legally entitled to employ” (Borghi/Karapapa 2011, 50-52).

¹⁰² Reinbothe/von Lewinski 2015, para. 7.1.29.

further reproduced or communicated.”¹⁰³ This criterion¹⁰⁴ already played a role in the 1982 deliberations of the Second WIPO/UNESCO Committee of Governmental Experts on Copyright Problems Arising from the Use of Computers for Access to or the Creation of Works. With regard to input-related questions, this latter Committee had developed the following formula for identifying acts falling within the scope of the right of reproduction:

As for the act of input of protected subject matter for storage purposes, it was generally agreed that it included at least reproduction of works on a machine-readable material support and their fixation in the memory of a computer system. The Committee agreed that whatever this act may be it involves fixation of works in a form sufficiently stable to permit their communication to an individual, and therefore it should be considered as governed by the international conventions and national legislation on copyright and therefore was subjected to the author’s exclusive rights. Thus, prior authorization by the right owner is required for the said act. Some delegations precised that sufficient stability of a form in which a work is fixed should be considered from the functional side, in the sense that the work can be perceived, reproduced, or otherwise communicated to the public with the aid of a computer system.¹⁰⁵

Considering the current TDM debate and the question of relevant acts of reproduction, this statement is of particular interest. Its first sentence seems to support the conclusion that “at least reproduction of works on a machine-readable material support and their fixation in the memory of a computer system”¹⁰⁶ should be qualified as a form of copying that requires the prior authorization of copyright holders. Following this approach, reproductions leading to a stable TDM corpus in a computer memory would amount to copyright infringement in the absence of prior consent. The second sentence, however, adds an important nuance by articulating the overarching criterion of “fixation of works in a form sufficiently stable to permit their communication to an individual.”¹⁰⁷ Evidently, the Committee also attached importance to the underlying aim: “communication to an individual.”¹⁰⁸ This configuration of the test offers

¹⁰³ WIPO 1992, 68, para. 75. Cf. Reinbothe/von Lewinski 2015, para. 7.1.31.

¹⁰⁴ As to similar criteria applied in US copyright law, see the definition of “copies” in § 101 of the US Copyright Act which refers to “material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.” Cf. Goldstein/Hugenholtz 2019, 287. For the US discussion on the status of temporary copying at the time of the 1996 Diplomatic Conference, see Sheinblatt 1998, 540-541; Lemley 1997, 551; Nicholson 1995, 170.

¹⁰⁵ WIPO/UNESCO 1982, 243, para. 33.

¹⁰⁶ WIPO/UNESCO 1982, id., para. 33.

¹⁰⁷ WIPO/UNESCO 1982, id., para. 33. Cf. Reinbothe/von Lewinski 2015, para. 7.1.52.

¹⁰⁸ WIPO/UNESCO 1982, id., para. 33. Cf. von Lewinski 2008, para. 17.58.

room for the exclusion of TDM copies from the scope of the right of reproduction. As copies for TDM purposes merely concern a computational analysis¹⁰⁹ and do not constitute use of a work “as a work,”¹¹⁰ they are not intended to permit “communication to an individual” in the sense of the criteria developed by the WIPO/UNESCO Committee.¹¹¹ The final part of the statement confirms this understanding:

Some delegations precised that sufficient stability of a form in which a work is fixed should be considered from the functional side, in the sense that the work can be perceived, reproduced, or otherwise communicated to the public with the aid of a computer system.¹¹²

In the 1982 WIPO/UNESCO Committee, there was thus support for a “functional” approach asking whether “the work can be perceived, reproduced or otherwise communicated to the public.”¹¹³ As indicated above, this element reappeared ten years later in the work of the 1992 WIPO Committee of Experts on a Possible Protocol to the Berne Convention. According to this 1992 Expert Committee, relevant acts of reproduction can be identified by asking whether a protected work “can be so perceived and, if so desired, further reproduced or communicated.”¹¹⁴ As Jörg Reinbothe and Silke von Lewinski explain, this criterion has been developed against the background of temporary, transient copies. They argue that, as long as temporary copies can be perceived, reproduced, or otherwise communicated, they are “by definition as much acts of reproduction under copyright as permanent ones.”¹¹⁵ However, this position did not receive sufficient support during the 1996 Diplomatic Conference leading to the WCT. A more accurate description of the outcome of the Conference is offered by Pam Samuelson:

The most honest thing that can be said about the temporary copying of works in computer memory is that there is no international consensus on this subject. Still, it is

¹⁰⁹ Carroll 2019, 954.

¹¹⁰ Ducato/Strowel 2021, 334.

¹¹¹ WIPO/UNESCO 1982, id., para. 33.

¹¹² WIPO/UNESCO 1982, id., para. 33.

¹¹³ WIPO/UNESCO 1982, id., para. 33.

¹¹⁴ WIPO 1992, 68, para. 75. Cf. Reinbothe/von Lewinski 2015, para. 7.1.31.

¹¹⁵ Reinbothe/von Lewinski 2015, para. 7.1.53-7.1.56. For a similar line of argument invoking Article 20 BC, see von Lewinski 2008, para. 17.57. Article 20 BC offers room for special agreements, such as the WCT, “in so far as such agreements grant to authors more extensive rights than those granted by the [Berne] Convention, or contain other provisions not contrary to this Convention.” Quite clearly, however, it cannot be inferred from Article 20 BC that the 1996 Diplomatic Conference adopting the WCT led to the recognition of a right of reproduction covering temporary copying. In the absence of agreement on this point at the 1996 Diplomatic Conference itself, an international obligation to grant a right of reproduction with this scope cannot be inferred from Article 20 BC. As Ricketson/Ginsburg 2006, para. 11.69-11.71 and 11.75, explain, the status of temporary copying under Article 9(1) BC is controversial and unclear. It cannot be said that Article 9(1) BC covers temporary copying. Cf. Samuelson 1997, 392; Sheinblatt 1998, 550.

significant that the copyright treaty signed in Geneva does not include a provision on temporary copying given how intent the U.S. and E.U. delegations had been about getting such a treaty provision.¹¹⁶

As explained above, the delegates at the Diplomatic Conference were not convinced that temporary copying should be qualified as a relevant act of reproduction.¹¹⁷ This outcome of the Conference was reached even though, for instance in cases of browsing, temporary copies enable an individual user to perceive and enjoy the work.¹¹⁸

Against this background, there is even more reason to assume that the international right of reproduction laid down in Article 9(1) BC does not apply when, from the outset, copies are not made for the purpose of allowing an individual to perceive, reproduce or otherwise communicate the work.¹¹⁹ In the case of TDM copies, works are only included in a harmonized dataset to allow the analysis with the help of an automated, computational process. The requirement of a reproduction allowing an individual to consult and enjoy the work is not fulfilled.

More generally, it seems safe to assume in the light of the experiences with the 1996 Diplomatic Conference that the international copyright community has reserved for itself the freedom of taking individual decisions on each new category of copying that has not been considered previously.¹²⁰ As discussed above, the debate at the 1996 Diplomatic Conference – and the lack of consensus on a comprehensive, all-embracing right of reproduction – has the status of a supplementary means of interpretation in the sense of Article 32(a) VCLT for determining the scope of the reproduction concept underlying Article 9(1) BC. Instead of confirming the comprehensive scope of the provision and allowing the internationally recognized right of reproduction to automatically absorb new types of copying, the 1996 Diplomatic Conference demonstrated that the negotiators considered themselves free to decide otherwise and keep new categories, such as temporary acts of copying, outside the scope of the right of reproduction. From this perspective, Article 9(1) BC cannot be understood to cover TDM until such time as an international consensus is reached on this very question. Given the considerable conceptual differences between TDM copying for the purpose of an automated, computational analysis, and traditional forms of reproduction that have been considered at the 1967 Stockholm Conference, such as photocopying for the purposes of reading and enjoying a work, TDM copies can be

¹¹⁶ Samuelson 1997, 392.

¹¹⁷ Ricketson/Ginsburg 2006, para. 11.71 and 11.75; Samuelson 1997, 392; Sheinblatt 1998, 550

¹¹⁸ Cf. CJEU, 5 June 2014, case C-360/13, Public Relations Consultants Association (“Meltwater”), para. 44-46; CJEU, 4 October 2011, cases C-403/08 and C-429/08, Football Association Premier League, para. 171-176. For a more detailed discussion of work perception options in the context of temporary copying, see Hugenholtz 2000, 482-493.

¹¹⁹ Cf. the above-described criterion developed by WIPO 1992, 68, para. 75.

¹²⁰ Cf. Samuelson 1997, 390-392.

qualified as a distinct category that requires international agreement before it can be brought within the scope of the 1967 reproduction concept underlying Article 9(1) BC.

The present analysis, however, cannot be concluded without revisiting the Agreed Statement that has been established at the 1996 Diplomatic Conference to address reproductions in the digital environment. As doubtful as its authority may be because of the missing consensus at the Conference,¹²¹ the Agreed Statement concerning Article 1(4) WCT adds further nuances to the international concept of reproduction that must not be disregarded. As already explained, the Agreed Statement reads as follows:

The reproduction right, as set out in Article 9 of the Berne Convention, and the exceptions permitted thereunder, fully apply in the digital environment, in particular to the use of works in digital form. It is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of Article 9 of the Berne Convention.

For a proper assessment of the impact of this Statement, it is important to distinguish between the first and the second sentence. Above, it has already been pointed out that the Agreed Statement has not been adopted by consensus in the final plenary Conference session.¹²² However, the earlier discussion in Main Committee I – where the substantive provisions of the later WCT have been prepared – reveals that the second sentence constituted the controversial element. The first sentence was adopted unanimously in Main Committee I.¹²³

In the light of the foregoing analysis, however, the first sentence does not militate against the assumption that Article 9(1) BC fails to cover TDM: a new category of copying outside the frame of the 1967 Stockholm Conference that was still unknown at the 1996 Diplomatic Conference. The first sentence confirms that the international right of reproduction fully applies in the digital environment and covers the use of works in digital form. Quite clearly, however, this clarification aims at allowing the right of reproduction to keep pace with technological developments that affect reproduction categories that have been considered previously in the context of international policymaking. The Agreed Statement concerns “[t]he reproduction right, as set out in Article 9 of the Berne Convention” and, accordingly, focuses on the continuation of the reproduction concept underlying Article 9 BC. Copying for the purpose of private study and enjoyment, for instance, was a controversial issue at

¹²¹ WIPO 1999, Vol. 1, 628, para. 497. Cf. Reinbothe/von Lewinski 2015, para. 7.1.50; Samuelson 1997, 390-391.

¹²² WIPO 1999, Vol. 1, 628, para. 497. Cf. Reinbothe/von Lewinski 2015, para. 7.1.50.

¹²³ WIPO 1999, Vol. 2, 784, para. 1047 to 788, para. 1075. Cf. Reinbothe/von Lewinski 2015, para. 7.1.49.

the 1967 Stockholm Conference.¹²⁴ In this respect, the first sentence of the Agreed Statement is of utmost importance. It ensures that Article 9(1) BC remains fully applicable. The switch from analogue private copying to digital private copying does not inhibit right holders from invoking the protection following from Article 9(1) BC. In this way, the first sentence of the Agreed Statement shields right holders from an erosion of the right in the digital environment. If the use of digital technology for a traditional form of copying, such as private copying, were sufficient to escape the verdict of infringement, the international right of reproduction would already have been deprived of most of its practical importance.

However, the first sentence – only forming part of an Agreed Statement; not of a substantive and formally adopted treaty provision – can hardly be understood as being sufficient to take more radical steps and include a completely new (and at the time of the 1996 Diplomatic Conference unknown) category of copying, such as copying for TDM purposes, in the concept of reproduction. Otherwise, the same could be said about temporary copying. This, however, would be highly inconsistent in view of the described critical remarks and the strong opposition of Member States to the inclusion of temporary copying at the 1996 Diplomatic Conference itself.¹²⁵ Rightly understood, the first sentence of the Agreed Statement concerning Article 1(4) WCT does not offer support for the extension of the reproduction concept to new categories, such as temporary copying and copying for TDM purposes. Commentary literature discussing the first sentence stresses that the confirmation of full applicability in the digital environment is “possibly meaningless”¹²⁶ and that the central point lies in the first sentence’s “emphasis on exceptions to the reproduction right”¹²⁷ – a point that does not support the assumption that the first sentence provides a basis for extending the traditional reproduction right in Article 9(1) BC to new categories, such as temporary and TDM copying.

With regard to attempts to interpret the words “fully apply” in the first sentence in a way that allows the extension of the right of reproduction to temporary copying, Sam Ricketson and Jane Ginsburg add that “the second sentence of the agreed statement muddies the waters.”¹²⁸ As they explain, the text of the second sentence

scrupulously avoids detailing the meaning of “storage”. If “storage” means retention for some more than transitory period of time, then it might add nothing to “any manner

¹²⁴ WIPO 1971, 113, Document S/1; 615, Document S/13; 690, Document S/70. For Member State observations, see WIPO 1971, id., 615 (France), 623 (Italy) and 630 (UK); Minutes of Main Committee I, 857-858. Cf. Senftleben 2004, 92-96.

¹²⁵ Nonetheless, Reinbothe/von Lewinski 2015, para. 7.1.53-7.1.58, want to take this highly inconsistent step. They adopt an interpretation that neglects the outcome of the 1996 Diplomatic Conference and seek to bring temporary copying within the scope of Article 9(1) BC.

¹²⁶ Ricketson/Ginsburg 2006, para. 11.74.

¹²⁷ Ricketson/Ginsburg 2006, para. 11.74.

¹²⁸ Ricketson/Ginsburg 2006, para. 11.75.

or form” [in Article 9(1) BC], because “form” could imply a manifestation more concrete than a transient communication. If, however, the term “storage” was meant also to cover fleeting passage through a digital network, then one may wonder at the selection of a term whose ordinary meaning implies more lingering than just passing through.¹²⁹

With its reference to “storage of a protected work in digital form in an electronic medium,” the second sentence of the Agreed Statement may also fuel discussions about the extension of the reproduction concept to TDM. In Main Committee I, Brazil expressed concerns relating to temporary copying. It was the understanding of Brazil that:

the access to make a work perceptible by browsing, and the transmission of a work through a computer network in the course of a temporary or non-permanent storage resulting from a technical procedure, did not infringe the exclusive rights of reproduction within the meaning of Article 9 of the Berne Convention.¹³⁰

The discussion, thus, focused on the issue of browsing, caching, and streaming. The temporary nature of these forms of copying occupied centre stage. As already indicated above, TDM will often require the creation of a stable TDM corpus. TDM practices go beyond mere temporary acts of reproduction. To bring TDM under the umbrella of Article 9(1) BC on the basis of the second sentence, however, it would be necessary to infer from the focus on temporary, non-permanent storage at the 1996 Diplomatic Conference that the extension of the international right of reproduction to more permanent storage, such as storage of protected fragments of a work in a digital TDM corpus, would be uncontroversial.

For several reasons, this line of argument is indefensible. At the 1996 Diplomatic Conference, the negotiators had no opportunity to discuss TDM because this category of copying was unknown at the time. The absence of stronger resistance against the inclusion of the word “storage” in the second sentence, thus, does not indicate that the delegations generally agreed on a broad understanding of the second sentence – an agreement solid enough to provide a basis for the extension of the international right of reproduction to TDM copies that are more stable than mere temporary copies. As consensus on temporary, non-permanent copying was beyond reach, it is much more convincing to assume that the delegations simply sought to express, as a minimum result, their agreement on more permanent forms of storage that are the result of traditional reproduction categories, such as private copying leading to storage in an electronic medium.

¹²⁹ Ricketson/Ginsburg 2006, para. 11.75.

¹³⁰ WIPO 1999, Vol. 2, 785, para. 1054.

Finally, it must be recalled that the second sentence of the Agreed Statement has very limited authority anyway. The second sentence constitutes the controversial element that led to a situation where the Agreed Statement could only be adopted with 51 votes in favour, 5 against, and 30 abstentions in the final plenary session.¹³¹ In total, 130 countries and 83 organizations participated in the 1996 Diplomatic Conference.¹³² Therefore, more than 40 countries chose not to attend the session adopting the Agreed Statement.¹³³ This fact further diminishes the impact of the Statement and, in particular, the impact of the second sentence. Even if the second sentence could be understood to cover storage in a TDM corpus, the international consensus is missing that would be required for the far-reaching policy decision to subordinate TDM research to the right of reproduction.¹³⁴ Hence, neither the first nor the second sentence of the Agreed Statement offer support for the assumption that, as a result of the 1996 Diplomatic Conference, the reproduction concept underlying Article 9(1) BC must be understood to encompass copies made for the purposes of TDM.

IV. CONCLUSION

In the light of the experiences at the 1996 Diplomatic Conference that led to the adoption of the WCT and the WPPT, it can hardly be said that international copyright law covers copying that takes place in the context of TDM research. Admittedly, Article 9(1) BC sets forth an exclusive right of reproduction covering reproduction “in any manner or form.” The Agreed Statement concerning Article 1(4) WCT may give rise to the question whether TDM activities leading to the “storage of a protected work in digital form in an electronic medium”¹³⁵ amount to relevant acts of reproduction in the sense of Article 9(1) BC.

Considering the deliberations at the 1996 Diplomatic Conference, however, the true story is this: despite the seemingly broad scope of Article 9(1) BC, the international copyright community has reserved for itself the freedom of taking individual decisions on each new category of copying that has not been considered previously. Instead of confirming the comprehensive scope of Article 9(1) BC and allowing the internationally recognized right of reproduction to automatically absorb any new category of copying, the 1996 Diplomatic Conference demonstrated that the negotiators considered themselves free to decide otherwise and keep new categories of reproduction, such as temporary acts of copying, outside the scope of the international right of reproduction.

¹³¹ WIPO 1999, Vol. 1, 628, para. 497. Cf. Reinbothe/von Lewinski 2015, para. 7.1.50; Samuelson 1997, 390-391.

¹³² WIPO 1999, Vol. 2, 819-882. Cf. WIPO 1997, 5, para. 19.

¹³³ For a more detailed description of the circumstances leading to the adoption of the Agreed Statement, see Samuelson 1997, 390-391.

¹³⁴ Samuelson 1997, 392; Ricketson/Ginsburg 2006, para. 11.71 and 11.75; Sheinblatt 1998, 550.

¹³⁵ Agreed Statement concerning Article 1(4) WCT.

In other words: Article 9(1) BC cannot be understood to cover TDM until such time as an international consensus is reached on this very question. As the topic of TDM has not yet been discussed at an international conference clarifying the scope of the right of reproduction, current TDM regulations that presume copyright relevance and seek to prevent inroads into the right of reproduction, such as the restrictive approach taken in the EU,¹³⁶ constitute Berne/TRIPS/WCT-plus regimes that have been adopted voluntarily in domestic legislation to offer more copyright protection than necessary under international law.

This voluntary policy decision, however, does not preclude more flexible approaches in other countries. In the absence of a binding international consensus on the question of TDM regulation, lawmakers outside the EU are free to weigh the pros and cons of flexibility in the area of TDM without any obligation to factor the international matrix of protection, including the requirements of the three-step test, into the equation. In this way, they can develop the solution that appears most promising in the light of their domestic social, cultural, and economic needs and safeguard the right to research.

Rightly understood, the regulation of TDM, thus, does not constitute an issue of copyright exceptions or limitations at the international level. Instead, international policymakers must first establish that the making of copies in the context of TDM has copyright relevance and falls within the right of reproduction in Article 9(1) BC at all. The discussion will have to commence at the level of tracing the conceptual contours of the term “reproduction” and determining the corresponding scope of the right granted in Article 9(1) BC. In this discussion, policymakers are free to opt for a general “carve out.” They can place TDM copies outside the scope of the right of reproduction from the outset. Adopting this approach, the international copyright community would follow the precedent that has been established at the 1996 Diplomatic Conference with regard to temporary copying.

¹³⁶ With regard to the critique of the approach taken in the EU, see the literature references *supra* note 4.

References

Bernhardt R (1967), “Interpretation and Implied (Tacit) Modification of Treaties – Comments on Arts. 27, 28, 29 and 38 of the ILC’s 1966 Draft Articles on the Law of Treaties”, *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 27 (1967) – Special Number, 497

Brennan DJ (2002), “The Three-Step Test Frenzy: Why the TRIPS Panel Decision might be considered Per Incuriam”, *Intellectual Property Quarterly* 2002, 213

Borghini M, Karapapa S (2011), “Non-display Uses of Copyright Works: Google Books and Beyond”, *Queen Mary Journal of Intellectual Property* 1 (2011), 21

Carroll MW (2019), “Copyright and the Progress of Science: Why Text and Data Mining Is Lawful”, *U.C. Davis Law Review* 53 (2019), 893

Caspers M, Guibault L et al (2017), *Future TDM – Baseline Report of Policies and Barriers of TDM in Europe*, Vienna: Synyo 2017

Ducato R, Strowel A (2021), “Ensuring Text and Data Mining: Remaining Issues with the EU Copyright Exceptions and Possible Ways Out”, *European Intellectual Property Review* 43 (2021), 322

Ficsor MJ (2002), “How Much of What? The Three-Step Test and Its Application in Two Recent WTO Dispute Settlement Cases”, *Revue Internationale du Droit d'Auteur* 192 (2002), 111

Geiger C (2006), “‘Constitutionalising’ Intellectual Property Law? The Influence of Fundamental Rights on Intellectual Property in the European Union”, *International Review of Intellectual Property and Competition Law* 37 (2006), 371

Geiger C (2021), “The Missing Goal-Scorers in the Artificial Intelligence Team: Of Big Data, the Right to Research and the Failed Text-and-Data Mining Limitations in the CSDM Directive”, in: Senftleben MRF, Poort J et al (eds.), *Intellectual Property and Sports – Essays in Honour of Bernt Hugenholtz*, The Hague/London/New York: Kluwer Law International 2021, 383

Geiger C, Frosio G, Bulayenko O (2018), “Text and Data Mining in the Proposed Copyright Reform: Making the EU Ready for an Age of Big Data? Legal Analysis and Policy Recommendations”, *International Review of Intellectual Property and Competition Law* 2018, 814

Geiger C, Gervais D, Senftleben MRF (2014), “The Three-Step Test Revisited: How to Use the Test’s Flexibility in National Copyright Law”, *American University International Law Review* 29 (2014), 581

Geiger C, Griffiths J, Hilty RM (2008), “Declaration on a Balanced Interpretation of the ‘Three-Step Test’ in Copyright Law”, *International Review of Intellectual Property and Competition Law* 39 (2008), 707

Geiger C, Izyumenko E (2020), “The Constitutionalization of Intellectual Property Law in the EU and the Funke Medien, Pelham and Spiegel Online Decisions of the CJEU: Progress, but Still Some Way to Go!”, *International Review of Intellectual Property and Competition Law* 51 (2020), 282

Geiger C, Jütte BJ (2022a), “The Right to Research as Guarantor for Sustainability, Innovation and Justice in EU Copyright Law”, in: Pihlajarinne TE, Mähönen J, Upreti P (eds.), *Rethinking the Role of Intellectual Property Rights in the Post Pandemic World: An Integrated Framework of Sustainability, Innovation and Global Justice*, Cheltenham: Edward Elgar 2022, forthcoming

Geiger C, Jütte BJ (2022b), “Conceptualizing the Right to Research and its Implications for Copyright Law, An International and European Perspective”, *American University International Law Review* 38 (2022), forthcoming

Geiger C, Schönherr F (2021), “The Information Society Directive”, in: Stamatoudi I, Torremans P (eds.), *EU Copyright Law – A Commentary*, 2nd ed., Cheltenham: Edward Elgar 2021

Ginsburg JC (2011), “Toward Supranational Copyright Law? The WTO Panel Decision and the “Three-Step Test” for Copyright Exceptions”, *Revue Internationale du Droit d'Auteur* 190 (2011), 13

Goldstein P, Hugenholtz PB (2019), *International Copyright – Principles, Law, and Practice*, 4th ed., Oxford: Oxford University Press 2019, 286

Griffiths J, Synodinou T, Xalabarder R (2022), *Comment of the European Copyright Society Addressing Selected Aspects of the Implementation of Articles 3 to 7 of Directive (EU) 2019/790 on Copyright in the Digital Single Market*, European Copyright Society 2022, available at: <https://europeancopyrightsociety.org/> (last visited: 17 October 2022)

Große Ruse-Khan H (2009), “Time for a Paradigm Shift? Exploring Maximum Standards in International Intellectual Property Protection”, *Journal on Trade, Law and Development* 1 (2009), 56

Handke C, Guibault L, Vallbé J-J (2015), “Is Europe Falling Behind in Data Mining? Copyright’s Impact on Data Mining in Academic Research”, in: Schmidt B, Dobрева M (eds.), *New Avenues for Electronic Publishing in the Age of Infinite Collections and Citizen Science: Scale, Openness and Trust - Proceedings of the 19th International Conference on Electronic Publishing*, IOS 2015, 120

Hilty RM, Richter H (2017), “Position Statement of the Max Planck Institute for Innovation and Competition on the Proposed Modernisation of European Copyright Rules – Part B: Exceptions and Limitations – Art. 3 Text and Data Mining”, *Max Planck Institute for Innovation and Competition Research Paper Series* 2017/2, Munich: Max Planck Institute for Innovation and Competition 2017

Hugenholtz PB (2000), “Caching and Copyright. The Right of Temporary Copying”, *European Intellectual Property Review* 11 (2000), 482

Kur A (2016), “From Minimum Standards to Maximum Rules”, in: Ullrich H, Hilty RM at al (eds.), *TRIPS plus 20 – From Trade Rules to Market Principles*, Berlin/Heidelberg: Springer 2016, 133

Kur A, Große Ruse-Khan H (2011), “Enough is Enough – The Notion of Binding Ceilings in International Intellectual Property Protection”, in:

Kur A, Levin M (eds.), *Intellectual Property Rights in a Fair World Trade System*, Cheltenham: Edward Elgar 2011, 359

Lemley MA (1997), “Dealing with Overlapping Copyrights on the Internet”, *University of Dayton Law Review* 22 (1997), 547

Litman J (1994), “The Exclusive Right to Read”, *Cardozo Arts and Entertainment Law Journal* 13 (1994), 29

Lucas A (2001), “Le “triple test” de l’article 13 de l’Accord ADPIC à la lumière du rapport du Groupe spécial de l’OMC “Etats-Unis – Article 110 (5) de la loi sur le droit d’auteur””, in: Ganea P, Heath C, Schrickler G (eds.), *Urheberrecht Gestern – Heute – Morgen, Festschrift für Adolf Dietz zum 65. Geburtstag*, C.H. Beck: Munich 2001, 423

Margoni T, Kretschmer M (2021), “A Deeper Look Into the EU Text and Data Mining Exceptions: Harmonisation, Data Ownership, and the Future of Technology”, *CREATE Working Paper 2021/7*, Glasgow: CREATE Centre 2021

Nicholson BJ (1995), “The Ghost in the Machine: MAI Systems Corp. v. Peak Computer, Inc. and the Problem of Copying in RAM”, *High Technology Law Journal* 10 (1995), 147

Oliver J (2002), “Copyright in the WTO: The Panel Decision on the Three-Step Test”, *Columbia Journal of Law and the Arts* 25 (2002), 119

Peukert A (2012), “Das Verhältnis zwischen Urheberrecht und Wissenschaft – Auf die Perspektive kommt es an!”, *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 4 (2012), 142

Rauschnig D (ed.) (1978), ILC Commentary, *The Vienna Convention on the Law of Treaties – Travaux Préparatoires*, compiled by Wetzel RG, Frankfurt am Main: Alfred Metzner 1978

Reinbothe J, von Lewinski S (2015), *The WIPO Treaties on Copyright – A Commentary on the WCT, the WPPT, and the BTAP*, 2nd ed., Oxford: Oxford University Press 2015

Ricketson S (2002), *The Three-Step Test, Deemed Quantities, Libraries and Closed Exceptions*, Centre for Copyright Studies, Strawberry Hills 2002, 31

Ricketson S, Ginsburg JC (2006), *International Copyright and Neighbouring Rights – The Berne Convention and Beyond*, 2nd ed., Vol. I, Oxford: Oxford University Press 2006

Sag M (2009), “Copyright and Copy-Reliant Technology”, *Northwestern University Law Review* 103 (2009), 1607

Samuelson P (1997), “The U.S. Digital Agenda at WIPO”, *Virginia Journal of International Law* 37 (1997), 369

Sheinblatt JS (1998), “The WIPO Copyright Treaty”, *Berkeley Technology Law Journal* 13 (1998), 535

Senftleben MRF (2004), *Copyright, Limitations and the Three-Step Test – An Analysis of the Three-Step Test in International and EC Copyright Law*, The Hague/London/New York: Kluwer Law International 2004

Senftleben MRF (2006), “Towards a Horizontal Standard for Limiting Intellectual Property Rights? – WTO Panel Reports Shed Light on the Three-Step Test in Copyright Law and Related Tests in Patent and Trademark Law”, *International Review of Intellectual Property and Competition Law* 37 (2006), 407

Senftleben MRF (2011), “Overprotection and Protection Overlaps in Intellectual Property Law – the Need for Horizontal Fair Use Defences”, in: Annette Kur and Vytautas Mizaras (eds.), *The Structure of Intellectual Property Law: Can One Size Fit All?*, Cheltenham: Edward Elgar 2011, 136

Senftleben MRF (2020), *The Copyright/Trademark Interface – How the Expansion of Trademark Protection Is Stifling Cultural Creativity*, The Hague/London/New York: Kluwer Law International 2020

Senftleben MRF (2022), *Study on EU Copyright and Related Rights and Access to and Reuse of Data*, European Commission, Directorate-General for Research and Innovation (DG RTD), Brussels: Publications Office of the European Union 2022, available at: <https://data.europa.eu/doi/10.2777/78973> (last visited: 17 October 2022)

Senftleben MRF, Margoni T et al (2022), “Ensuring the Visibility and Accessibility of European Creative Content on the World Market: The Need for Copyright Data Improvement in the Light of New Technologies and the Opportunity Arising from Article 17 of the CDSM Directive”, *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 13 (2022), 67

Sinclair I (1984), *The Vienna Convention on the Law of Treaties*, Manchester: Manchester University Press 1984

Spoor JH (1996), “The Copyright Approach to Copying on the Internet: (Over)stretching the Reproduction Right”, in: Hugenholtz PB (ed.), *The Future of Copyright in a Digital Environment*, The Hague/London/Boston: Kluwer Law International 1996, 67

Spoor JH (2012), “*Verveelvoudigen: Reproduction and Adaptation Under the 1912 Copyright Act*”, in: Hugenholtz PB, Quaedvlieg AA, Visser DJG

(eds.), *A Century of Dutch Copyright Law – Auteurswet 1912-2012*, Amstelveen: deLex 2012, 197

Ueno T (2021), “The Flexible Copyright Exception for ‘Non-Enjoyment’ Purposes Recent Amendment in Japan and Its Implication”, *Gewerblicher Rechtsschutz und Urheberrecht International* 70 (2021), 145

Van Daalen O (2022), *Making and Breaking with Science and Conscience*, Amsterdam: van Daalen 2022

Van Eechoud M (2012), “Copyright – Auteurswet Unofficial Translation”, in: Hugenholtz PB, Quaadvlieg AA, Visser DJG (eds.), *A Century of Dutch Copyright Law – Auteurswet 1912-2012*, Amstelveen: deLex 2012, 505

Vinje T (1996), “All’s not Quiet on the Berne Front”, *European Intellectual Property Review* 1996, 585

Von Lewinski S (2008), *International Copyright Law and Policy*, Oxford: Oxford University Press 2008

Von Lewinski S, Gaster JI (1997), “Die Diplomatische Konferenz der WIPO 1996 zum Urheberrecht und zu verwandten Schutzrechten”, *Zeitschrift für Urheber- und Medienrecht* 1997, 607

WIPO (1971), *Records of the Intellectual Property Conference of Stockholm June 11 to July 14, 1967*, Geneva: WIPO 1971

WIPO (1978), *Guide to the Berne Convention for the Protection of Literary and Artistic Works (Paris Act, 1971)*, WIPO Publication No. 615(E), Geneva: WIPO 1978

WIPO (1992), WIPO Committee of Experts on a Possible Protocol to the Berne Convention for the Protection of Literary and Artistic Works, “Second Session (Geneva, February 10 to 17, 1992)”, *Copyright* 28 (1992), 66

WIPO (1997), Governing Bodies of WIPO and the Unions Administered by WIPO, “Thirty-First Series of Meetings, Geneva, September 22 to October 1, 1997 – Overview of Activities and Developments in the Year 1996 and the First Half of the Year 1997 – Memorandum by the Director General”, Document AB/XXXI/6, dated 31 July 1997, Geneva: WIPO 1997

WIPO (1999), *Records of the Diplomatic Conference on Certain Copyright and Neighboring Rights Questions – Geneva 1996*, WIPO Publication No. 348(E), Geneva: WIPO 1999

WIPO, UNESCO (1982), Second WIPO/UNESCO Committee of Governmental Experts on Copyright Problems Arising from the Use of

Computers for Access to or the Creation of Works, “Report (Paris, June 7 to 11, 1982)”, *Copyright* 18 (1982), 239