



# Towards a European Research Freedom Act: A Reform Agenda for Research Exceptions in the EU Copyright *Acquis*

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**Abstract** This article explores the impact of EU copyright, related rights and *sui generis* database protection on the use of protected knowledge resources in scientific research (Sect. 1). We take a fundamental rights approach, focusing on the need to strike a fair balance between, on the one hand, copyright as an exponent of the right to property and, on the other hand, freedom of expression, freedom of information, and the freedom of the arts and sciences (Sect. 2). Surveying the current copyright/research interface reveals that the existing legal framework lacks adequate mechanisms for reconciling the divergent interests of copyright holders and researchers. Structural deficiencies are identified, such as fragmented and overly restrictive research exceptions, opaque lawful access provisions, outdated non-commercial use requirements, legal uncertainty arising from the three-step test in the EU copyright

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*acquis*, obstacles created by the protection of paywalls and other technological measures, and the risk of contracts overriding statutory research freedoms (Sect. 3). Empirical data confirm that access barriers, use restrictions, and the lack of harmonised rules for transnational research collaborations impede the work of researchers in the EU (Sect. 3). Against this backdrop, we propose legislative reform, in particular the introduction of a mandatory, open-ended research exemption to ensure reliable breathing space for scientific research across EU Member States, the clarification of lawful access criteria, a more flexible approach to public-private partnerships, and additional rules to support modern research methods, such as text and data mining. This reform agenda could form part of a broader European Research Freedom Act, aimed at establishing a balanced legal framework: an updated EU *acquis* that safeguards existing rights, such as copyright and *sui generis* database rights, while fostering innovation, collaboration, and scientific progress (Sect. 4). As a further step in the right direction, EU legislation should harmonise secondary publication rights, enabling researchers to provide open access to research results. However, this aspect of the reform agenda is beyond the scope of the present inquiry and will therefore be the focus of another study.

**Keywords** Open science · Right to research · Digital and data legislation · Public-private partnerships · Text and data mining · Lawful access · Technological protection measures

## 1 Introduction

In today's data-driven<sup>1</sup>, increasingly algorithmic information society, the freedom to access, use, and reuse diverse knowledge resources – ranging from repositories of literary and artistic works to more general data collections – is indispensable for research<sup>2</sup>. As digitisation pervades ever more societal subsystems, researchers can only be expected to analyse developments, and provide new insights and solutions, if they have access to a sufficiently broad and representative spectrum of knowledge resources.<sup>3</sup> However, knowledge resources required for research are often subject to specific regulations that limit access and use. The protection regimes for patents<sup>4</sup> and personal data<sup>5</sup> are a case in point. In addition, copyright, related rights, and *sui generis* database rights can pose obstacles.

<sup>1</sup> Cf. Study for European Commission (2024), pp. 83–114 and Annex 1; Angelopoulos (2022), pp. 33–52; Lazarova (2024); Caso (2023), pp. 35–45; Caso and Dore (2022), pp. 336–337; Visser (2015), pp. 69–72.

<sup>2</sup> Sganga et al. (2025).

<sup>3</sup> Fiil-Flynn et al. (2022), p. 951; Geiger et al. (2019), pp. 5 and 31; Margoni and Kretschmer (2022), p. 685; Beckett (2019) pp. 1 and 26. For an existing policy initiative emphasising the importance of research freedoms, see COMMUNIA (2024), Action 2.

<sup>4</sup> Cf. Senftleben (2011) pp. 157–170; Strandburg (2008), pp. 508–531; Dreyfuss (2004); Strandburg (2004); Mohr (2004); Mueller (2004); O'Rourke (2000), p. 388.

<sup>5</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (GDPR), OJ 2016 L 119, 1, Arts. 9(2)(j) and 89. Discussions

Copyright protection does not extend to mere facts, ideas, styles, concepts, etc.<sup>6</sup> However, it does protect the individual expression that the author has chosen in order to give those facts, ideas, styles, concepts, etc. a specific form. Once information needed for a research project is embedded in a protected work of authorship – a literary, musical, or artistic work that reflects free, creative choices<sup>7</sup> – access and reuse may be subject to the copyright holder’s exclusive rights over reproduction, communication to the public, and making available of the work, as set out in Arts. 2 and 3 of the 2001 Information Society Directive (“ISD”).<sup>8</sup>

Like European copyright law, the 1996 Database Directive (“DBD”)<sup>9</sup> confers *sui generis* database protection against unauthorised acts of data extraction and re-utilisation,<sup>10</sup> provided the database maker can demonstrate substantial investment in obtaining, verifying, or presenting its contents.<sup>11</sup> The exclusive rights of extraction (acts of transferring database contents)<sup>12</sup> and re-utilisation (acts of making database contents available)<sup>13</sup> enable the database maker to control the use of data resources contained in a protected database.<sup>14</sup>

Hence, copyright and *sui generis* database protection can raise specific questions about access, use, and reuse when scientific research involves acts, facts, or information contained in a database or a literary and artistic work that enjoys protection under EU database or copyright law.<sup>15</sup> Machine-generated data from “smart” devices that form part of the so-called “Internet of Things” (“IoT”) may fall outside the scope of copyright and *sui generis* database protection. In their raw, machine-generated form, these data lack the free, creative choices necessary for

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Footnote 5 continued

on legal compliance in the research sector involve both legal scholars and scientists from other disciplines. See, further, Slokenberga et al. (2021); Vlahou et al. (2021); Ausloos and Veale (2020); Peloquin et al (2020); Staunton, Slokenberga and Mascalzoni (2019); Mourby et al. (2019); Donnelly and McDonagh (2019); Chassang (2017); Pormeister (2017); Erdos (2013); Erdos (2011).

<sup>6</sup> Article 2(8) Berne Convention for the Protection of Artistic and Literary Works; Art. 9(2) Agreement on Trade-Related Aspects of Intellectual Property Rights; Art. 2 WIPO Copyright Treaty. Cf. Dutch Supreme Court (*Hoge Raad*), 29 March 2013, case LJN BY8661, *Broeren/Duijsens, Tijdschrift voor auteurs-, media- en informatierecht* 2013, 108.

<sup>7</sup> CJEU, 1 March 2012, case C-604/10, *Football Dataco/Yahoo!*, para. 38; CJEU, 1 December 2011, case C-145/10, *Painer*, para. 89; CJEU, 16 July 2009, case C-5/08, *Infopaq*, para. 45.

<sup>8</sup> Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001, on the harmonisation of certain aspects of copyright and related rights in the information society, OJ 2001 L 167, 10.

<sup>9</sup> Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996, on the legal protection of databases, OJ 1996 L 77, 20.

<sup>10</sup> For a definition of these modes of use, see Art. 7(2) DBD.

<sup>11</sup> The threshold for assuming a substantial investment need not be particularly high. For instance, see CJEU, 9 October 2008, case C-304/07, *Directmedia/Universität Freiburg*, para. 24, where an investment of EUR 34,900 had been deemed sufficient by the national judge.

<sup>12</sup> Article 7(2)(a) DBD.

<sup>13</sup> Article 7(2)(b) DBD.

<sup>14</sup> Article 7(1) and (5) DBD.

<sup>15</sup> Cf. Ducato and Strowel (2021) p. 323; Hugenholtz (2019), pp. 168–169; Geiger et al. (2018), pp. 817–819; Kretschmer et al. (2024).

copyright protection.<sup>16</sup> Regarding potential *sui generis* database rights, Art. 43 of the Data Act (“DA”)<sup>17</sup> explicitly excludes protection for IoT data, in order to prevent the monopolisation of sole-source *data corpora*.<sup>18</sup> However, under certain conditions, machine-generated raw data may still be protected by proprietary or quasi-proprietary legal instruments, in particular trade secret law,<sup>19</sup> technical protection measures under Art. 11 DA, or contractual obligations governing access and use.<sup>20</sup> If a database producer makes substantial investments in obtaining, verifying, or presenting IoT data, *sui generis* database protection may also be available.<sup>21</sup>

## 2 Fundamental Rights Dimension

At the level of fundamental rights, the tension between the protection interests of holders of copyright and *sui generis* database rights, on the one hand, and the use interests of researchers, on the other, can be seen as a conflict between different legal positions recognised in the EU Charter of Fundamental Rights (“CFR”).<sup>22</sup> Article 17(2) CFR clarifies that “[i]ntellectual property shall be protected”.<sup>23</sup> The exclusive rights granted in European intellectual property legislation, including copyright and *sui generis* database rights, thus fall within the scope of the right to property: the right to “own, use, dispose of and bequeath his or her lawfully acquired possessions”.<sup>24</sup> As a counterbalance, researchers can invoke the “right to research” that can be derived from the guarantee of freedom of expression and freedom of information in Art. 11(1) CFR, and the freedom of the arts and sciences addressed in Art. 13 CFR.<sup>25</sup> Consulting existing knowledge resources to arrive at new insights, researchers exercise their right to “receive and impart information and ideas.”<sup>26</sup> Sharing research outcomes, they exercise their freedom to “hold

<sup>16</sup> CJEU, 1 March 2012, case C-604/10, *Football Dataco/Yahoo!*, para. 38; CJEU, 1 December 2011, case C-145/10, *Painer*, para. 89; CJEU, 16 July 2009, case C-5/08, *Infopaq*, para. 45.

<sup>17</sup> Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act), OJ 2023 L 2854.

<sup>18</sup> Derclaye and Husovec (2022b), p. 2; Graef and Husovec (2022), p. 4. Cf. Fisher et al. (2018), pp. 30–31; Margoni et al. (2023), pp. 202–211.

<sup>19</sup> Regarding trade secrets, see Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure, OJ 2016 L 157, 1. Cf. Aplin (2015); Specht-Riemenschneider (2021), pp. 21–22; Ducato and Strowel (2021), p. 336.

<sup>20</sup> Cf. Margoni and Strowel (2024).

<sup>21</sup> Cf. Derclaye and Husovec (2022b), p. 2.

<sup>22</sup> Charter of Fundamental Rights of the European Union, OJ 2000 C 364, 1.

<sup>23</sup> For a more detailed discussion of this global statement, see Jongsma (2019), pp. 163–168; Griffiths and McDonagh (2013); Geiger (2009).

<sup>24</sup> Article 17(1) CFR.

<sup>25</sup> Cf. Geiger and Jütte (2023a), pp. 24–62; Geiger and Jütte (2023b).

<sup>26</sup> Article 11(1) CFR.

opinions”<sup>27</sup> and their freedom of expression more generally. In addition, Art. 13 CFR stipulates that “scientific research shall be free of constraint” and underlines that “[a]cademic freedom shall be respected”.

In the light of Arts. 11 and 13 CFR, it seems safe to assume that EU legislation is under an obligation to create a favourable, enabling environment for scientific research, and to weigh this fundamental value against other objectives, such as the desire to protect copyright and *sui generis* database rights as exponents of the right to property.<sup>28</sup> In this vein, the Court of Justice of the European Union (“CJEU”) has held that the protection of copyright is not absolute.<sup>29</sup> In cases concerning freedom of expression and freedom of information, the Court has pointed out that a “fair balance” has to be struck between “the rights and interests of authors on the one hand, and the rights of users of protected subject-matter on the other”.<sup>30</sup> Referring to user “rights”, the Court has clarified that the legal position of users invoking freedom of expression and information is not a priori weaker than the protection status that a holder of copyright or database rights enjoys by virtue of EU law. In *Funke Medien* and *Spiegel Online*, the CJEU confirmed that copyright exceptions and limitations serving freedom of expression and information “do themselves confer rights on the users of works or of other subject matter”.<sup>31</sup>

Interestingly, the CJEU has also explained how a proper balance between copyright protection and other fundamental rights and freedoms could be achieved. In *Pelham* – a case concerning the reuse of music fragments in sound sampling<sup>32</sup> – the CJEU emphasised that the required balance had to be achieved within the system of exclusive rights and limitations established in EU copyright law:

[t]he mechanisms allowing those different rights and interests to be balanced are contained in Directive 2001/29 itself, in that it provides inter alia, first, in Articles 2 to 4 thereof, rightholders with exclusive rights and, second, in Article 5 thereof, for exceptions and limitations to those rights which may, or even must, be transposed by the Member States ...<sup>33</sup>

<sup>27</sup> Article 11(1) CFR.

<sup>28</sup> For a more detailed discussion of the right to research in the CFR, see Geiger and Jütte, *id.*

<sup>29</sup> The Court reached this conclusion for the first time in CJEU, 24 November 2011, case C-70/10 *Scarlet Extended SA v Société belge des auteurs, compositeurs et éditeurs SCRL (SABAM)* ECR 2011 I-11959. More recently, see CJEU 29 July 2019, case C-469/17, *Funke Medien NRW*, para. 72. On a more balanced interpretation of Art. 17(2) CFR, see Sganga (2021).

<sup>30</sup> CJEU, 1 December 2011, case C-145/10, *Eva Maria Painer/Standard VerlagsGmbH*, para. 132; CJEU, 3 September 2014, case C-201/13, *Deckmyn*, para. 26; CJEU, 29 July 2019, case C-469/17, *Funke Medien NRW*, paras. 67–76.

<sup>31</sup> 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. For a more detailed discussion of this point, see Aplin and Bently (2020), pp. 75–84; Geiger and Izyumenko (2020), pp. 292–298.

<sup>32</sup> CJEU, 29 July 2019, case C-476/17, *Pelham*. For a more detailed discussion of the case, see Senftleben (2020a).

<sup>33</sup> CJEU, *id.*, para. 60. Cf. CJEU, 29 July 2019, case C-469/17, *Funke Medien NRW*, para. 58, where the Court uses the same formula.

Therefore, an appropriate balance must be struck using the regulatory tools available within the existing EU copyright framework.<sup>34</sup> Regarding the use of protected material in the context of scientific research, this decision implies that researchers' freedom of expression, freedom of information, and freedom of science must be safeguarded *within* the copyright matrix of exclusive rights and limitations.<sup>35</sup> Otherwise, the harmonisation objective underlying European copyright legislation would be thwarted, and the internal market could be disrupted.<sup>36</sup> As the CJEU applies this approach more broadly in intellectual property law,<sup>37</sup> it is likely to also insist on internal balancing – within the confines of the DBD system of exclusive rights and limitations – in cases concerning *sui generis* database protection.

### 3 Assessment of Existing Research Provisions

Accordingly, the question arises as to whether the current EU *acquis* in the field of copyright, related rights, and *sui generis* database protection offers sufficient breathing space for research use – in the sense of provisions that can be invoked to strike a proper balance between the right to property of right holders (Art. 17 CFR) and the right to freedom of expression, freedom of information, and freedom of the arts and sciences of researchers (Arts. 11 and 13 CFR).

Before embarking on a closer inspection of the copyright framework from this perspective, it is important to note that there is no hierarchy between fundamental rights.<sup>38</sup> No fundamental right is weaker than another. They all have the same status. Therefore, right holders with exploitation interests and researchers with use interests meet on equal terms.<sup>39</sup> Right holders cannot expect to enjoy a legal position that, by definition, carries more weight.

This insight provides an important signpost for assessing the appropriateness of the current copyright architecture of rights and limitations: researchers should not be placed at a disadvantage by being required to defend access, use, and reuse activities based on narrow exceptions and limitations. If the matrix of exclusive rights and limitations in European copyright, related rights, and *sui generis* database law does not offer sufficient breathing space for research, changes must be introduced to make the system more flexible. Otherwise, protection through exclusive rights becomes excessive, hinders research use, and undermines the fundamental rights that researchers enjoy – and that legislators must safeguard – in accordance with the Charter.

<sup>34</sup> For a more detailed discussion, see Senftleben (2024), pp. 1479–1489.

<sup>35</sup> Cf. Geiger and Izyumenko (2014) regarding the necessity to offer room for freedom of expression and information. For a discussion of “internal” and “external” balancing in the field of intellectual property, see Senftleben (2020b), pp. 500–504; Kulk and Teunissen (2019), pp. 126–129; Dreier (2001).

<sup>36</sup> CJEU, 29 July 2019, case C-476/17, *Pelham*, para. 63.

<sup>37</sup> Senftleben (2024), pp. 1493–1494.

<sup>38</sup> Kulk and Teunissen (2019), pp. 125–126.

<sup>39</sup> Senftleben (2024), pp. 1478–1479.

Hence, the central question is whether the EU copyright and database *acquis* offers sufficient flexibility to support the use of protected knowledge resources for scientific research. In this regard, it is particularly important to test the elasticity of the horizontal exception for scientific research found in EU copyright, related rights, and database law (3.1). In addition, the more specific exception for scientific text and data mining (“TDM”), introduced by the 2019 Directive on Copyright in the Digital Single Market (“CDSMD”), plays a key role (3.2).<sup>40</sup>

### 3.1 Horizontal Research Exception

Article 5(3)(a) ISD, Arts. 6(2)(b) and 9(b) DBD, and Art. 10(1)(d) of the Rental, Lending, and Related Rights Directive (“RLRD”)<sup>41</sup> contain an exception that globally refers to use for “scientific research.” Article 5(3)(a) ISD, for instance, reads as follows:

Member States may provide for exceptions or limitations to the rights provided for in Articles 2 and 3 [the reproduction right and the right of communication to the public] in the following cases: (a) use for the sole purpose of illustration for teaching or scientific research, as long as the source, including the author’s name, is indicated, unless this turns out to be impossible and to the extent justified by the non-commercial purpose to be achieved; [...]

Evidently, the provision is not confined to specific forms of research or specific research tools, methodologies, collaborations, research settings, etc. It addresses scientific research in a broad, general manner. The same can be said for its counterparts in the DBD and RLRD. At first glance, these provisions thus seem to inject considerable flexibility into the EU copyright and database protection system.<sup>42</sup> However, a closer look reveals several conceptual problems.

#### 3.1.1 Problem Areas

First, Art. 5(3)(a) ISD, Arts. 6(2)(b) and 9(b) DBD, and Art. 10(1)(d) RLRD are “may” provisions. Their optional nature implies that Member States are not bound to implement the exemption for scientific research purposes in a standardised form. They may refrain from adopting the research privilege altogether, as several Member States have done – particularly regarding database protection – in the past.<sup>43</sup> They may also take a cautious approach and impose further conditions for

<sup>40</sup> Article 3(1) of Directive (EU) 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, OJ 2019 L 130, 92.

<sup>41</sup> Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property, OJ 2006 L 376, 28.

<sup>42</sup> For a potential broad interpretation of these provisions, see Szkalej (2025), pp. 309–310.

<sup>43</sup> Study for European Commission (2024), Annex I, pp. 189–190.

invoking the use privilege at national level: conditions that make the scope of the exception narrower than that of the prototypes at EU level.<sup>44</sup>

The regulatory framework for use in scientific research contexts is thus highly fragmented. The national implementation of Art. 5(3)(a) ISD – the most widely transposed research exception in the EU copyright *acquis* – reflects the considerable diversity of regulatory approaches.<sup>45</sup> In the absence of a fully harmonised umbrella clause at EU level, national research provisions differ regarding beneficiaries, works covered, the scope of permitted use, the exclusive rights covered (reproduction and/or communication to the public), conditions of applicability, remuneration requirements, and safeguards against contractual override.<sup>46</sup> Quite clearly, this diversity is not conducive to cross-border research activities, posing challenges to joint research activities in transnational consortia. Research use that is permissible in one Member State may constitute an infringement in other Member States that have followed a more restrictive implementation strategy.

Second, legal uncertainty with a corrosive effect on research activities can arise from conceptual inconsistencies. In the context of Art. 5(3)(a) ISD and Arts. 6(2)(b) and 9(b) DBD, it is unclear whether the illustration requirement pertains solely to teaching or is also intended to cover use for research purposes. On the one hand, Art. 5(3)(a) ISD may be understood to generally permit “use for the sole purpose of [...] scientific research”.<sup>47</sup> On the other hand, it can be argued that the provision only covers “use for the sole purpose of illustration for [...] scientific research”.<sup>48</sup> Divergent national implementation practices show that both interpretations have informed lawmaking in EU Member States.<sup>49</sup>

Third, the research exceptions in the EU *acquis* differ regarding the spectrum of exclusive rights. While Art. 5(3)(a) ISD covers both reproduction and communication to the public, Art. 9(b) DBD only covers acts of reproduction (“extraction” in the terminology used in the context of the *sui generis* database right).<sup>50</sup> The Software Directive (“SWD”)<sup>51</sup> does not even contain a scientific research provision comparable to Art. 5(3)(a) ISD, Art. 10(1)(d) RLRD and Arts. 6(2)(b) and 9(b) DBD. It is unclear whether the existing rules on studying, testing, and decompiling computer programs<sup>52</sup> are capable of providing comparable breathing

<sup>44</sup> Senftleben (2022b), p. 19.

<sup>45</sup> Study for European Commission (2024), Annex 1, pp. 90–94, 178 (Arts. 5 and 6 SWD), 178 (Art. 6 DBD), 180 (Art. 8 DBD), 181 (Art. 9 DBD). See also the mapping and assessment conducted within the H2020 project *reCreating Europe* by Sganga et al. (2023).

<sup>46</sup> *Id.*

<sup>47</sup> Geiger and Schönherr (2021), Sec. 11.99; Hugenholtz and Senftleben (2011), pp. 14–18.

<sup>48</sup> This position is taken, for instance, by Derclaye (2021), Sec. 9.65; Bechtold (2016), p. 464.

<sup>49</sup> Senftleben (2022b), pp. 17–18.

<sup>50</sup> Study for European Commission (2024), Annex 1, p. 181.

<sup>51</sup> Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (codified version), OJ 2009 L 111, 16.

<sup>52</sup> Articles 5(3) and 6 SWD.

space for research use.<sup>53</sup> The asymmetry between the general research provisions in different EU directives is likely to pose particular problems in the context of research projects.<sup>54</sup> The lack of an entitlement to make protected elements of a database available to the public can lead to a situation where researchers in a large consortium are inhibited from sharing data resources (extracted from a protected database) with colleagues. A circle of researchers belonging to a broader research consortium, such as a group of researchers consisting of several teams in different EU Member States, may be deemed to constitute a relevant public under copyright and *sui generis* database law.<sup>55</sup> Accordingly, the sharing of protected database contents within this circle of researchers could be considered an act of making available to the public. As the research exemption in Art. 9(b) DBD does not cover the re-utilisation – that is, the making available to the public<sup>56</sup> – of protected database contents, this use falls outside the scope of the use privilege and requires authorisation for each protected database element. The transaction costs and licensing budget required for rights clearance can easily frustrate the sharing of protected data resources within a research group. As a result, the harmonisation of different datasets, such as those stemming from teams in several Member States, becomes difficult, if not impossible. On the other hand, the absence of any limitation on the right of making available to the public prevents researchers from sharing research results with the broader academic community – or the public at large – if these results contain protected elements of a database. In this second scenario, the lack of entitlement to share database material can pose particular problems from the perspective of academic integrity.<sup>57</sup> If research results and underlying data resources cannot be made available because they contain protected database elements, it becomes impossible to check the replicability of the scientific analysis or verify research results.

Fourth, the requirement of use for a “non-commercial purpose” further complicates the legal landscape surrounding the exceptions laid down in Art. 5(3)(a) ISD and Arts. 6(2)(b) and 9(b) DBD. This has become a source of legal uncertainty,<sup>58</sup> and appears outdated, particularly in the light of the evolving nature of research practices, which increasingly involve collaborations with private partners and public-private partnerships – collaborations often encouraged or even required by European and national research funding schemes.<sup>59</sup> Recital 42 ISD

<sup>53</sup> Cf. CJEU, 2 May 2012, case C-406/10, *SAS Institute*, paras. 39–41, on the intention of EU legislation to offer room for productive reuse. However, see, also, the analysis of practical problems that arise by Widla (2025), pp. 8–10; Senftleben (2009), 222–228.

<sup>54</sup> Derclaye (2021), Sec. 9.65.

<sup>55</sup> Senftleben (2022b), pp. 31–32. Cf. Stamatoudi et al. (2021), Sec. 11.35. For example, see Sec. 15(3) of the German Copyright Act (*Urheberrechtsgesetz*); Art. L 122-5(1) of the French Intellectual Property Code (*Code de la propriété intellectuelle*); Art. 12(4) of the Dutch Copyright Act (*Auteurswet*). On the de minimis threshold introduced by the CJEU, see CJEU, 15 March 2012, case C-135/10, *SCF/Marco del Corso*, para. 85.

<sup>56</sup> Cf. the definition in Art. 7(2)(b) DBD.

<sup>57</sup> See ERAC Standing Working Group on Open Science and Innovation (2021); Haven et al. (2022).

<sup>58</sup> Angelopoulos (2022), pp. 14–15.

<sup>59</sup> Recital 11 CDSMD. Cf. Senftleben (2022b), p. 21.

offers the following clarification regarding the gatekeeper criterion of non-commercial use:

When applying the exception or limitation for non-commercial educational and scientific research purposes, including distance learning, the non-commercial nature of the activity in question should be determined by that activity as such. The organisational structure and the means of funding of the establishment concerned are not the decisive factors in this respect.

This guideline – requiring an assessment of the research activity “as such” – can easily lead to each individual research project being scrutinised in the light of the “non-commercial purpose” requirement. Moreover, if the criterion is applied strictly, the mere possibility of research yielding results that can be exploited commercially<sup>60</sup> may already prevent researchers from invoking the research exception. As a result, even the commercialisation of research output by technology offices of publicly funded research institutions may create legal complications for researchers who initially – while conducting the research and assuming non-commercial use – relied on the research exemption, only to learn afterwards – when the project was completed – that the results would be exploited commercially. The increasing number of public-private partnerships further exacerbates this risk of legal complications. A strict interpretation, as described, can easily limit the scope and effectiveness of the research exception and its potential to serve as a basis for reconciling the fundamental rights of copyright holders and *sui generis* database producers with those of researchers. While more flexible approaches are conceivable,<sup>61</sup> substantial legal uncertainty remains in the light of CJEU jurisprudence that takes a strict interpretation of exceptions as a starting point.<sup>62</sup>

Fifth, the principle of equal treatment enshrined in Art. 20 CFR requires that comparable situations must not be treated differently, and that different situations must not be treated in the same way unless such treatment is objectively justified.<sup>63</sup> An EU copyright and database *acquis* providing an exception for the benefit of researchers working with specific categories of protected material, such as text, images, sound, film, or databases, but not for others (e.g. computer programs), risks preventing the rights and freedoms guaranteed by the Charter from being effectively realised for researchers working with such other knowledge resources. This biased approach may also fail to take sufficient account of research methods and practices in a discipline that requires a wide diversity of research data. Conversely, the current EU *acquis*, being incomplete regarding computer programs, treats copyright holders in the software sector (who are not subject to an exception for scientific research under the SWD) more favourably than other right holders who must tolerate certain research freedoms. In this respect, it is important to note that the

<sup>60</sup> See the implementation of Art. 5(3)(a) ISD in France. Article L 122-5(3)(e) of the French Intellectual Property Code makes it a condition that the use “*ne donne lieu à aucune exploitation commerciale*”.

<sup>61</sup> Cf. Spindler (2018), pp. 279–280. Cf. Bundesregierung (2017).

<sup>62</sup> CJEU, 16 July 2009, case C-5/08, *Infopaq*, paras. 56–57. For a discussion of this approach, see Senftleben (2024), pp. 1479–1481.

<sup>63</sup> See, for example, CJEU, case C-260/22 *Seven.One Entertainment Group v Corint Media*, para. 45.

reuse and development of computer programs or systems is not necessarily limited to historically relevant fields typically associated with these activities, such as engineering or computer science, but may also extend to natural sciences, especially in fields like bioinformatics or neuroinformatics, or any other field that requires an interdisciplinary approach involving informatics.<sup>64</sup>

Sixth, it must not be overlooked that in addition to the issues described, which arise from the wording of the research provisions themselves, the EU *acquis* poses additional hurdles. The overarching requirement to ensure compliance with the three-step test laid down in Art. 5(5) ISD gives rise to the question whether researchers must explain – potentially even for each individual project – that the intended use of resources enjoying protection constitutes a “special case”. Moreover, they may have to rebut allegations that the use carried out in a research project has a corrosive effect on the normal exploitation of protected works and/or unreasonably prejudices the legitimate interests of right holders.<sup>65</sup>

Finally, legal uncertainty and use restrictions can also arise from technological protection measures that serve as electronic fences and prevent access and use for research purposes.<sup>66</sup> The fourth subparagraph of Art. 6(4) ISD amplifies the corrosive effect of this additional legal issue. According to this provision, contractual terms prevail over the research exemption in Art. 5(3)(a) ISD. This decision of the EU legislature subjects researchers to contractual clauses that may exclude use for research purposes altogether.<sup>67</sup>

### 3.1.2 Perceptions of Researchers, Research Organisations, and Publishers

While the results of the preceding analysis already indicate that the existing legal framework for research is wanting in several respects, additional support for the development of a reform agenda comes from a survey conducted in 2023 to shed light on the perceptions and experiences of researchers (962 responses), research performing organisations (“RPOs”, 583 responses), and scientific publishers (128 responses) in the EU.<sup>68</sup>

The survey results demonstrate that the legal issues outlined are not mere theoretical concerns. On the general need for sufficiently flexible research rules in EU copyright and *sui generis* database law, the results of the RPO survey are of particular interest. A total of 47.8% of respondents (239 out of n=500) were very strongly in favour of an open-ended umbrella clause that would generally permit the use of protected knowledge resources for all kinds of research purposes,<sup>69</sup> while a

<sup>64</sup> See, generally, Gauthier et al. (2019); Nayak et al. (2018); Nichols and Pohl (2015); Gewaltig and Cannon (2014); Baxter et al. (2006).

<sup>65</sup> Senftleben (2022b), pp. 21–25.

<sup>66</sup> Cf. Geiger and Schönherr (2021), Sec. 11.112; Dreier and Senftleben (2001).

<sup>67</sup> Hilty (2006), pp. 186–187. For an in-depth analysis, see Guibault (2002), pp. 276–277.

<sup>68</sup> For a description of the survey methodology, sample, response rates and limitations, see Study for European Commission (2024), pp. 889–893 (with Table 39 giving an overview of response rates). See also Valente et al. (2025), pp. 25–29.

<sup>69</sup> Study for European Commission (2024), p. 121 (Table 16).

further 33.6% of respondents (168) stated that they would support (“rather favour”) the introduction of such a general clause. Considering the high number of responses to this question (n=500), this is a clear statement in favour of an open-ended clause to support scientific research in general without limiting privileged use to specific circumstances, such as specific research settings, research tools, or research resources.

The survey also confirmed that obstacles to lawful access – specifically the requirement to purchase subscriptions for knowledge resources behind paywalls – have a profound impact on research. It revealed that 80% of respondents (n=635) faced significant barriers to access because of not having subscriptions to copyrighted knowledge resources. Some 59.6% of the researchers also indicated that they were unable to access protected knowledge resources on the internet because the materials were behind a paywall or electronic fence. This is a robust result based on a large number of responses (n = 473). The RPO responses confirmed a lack of subscriptions and problems with paywalls. RPOs were very frequently (every week or month) or somewhat frequently (every three to six months) confronted with situations where researchers were unable to obtain access to protected knowledge resources because of not having subscriptions (69.9%, 324 out of n = 464) or because of insurmountable paywalls (75.0%, 333 out of n = 444).<sup>70</sup> Not surprisingly, the issue of access is high on the public policy agenda of RPOs. A full 47.3% of the respondents (232 out of n = 491) strongly supported granting researchers access to protected knowledge resources, including those behind a paywall, provided such access fulfilled strict public interest conditions defined by law. A further 34.4% (169 respondents) supported (“rather favour”) the introduction of access rights in cases of overwhelming public interest.<sup>71</sup>

The RPO survey also provides some clarification regarding the invocation of research provisions in the case of public-private partnerships. While the majority of RPOs (60.3%, 179 out of n = 297) reported no specific issues arising from industry collaborations,<sup>72</sup> the remaining 39.7% indicated that such issues occurred very frequently (14.1%, 42 respondents) or somewhat frequently (25.6%, 76 respondents). Their researchers refrained from using protected knowledge resources owing to concerns that, because they were collaborating with industry partners, copyright permissions would no longer apply. Against this backdrop, the majority of RPOs expressed a preference for clarifying in the EU *acquis* that copyright exceptions for research covered not only non-commercial research but also research conducted within the framework of public-private partnerships. A total of 32.6% of respondents (157 out of n = 481) were strongly in favour of such clarification, while 35.6% (171 respondents) indicated support (“rather favour”), and 22.7% (109 respondents) adopted a neutral position.<sup>73</sup>

Turning to academic publishers, it becomes clear that the views of right holders and the research community differ considerably. Within the group of commercial

<sup>70</sup> Study for European Commission (2024), p. 1013 (Figure 135).

<sup>71</sup> Study for European Commission (2024), p. 121 (Table 16).

<sup>72</sup> Study for European Commission (2024), p. 1013 (Figure 135).

<sup>73</sup> Study for European Commission (2024), p. 1017 (Figure 136).

publishers, 75.7% would not at all support the introduction of an open-ended umbrella clause to permit scientific research use, and 10.8% would rather reject it. Commercial publishers were also against the relaxation of access requirements. Assessing a proposal to clarify that subscription-based access at one research institution in a transnational research project should also give consortium partners in other EU Member States the status of lawful users,<sup>74</sup> 75.0% of commercial publishers (27 respondents) were strongly against the proposal, while 11.1% (4 respondents) would “rather reject” it.<sup>75</sup>

By contrast, a clear majority of institutional publishers (85.7%) expressed support, even strong support, for measures that would strengthen general research exemptions in the EU *acquis*. Moreover, all institutional publishers (7 respondents) were strongly in favour of extending the lawful access status of a research institution with a subscription to foreign consortium partners in a joint research project.<sup>76</sup> In the field of non-commercial publishing,<sup>77</sup> a sizable minority (36.4%) would not at all support a copyright reform leading to an umbrella clause for research use, while a further 9.1% were inclined to reject it. Regarding the extension of subscriptions of one research institution to foreign partners in a transnational project, 50.0% of non-commercial publishers (4 responses) indicated strong opposition, while 25.0% (2 respondents) stated that they would “rather reject” this approach.<sup>78</sup>

Regarding the more specific issue of paywalls and electronic fences, the survey results revealed notable opposition from academic publishers. Commercial publishers in particular (78.9%, 30 respondents),<sup>79</sup> but also a slim majority of non-commercial publishers (60.0%, 6 respondents),<sup>80</sup> expressed serious concerns about modifying the current approach, under which technological protection measures prevail over the research exception in Art. 5(3)(a) ISD. Only institutional publishers (83.3 %, 5 respondents) were strongly in favour of access despite paywalls where there was an overwhelming public interest.<sup>81</sup>

Finally, the survey showed that publishers were predominantly against any departure from the traditional non-commercial use requirement. Opposition was particularly strong among commercial publishers, with 74.4% (29 respondents)

<sup>74</sup> For a more detailed discussion of this approach, see Senftleben (2022b), pp. 44–45 and 69.

<sup>75</sup> Study for European Commission (2024), pp. 1126–1127 (Figure 200).

<sup>76</sup> Study for European Commission (2024), pp. 1130–1131 (Figure 201).

<sup>77</sup> Study for European Commission (2024), p. 70, divided publishers into three categories. Institutional Publishers “are part of academic or cultural institutions and publish work related to their own research and educational activities. They aim to spread knowledge and support their community’s learning and discovery efforts”. Commercial Publishers “are businesses that publish a broad range of content to sell to the public. They focus on reaching wide audiences and generating profits through sales and subscriptions”. Non-Commercial Publishers “publish content for specific academic or professional communities without seeking profit. They aim to make research and educational materials accessible, often funded by donations or memberships”.

<sup>78</sup> Study for European Commission (2024), pp. 1134–1135 (Figure 202).

<sup>79</sup> Study for European Commission (2024), pp. 1126–1127 (Figure 200).

<sup>80</sup> Study for European Commission (2024), pp. 1134–1135 (Figure 202).

<sup>81</sup> Study for European Commission (2024), pp. 1130–1131 (Figure 201).

strongly opposing, or generally rejecting, a more flexible approach.<sup>82</sup> Non-commercial publishers were divided on this question, with 55.5% (5 respondents) opposing and 44.4% (4 respondents) in support.<sup>83</sup> Only institutional publishers were strongly in favour of extending research exceptions to public-private partnerships (83.3%, 5 respondents).<sup>84</sup>

### 3.1.3 Problem Areas Revisited

These mixed results – support for reform from the research community; strong opposition from commercial publishers – show clearly that interests need to be balanced carefully. Ideally, amending existing research rules will foster an environment conducive to scientific research while safeguarding the legitimate interests of right holders, such as the publishers that expressed concerns in the survey. In the quest for the right regulatory approach, the survey provides important signposts.

Feedback from the research community indicates clearly that the issue of subscription-based access – and lawful access rules more generally – requires particular attention. Evidently, dependence on subscriptions, and potential dissatisfaction with the range of knowledge resources available through subscriptions that RPOs can afford, is inherent in copyright and *sui generis* database protection. The law grants exclusive rights and thus a monopoly position that allows providers of protected knowledge resources, such as commercially orientated academic publishers, to set and enforce the access terms they prefer. If the research community wishes to escape this machinery, researchers and RPOs should explore alternative publication modes in order to reduce the reliance on subscriptions that arises from the transfer of copyright to scientific publishers, particularly commercial publishing houses.<sup>85</sup> The survey results indicate that a switch to institutional and non-commercial publishers could broaden the common ground for more flexible regulatory solutions.

However, in the light of CJEU jurisprudence, it becomes apparent that the equation is more complex than this general statement on the monopolistic effects of copyright and *sui generis* database protection suggests. As explained above, the CJEU held in *Pelham* (a judgment that addressed freedom of expression, and freedom of the arts and sciences)<sup>86</sup> that the balance required between copyright and competing fundamental rights had to be struck within the system of exclusive rights and limitations established by the EU copyright *acquis*.<sup>87</sup> In line with this approach,

<sup>82</sup> Study for European Commission (2024), pp. 1126–1127 (Figure 200).

<sup>83</sup> Study for European Commission (2024), pp. 1134–1135 (Figure 202).

<sup>84</sup> Study for European Commission (2024), pp. 1130–1131 (Figure 201).

<sup>85</sup> Angelopoulos (2022), pp. 53–56.

<sup>86</sup> CJEU, 29 July 2019, case C-476/17, *Pelham*, paras. 32–35.

<sup>87</sup> CJEU, 29 July 2019, case C-476/17, *Pelham*, para. 60. Cf. CJEU, 29 July 2019, case C-516/17, *Spiegel Online*, paras. 43 and 50–54; CJEU, 29 July 2019, case C-469/17, *Funke Medien NRW*, paras. 58 and 65–70, where the Court uses the same formula. Cf. Szkalej (2021), pp. 205–206; Geiger and Izumenko (2020), pp. 292–298.

copyright and *sui generis* database legislation can be expected, from the outset, to provide sufficient room to safeguard not only the exclusive rights of the holders of copyright and *sui generis* database rights but also the competing fundamental rights of researchers. The clear signal given by the research community in the survey – namely, that the current copyright and database protection regimes fail to ensure adequate access – must be taken particularly seriously against this background.

Surveying the broader EU digital and data legislation, it also becomes apparent that specific access rules for research do not constitute outliers. Article 40(4) and (12) of the Digital Services Act<sup>88</sup> sets forth specific provisions to give researchers access to knowledge resources.<sup>89</sup> Article 5(1) DA makes it clear that users may request the sharing of data with a third party:

without undue delay, of the same quality as is available to the data holder, easily, securely, free of charge to the user, in a comprehensive, structured, commonly used and machine-readable format and, where relevant and technically feasible, continuously and in real-time.<sup>90</sup>

Recital 33 further clarifies that:

[a] third party to whom data is made available may be a natural or legal person, such as a consumer, an enterprise, a research organisation, a not-for-profit organisation or an entity acting in a professional capacity.<sup>91</sup>

EU legislation in the data field thus explicitly contemplates the possibility of users sharing data with researchers. A further avenue for access – data access for public bodies – was established in Art. 14(1) DA, which entitles public sector bodies to request data in situations of exceptional need. Recital 63 points out that “[r]esearch-performing organisations and research-funding organisations could also be organised as public sector bodies or bodies governed by public law”.<sup>92</sup> Hence, researchers in public sector institutions may be able to rely on Art. 14(1) DA and obtain direct access data via this avenue. In addition, Art. 21(1)(a) DA allows public bodies that receive data on the basis of Art. 14(1) DA to share such data “with individuals or organisations in view of carrying out scientific research or analytics compatible with the purpose for which the data was requested”.<sup>93</sup> In cases where a research institution is not itself organised as a public body, indirect access to data may therefore be possible through collaboration with an eligible public sector body.

Given these developments in digital and data legislation,<sup>94</sup> it seems consistent – particularly in the light of freedom of expression, freedom of information, and

<sup>88</sup> Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC, OJ 2022 L 277, 1.

<sup>89</sup> Liesenfeld (2024); Halil et al. (2024); Dergacheva et al. (2023).

<sup>90</sup> Article 5(1) DA.

<sup>91</sup> Recital 33 DA.

<sup>92</sup> Recital 63 DA.

<sup>93</sup> Article 21(1)(a) DA.

<sup>94</sup> For a more detailed discussion, see Study for European Commission (2024), pp. 262–276 and 283–300. As to research-related provisions of the AI Act, see Quintais (2025), p. 2.

freedom of the arts and sciences – to establish specific access rules in the EU copyright *acquis* as well. Such rules should ensure access for research purposes without reliance on subscriptions or other right holder permissions. Recital 14 CDSMD already confirms that lawful access should be assumed when content is freely available online. Taking the DSA and DA provisions outlined as additional reference points, access rules could also be introduced for situations where a strong public interest justifies access for research. Article 40(4) DSA concerns data access “for the sole purpose of conducting research that contributes to the detection, identification and understanding of systemic risks [...]”. The DA provisions for public sector bodies concern situations of “exceptional need”, such as responding to a public emergency or fulfilling a “specific task carried out in the public interest”.<sup>95</sup>

However, it will be important to consider in this context that Art. 13 CFR seeks to safeguard research autonomy by stipulating that “[a]cademic freedom shall be respected”.<sup>96</sup> Against this background, it seems advisable to draw the conceptual contours of “public interest access” in a way that leaves sufficient scope for non-instrumental, curiosity-driven research initiatives. The aforementioned examples in the DSA and the DA do not seem entirely satisfactory from this perspective, as they pre-define privileged research purposes and restrict access to research on systemic risks<sup>97</sup> or situations of exceptional need, such as a public emergency.<sup>98</sup> A broader concept of “strong public interest” that goes beyond systemic risks and emergency situations need not unduly encroach upon the exclusive rights that have been transferred to publishers. In line with the general configuration of copyright exceptions in the EU *acquis*, the conceptual contours of “public interest” would in any case need to be defined in the light of the three-step test in Art. 5(5) ISD. This means, for instance, that legitimate access based on “strong public interest” should not assume proportions that *de facto* undermine normal modes of exploitation, particularly those that generate the lion’s share of publishers’ income.<sup>99</sup>

The survey results highlight a further strategy for addressing concerns about insufficient access to protected knowledge resources for research, namely one focused on the territorial scope of use permissions. When an RPO holds a subscription and can thus provide researchers with subscription-based access, the question arises as to how the circle of beneficiaries should be defined across Member State borders. More specifically, it could be clarified that, in the case of transnational research consortia, where one consortium partner has a subscription, all other partners in the research project ought to be able to rely on that subscription as a basis for demonstrating lawful access.<sup>100</sup> The same could be said about copyright exceptions that are not fully harmonised within the EU. If researchers in one Member State can rely on a national research rule that grants lawful access, this

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<sup>95</sup> Article 15(1) DA.

<sup>96</sup> Article 13 CFR.

<sup>97</sup> Article 40(4) DSA.

<sup>98</sup> Articles 14 and 15(1)(a) DA; For a more detailed critique of this aspect, see Study for European Commission (2024), pp. 262–276 and 283–300.

<sup>99</sup> Cf. Senftleben (2004), pp. 190–194.

<sup>100</sup> Cf. Senftleben (2022b), pp. 44–45 and 69.

access entitlement could be applied universally to all research partners in a transnational project – regardless of the Member State in which they are based. To achieve this goal, a country-of-origin rule could be introduced, according to which the research use should be deemed to occur solely in the country where the copyright exception exists. In practice, this would mean that, in transnational research collaborations, all researchers could benefit from any copyright exception available in a Member State in which at least one consortium partner is located.<sup>101</sup> The EU's objective of creating a borderless internal market for research – embodied in the European Research Area, as recognised in Art. 179 of the Treaty on the Functioning of the EU – strongly supports such rules, paving the way for the cross-border availability of knowledge resources within transnational research consortia.<sup>102</sup> Moreover, the cross-border rule for educational use in Art. 5 CDSMD underscores both the feasibility and importance of legislative initiatives aimed at ensuring the cross-border availability of knowledge resources.

In the light of the three-step test laid down in Art. 5(5) ISD, it is important to stress that extending subscription-based use entitlements to all consortium partners would not constitute a general substitute for subscriptions but would merely facilitate lawful access within the context of a specific research project. It must also be noted that knowledge resources available through one consortium partner's subscription or statutory use entitlement are not necessarily of general interest to other partners. For example, a Portuguese university is unlikely to subscribe to any Swedish academic journals. However, in a transnational, comparative research project seeking to analyse journal publications across Member States, it may be important for a Portuguese research partner to have access to Swedish publications, either through the Swedish partner's subscriptions or under a Swedish copyright exception that permits research use. This is unlikely to deprive Swedish publishers of substantial income in a manner relevant to the three-step test analysis. Outside the specific research project, the likelihood of Portuguese RPOs subscribing to Swedish journals will remain low.<sup>103</sup> Therefore, cross-border use for scientific research is unlikely to interfere with normal exploitation or cause unreasonable prejudice to the legitimate interests of right holders.

Regarding another obstacle to access that featured prominently in the survey – the issue of paywalls and electronic fences – the existing EU copyright *acquis* already provides a template that could be used to address the concerns of the research community without unduly encroaching upon the legal position of publishers. Article 7(2) CDSMD, which addresses scientific TDM,<sup>104</sup> explicitly

<sup>101</sup> Cf. Art. 5 CDSMD; Art. 1(2)(b) of Council Directive 93/83/EEC of 27 September 1993 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission, OJ 1993, L 248, 15; Art. 4 of Regulation 2017/1128 of the European Parliament and of the Council of 14 June 2017, on cross-border portability of online content services in the internal market, OJ 2017, L 168, 1.

<sup>102</sup> European Commission: Directorate-General for Research and Innovation (2022), pp. 5–6 (Action 2).

<sup>103</sup> Cf. Senftleben (2022b), pp. 44–45 and 69.

<sup>104</sup> The copyright exception for scientific TDM is enshrined in Art. 3 CDSMD. Article 7(2) CDSMD refers to this provision. For a broader discussion, see Ducato and Strowel (2021), p. 323; Hugenholtz (2019), pp. 168–169; Geiger et al. (2018), pp. 817–819.

excludes the applicability of the fourth subparagraph of Art. 6(4) ISD. As explained above, this subparagraph prevents Member States from safeguarding copyright exceptions based on the research rule in Art. 5(3)(a) ISD when technological protection measures are employed to enforce online contracts relating to protected knowledge resources. In a nutshell: online contracts that prohibit research use override copyright exceptions that would otherwise permit it.<sup>105</sup> By excluding the application of the fourth subparagraph of Art. 6(4) ISD, Art. 7(2) CDSMD eliminates the primacy of online contracts in this context. As a result, Member States are free to intervene on the basis of the first subparagraph of Art. 6(4) ISD, ensuring that researchers can rely on the copyright exception under Art. 5(3)(a) ISD.<sup>106</sup> Within the framework of copyright reform, this regulatory model could be extended beyond the research rule in Art. 5(3)(a) ISD to further copyright exceptions that support research use, in particular the temporary reproduction exception in Art. 5(1) ISD and the right of quotation in Art. 5(3)(d) ISD. These exceptions do not currently fall within the scope of Art. 6(4) ISD.

The EU copyright *acquis* also provides sources of inspiration for recalibrating the requirement of non-commercial research use. Article 10(1)(d) RLRD shows that it is conceivable to dispense with non-commercial use requirements altogether. This provision broadly exempts “use solely for the purposes of teaching or scientific research”, without restricting such privilege to non-commercial research. In accordance with Art. 10(3) RLRD, this exemption remains subject to the three-step test. The latter prevents any conflict with normal exploitation of protected knowledge resources or unreasonable prejudice to the legitimate interests of right holders, acting as an effective bulwark against the erosion of the market for protected knowledge resources. Hence, the regulatory model chosen in Art. 10 RLRD demonstrates that a non-commercial use requirement can be deemed redundant, given the protection provided by the three-step test.

Alternatively, the current requirement of use for a “non-commercial purpose” in Art. 5(3)(a) ISD and Arts. 6(2)(b) and 9(b) DBD could be replaced with a more flexible formula that allows greater scope for collaborations with private partners. The approach taken in the CDSMD could serve as a template for this alternative approach. Instead of confining the scope of exceptions for scientific research to non-commercial use, Art. 3 CDSMD limits the circle of beneficiaries of the TDM provision for scientific research to “research organisations and cultural heritage institutions”. Defining the term “research organisation”, Art. 2(1) CDSMD puts an emphasis on the non-profit nature of the scientific institution carrying out the research.<sup>107</sup> Hence, it is no longer necessary for each individual research project to be non-commercial. Instead, it is sufficient that the RPO where the project is carried out is a non-profit organisation. Arguably, this suggests that an individual research project can create marketable knowledge as long as this does not change the overall

<sup>105</sup> Cf. Hilty (2006), p. 187.

<sup>106</sup> Admittedly, it is unclear whether this regulatory model offers sufficient support for scientific research in practice. To this day, Member State initiatives in this area remain limited. Cf. Margoni and Kretschmer (2022); Geiger and Schönherr (2021), Sec. 11.109.

<sup>107</sup> Cf. Quintais (2025), p. 1.

non-profit nature of the institution itself.<sup>108</sup> By shifting the focus from the non-commercial nature of individual research projects (a perspective reflected, as explained above, in Recital 42 ISD) to the non-commercial nature of the research organisation, the EU copyright *acquis* creates additional breathing space for public-private partnerships. Recital 11 CDSMD confirms that this objective has informed the recalibration of the non-commercial research requirement in the context of the TDM provision. Evidently, the EU legislator assumed that this switch to a more flexible approach would be compatible with the three-step test.

To implement this alternative solution, the approach adopted in the CDSMD would need to be applied universally across all research provisions in the ISD, DBD, and SWD. Extending the CDSMD approach in this way would also be in line with developments in the DSA. Regarding data access for researchers, Art. 40(8)(a) DSA already refers to the definition of “research organisation” in Art. 2(1) CDSMD. This marks a first step towards a broader application of the CDSMD approach.

When broadening the CDSMD approach, it could also be important to clarify the status of private partners involved in scientific research projects. In particular, the extent to which private partners can benefit from use privileges for scientific research – as well as from new knowledge and information resources (such as publications and data) generated through privileged research use – requires further clarification. In addition, focusing solely on research organisations risks overlooking the legitimate research needs of individual researchers who do not belong to an established research organisation in the sense of Art. 2(1) CDSMD. Investigative journalists are a case in point here.<sup>109</sup>

### 3.2 Interplay with More Specific Research Provisions

The proposal for a more flexible research rule applicable across EU directives on copyright, related rights and *sui generis* database protection raises the question of how this overarching clause would interact with more specific research provisions, such as the aforementioned rule for scientific TDM in Art. 3 CDSMD. Article 25 CDSMD defines the relationship between the specific TDM rule in Art. 3 CDSMD and broader research provisions, such as Art. 5(3)(a) ISD, as follows:

Member States may adopt or maintain in force broader provisions, compatible with the exceptions and limitations provided for in Directives 96/9/EC [DBD] and 2001/29/EC [ISD], for uses or fields covered by the exceptions or limitations provided for in this Directive.<sup>110</sup>

Hence, the specific TDM provision in Art. 3 CDSMD is not intended to preclude reliance on broader provisions in the DBD and ISD. Rather, Art. 3 CDSMD merely clarifies that TDM research falling within its ambit of operation constitutes, in any case, a permissible use. Recitals 8, 10, and 11 CDSMD explain that the provision is

<sup>108</sup> Rosati (2021), p. 43; Griffiths et al. (2022), pp. 14–15; Senftleben (2022b), pp. 38–39.

<sup>109</sup> Cf. Margoni and Kretschmer (2022), pp. 5 and 10.

<sup>110</sup> Article 25 CDSMD, clarifications within brackets added.

intended to remove the legal uncertainty that research institutions are confronted with when undertaking TDM.<sup>111</sup> This clarification does not pre-empt the invocation of other research rules that may provide breathing space for research-related TDM beyond the scope of Art. 3 CDSMD.

This configuration of the relationship between specific research provisions, such as the TDM rule in Art. 3 CDSMD, and a general, open-ended research exemption, such as the umbrella clause discussed in the preceding sections, seems appropriate. The clarification of specific use privileges in additional provisions must not curtail the flexibility that an open, overarching research exemption seeks to provide. At the same time, specific provisions, such as a dedicated rule on scientific TDM, can enhance legal certainty by offering a more precise definition of permitted use.

Regulating the interplay between more general research rules and specific provisions in line with Art. 25 CDSMD seems appropriate, given the inherent weaknesses of narrowly framed research exceptions. The specific rule on scientific TDM in Art. 3 CDSMD is a case in point. With its narrow focus on acts of reproduction, Art. 3 CDSMD fails to cover acts of data sharing. Researchers may copy works and databases to compile the corpus of data resources necessary for a TDM analysis and then carry out that analysis. However, Art. 3 CDSMD does not permit the researchers to share this corpus of protected works and databases with other researchers if such sharing constitutes an act of making works available to the public<sup>112</sup> and/or of re-utilising protected database contents.<sup>113</sup>

Restricting the use privilege to acts of reproduction may pose significant challenges. A broader research consortium, such as a group of researchers consisting of several teams across different EU Member States, may constitute a relevant public in the sense of copyright and *sui generis* database law.<sup>114</sup> Accordingly, sharing TDM copies of protected works and database contents within this circle of researchers qualifies as making them available to the public. As the TDM exemption does not cover making protected works or databases available, this use falls outside the scope of Art. 3 CDSMD, and authorisation is required for each individual work and protected database element. It is clear that the transaction costs and licensing budget required for this rights clearance task can easily hinder the sharing of TDM copies within a research group.<sup>115</sup> As a result, harmonising different datasets for a TDM analysis – particularly datasets from teams in several Member States – becomes difficult, if not impossible.

The same applies to initiatives to share TDM copies with a more general public, such as the academic community with an interest in the research. In this case, the lack of entitlement to share TDM source material can pose particular problems from the perspective of academic integrity. Although Art. 3(2) CDSMD authorises

<sup>111</sup> Cf. recital 18 CDMD, clarifying the position for the general TDM exception in Art. 4 by reference to Art. 5(1) ISD. See, further, Szkalej (2025), p. 311.

<sup>112</sup> Article 3 ISD.

<sup>113</sup> Article 7(2)(b) DBD. Cf. Margoni and Kretschmer (2022), p. 25.

<sup>114</sup> Senftleben (2022b), pp. 31–32.

<sup>115</sup> Cf. Hilty and Richter (2017), p. 1; Geiger and Iaia (2024), pp. 5–6; Craig (2022), p. 26; Lemley and Casey (2021), pp. 770–771.

researchers to retain copies forming part of the dataset for the purpose of scientific research, including for verifying research results, this entitlement seems designed for the original researcher (or their organisation), to enable them to store copies, but not for external researchers wishing to verify the research results. If TDM corpora cannot be made available as defined in copyright legislation, ensuring the replicability of the TDM analysis and verifying research results becomes nearly impossible.<sup>116</sup>

In transposing Art. 3 CDSMD into national law, legislators have not overlooked the dilemmas arising from the lack of entitlement to share TDM copies. Seeking a solution, the German legislator, for instance, availed itself of the possibility offered in Art. 25 CDSMD and relied on the broader research exception in Art. 5(3)(a) ISD<sup>117</sup> to supplement the national counterpart of Art. 3(1) CDSMD with a provision that allows the sharing of TDM copies.<sup>118</sup>

However, it is important to point out that this solution falls far short of providing researchers in international consortia with a reliable legal framework. First, the above-described requirement of use for “non-commercial purposes”, which was abandoned in the scientific TDM rule under Art. 3 CDSMD, re-emerges in Art. 5(3)(a) ISD. The sharing entitlement following from the German provision is thus inconsistent with – and potentially more restrictive than – the reproduction entitlement under Art. 3 CDSMD. Second, relying on the current, non-mandatory research exemption in Art. 5(3)(a) ISD means that this solution is based on an optional copyright exception in the EU *acquis*, which may not be available in other Member States.<sup>119</sup> In the case of research consortia with partners in different Member States, the permission given by the German legislator may thus be insufficient to allow the sharing of TDM copies with researchers in other Member States where no comparable rule exists. Third, as a legal basis for the German provision, Art. 5(3)(a) ISD only covers the right of making available to the public in the field of copyright and related rights.<sup>120</sup> The more general research provision in the field of *sui generis* database rights – Art. 9(b) DBD – does not encompass acts of making available to the public.<sup>121</sup> Therefore, the sharing entitlement following from the German provision remains limited to parts of a TDM corpus that enjoy copyright protection. The sharing of protected database elements falls outside the scope of the copyright exception<sup>122</sup> and can only be deemed permissible if the *sui generis* database right is interpreted as never having restricted research purposes from the outset. The CJEU’s decision in *CV-Online Latvia* may pave the way for this

<sup>116</sup> Ducato and Strowel (2021), p. 327; Geiger et al. (2018), p. 819.

<sup>117</sup> Stieper (2020), p. 4; Dreier (2022), Sec. 60d, paras. 2 and 10.

<sup>118</sup> Section 60d(4) of the German Copyright Act (*Urheberrechtsgesetz*), English translation available at: [https://www.gesetze-im-internet.de/englisch\\_urhg/](https://www.gesetze-im-internet.de/englisch_urhg/).

<sup>119</sup> Senftleben (2022a, b), pp. 46–47.

<sup>120</sup> Article 3 ISD.

<sup>121</sup> See the definition of “re-utilization” in Art. 7(2)(b) DBD and the missing reference to reutilisation in Art. 9(b) DBD.

<sup>122</sup> Dreier (2022), Sec. 60d, para. 10.

approach.<sup>123</sup> However, the Court has not yet had the opportunity to confirm the considerable flexibility for scientific data sharing that may follow from the approach taken in that case.

This closer inspection of the legal framework for scientific TDM once again highlights research obstacles discussed above. Another recurring theme is the requirement of “lawful access” under Art. 3 CDSMD, which can cause considerable legal uncertainty in the absence of further clarification. Recital 14 CDSMD cites subscription-based access for a research organisation’s own researchers as one example (“[f]or instance”) of lawful access. In this scenario, the exact conditions for access are not determined by the subscriber but by the service provider.<sup>124</sup> However, the provision does not account for the fact that conditions for access can vary across services and Member States and that they can be designed with the national copyright framework in mind, such as the existence and scope of particular copyright exceptions or other mechanisms.

In other words, even if researchers in a transnational consortium obtain a subscription tailored to their own Member State, it cannot be assumed that it is identical to those of partners located in other Member States. Moreover, it is worth recalling that all domains of knowledge are, by default, of interest to science. Therefore, obstacles to scientific TDM that may arise from the lawful access requirement should be viewed through the prism not only of access models used in the scientific publishing industry. Access rules in other sectors, such as the market for music, film and novels, must be factored into the equation as well. Market actors in each sector may be driven by different commercial goals – leading to divergent subscription models and access conditions. Admittedly, Art. 7(1) CDSMD renders contractual terms that prevent TDM unenforceable. But this does not guarantee researchers sufficiently broad access when obtaining a subscription. Moreover, right holders may be able to bypass the embargo in Art. 7(1) CDSMD by carefully avoiding any direct reference to TDM in their terms of use, and imposing indirect restrictions through the back door of other contractual stipulations.<sup>125</sup>

In addition, the position of right holders to determine the technical parameters of access is reaffirmed by Art. 3(3) CDSMD, which recognises that right holders may “apply measures to ensure the security and integrity of the networks and databases where the works or other subject matter are hosted”.<sup>126</sup> In this context, one particular point of uncertainty is whether this entitlement extends to the networks and databases operated by RPOs. Article 3(2) CDSMD seems to point in this direction when requiring that researchers store copies “with an appropriate level of security”.<sup>127</sup>

Another source of legal uncertainty is the interface with Art. 6 ISD on the legal protection of technological measures. In particular, the question arises whether the

<sup>123</sup> CJEU, 3 June 2021, case C-762/19, *CV-Online Latvia/Melons*, paras. 37 and 46. Cf. Senftleben (2022a, b), pp. 34–35; van Eechoud (2021), pp. 257–258; Derclaye and Husovec (2022a).

<sup>124</sup> Szkalej (2025), p. 313; Margoni (2024).

<sup>125</sup> Szkalej (2025), pp. 312–313.

<sup>126</sup> Article 3(3) CDSMD; Kretschmer et al. (2024).

<sup>127</sup> Article 3(2) CDSMD.

measures recognised in Art. 3(3) CDSMD constitute technological protection measures in the sense of Art. 6 ISD and are therefore legally protected from circumvention. It may not necessarily be so, but if they are to be viewed as such, it is imperative to clarify the relationship between right holders' expectations arising from Art. 3(3) CDSMD and the aforementioned prerogative of Member States to adopt measures to ensure that researchers seeking to benefit from the freedom of scientific TDM<sup>128</sup> can carry out TDM despite technological protection measures that may prevent it.<sup>129</sup> If security and integrity measures taken in line with Art. 3(3) CDSMD do not constitute technological protection measures in the sense of Art. 6 ISD, it is necessary to clarify the interface between Art. 3(3) and Art. 3(4) CDSMD, which calls upon Member States to “encourage” all actors involved – right holders, RPOs and cultural heritage institutions – to agree on best practices relating to the use of such measures. For instance, these best practices could address the desirability of allowing researchers to access application programming interfaces.

Further questions of interpretation arise from differences between the specific TDM rules in the CDSMD. Regarding scientific TDM, Art. 3(1) CDSMD establishes the requirement of “lawful access.” The more general TDM rule in Art. 4 CDSMD, by contrast, requires the use of “lawfully accessible” knowledge resources. This latter test might be understood to include the further requirement that freely available online sources be lawful.<sup>130</sup> “Lawful access” in the sense of Art. 3 CDSMD, by contrast, could have a more neutral meaning. Arguably, a “lawful access” test can already be satisfied when knowledge resources used for research are freely available on the internet. To allow research into unlawful online communities, such as piracy networks, it should not be a precondition that online sources used for scientific research always be lawful.

Finally, certain gaps in the regulation of TDM research must not be overlooked. The above-mentioned inconsistencies concerning research activities involving computer programs resurface in this context. Are the scientific TDM rules in Art. 3 CDSMD applicable to software?<sup>131</sup> In the light of freedom of the press and the watchdog function of journalists, it is also surprising that Art. 3 CDSMD does not clarify whether, and to what extent, investigative journalists can rely on the rules for TDM research.<sup>132</sup> In this regard, one might consider whether, and under what circumstances, newspaper departments conducting their own investigations might be classed as an “other entity” within the meaning of Art. 2(1) CDSMD and thus be entitled to invoke the rule for scientific TDM in Art. 3 CDSMD.

Regarding the interplay between a general umbrella clause for scientific research and more specific provisions, this foray into legal questions raised by the TDM rules yields two important insights: first, narrow research rules, such as Art. 3 CDSMD

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<sup>128</sup> Article 3(1) CDSMD.

<sup>129</sup> Article 6(4) ISD; Art. 7(2) CDSMD.

<sup>130</sup> Cf. Margoni (2023).

<sup>131</sup> Cf. Widła (2025), pp. 8–9; Raue (2019), p. 687.

<sup>132</sup> Regarding the importance of TDM for investigative journalism, see Beckett (2019), pp. 1–2 and 24–26; Fiil-Flynn et al. (2022), p. 951; Geiger et al. (2019), pp. 5 and 31; Margoni and Kretschmer (2022), p. 689.

with its specific focus on scientific TDM, only add value if they succeed in enhancing legal certainty within their specific ambit of operation; second, it is unlikely that the legislator can solve the research dilemmas discussed in the preceding sections by relying exclusively on specific copyright exceptions. As the analysis of Art. 3 CDSMD demonstrates, the adoption of ever more narrowly tailored research rules is likely to create additional hurdles and complexity. The adoption of a general umbrella clause is thus indispensable for at least two reasons: first, to fill gaps in the research infrastructure left by narrow exceptions, such as the lack of entitlement to share TDM resources under Art. 3 CDSMD; and, second, to avoid the evolution of a – potentially highly inconsistent – “thicket” of narrow research rules that would follow from a piecemeal approach of introducing new specific rules whenever new research tools or methodologies emerge.

#### 4 Conclusion

In accordance with the jurisprudence of the CJEU, the reconciliation of competing fundamental rights must take place internally, within the system of exclusive rights and limitations established by EU copyright and *sui generis* database law.<sup>133</sup> This obliges the EU legislator to ensure sufficient flexibility to allow a fair balance to be struck within the respective protection regimes. Specifically, in the context of scientific research, it is essential to devise a legal framework capable of reconciling the right to intellectual property (Art. 17(2) CFR) with researchers’ freedom of expression, freedom of information, and freedom of the arts and sciences (Arts. 11 and 13 CFR). As the analysis has shown, the current EU *acquis* is unlikely to offer sufficient breathing space for this balancing act. The existing research rules have structural deficiencies, ranging from fragmented and overly restrictive research exceptions to opaque lawful access provisions, outdated non-commercial use requirements, legal uncertainty arising from the three-step test, obstacles posed by the protection of paywalls and other technological measures, and the prevalence of contracts that override statutory research freedoms. Empirical evidence confirms that the current EU *acquis* in copyright, related rights, and *sui generis* database protection can stifle research, rather than offer the flexibility needed to safeguard the fundamental rights of researchers.

Therefore, the time has come to discuss legal reform. Based on the analysis of current problem areas, consideration could be given to:<sup>134</sup>

- clarifying that the requirement of use as an “illustration” in Art. 5(3)(a) ISD and Arts. 6(2)(b) and 9(b) DBD applies only to the teaching aspect of the use privilege and not to scientific research;
- abandoning the outdated requirement of use for a “non-commercial purpose” and, instead, following an approach that offers room for public-private partnerships, such as the approach taken in Art. 3(1) CDSMD, which, rightly

<sup>133</sup> CJEU, 29 July 2019, case C-476/17, *Pelham*, para. 60; CJEU, 29 July 2019, case C-469/17, *Funko Medien NRW*, para. 58.

<sup>134</sup> Cf. Senftleben (2022b), pp. 4–5.

- understood,<sup>135</sup> offers flexibility for public-private partnerships and more opportunities to translate research insights into products and services that can be brought to market;
- recalibrating lawful access criteria. Instead of requiring access permissions for each individual research institution participating in a transnational research project, it could be deemed sufficient for one participating consortium partner to have a subscription or be able to rely on a national copyright exception. This subscription or statutory use permission could give the whole consortium lawful access status. Attention should be paid to clearly and definitively defining the characteristics a consortium must have in order to invoke this cross-border rule;
  - clarifying that, regardless of the volume of use, scientific research constitutes a “special case” under the three-step test of Art. 5(5) ISD because of the fundamental rights outlined in Arts. 11(1) and 13 CFR;
  - declaring that the fourth subparagraph of Art. 6(4) ISD does not apply to uses for the purposes of scientific research, as already done in Art. 7(2) CDSMD, and granting researchers the right to circumvent technological protection measures if right holders fail to ensure that the use privilege for scientific research remains effective when such measures are applied;
  - declaring any contractual provision contrary to use privileges for scientific research unenforceable, as already stated in Art. 7(1) CDSMD.

In contrast to the current optional research exceptions in Art. 5(3)(a) ISD, Arts. 6(2)(b) and 9(b) DBD and Art. 10(1)(d) RLRD, a more flexible and robust exemption with these conceptual contours should be established as a mandatory “shall” provision. This would ensure harmonised application across Member States and comparable conditions for research teams in different countries. Moreover, the strengthened provision should cover both the right to make copies for research purposes (reproduction) and the right to share these copies (making available to the public). Finally, it is advisable to implement the more flexible and robust use privilege proposed for scientific research not only in the field of copyright, related rights and *sui generis* database protection but also in the area of computer programs, where there is currently no open-ended research provision.

In proposing these amendments, legislators must not overlook the benefits for society as a whole. An open-ended umbrella clause with the conceptual contours described could enable EU copyright and *sui generis* database law to keep pace with the rapid evolution of new technologies as well as changing research approaches and methodologies.<sup>136</sup> A narrow research exception that only supports known research needs and methodologies will inevitably fail to accommodate new, previously unknown approaches. In contrast, a general provision would enable the research community to analyse developments in the increasingly digital and algorithmic information society with all the concomitant rapid changes in information technology and modes of communication. It would strengthen research

<sup>135</sup> Cf. Rosati (2021), pp. 42–43; Griffiths et al. (2022), pp. 14–15. However, see, also, the more nuanced positions taken by Stamatoudi and Torremans (2021), Sec. 17.94; Margoni and Kretschmer (2022).

<sup>136</sup> Cf. Hugenholz and Senftleben (2011), pp. 7–9 and 29–30; Senftleben (2022a), pp. 204–207.

autonomy by providing a basis for exploratory research projects and methodologies that fall outside traditional approaches and categories.

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