jipitec

1 | 2022

Volume 13 (2022)
Issue 1 ISSN 2190-3387

Journal of Intellectual Property, Information Technology, and Electronic Commerce Law

www.jipitec.eu

jipitec

Journal of Intellectual Property, Information Technology and Electronic Commerce Law

Volume 13 Issue 1 April 2022
www.jipitec.eu
contact@jipitec.eu

A joint publication of:

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ISSN 2190-3387

Funded by

DGRI Deutsche Gesellschaft für Recht und Informatik e.V.

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Editorial

by **Séverine Dusollier**

Recommended citation: Séverine Dusollier, Editorial, 13 (2022) JIPITEC 1 para 1

1 I am writing this editorial in times of war. It is mid-March 2022. A few Ukrainian cities have been conquered by the Russian army, more than 2 million Ukrainians have fled and sought refuge in the European Union, Russians control two nuclear sites, the resistance inside the country—as well as the solidarity outside—is astonishing. I don't know how much worse it will be when you will be reading this.

2 Every other day I speak with one Ukrainian student of mine and feel so powerless. His biggest fear is that Putin manages to cut the Internet, which would leave him and his younger sister without any possibility to communicate with their parents in Kyiv.

3 Communication has always been a weapon and a target during wars. This is not new. Yet, this is certainly the first war in Europe where Internet and digital technologies of communication are an integral part of the means, tools, sanctions, and threats mobilized by the different states involved, as well as the actions of private individuals and companies alike.

4 On the side of sanctions, the Council of the European Union has prohibited, by a regulation 2022/350 of 1st of March 2022, operators from broadcasting or transmitting the Russian channels RT and Sputnik by any means, including cable, satellite, IP-TV, and internet. Whatever the exceptionality of the crisis and the inclusion of this "censorship" in the overall sanctions against Russia, this could create a dangerous precedent for the Council might lack the competence to apply such media regulation and that no scrutiny of its necessary proportionality in regard of the impact of fundamental rights of expression and of access to information has been conducted. Note that RT France has immediately filed for annulment of the Regulation before the General Court (case T-125/22). Some social networks, such as Facebook, TikTok, Reddit, YouTube and Twitter had already either suspended the accounts of these channels, and other Russian official media, or cautioned against their publications by labelling them as possible misinformation or as media controlled by the Russian government.

5 Many tech giants have also decided to upend their sales, services, or operations in Russia, such as Microsoft, Apple, Samsung, Spotify, Netflix, Paypal, Epic Games, Ubisoft, and Intel (and the list is expanding every day). Russian media apps are no more available from Apple Store, and Google and Meta have ceased to commercialize ads in Russia.

6 In retaliation, the Russian media regulating authority has blocked the access to Facebook and severely restricted the access to Twitter and Instagram. In parallel, Kremlin moves to stifle dissent and a hastily voted law threatens the diffusion of "fake news on the army" with heavy fines and imprisonment. Independent media are forced to shut down or to adopt a more official coverage of the situation. Other websites, such as BBC, Voice of America and Deutsche Welle are also restricted, if not shut down, on the Russian territory.

7 "War" is now a prohibited word in Russia (say "special operations" only), a State that dangerously resembles the Oceania dictatorship depicted in Georges Orwell's *1984*, where the nation slogan is "war is peace, freedom is slavery, ignorance is strength". Vladimir Putin applies this message with a brutal force, claiming that he only wants to bring peace to the Ukrainians his army kills, demonizing freedoms in Ukraine, Russia or Belarus, and forcing ignorance upon his citizens by controlling all media and communication channels.

8 Despite all the efforts of Russia to control its citizens' knowledge about the aggression to its neighbor state and the Ukrainians' access to communication means, the internet has become a tool of resistance and information. The Ukrainian youth (some with millions of followers) multiply memes and videos on TikTok and other social networks to denounce and document the war (sometimes with dark humor), and to show the resistance; cyberactivists have started to try and hack Russian facilities; and

Zelensky intensively uses the Internet to galvanize his population and communicate with the world. Most interestingly, the Ukrainian government, by contrast to the invader, has decided to still allow VKontakte (VK), the favorite social network of the Russian population, instead of banning it, and encourages the Ukrainians to post information on VK about the war. It has also provided a website to mothers of Russian soldiers with information about their sons.

9 While Russian still applies an old-world logic of straightforward censorship of media and opinions ("ignorance is strength"), the Ukrainian government and population have perfectly understood to power of unrestricted digital media.

10 Those different positions on communication, its prohibition and control on one side or its strategic use on the other, perfectly reflect that wars are now also fought on social networks. People die in bombed building, in caves, in the streets in Ukraine, and a video on TikTok might look rather futile in comparison. However, if one believes that information (and not ignorance) is strength and power, it has a crucial role to play in stopping this horrendous aggression, in one way or another.

11 The present issue of JIPITEC, prepared before these awful events, covers quieter topics. Away from the Ukrainian battlefield, we have the luxury of peace and comfort to still read scholarship in our fields. I hope we can realize, however, the extent to which we need to transform this knowledge and thinking about our digital world and its legal issues into building a robust, resilient, and open network, that can fill its promises of providing power, truth, and information to people whose survival and resistance are on the frontline.

Séverine Dusollier

Out-of-Commerce

How the Existing Copyright Practices in Film Archives Impact on Widening Public Access to Cultural Heritage

by **Melanie Stockton-Brown***

Abstract: Article 8 of the EU Copyright in the Digital Single Market Directive 2019 addresses the issue of out-of-commerce works, enabling cultural heritage institutions ("CHIs") to provide public access to these copyright works in certain circumstances. This article addresses the problem of out-of-commerce works within the context of film archives, through data gathered through ethnographic and interview research. It will be discussed how copyright shapes and orchestrates wider archival practice. A copyright regime of archival practices is formulated here that proposes a deeper analysis of the likelihood of successful incorporation of out-of-commerce works into existing archival practices. This copyright regime is conceptualised as a discursive system that brings together the different elements of archiving practices: meanings, materials, and competences. Three subregimes are proposed: the Oppressive regime; the Pragmatic Compliance regime; and the Active Agency regime. The value in understanding the existing copyright regime of archival practices is in formulating a theoretical framework for exploring and understanding the diverse copyright practices present and performed in the film archives, as this informs the incorporation of future legal reforms. This article then builds on the formulated theoretical framework, considering the practical likelihood of film archives being able to incorporate Art. 8 into their working practices, drawing on the empirical data gathered. This article concludes that issues of funding, copyright specialism, and fears of reputational harm may weaken the likelihood of successful incorporation into existing practices. Also, the inability to exploit the works commercially is likely to hinder the appeal to film archives, who need to generate revenue to continue their day-to-day work.

Keywords: out-of-commerce; theory; copyright; archives; cultural heritage

Recommended citation: Melanie Stockton-Brown, Out-of-Commerce: How the Existing Copyright Practices in Film Archives Impact on Widening Public Access to Cultural Heritage 13 (2022) JIPITEC 3 para 1

A. Introduction

1 Within the cultural heritage sector, film archives are particularly impacted by the problem of out-of-commerce works. Within Europe, there are approximately 1.03 million hours of film material in cultural heritage institutions including film archives.[1] Film archives have estimated that 76% of the film works in their collections are under copyright, and that about 60% of the feature films under copyright are presumably orphan works or out-of-commerce.[2]

* Senior Lecturer in Law at Bournemouth University, and member of the Centre for Intellectual Property Policy & Management. All suggestions, comments, and questions to the author are welcome, and can be emailed to mstockton-brown@bournemouth.ac.uk. For other articles by the author on out-of-commerce works and film archives, see Melanie Brown "Exploring Article 8 of the Copyright Directive: Hope for Cultural Heritage" in Luigi Carlo Ubertazzi (ed.) AIDA Italian Annals of Copyright XXVIII, Giuffrè Francis Lefebvre, 2019; Melanie Stockton-Brown, Finding the Lost Films: Out-of-Commerce Works in the Archive (Illustrated Zine) 2021; and Melanie Stockton-Brown "Out-of-commerce Copyright Works in EU Film Archives: A Solution?" Journal of Film Preservation (2021) 105, pp. 29-38.

1 Nick Poole "The Cost of Digitising Europe's Cultural Heritage: A Report for the Comité des Sages of the European Commission" (The Collections Trust, November 2010), 3.

2 Gilles Fontaine and Patrizia Simone (eds.), *The access to*

This means that there are hundreds of thousands of hours of films held by these archives, that have not been digitised or made available to the public.

2 The introduction of the EU's Copyright in the Digital Single Market Directive 2019 ("CDSM"),[3] brings the legislative change needed for CHIs to make use of their out-of-commerce works and is a change that scholars have strongly advocated for.[4] Article 8 CDSM addresses the issue of out-of-commerce works, enabling cultural heritage institutions ("CHIs") to provide public access to these copyright works in certain circumstances. Article 8 enables CHIs to obtain licences from collective management organisations ("CMOs"), avoiding the need to negotiate with each individual rightholder. Article 8(2) expands this and enables CHIs to make out-of-commerce works available for non-commercial purposes without seeking the rightholder's permission where there is no representative CMO. However, copyright reform alone is insufficient, unless it is accompanied by working practices and knowledge within these institutions that can incorporate this legal reform. This research addresses the problem of out-of-commerce works within the context of film archives and puts forward a theoretical framework.

3 This article streams from ethnographic research conducted in three film archives, prior to the national implementations of the CDSM. This then led to the formulation of a theoretical framework to understand the copyright regime of archival practices, which articulates the ways in which copyright shapes archival practice and can act as a barrier to certain activities. This copyright regime is the basis for this article and is conceptualised as a discursive system that brings together the different elements of archiving practices: meanings, materials, and competences. Three sub-regimes are proposed: the Oppressive regime; the Pragmatic Compliance regime; the Active Agency regime.

4 The value in understanding the existing copyright regime of archival practices is in formulating a theoretical framework for exploring and understanding the diverse copyright practices present and performed in the film archives. This enables a consideration of the practical likelihood of film archives being able to incorporate Article 8 into their working practices, drawing on the empirical data gathered. Furthermore, it provides detailed evidence to policymakers and legislators regarding the barriers to successful incorporation into existing archival practices. Practice theory shapes the focus of the theoretical framework to be on the *film archivists* and their practices as well as the *film archive* itself as an organisation. It also highlights any self-regulation that is carried out to maintain adherence to these meanings.[5]

5 This article will discuss the following: (B) a contextual overview of the relevant film archives; (C) an overview of the copyright regime of archival practices; (D) the Oppressive sub-regime found in Archive 1; (E) the Pragmatic Compliance sub-regime found in Archive 2; and (F) the Active Agency sub-regime found in Archive 3.

B. A Contextual Comparison of the Archives

6 Ethnographic research was conducted at three film archives, two in the UK (when the UK was still in the EU) and one in the Netherlands. In total, just under 6 weeks was spent across the three film archives.

film works in the collections of Film Heritage Institutions in the context of education and research (European Audiovisual Observatory, 2017), 32.

3 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, referred to in this thesis as the "DSM Directive".

4 For example, Guibault and Schroff have advocated for Extended Collective Licensing, see Lucie Guibault and Simone Schroff, Extended Collective Licensing for the Use of Out-of-Commerce Works in Europe: A Matter of Legitimacy Vis-à-Vis Rights Holders (2018) 49(8) *IIC*, pp. 916-939; Borghi and Karapapa have advocated for a copyright exemption when the work is no longer commercially exploited, see Maurizio Borghi and Stavroula Karapapa, *Copyright and Mass Digitization* (OUP, 2013); Dusollier has advocated for "re-aligning" economic rights with the actual exploitation of the work, see Severine Dusollier "Realigning Economic Rights With Exploitation of Works: The Control of Authors Over the Circulation of Works in the Public Sphere" in Bernt Hugenholtz (ed.) *Copyright Reconstructed: Rethinking Copyright's Economic Rights in a Time of Highly Dynamic Technological and Economic Change* (Kluwer Law International, 2018); see also Stef van Gompel and P. Bernt Hugenholtz The Orphan Works Problem: The Copyright Conundrum of Digitizing Large-Scale Audiovisual Archives, and How to Solve It (2010) 8(1) *Popular Communication*, pp. 61-7; and European Copyright Society "Answer to the EC Consultation on the review of the EU copyright rules" (European Copyright Society, 2014).

5 See Elizabeth Shove, Mike Pantzar and Matt Watson *The Dynamics of Social Practice: Everyday Life and how it Changes* (SAGE Publications, 2012), 52; *see also* Norbert Elias Technicization and civilization (1995) 12(3) *Theory, Culture and Society*, pp. 7–42, 25.

The length of time at each archive varied according to what the film archive was able to accommodate logistically. Below is a table that places the archives in their wider contexts. The archives are anonymised with a number.

Comparison of Archives	**Oppressive Sub-Regime Archive** **(Archive 1)**	**Pragmatic Compliance Sub-Regime Archive** **(Archive 2)**	**Active Agency Sub-Regime Archive** **(Archive 3)**
Archival Scope	Regional in the UK	National in the UK	National in the Netherlands
Nationality	UK	UK	The Netherlands.
Size of Archive	Small – approx. 10 staff	Very large, approx. 450- 500 staff members across the organisation (not all involved in curation & film archiving)	Large, about 165 staff members across the organisation (not all involved in curation & film archiving)
Funding	Received some national funding, but this very limited. The majority of the archive's funding is raised through commercial revenue of commercial licensing or digitisation projects for clients	Government funding, funding from TV broadcasters; and Lottery funding. Also obliged to self-fund some of its income (approx. 30%).	Government funding; Amsterdam funding; and several local and regional funds; and some private foundations. Also self-funds some of its income.
Collection size and nature	Approximately 75,000 films and TV programmes held in various formats, including a regional TV collection	Has the world's largest collection of screen heritage. Its film collections include approximately 20,000 silent films; 60,000 fiction films, including features; 120,000 non-fiction films, approximately 750,000 television titles; and audio and video recordings of Parliamentary sessions and proceedings. Approximately 12.5% of all daily broadcast TV is captured and stored in the Archive.	The national film archive of the Netherlands, and its archive holds approximately 40,000 films, and is a combination of many different film works. It is therefore the largest film library in the Netherlands.
When founded	Founded in early 2000s	Founded in 1930s	Founded in early 2010s, bringing together a number of existing Dutch film institutions.
Film institutional memberships	Member of the Film Archive UK ("FAUK") is the UK film organisation that comprises the national and the regional film archives.	Member of both FAUK, ACE and FIAF. Federation of Film Archives ("FIAF") is the leading international body for national film archives (approx. 95 film archives globally).	Member of FIAF and ACE. Association of European Cinematheques ("ACE") is an affiliation of 49 European national and regional film archives, that aims to protect and advocate for film heritage.
Archival projects likely to have involved out-of-commerce works	Part of the UK's Unlocking Film Heritage programme, which ran between 2014 and 2018. It digitised 5,000 film titles from the national archive and an additional 5,000 titles from the regional archives. It is very likely that this project made many out-of-commerce works available to the public, as the majority of these films had been "unknown and unseen for decades."	Part of the Unlocking Film Heritage programme. Also led the *Missing Believed Wiped* campaign, which aims to locate historic UK TV programmes that there is no known copy of, to share with the public. It is highly probable that any such works would be out-of-commerce works.	Part of the "Images for the Future" project which ran with other Dutch partners from 20017 to 2014. It digitised hundreds of thousands of hours of film, audio, and more than 2 million photos.
Contributes/ contributed to the EU's Orphan Works Database of the EUIPO	No	Yes, prior to UK leaving the EU – but far fewer than the Active Agency Sub-Regime Archive	Currently has listed 780 orphan works on the Database (although many are still being processed by the archive)

7 None of the film archives had a specific, formal copyright or intellectual property policy. At all three, staff had someone to ask specific copyright questions to or with, but how this was coordinated varied. The general copyright culture in each of the film archives was observed to be collaborative and supportive, with no shaming of staff or practices being observed or commented on by participants.

Copyright Sub-Regime	Official written IP/ copyright policy	Staff able to ask copyright questions to someone in the organisation	Official staff training related to copyright	Copyright specialist within the organisation (self-identifying)
Pragmatic Compliance	No	Yes, via email and in person and at copyright clinic sessions	Some staff	Yes
Oppressive	No	Yes, more informally discussed as a group	None that was commented on or observed	No
Active Agency	No	Yes	Some staff	Yes

8 Individuals at each of the three archives were positive about the concept of out-of-commerce works, viewing it as potentially very beneficial for film archives. It was commented by many of the individuals that they believe there are many out-of-commerce works in the archives; and that the concept is well aligned with the desire to make these films publicly available. To illustrate, a participant commented that they believe that there, "would be loads of out-of-commerce films in the archive; and it could maybe help raise the archive's profile if they were used." It was also commented that the out-of-commerce works, "could be used for anything if it works well... [it could be] very useful for us, as a large chunk of our remit is making stuff available for educational and public access."

9 A meaning of making films available for public access was strongly intertwined with the narrative of out-of-commerce works, and it was observed that they were viewed as potentially very beneficial for enabling public access. It was observed from the list of films in their collections and the discussions generally that many of the films appear to be out-of-commerce, as they are thought not to be available anywhere else, according to the curators. Likewise, another participant noted that their organisation is hopeful that the out-of-commerce works scheme could be "very useful", even more so if "it allows more public engagement and for us to be able to give more access; and raise more money, as we are a charity."

10 Another participant noted that out-of-commerce works could potentially be a way of "supporting the archive" financially and of "building awareness of the archive". They hope it will help with future commercial sustainability for the archive, which is "particularly important" for film archives that are charities. This is an interesting comment given that out-of-commerce works cannot be commercialised, which this participant understood, and suggests that the film archives anticipate that making these works available to the public will attract more viewers. This in turn could attract more commercial interest in the archive's collection. This notion could offer reassurance to film archives wishing to prioritise commercial activities to support their limited funding, and thus do not view making available out-of-commerce works as a financially viable activity. If this were viewed as attracting additional revenue over a longer period of time, this could be a more attractive option.

C. A Proposed Copyright Regime of Archival Practice

11 Practice theory is a theoretical framework employed by a variety of disciplines, that focus on the practice of a task. This article utilises the understanding of practices as being made up of materials, meanings, and competences, as set out by Shove et al:

> *materials – including things, technologies, tangible physical entities, and the stuff of which objects are made; competences – which encompasses skill, know-how and technique; and meanings – in which we include symbolic meanings, ideas and aspirations.*[6]

12 Links are made between the elements that constitute a practice, as well as between the multiple practices that individual elements form parts of.[7] Shove et al.

6 Elizabeth Shove, Mike Pantzar and Matt Watson *The Dynamics of Social Practice: Everyday Life and how it Changes* (SAGE Publications, 2012),14.

7 Shove, Pantzar and Watson (n.7) 36-37.

also introduce the concept of the "proto-practice",[8] meaning a potential new practice in which the links between the meanings, materials and competences has not yet taken place. That is, a reproduced practice has not yet been formed from these constituent parts. New practices "exploit" the connections made by practices that already exist.[9] In addition, these new interactions are "transformative" in that the materials, competences and meanings are "mutually shaping" and impact on one another.[10] Film archives making out-of-commerce works available can be viewed as a proto-practice: as there is a desire from the film archives to make these works available; there are many out-of-commerce works in the film collections and the materials to digitise them and place them online; and there are individuals with specialist knowledge concerning copyright law and out-of-commerce works.

13 In this sense, the needed constituent parts to form a practice of making these works available to the public are present. However, it is not as simple as willing the practice into being.[11] Practices need to recruit carriers to continue,[12] consequently there need to be individuals who are personally interested and committed to performing the practice, and engaging others in doing the same. From the ethnographic research, it is clear that there are individuals in the film archives who are keen to make these works available to the public.

14 Of crucial importance is how the new practice interacts with existing practices. If a new practice demands too much time that is allocated for existing practices or uses too many resources currently allocated to other practices, it is unlikely to be taken up by many practitioners. There are demands on time, resources, and staff at the archives, with significant backlogs of processing, cataloguing films and tasks. For this reason, the new practice of making out-of-commerce works available needs to fit within the current practices and demands, or it will not be performed.

15 The copyright regime of archival practices set out in this article considers how materials, meanings, and competences come together to form an individual practice; and how these individual practices come together to create a holistic network or web of overlapping practices and attitudes, which shapes decision-making and daily activities. This network of multiple or overlapping practices forms what is referred to in this article as a regime of practices.

16 "Meanings" is being used to mean the spoken, written, unwritten, explicit, and implied narratives that are present within the film archives. For example, copyright compliance and a desire to provide public access to the films are meanings evident in the ethnographic study. Materials are the objects that are involved in the practice. In this research, examples of materials include the films themselves, policy documents, and donor or deposit agreements. Competences refers to the technical skills, knowledge, and abilities of the individuals within the archive, such as knowledge of copyright law, and film restoration skills. It was evident in the ethnographic research that the competences, materials, and meanings are interwoven, and the existing archival practices rely on each constituent part.

17 Within the copyright regime proposed here, three distinct sub-regimes were apparent: the copyright as "Oppressive" regime; "Pragmatic Compliance" to copyright; and "Active Agency". These three distinct sub-regimes could be thought of sitting on a scale of strong copyright compliance motivated by copyright fear, to active resistance to copyright on the other end.

18 Each of the three archives within this research had an institutional approach that adhered to one of these regimes. Not all individuals within the archive adhered fully to the sub-regime of the archive to extent, but the overall adherence to the archive's institutional copyright regime was evident. This is likely the result of the power dynamics and dominant meanings in each film archive. The staff in the archives were keen to adhere to what was perceived as proper or correct legal compliance, including concern for rightholders and avoiding reputational harm.

19 The table below sets out the copyright sub-regimes found in the film archives; a comparative table is provided for ease of analysis.[13]

8 Shove, Pantzar and Watson (n.7) 24, 25.

9 Shove, Pantzar and Watson (n.7) 67.

10 Shove, Pantzar and Watson (n.7) 32.

11 Shove, Pantzar and Watson (n.7) 68.

12 Shove, Pantzar and Watson (n.7).

13 The data gathered during the ethnographic research was analysed using discourse analysis, which involves coding the texts, to identify emergent themes. The interviews were individually coded. They were coded to initially identify emergent themes and discourses (or meanings) of copyright, and other topics. There is subjectivity in this coding as the researcher is interpreting the meaning and significance of what was said or observed. The coding themes were chosen with the specific focus on out-of-commerce works. Coding themes:

Copyright fear/ wariness, Orphan Works Directive and orphan works, Specialist knowledge and roles, Non-commercial/ Commercial use, Out-of-commerce works definition, including cut-off date, Out-of-commerce works beneficial to film archive, Rightholders, CMOs, Reputational harm and risk, Copyright clearance , Copyright internal processes , Financial concerns.

Copyright Sub-regime	Materials	Meanings	Competences
Oppressive - Copyright is experienced as oppressive and restrictive on other activities. Strict legal compliance.	Contracts Policies (no formal copyright policy) Records spreadsheets and index cards Physical film materials and equipment	Copyright fear Copyright compliance Fear of reputational harm Strong concern for the archive's longevity Commercial licensing focus due to limited funding Public access Gatekeeping	Limited specialist copyright knowledge Avoidance of copyright activities deemed 'risky' Specialist knowledge of staff within their roles Record-keeping Liaising with rightholders Technical archiving skills (digitising, preserving, restoring, etc.) Fundraising skills Commercial revenue generating
Pragmatic Compliance - Copyright is restrictive, but more a logistical barrier than oppressive. Legal compliance is adhered to, with some limited exceptions where staff lack confidence or knowledge	Contracts Policies (no formal copyright policy) Records spreadsheets Internal documents and information memos to staff Emails containing information Physical film materials and equipment	Copyright fear (some staff) General copyright compliance Hesitant about legal compliance that is limited Fear of reputational harm Limited concern for the archive's longevity Public access Gatekeeping	Specialist copyright knowledge Avoidance of copyright activities deemed 'risky' Specialist knowledge of staff within their roles Record-keeping (historically lax) Liaising with rightholders Liaising with national government Technical archiving skills (digitising, preserving, restoring, etc.) Fundraising skills Commercial revenue generating
Active Agency - Copyright is restrictive, but not oppressive. Legal compliance to the extent that it is deemed necessary, and some active departure from copyright.	Contracts Policies (no formal copyright policy) Records spreadsheets Physical film materials and equipment	Copyright compliance that is balanced with professional judgement, some active departure. Fear of reputational harm Confidence in the archive's longevity Public access Gatekeeping	Specialist copyright knowledge Specialist knowledge of staff within their roles Record-keeping Liaising with rightholders Liaising with national government Technical archiving skills (digitising, preserving, restoring, etc.) Fundraising skills Commercial revenue generating

20 Within the meanings identified in the copyright sub–regimes of archival practice, there are both dominant meanings and subordinate meanings present. The term "dominant meanings" refers to what "should" or "ought to be" done: the meanings that set standards of best practice. "Subordinate meanings" are meanings that are exhibited by some individuals but are not the meaning held at the institutional level across the archive. It is important to acknowledge the existence of these subordinate meanings as it is an over-simplification to state that all individuals within the film archives adhere to the organisational culture and dominant meanings of the archives.

21 For example, in the Pragmatic Compliance regime, there is a dominant meaning present that legal compliance and copyright compliance should be adhered to. In most of the observations and interviews, this appeared to be followed. However, in other team meetings it was observed that some legal compliance was limited, either because it had been "fudged", or because separate teams had control over supervising their own legal compliance. Therefore, what was observed to be happening in practice was a dominant meaning of general (but not complete) legal compliance, and a meaning of hesitancy around these areas of limited legal compliance.

D. The Oppressive Sub-Regime found in Archive 1

22 In the "Oppressive" copyright regime of archival practices, copyright is experienced as oppressive and restrictive on other activities. Strict legal compliance was prioritised over providing public access. This shaped archiving through the prohibition of any archival activities that could infringe copyright, for example reusing someone's film or making it available online. Copyright concerns had an overt effect on the choice of films made available on the archive's website, for filmmakers and students to reuse, and for commercial licensing. In this sense, copyright has a core orchestrating impact on wider archival activities.

23 Copyright orchestrates the archival practices considerably. Only the films with a clear and known copyright status were allowed to be reused. Also, copyright compliance led to a strong copyright fear within the regime. This in turn culminated in a practice of always re-seeking rightholder permission when access or reuse is requested by a third party, to avoid reputational harm. This practice limited the available films for reuse and public access.

24 It was accepted by the staff that the archive's desire to provide public access to material must be superseded by copyright concerns. This is a result of the fact that over-compliance is preferable to under-compliance regarding copyright, and as such there may be concern about using out-*of-commerce works in case they are actually in commerce or the rightholder objects.*

I. Meanings

25 The meanings observed in the Oppressive regime of practices were the following: copyright fear; copyright compliance; fear of reputational harm; a strong concern for the archive's longevity; commercial licensing focus due to limited funding; public access; and gatekeeping. Public access practices in particular were observed as a crucial part of the archives' daily functions.

26 Copyright fear and copyright compliance were dominant meanings, and it was viewed that copyright compliance would lessen the chance of reputational harm for the archive. For instance, A (a member of the archive) noted that copyright is a "nightmare, coupled with threat", and that "you are confined by copyright". Copyright fear and a strong meaning of legal compliance culminate in a risk-averse approach to reuse, with many films regarded as too complex to get copyright permission to reuse. This emphasises that concerns about the copyright status of some of their films prevent them from using them, and that it restricts the ability to allow reuse of materials.

27 There was also a conflict noted in the meanings of providing public access and of needing to generate revenue though generating commercial revenue from some of the collection. A participant noted that their fundamental goal of access therefore necessitates some commercialisation of the archive, "... but the archive needs to be able to provide access, so we need commercial revenue to keep going." It was therefore observed that commercial sales of films within the archive are a core practice by which the archive is maintained, and therefore how public access is enabled. The commercial activities and access activities are therefore part of the same practice. The nature of the specific archival collection particularly lends itself to commercial re-uses of these films.

28 A meaning of gatekeeping or protecting donors and rightholders was present, with the view held by the staff that the film archive has an ethical or moral duty to protect donors and rightholders. They were very cautious about what they allow to be done with the film material, as a lot of it is very sensitive or personal. A participant noted that "[y]ou have to be sensitive" about allowing the use of certain content, including amateur films with private moments such

as strip teases, etc. These are ethical issues that are seriously considered, alongside the copyright ownership. An overlapping of ethical and copyright concerns was observed in each of the archive, with copyright acting as a shorthand for wider legal, moral, or ethical concerns.

II. Competences

29 The competences observed in the Oppressive copyright regime of archival practices: limited specialist copyright knowledge; avoidance of copyright activities deemed 'risky'; specialist knowledge of staff; record-keeping; liaising with rightholders; technical archiving skills (digitising, preserving, restoring, etc.); fundraising skills; and commercial revenue generating.

30 Competences were observed to be held by individuals in specific roles, with individuals being highly specialised and knowledgeable about their specific roles. It was common for specific individuals to be deferred to for set tasks or topics. All individuals observed and spoken to have the ability and the desire to generate commercial revenue, and to prioritise commercial client projects. All individuals who encountered copyright decisions (either customer or public facing, or in charge of creating film projects) displayed avoidance of copyright activities deemed 'risky'. This was evident alongside a strong meaning present that, if in any doubt about the legality of something, it is best to avoid the use or activity.

31 W is the person who primarily deals with copyright; they are not a legal specialist and do not have a legal background. As W describes, knowledge and process have been built upon and established over time regarding copyright: "There's no particular protocol in place, we all just know what to do". W noted that, "[a] lot of the procedures are sensible and common sense. And lots is done on a case-by-case basis, so a stringent policy in place doesn't work for everything."

32 Record-keeping was regarded as very important. Digital files and physical files including index cards were all maintained. This practice appeared linked to the copyright fear discourse and overall strict legal compliance discourse, it was observed to generate a culture of strict adherence to rules and procedures.

33 They were involved in liaising with rightholders, donors and commercial clients, and had set internal norms for these interactions. Commercial clients were prioritised, as a result of the strong desire to generate income. This was also linked to competences in fundraising and commercialisation of their archive: they offer archival footage searches to potential clients as a way of obtaining income from licence fees. The focus on maintaining good relationships with clients was prevalent throughout all activities and practices in the archive, as reputational harm was perceived as likely to dissuade clients from licensing with them.

34 Also, there was an observed avoidance of activities regarded as 'risky' from a copyright perspective. As D (a member of the archive) noted in relation to a co-creation project on women using the archive's films: "I'll have to get them to choose way more footage than they'll need, so I can go through and say 'woah! Definitely not that one for rights!'"

1. Materials

35 There is also no formal written copyright policy. There is also no legal specialist, which was observed to correlate with strict legal compliance practices, as there was no desire to resist copyright. This contrasts with the Active Agency regime. D noted that "copyright is very important, [so we do] anything that makes us feel more confident, more comfortable." W commented that concerning copyright "[i]t's on a case-by-case basis. It's '*can I do this?*' We ask [person] and [person] if we have any questions."

36 As D also noted, "[w]e don't have a standard policy for copyright. But I'm the new kid on the block, so maybe I don't know. But it's all about procedure here, and we do this in a uniform way."

37 They have set contracts that they use with their clients, which was observed to provide legal reassurance. They struggle with lawyers from commercial clients trying to adapt their contract or remove parts, as they fear this could led to potential liability for them. D further commented that there is a: "uniform approach to contracts, written by a legal advisor/ IP person...We feel fully indemnified...We feel bullied a lot by lawyers from big companies, as they try to remove our indemnity clause."

38 They have clear policy documents, which are public-facing and available on their website. The policies, including access policies, are clear and aimed at providing detailed information to potential users, and to donors. As the archive is particularly focussed on revenue generation from commercial licensing, this practice seems linked to the fear of reputational harm to the archive, and a desire to be seen as legally compliant and rigorous.

2. A Key Issue in the Oppressive Sub-Regime: Funding Issues & Commercialisation

39 One of the significant materials lacking from the archives in order to make out-of-commerce works available is the required levels of funding. The archives face continually diminishing funds, and greater pressure from the government for them to be more financially independent. Many film archives, even those that receive national funding, are required to self-fund to some extent. For some film archives, they need to be almost wholly self-funded, as they receive only a small amount of national or public funding. As a result, they are hesitant to spend time and money on utilising out-of-commerce works, when Article 8 only allows them to do so for non-commercial purposes.

40 The Oppressive sub-regime archive is a UK regional film archive. The UK regional archives have developed in an "ad hoc" manner and have been considerably shaped by their funding situation and challenges.[14] Historically, regional film archives have suffered from a lack of funding from the UKFC when it was operational, as their agendas have not been aligned with the UKFC's funding agenda.[15] Kelly states that regional film archives in the UK "all supplement their income through project-based funding and commercial activity" and this activity is "high-risk, short-term and geared towards priorities set in accordance with external criteria".[16] She therefore concludes that this is "highly inappropriate for long-term management of screen heritage", and prevents the regional film archives from "attending to many of the basic collections management tasks that underpin widespread access."[17]

41 The archive in the Oppressive sub-regime in particular has a fundamental funding gap and has to prioritise commercial activities over non-commercial activities. From observing general conversation and from the interviews, it is clear that funding is a primary concern, and the focus therefore is on all activities that can generate income. It was commented in conversation between two staff members that it is a "month to month" worry about funding and being able to continue the archive. The fact that out-of-commerce works can only be used for non-commercial purposes is also deemed a significant concern for its usefulness:

> *[i]t's difficult, as we need to generate revenue, so the non-commercial uses for out-of-commerce works doesn't help with that. It's great from a public point of view, but the archive needs to be able to provide access, so we need commercial revenue to keep going.*

42 At all of the archives, it was commented and observed that due to both space and budgets, decisions have to be made as to which material is kept, and which material is to be prioritised for digitisation and access. This was an issue for the individual film archives to varying degrees. Backlogs of digitisation and preservation were observed at each of the archives. Shelves in the film vaults were stacked with material that is uncatalogued, yet to be accessioned, viewed, and digitised. The focus within the archives is therefore to manage this backlog before considering other less urgent projects and utilising the out-of-commerce provisions is likely to fall down the priority list.

43 One of the competences demonstrated by the archives was the ability to align their activities to the objectives of their funders, as a way of increasing their funding. The regional archives in particular need to adapt to the direction of the sector and the funders' requirements, to ensure their longevity. The archive in the Oppressive sub-regime has intentionally aligned their projects with the national film archive funder, as D commented: "[we] align our strategic objectives with what's going on in the film cultural sphere...If you're not aligned to them, you're counting yourself out...". This alignment to the activities of funders suggests that the regional film archives may be more likely to use Article 8 if the national film archives do. In other words, if national film archives lead the way in making use of out-of-commerce works, the regional film archives may do the same.

44 An interesting concept that arose at each of the three archives in multiple interviews alongside the issue of funding was the parallel need to therefore generate revenue through commercial revenue streams. This is complicated by the fact that each of the film archives is a registered charity (or local equivalent). Due to the severe funding issues, the Oppressive regime views commercial activities as having priority over non-commercial activities, due to necessity. In contrast, the other two sub-regimes have dominant meanings that public access non-commercial work should take priority. This difference in approach is a result of reduced funding in the Oppressive regime; as well as differences in categorisation of what is "commercial".

14 James Patterson, The National Strategy for Screen Heritage: A Personal View (2009) 6(2) *Journal of British Cinema and Television*, pp. 313-318, 316.

15 *Ibid.*

16 Ruth Kelly (ed.) "Strategy for UK Screen Heritage" (UK Film Heritage Group, 2007), 13.

17 *Ibid.*

45 Many of the commercially exploited films at the film archives studied were orphan works or public domain films, as they are easier to manage from a copyright perspective than works with a known copyright owner. Article 8 provides the ability to provide widened access to out-of-commerce films in their collections, but not to commercially exploit these films. Inherently, it seems that the out-of-commerce provisions sit at odds with the reality of daily archival practice and misunderstand the fundamental commercial roles the archives are required to play. Being unable to commercialise the out-of-commerce films, whether members of FIAF or not, does not address the funding gap that many archives face.

46 If a film archive's existence is at risk due to financial uncertainty, and by extension the livelihood of the individuals working within the film archive, provisions that focus on non-commercial use are unlikely to be regarded as a key priority. The regional film archives face the greatest financial uncertainty and are therefore more likely to adopt policies and projects that focus on commercial uses of the collection

E. Pragmatic Compliance Copyright Regime found in Archive 2

47 In the "Pragmatic Compliance" copyright regime of practice, copyright is experienced as restrictive on archival activities, but more a logistical barrier than oppressive. Overall, legal compliance is adhered to. This shaped archiving through the avoidance of archival activities that could infringe copyright, for example reusing someone's film or making it available online. Copyright concerns had an overt effect on the choice of films made available on their website, for filmmakers and students to reuse, and for commercial licensing. In this sense, copyright has a core orchestrating impact on wider archival activities. However, this regime differs to the one discussed above in that there is not an *absolute prohibition* on activities with an unclear copyright status, as some staff members are more willing to engage with them anyway.

48 Films with a clear and known copyright status were preferred for reuse, and some film titles are viewed as not able to be utilised due to copyright concerns. As was noted in the Oppressive regime, there is a practice of avoiding situations deemed too 'risky' from a copyright perspective. In the Pragmatic Compliance sub-regime, this presented more through a meaning of hesitancy around limited legal compliance, than a full prohibition. It was accepted by staff at this archive that copyright compliance is important, but there is not the same belief that over-compliance is better than under-compliance. There is hesitancy about legal compliance that is limited, however. It was also an accepted truth that the archive's desire to provide public access to material must be superseded by copyright concerns in some instances.

49 The archive has been a user of the EU Orphan Works Scheme (prior to the UK leaving the EU) and is able to undertake detailed and lengthy diligence to track down rightholders; demonstrating the high level of legal expertise of a small number of individuals at the archive.

I. Meanings

50 The meanings observed in the Pragmatic Compliance regime of practices were the following: copyright fear (some staff); general copyright compliance; hesitancy about legal compliance that is limited; a fear of reputational harm; limited concern for the archive's longevity; public access; and gatekeeping. Meanings of funding concerns and a fear of reputational harm were noted in the interviews with the staff. Copyright fear and copyright compliance were dominant meanings, and it was viewed that copyright compliance would lessen the chance of reputational harm for the archive.

51 There were a number of staff who were wary about speaking about copyright, and especially saying something "incorrect". It was common when speaking with people for them to comment in a similar way to T: "I'm not a lawyer and I don't really know much about copyright" and to state that there are other people who might be able to answer the questions better. T was also reluctant to discuss specific issues concerning copyright or rights clearance and made a comment at the end of the discussion that they would "have to go and brush up on the rights strand", implying that the conversation had made them feel unsure of their knowledge. Z also explained that people are "quite nervous" in the archive about copyright and about "saying things and sharing whether decisions worked". Z said that they personally used to be "hesitant" in relation to copyright but are not anymore. They commented that an "agreed, basic kind of approach" to copyright and rights is needed, but that this is difficult when there is misunderstanding and ignorance of copyright "across the board" within the archive.

52 Despite this copyright fear evident in some of the individuals, the overall copyright approach remains one of pragmatic compliance. This was due to the presence of a copyright specialist, which is not present in the Oppressive regime. This specialist individual provided reassurance and guidance to their colleagues, which lessened the depth of the copyright

fear present. It is common in the archival sector that individuals have specialist roles and knowledge, so this legal specialism is accepted and aligned with wider archival practice.

53 As was noted in the Oppressive regime, there is a practice of avoiding situations deemed too 'risky' from a copyright perspective. In the Pragmatic Compliance regime, this presented more through a meaning of hesitancy around limited legal compliance, such as in relation to orphan works. It was noted that the existing orphan works scheme is "trying to do too many things", and that the end result is "awkward", largely because the orphan works scheme does not work well with royalties, and that the film industry works on royalties.

54 It was noted across various observations and interviews that there is a discourse of copyright issues being considered at the end of projects, and not *holistically part of them*. During an informal project meeting between several members of the team, the project made for the next few months was examined. It was noted that "Rights" is at the end of this timeline with no specific date attached to it. K joked in relation to this that "...we're like the ugly cousins no one wants to claim...we're always forgotten about and put to the end". This sentiment was echoed in several other discussions and group meetings, that rights clearance is only considered *after* the other work has been completed, and not always as a cohesive part of it. This can lead to situations in which the rights clearance of a film became impossible, even after a significant effort had been made to physically repair and digitise the film.

II. Competences

55 The competences observed in the Pragmatic Compliance regime of practices were the following: specialist copyright knowledge; an avoidance of copyright activities deemed 'risky'; specialist knowledge of staff; record-keeping (which has been historically lax); liaising with rightholders; liaising with national government; technical archiving skills (digitising, preserving, restoring, etc.); fundraising skills; and commercial revenue generating.

56 Despite the lack of a formal copyright policy, there were clear practices observed and commented upon in the interviews, which indicated a specific individual, Z, who is consulted for copyright advice both formally and informally by others. Competences are embodied by key personnel within the archive, and thus archiving practices require coordination between those who have copyright competences and those who do not and who may be handling the management of the archive. There are a few team members who are consulted in relation to copyright. As was observed by a participant in relation to Z: "[Z is] a mine of information and [they] answer a lot of our questions, we send [them] a lot of questions all the time... [They are] great; [they will] just know something off the top of [their] head." Z is emailed and spoken to about copyright issues and queries by staff from other teams too, and other have commented that they are a "fountain of knowledge". It is therefore clear that certain members of the team are highly skilled in relation to copyright and others seek them out for information. A staff member, E, from another team in the archive, commented that

> *from my experience in the heritage sector, you have small pockets of people who understand copyright in-depth, and then there is a spectrum of understanding from everyone else. And everyone then asks those few people all the questions. Curators especially can lack this depth of knowledge.*

57 Copyright training sessions were only observed to be given to only individuals or teams deemed likely to 'need' it, presumably to reduce cost and staff time. These training sessions were a place for the individuals to ask questions and to share best practices with one another, as well as receive training and guidance from Z. These were very open, informal sessions led by Z in which Z was honest about areas the archive lacked clear processes or guidance on. This in turn was observed to enable the team to feel more confident in asking questions, as there was no culture or feeling of shame for anyone who lacked knowledge.

1. Materials

58 There is no specific written copyright or related policy that is followed within the archive, but there is an increasing internal focus on copyright compliance at the archive. For example, Z noted that there has been both an external and internal review of copyright processes and systems recently. This review consulted people across various departments to ask them whether they came across copyright issues often and where they look for information. From this review, functional issues, data issues, and technical issues were found. Some of these changes have been implemented, and some are ongoing. This internal review emphasises that strict copyright compliance has not been adhered to, and historically there has been a lax approach to compliance.

59 It was commented by Z that prior to internal changes in 2014, there was very little written down within the team regarding policies and procedures; and that historically there has been "anecdotal, subjective decision-making". Z noted that a lot of decisions are made during "informal conversations"; and often no record is kept of these. Z explained that this

subsequently made it very difficult to understand historic decision-making and rationales, especially when staff left. This has also led to historic legal and factual "misunderstandings" regarding rights ownership becoming clear upon investigation, regarding incorporating the Orphan Works Scheme. This evidences that historically copyright has not been a primary orchestrator of practices. This has changed in recent years, with the rise of copyright infringement litigation causing concern, and so copyright has been focussed on much more.

60 The material documents at the archive concerning copyright and licensing deals are not consistent across the archive's various teams and leave potential gaps in the distribution of knowledge, as some teams manage their own copyright research and copyright licensing, with the two teams "swapping notes" to share knowledge. It was noted by staff members that the archive's approaches and internal practices have sometimes later transpired to be incorrect. For instance, it was noted that the archive's internal guidance relating to Crown Copyright films was "incorrect".

2. Key Issue in the Pragmatic Sub-Regime: Reputational Harm

61 Reputational harm (both actual and perceived) to the archive and to the individual archivist was discussed in relation to copyright by many individuals across the archives. Any potential reputational harm to the archive was seen as very serious. Reputational harm was observed as having a very negative impact on the film archive in a financial and professional sense. This was viewed as likely to occur if the archive suffers from a reputation of being careless with copyright works, of not respecting rightholders, and of failing to comply with legal requirements. The focus on the relationship with rightholders was of key importance, as without rightholders agreeing to allow their material to be stored and used, the film archives could not continue.

62 Reputational risk is an issue that, from speaking to the participants, can be separated into a fear of harming relationships with four distinct groups: current or future financial donors; current or future donors of material to the collection; members of the public or users of the collection; and other CHIs or partner institutions. No individual or archive articulated the fear of reputational harm as having these four aspects, but they appeared through analysing the comments made. It was the potential reputational harm to current or future financial donors; and current or future donors of material to the collection that was spoken about by many of the participants. This fear of reputational harm is itself interlinked with on-going fears of funding and the continuing viability of the archive, as discussed above. The avoidance of reputational harm was therefore seen to be motivated by: the fear of legal action for any infringements; an ethical sense of duty and care towards rightholders; and a risk of rightholders ceasing to engage with the archive.

63 This fear led to avoidance of activities that were perceived as likely to lead to reputational harm. This avoidance of activities deemed to risk reputational harm was observed across the three sub-regimes and seemed to create a particular barrier for the Practical Compliance sub-regime. To illustrate, a participant commented that existing rightholder relationships will not be risked by utilising the out-of-commerce provisions, even if the works are eligible: "[w]e would never consider anything OOC if we were in contact with the rights holder(s), even if it would fit the bill."

64 Reputational harm and the relationship with rightholders are paramount to the individual archivists, and shapes access practices. As a participant commented: "reputation as an archive is really important". This is clearly evidenced through access practices, in that:

> *[a]ccess to material that is still in copyright is only open to rights holders (regarding their own material) and third parties who have acquired the rights holders' permission unless permission is not required such as under the in-situ exception.*

65 It is likely that they would adopt a similar approach with out-of-commerce works if they were to utilise them; seeking permission from rightholders and donors to do so, as a "courtesy". This could lessen the likelihood of film archives making out-of-commerce works available. On the other hand, rightholder concerns about Article 8 will be best addressed through close stakeholder dialogue. If the film archives are seen to be considering the best interests of the rightholders in their collections, this will strengthen these professional relationships and trust.

F. Active Agency Copyright Regime found in Archive 3

66 In the "Active Agency" copyright regime of archival practices, copyright is experienced as restrictive to archival activities, but not oppressive. There is legal and copyright compliance to the extent that it is deemed necessary, and there is some active departure from copyright. Crucially, legal compliance is adhered to the extent *deemed necessary and compatible* with its public access goals. This departure is based on professional judgement of the archivists.

This shaped archiving through the understanding that public access to films is of the utmost importance and that copyright law offers the archive opportunities to make use of their collection, as well as placing restrictions on its use. Whilst individual wariness of copyright was still present and was seen to restrict some individual curatorial activities, there was a wider institutional acceptance that there can be some resistance to copyright.

67 Some films with an unclear copyright status or no rightholder permission could not be made available to the public, but many films are made available, even without express consent. Only the films with a clear and known copyright status were allowed to be reused. Within the Active Agency regime, it was accepted by all individuals involved in the research that copyright compliance is important, but that this compliance must be balanced with professional judgment and with the view to providing public access.

I. Meanings

68 The meanings observed in the Active Agency regime of practices were the following: copyright compliance that is balanced with professional judgement, with some active departure; fear of reputational harm; confidence in the archive's longevity; public access; and gatekeeping. Copyright compliance and ethical practice is regarded as very important to the practices at the archive. As S noted regarding the archive's copyright approach: "...our policy is to respect the law. We are a public institute, and we take that seriously...We work with these issues on a daily basis and we're really respectful of that."

69 There was also a dominant meaning of expertise and professional judgement noticed across various issues and roles. Legal compliance is adhered to the extent deemed necessary and compatible with its public access goals. The archive only consults the sources it deems necessary during a diligent search, even if this means omitting sources that are legally required to be consulted. As stated by their legal specialist, the "sources are only consulted if they are relevant *even if they are mandatory according to law*" (emphasis made by the legal specialist themselves). The reason for omitting certain irrelevant sources is that it saves time, and therefore money, as otherwise this can be a cumbersome task. This approach demonstrates a focus on the law's intention, more so than its direct wording. Copyright adherence is therefore *balanced* with internal professional judgement, and there is some departure from copyright compliance.

70 This discourse is strongly correlated to the discourse of knowledge and roles being highly specialised across the archive. For example, a participant commented that "[e]ach person has a role in the film heritage circle. It is a finely tuned machine; every cog is critical". Many of the staff are reassured by F, the copyright specialist at the archive. Some of this practice was observed to be informal conversations and emails, as well as more formal delegation of responsibility for certain tasks. For instance, F is the primary individual for conducting copyright research; they note that, "...establishing the rights status (in or out of copyright, orphaned) or looking for rights holders, that's something that really only I do at the moment".

71 There was observed to be a widely accepted practice of relying on F for copyright guidance, as B noted: "[F] gives us the rules". C commented that for approximately 80% of cases it is clear what the copyright situation is, and for the remaining 20% it is "unclear, but [F] does those". Staff members from across the archive engage with copyright, but it is primarily F who manages "rights clearance" to obtain the necessary copyright permissions. This emphasises that copyright research and permission practices are, where a specialised individual is present, carried out almost exclusively by that person. This logically accounts for the absence of copyright training given to individuals across this film archive, as it appears that this is not viewed as essential.

II. Competences

72 The competences observed in the Active Agency regime of practices were the following: specialist copyright knowledge; specialist knowledge of staff; record-keeping; liaising with rightholders; liaising with national government; technical archiving competences (digitising, preserving, restoring, etc.); fundraising competences; and commercial revenue generating.

73 Historically, limited record-keeping and documentation occurred. M commented that when they joined the archive, there was a "huge backlog" of registration of contracts for acquisitions, and consequently these acquisitions were not registered anywhere. M noted that they therefore were unsure "what rights/licences were agreed upon, or the duration". M was part of the efforts to clear this backlog, and therefore "I really got to know how these contracts work".

74 Understanding the copyright position of a film is only possible with accurate and sufficient information about the film. B noted that fully cataloguing a work in their records "can take a long time, up to **10 years** for the result" (emphasis added). This length of time is due to an issue with incorrect IDs for the films, and a lack of information about the films. They consequently must "look down different routes and

speak to the public", to find more information. Due to these complexities, the research into some films is "on the back burner" and remains an ongoing task.

75 Furthermore, B noted that this is complicated by the fact that they have a "very little limited budget now" at the film archive. They noted that this significantly impacts the film restoration activities, and that they are consequently "very selective now" about which films are taken in and restored. In this sense, decisions and archival practices are influenced by what is economically viable; and therefore, often choose to prioritise the films with either the greatest national significance, or the films with a stronger chance of generating commercial revenue.

1. Materials

76 There is no formal copyright policy, as F commented:

> *[t]here are no policies as in written manifests or anything like that. But everybody within the organisation is (made) aware that copyrighted material cannot be used without the proper clearance. In case of doubt, colleagues usually ask me. Especially when in doubt about the applicability of copyright exceptions...*

77 B noted that the archive has adopted an approach of first "clearing copyright", before deciding whether to restore the film, as there is a lack of money (and spending the considerable money to digitise a film that cannot be used commercially for copyright reasons is viewed as economically unviable). This demonstrates how copyright impacts upon curatorial choice and archival practice. B noted that archivists do not want to be too concerned about copyright and commented that once the copyright research for a film has been completed "I try not to think about it too much" after doing the research. This is another example of copyright orchestrating archival practices, as it shapes which films and collections the archive chooses to focus on in their work projects.

2. Key Issue for the Active Agency Sub-Regime: The Difference Between "Commercial" or "Non-Commercial" Use

78 The issue of whether a particular use is "commercial" was a significant concern for all of the archives. This issue was regarded as essential for the successful incorporation of Article 8 by the archives, as a lack of clarity on this renders Article 8 ineffective. Uses such as research and education were generally viewed by the participants as non-commercial. One individual noted: "[s]ome things are clearly commercial and some things are clearly non-commercial, and others on a sliding scale, depending on who you talk to as well". This recognises the subjectivity in determining whether a work is commercial or non-commercial, and that people within the same archive can hold differing views on this.

79 Likewise, there is a meaning that views all of the archive's own activities as non-commercial, as all revenue generated goes back into supporting the archive's public access mission, and many film archives are charities. That said, what is viewed as non-commercial might be different when a member of the public wants to carry out a similar use of one of the archive's films. A highly contextual approach to the meaning of commercial and non-commercial was observed. When the archive itself was the copyright user, individuals within the organisations commented that they then tended to interpret the meaning of commerciality differently to when charging commercial clients. This seemed to correlate to the belief at the archive that all of their activities are inherently non-commercial.[18] The archive in the Active Agency sub-regime in particular regards all of their activities as non-commercial, as they are a non-profit organisation:

> *"[w]e are an archive, we are a museum; commercial is where you make a profit. Everything we make goes back into the funds to keep us going, so we make no profit." There is a difference of approach when discussing the reuses of the films by clients, with a tendency towards assuming these will be commercial. A participant at the archive regarded academic and educational uses as most likely non-commercial, but "I consider some of it as commercial".*

80 In the Pragmatic Compliance sub-regime, the view was likewise shared that, in theory, all of their activities are non-commercial: "[n]othing the [archive] does makes a profit as it all goes back into the institution...In some ways, we could say that everything we do is non-commercial". However, in practice it was noted that this view is not held as strongly or boldly as in the Active Agency sub-regime; and in reality, great caution is exercised in uses that could be viewed as commercial. As Q noted, non-commercial use is when "no one is making any money at all – is the simple answer".

18 The FIAF Code of Ethics: "3.1. Archives recognise that the materials in their care represent commercial as well as artistic property, and fully respect the owners of copyright and other commercial interests. Archives will not themselves engage in activities which violate or diminish those rights, and will try to prevent others from doing so. 3.2. Unless and until commercial rights in items from their collection shall have expired or been either legally annulled or formally vested in their institution, archives will not exploit those items for profit." See. FIAF, "FIAF Code of Ethics" FIAF, "FIAF Code of Ethics" Available at: < https://www.fiafnet.org/pages/Community/Code-Of-Ethics.html> Accessed on 17th May 2019.

81 Advert revenue was a cause of uncertainty for some archives, as to whether it is non-commercial. As one individual in the Pragmatic Compliance sub-regime commented: "[i]t's becoming more difficult to distinguish between commercial and non-commercial use... [This situation has been] blurred with YouTube, as ad revenues on the side, are potentially quite a lot of money." Furthermore, sponsorship on websites was raised by one individual, who viewed advert revenue on YouTube as commercial, but was "not sure" whether sponsored content would be. This was because it was regarded as being "more difficult to distinguish when it's indirect revenue."

3. Second Key Issue for the Active Agency Sub-Regime: A Need for Cut-Off Dates

82 The Netherlands was the first country to implement the CDSM nationally. The UK chose not to implement the CDSM Directive prior to leaving the EU.[19] Neither the UK nor the Netherlands have a sufficiently representative CMO for film works. Therefore, Dutch film archives wishing to utilise Article 8 would have to use the fall-back exception.

83 In the Netherlands, there is also no official extended collective licensing scheme in place,[20] but various CMOs operate in the Netherlands who are affiliated to the official Association of Organisations for the Collective Management of Intellectual Property Rights (or "VOI©E" in Dutch).[21] VOI©E was set up in 2008 as a trade association for CMOs.[22] A voluntary Dutch CMO Quality Mark assessment for CMOs was subsequently established. A report into the effectiveness of the CMO Quality Mark found that:

> *[t]here is increased transparency for users where rates and licence terms are concerned. The CMO Quality Mark encourages CMOs to work together closely where possible and good progress has been made in this area... The CMOs have, for example, started a project to harmonize their financial affairs and reporting.*[23]

84 The collective management of rights therefore appears to have a strong position nationally in the Netherlands, despite the lack of extended collective licensing scheme or CMO for film. The CMO Quality Mark further protects rightholders. This prominence of CMOs in the Netherlands is something that has been achieved in recent years. Before this, within Dutch copyright implementation, "self-regulation has always been a core strategic choice".[24] Hoorn elaborates on this in detail, and notes that there are many instances of "a broad involvement of diverse stakeholders".[25]

85 Therefore, the trust and accountability of CMOs in the Netherlands appears to be especially well established, meaning that a CMO appearing for film there would have a strong chance of being representative. The strong culture of collective management of copyright in the Netherlands and the strong stakeholder dialogue presents a solid foundation for a CMO for films to appear in the future.

86 What was clear across the three film archives was a need for workable, clear definitions of "out-of-commerce works", which ideally included cut-off dates. This need becomes even higher for the EU countries without sufficiently representative CMOs for film works (or other relevant categories of works), as this means that the CHIs need to have the confidence to clearly distinguish which works should be deemed out-of-commerce. Cut-off dates give far greater clarity and allow CHIs to explain to rightsholders how these decisions have been made. As has been discussed, avoiding potential reputational harm through meaningful rightsholder dialogue is essential to the proper functioning of film archives, and cut-off dates can help to facilitate it.

87 Many at the archives believed that without a clear timescale at which a work could be deemed to be out-of-commerce, it would be too onerous to be used. The length of the cut-off was discussed, with differing suggestions given by those interviewed. It was noted by some that the rightholders are likely to

19 However, there is no barrier to the UK choosing to implement domestic legislation that mirrors in substance the provisions of the DSM Directive, including Art. 8. As it stands, there are no intentions within the UK government to implement similar changes to those that the DSM Directive will bring to the EU.

20 European Commission "Cultural heritage Digitisation, online accessibility and digital preservation Report on the Implementation of Commission Recommendation 2011/711/EU 2013-2015" (European Commission, 2016), pg. 39.

21 https://business.gov.nl/regulation/copyright/

22 Stichting Reprorecht, "Today's rights management the Dutch way: Transparency and governance in collective management of copyright and neighbouring rights in the Netherlands: a progress report" (Stichting Reprorecht, 2013) 8.

23 Stichting Reprorecht (n. 23) 12.

24 Esther Hoorn "Contributing to Conversational Copyright: Creative Commons Licences and Cultural Heritage Institutions" in Guibault, L. and Angelopoulos, C. (eds.) *Open Content Licensing: From Theory to Practice* (Amsterdam University Press, 2011), 209-211.

25 *Ibid.*

lobby for this limit to be as long as possible, if one is introduced. Time limits are therefore essential to the usability and proper functioning of out-of-commerce works within archival practice. A participant commented: "[w]e have heard proposals for twenty years, but that seems unrealistic. Likely the rights holders would collectively oppose such a proposal. But forty years could work".

88 In contrast, another participant suggested a time-limit of approximately "a couple of years … two-five years maybe with six months' notice of intention". It was further noted by this participant that before a time limit could be set, it would have to be established how long is required for an agreement to be made: "how long does it take to do a deal somewhere? Rightholders need to have the chance to negotiate with people." These suggested cut-off limits were therefore positioned to safeguard and respect the rightholder, not simply to benefit the film archive.

89 The individuals who discussed a cut-off date all related it back to negotiations with rightholders and agreeing a position that rightholders view as fair to them. This focus on the relationships with rightholders reiterates the desire to utilise out-of-commerce works for instances in which there is no likelihood of commercialisation, as opposed to encroaching on the right of the copyright owner to commercialise their work. This is aligned to the meaning of avoiding reputational harm present in each of the copyright regimes.

90 Different cut-off dates for different genres of film work were suggested, as different genres have their own unique commercial life cycles. A participant stated that the cut-off date chosen is likely to be influenced by the film distribution timeline, as films tend to have natural breaks in their lifetimes.[26] Z stated that during these natural commercial "breaks" it is unlikely the work could be considered out-of-commerce. These discussions further highlight the need for sector-specific guidance and definitions, as commercial film works do not follow the same commercial life cycles as works such as books.

91 Given the lack of clarity in the definition, it is unclear how many out-of-commerce works there are in the film archives. A lack of accurate figures weakens the incentive for film archives to invest time and money in bringing these works to the public, as it is unclear what the potential scale of the benefit is for the archive.

26 For example, a six-month break between theatrical release and DVD sales.

G. Concluding Remarks

92 For Article 8 to be beneficial to film archives in providing public access to out-of-commerce works, understanding the practices of copyright is crucial, as their current response to copyright is a likely indicator of the success of future copyright provisions. A theorical framework, based on empirical research, enables us to understand potential barriers to incorporation of legal reform, and to adequately address these barriers. Furthermore, it provides detailed evidence to policymakers and legislators regarding the barriers to successful incorporation into existing archival practices.

93 This article proposes a copyright regime of archival practice. The different sub-regimes of copyright in each archive establish how the various elements of archiving come together, and the meanings of copyright and legal incorporation. This contributes a theoretical framework for the understanding of how copyright shapes archival practices and decision-making. The three copyright sub-regimes of archival practice are: an Oppressive Regime; Pragmatic Compliance regime; and Active Agency regime. This article applies the copyright regime of archival practices to out-of-commerce works. In doing so, it examines how existing practices are likely to face barriers in the introduction of a new proto-practice of making out-of-commerce works available.

94 It seems likely that the archives that adhere to an "Active Agency" copyright regime, with a legal specialist that is knowledgeable and confident about copyright, are the most likely to utilise Article 8. This is due to this copyright sub-regime of displaying less copyright wariness and fear. It is also due to the fact that this regime involves copyright compliance balanced with professional judgement and departure from copyright when it is deemed too restrictive or too onerous, such as the departure from the Orphan Works Directive diligent search requirements.

95 It is suggested here that this copyright regime will be most aligned to making use of Article 8(2) in particular, as utilising the fall-back exception will require the film archive to have copyright confidence, and confidence that this action will not cause reputational harm with rightholders and donors, to do so. For film archives aligned to this regime in a Member State with a sufficiently representative CMO for film, it seems very likely that they would seek to liaise with the CMO to agree a non-exclusive licence. This is due to the same confidence that this action will not cause reputational harm with rightholders and donors, especially in countries with effective stakeholder dialogue.

96 Conversely, for archives aligned to the "Oppressive" copyright regime, it seems very unlikely that they

will be able to incorporate utilising out-of-commerce works into their practices. The current lack of clarity of terms including "commercial use"; "non-commercial use"; "out-of-commerce" and "customary channels of commerce" are likely to be incompatible with the meanings of strict legal compliance, copyright fear, and fear of loss of jobs if the archive closes. For this reason, it is unlikely that archives aligned to this copyright regime would feel able to utilise the fallback exception, as it will be deemed too high-risk.

97 There is more likelihood that they would consider utilising Article 8(1) if there is a sufficiently representative national CMO, as this places less onus on the archive itself to make copyright decisions, as the licensing process will be led by the CMO. That said, the strong meaning of fear of reputational harm with existing and future donors and rightholders could lead to the decision that agreeing non-commercial licences with a CMO would discourage rightholders from trusting the film archive and its motives.

98 The "Pragmatic Compliance" copyright regime is positioned between the Active Agency and Oppressive regime, as legal compliance is adhered to in almost all areas, with some limited exceptions where the staff lack confidence or knowledge. Its meaning of general compliance, hesitancy about limited legal compliance, and fear of reputational harm suggest that there is a lesser chance of utilisation in these archives than Active Agency regimes, but more so than Oppressive regime archives.

99 As there is general copyright and legal compliance, it is possible that film archives aligned to this regime will feel able to utilise Article 8(1) at least, as they have more legal clarity and the CMO will lead the process for them once a licence is agreed. However, it was noted in this regime, that there is some "mistrust" of CMOs. This relationship with CMOs would have to be strengthened considerably for Article 8(1) to be utilised by film archives. It could be that this mistrust stems from a lack of engagement with CMOs. With this mistrust in mind, it remains possible that Article 8(1) would be utilised.

100 Future research could apply the sub-regimes proposed here to a wider variety of film archives and CHIs, to test their generalisability, which would widen the scope of this framework. The author is very keen to hear from any researchers or cultural heritage institutions who are interested in testing or applying this theory more widely—and to improving its usefulness.

From Cyborgs to Quantified Selves

Augmenting Privacy Rights with User-Centric Technology and Design

by **Mark Fenwick and Paulius Jurcys***

Abstract: Transhuman enhancements – technologies that boost human capabilities – are everywhere: bodily implants, wearables, portable devices, and smart devices embedded in everyday spaces. A key feature of these technologies is their capacity to generate data from the user side and 'give back' that data to users in the form of personalized insights that can influence future choices and actions. Increasingly, our choices are made at the shifting interface between freedom and data, and these enhancements are transforming everyone into human-digital cyborgs or quantified selves. These personalized insights promise multiple benefits for diverse stakeholders, most obviously greater self-understanding, and better decision-making for end-users, and new business opportunities for firms. Nevertheless, concerns remain. These technologies contribute to the emergence of new forms of post-Foucauldian surveillance that raise difficult questions about the meaning, limits, and even possibility of privacy. As personal choice becomes increasingly dependent on data, traditional legal conceptions of privacy that presuppose an independent and settled sphere of private life over which an autonomous 'person' enjoys dominion become strained. Transformations in the practice of privacy are occurring, and we are experiencing the augmentation of a narrative of the protection of privacy rights of persons with a more situational, human-centered, and technology-driven conception of privacy-by-design. This article describes such privacy enhancing technologies and raises the question of whether such an approach to privacy is adequate to the complex realities of the contemporary data ecosystem and emerging forms of digital subjectivity.

Keywords: Cyborgs, Digital self; Quantified self; Personalized insights; Privacy; Surveillance; Transhumanism; User-held data; Data ownership; Wearables; Privacy-by-design; Privacy enhancing technologies

Recommended citation: Mark Fenwick and Paulius Jurcys, From Cyborgs to Quantified Selves: Augmenting Privacy Rights with User-Centric Technology and Design 13 (2022) JIPITEC 20 para 1

A. Introduction

1 The cyborg trope in modern fiction typically invokes a monstrous figure—an experimental fusion of flesh and metal—crafted by a demonic genius operating beyond the law.[1] Recall, for example, the tragic character of Yan in Ken Liu's short story, *The Good Hunter*:

> Every piece of me is built with the best craftsmanship and attached to my body by the best surgeons – there are many who want to experiment, despite the law, with how the body could be animated by electricity, nerves replaced by wires. They always spoke only to him, as if I was already only a machine.[2]

2 Our starting point is the claim that a future of technology-enhanced human machines is upon us. We are all—as Donna Haraway predicted in her seminal Cyborg Manifesto—'chimeras, theorized

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1 See William S. Haney, Cyberculture, Cyborgs and Science Fiction: Consciousness and the Posthuman (Rodopi 2006).

2 Ken Liu, The Paper Menagerie and Other Stories (Sage Press 2011) 102.

and fabricated hybrids of machine and organism, in short, cyborgs.'[3] At the very least, a transhuman future seems to be the clear direction of travel. And new technological developments such as edge computing, differential privacy, machine learning, and user-centric data models are about to materialize the notion of a digital or 'quantified' self.[4]

3 However, if Haraway captured the mood and trajectory of our transhuman future, she missed several essential details. She was half right—we are all becoming cyborgs—but half wrong in that the technological modifications surrounding us do not transform us into the magnificent human-machines of Liu's story. Instead, our fate is altogether more ambiguous. The transhuman of the twenty-first century is not the 'hybrid of machine and organism,' but the blending of the human with the digital. Furthermore, the transhuman of today is not the creation of a demonic genius operating outside the law but the co-production of the somewhat more banal figures of the software code and tech entrepreneur.

4 Here, we describe some of the vagaries of our transhuman future and ask what it means for our conceptions and practice of privacy. To explore these questions, we use transhuman enhancements—technologies that augment our human capacities by monitoring our condition or activities. Such enhancements are now everywhere, and they have become a defining technology of everyday life post-digital transformation. We focus on one feature of these technologies: their ability to generate personalized data that can be 'given back' to end-users and inform future choices. Several types of personalized insight are identified, and the effects of this process are described.

5 It is suggested that, in our transhuman future, the human and digital selves of the end-user are engaged in an elaborate dance as these personalized insights inform, structure, and—in some sense—determine the future choices of end-users. We will increasingly be defined by enhancements that deliver feedback functionality of this kind, and our identities will be constituted at the shifting interface between data and individual freedom. A critical anthropology of these new augmentations becomes necessary for thinking about the digital transformation and its effects, including data protection and privacy questions.

6 Our intention here is to focus on the ambiguous character of this shift: such technologies undoubtedly empower end-users in new and significant ways and introduce greater equality into the data ecosystem. Moreover, they offer new opportunities for businesses to add value by providing more personalized products and services that make data 'work' for end-users. However, these technologies simultaneously create new transhuman forms of surveillance, normalization, and control.

7 Moreover, if personal choice is made contingent on data in the way suggested here, what are the implications for concepts of privacy that presuppose an independent and settled sphere of 'private life' over which an autonomous 'person' enjoys dominion? Emerging forms of human-digital identity disrupt the meaning—and, perhaps, even the very possibility—of privacy, at least as traditionally understood. When our identity—who we are and whom we will become—has already spilled out into and been constituted by the global data network, does privacy need re-imagining? The last part of the article describes how such a re-making of privacy is already occurring around ideas of privacy-by-design and more user-centric models of data ownership. The article describes these evolving approaches and asks whether they are adequate to the dynamic realities of today's data ecosystem.

B. Transhuman Enhancements

I. Mapping Categories of Data and Data Sources

8 Transhuman enhancements are understood here as technologies that deploy sensors to collect personal data about users (either states or events), that are then aggregated, analyzed, and, in some cases, given back to end-users in the form of personalized data insights delivered via an app or other user interface.

9 Such augmentations are everywhere, either as stand-alone technologies or as one element in more complex devices. Consider data-collecting sensors in our cellphones, smartwatches, rings, headbands, or other types of wearables that measure daily steps, heart rate, sleep, glucose level, or many other vital parameters.[5] A second broad category is implants or

3 Donna Haraway, Simians, Cyborgs, and Women: The Reinvention of Nature (Routledge 1991) 150; Donna Haraway, When Species Meet (The University of Minnesota Press 2008).

4 See Deborah Lupton, The Quantified Self: A Sociology of Self-Tracking (Polity Press 2016); Paulius Jurcys, Christopher Donewald, Jure Globocnik and Markus Lampinen, 'My data, my terms: A proposal for personal data use licenses' (2020) Harvard Journal of Law & Technology Digest 1.

5 Kara Swisher, 'Amazon wants to get even closer. Skintight' The New York Times (27 November 2020) <https://www.nytimes.com/2020/11/27/opinion/amazon-halo-surveillance.html> accessed 29 September 2021.

patches placed inside or on the body's surface and monitor, document, and, potentially, correct medical states and conditions.[6] Third, portable devices, such as smartphones, typically have more wide-ranging functionality and better processing capacities because of an adaptable touch screen and processing power. Finally, there are devices located in our lived environments. For example, connected home devices (such as Alexa speaker, IoT sensors that monitor the locking of doors, or Furbo—a remote pet feeding and interaction device, etc.); at work (e.g., systems that monitor work-related activities or employees' COVID-19-related health and wellness data); and other spaces of everyday life (e.g., connected automobiles that record and monitor car usage and driving performance and offer semi-autonomous driving functions).

10 The focus here is on the capacity of these enhancements to collect, in real-time, accurate and otherwise unknowable data and for this information to be given back to end-users. The 'gift' of data is an increasingly important but often neglected aspect of the contemporary data ecosystem.[7] By way of introduction, it is helpful to begin by distinguishing the different stages in the life cycle of the data that such enhancements capture, generate, and distribute:[8]

- *Raw Data.* States of a person (e.g., body states such as heart rate, blood pressure, temperature) or events in a person's life (e.g., data on sleeping or driving such as speed, braking, acceleration, proximity to other vehicles) are detected by sensors located in the device. In general terms, a sensor can be defined as an instrument that detects some state or event in its environment and translates the seen phenomenon into a signal.[9] Crucially, a sensor detects the phenomenon but also measures and quantifies it. In this way, sensors can record diverse phenomenon: conditions, circumstances, events, transactions, attributes, or processes. A sensor's action is automatic and receptive—sensors do not watch or listen in any meaningful sense—but instead, they simply detect information in their environment and record that information.

- *Input Data.* Raw signals from sensors are then converted into digital data. This is achieved by signal conditioning, which converts the analog signal from the sensor into a form that can be converted to digital values, and an analog-to-digital converter to convert the conditioned sensor signals to digital values. This process of the conversion of analog signals into a digital form is typically referred to as *digitization.* As Jeremy Packer puts it, the breakthrough of digital media is that 'all of reality is now translatable'.[10]

- *Aggregated Data.* Input data is combined at scale by data-controllers, and data points from multiple sources are integrated to create vast datasets, i.e., Big Data.[11] Additional input data may be provided by end-users, such as identity-related data or information from other datasets that supplements and enriches the input data acquired via sensors.

- *Derived Data.* Data analysis derives various inferences—unintuitive insights—about individual users (e.g., behavior patterns, health conditions, or other knowledge) and populations. Such analysis employs increasingly sophisticated data analysis and AI that leverage the increased processing power of modern computing.[12] It is worth noting that many of the data collected from sensors by data-handlers are of no interest to the individual user. Technical data on product performance, for example, may well be vital for a business in developing and improving its products and services but is of little use or value to anyone else. However, some of the derived data is highly personal and of great potential interest to users.

6 See Bert Gordjin and Ruth Chadwick, Medical Enhancements and Post-Humanity (Springer 2008).

7 Paulius Jurcys, Christopher Donewald, Mark Fenwick, Markus Lampinen, Vytautas Nekrošius and Andrius Smaliukas, 'Ownership of user-held Data: Why property law is the right approach' (2021) Harvard Journal of Law & Technology Digest <https://jolt.law.harvard.edu/digest/ownership-of-user-held-data-why-property-law-is-the-right-approach> accessed 29 September 2021.

8 See Jeannette M Wing, 'The data life cycle' Harvard Data Science Review (2 July 2019) <https://doi.org/10.1162/99608f92.e26845b4> accessed 29 September 2021.

9 See Jacob Fraden, The Handbook of Modern Sensors: Physics, Designs, and Applications (Springer 2016); Jennifer Gabrys, Program Earth: Environmental Sensing Technology and the Making of a Computational Planet (The University of Minnesota Press 2016); Jennifer Gabrys, How to Do Things with Sensors (The University of Minnesota Press 2019).

10 Jeremy Packer, 'Epistemology not ideology or why we need new Germans' (2013) 10 Communication and Critical Cultural Studies 295, 298.

11 Rob Kitchen, The Data Revolution: Big Data, Open Data, Data Infrastructures, and their Consequences (Sage 2014).

12 Viktor Mayer-Schonberger and Kenneth Cukier, Big Data: A Revolution that Will Transform How We Will Live, Work, and Think (Mariner 2014).

- *Feedback Data.* This is the input data or derived data relevant to an individual user as it is presented back to that user by the data-handler. A primary goal of such feedback is actionable insights and personalized interventions that facilitate the end-user in improving their condition or behavior.

- *Destroyed Data.* The destruction or recycling of data is not considered here. However, it raises several important and challenging issues, most obviously whether and how data erasure is feasible. From a technical point of view, the question is whether 'absolute' deletion of data is implemented without leaving any trace of the data layer after deletion. From a legal and regulatory point of view, the latest data privacy regulations such as the EU General Data Privacy Regulation (GDPR) and California Consumer Privacy Act (CCPA) require data processors to keep a log of the data deleted upon the consumer request.[13]

II. Unlocking the Value of Data in a User-Centric Environment

11 An important consequence of the types of data and data life cycle described above is that the data stack can be 'unbundled' in any given use case, i.e., different entities and actors may be involved at different stages, creating a dynamic fluid ecosystem of various stakeholders. For example, the company producing the sensor may be different from the company performing the analysis of the aggregated data, which, in turn, is different from the company designing the interface that delivers the feedback data. Moreover, we have a technological infrastructure (hardware) layer, a platform (operating systems) layer, and an application layer (SaaS, databases, etc.). Finally, there is geographical complexity: markets and stakeholders are global, and actors from several jurisdictions are involved in storing and transmitting each layer of data. Taking this complex architecture of the data ecosystem, it seems desirable to create an environment where data sets are accessible to multiple stakeholders rather than locked into proprietary siloes. Furthermore, lessons of opening data in the financial services ecosystem in Europe (the EU Payment Services Directive II.) offer good reasons to believe such unbundling will only accelerate as the ecosystem develops in a particular sector, based on trends observed elsewhere in the technology sector.[14] However, much work is needed to create an infrastructure layer with shared interoperability and portability standards.

12 An effect of this unbundling is that different types of data can be anywhere and everywhere, involving multiple actors. The technological, organizational, and legal complexity of the contemporary data landscape is somewhat disquieting. Here, our focus is on one feature of these enhancements, namely their ability to deliver personalized data insights, i.e., the practice of creating personal value based on the data that individuals generate about themselves. Such personal value could be delivered to end-users in the form of applications via smartphones or some other user interfaces (e.g., a web page).

13 Much data—even data about individuals—is only of value in the aggregate of thousands of data points and is not valuable or meaningful to any individual. Data analysis typically focuses on populations, and the goal is not, primarily, an ex-post understanding of an individual event or person. Instead, much data analysis aims to develop a comprehensive portrait of an entire population or a class of events in aggregate. Nevertheless, even though much data is not meaningful for individuals and only makes sense in aggregate, there is always the possibility of personally relevant insights at an individual level. Modern data analytics and AI rely on ever-larger datasets to discern larger patterns, but these patterns can still be deployed to understand a particular case. Insights at the derived data layer can, for instance, be of enormous interest to the individual. Furthermore, this is where the possibility and potential of personalized data insights arises.

14 A combination of sensors acquiring personal data and data analysis modeling populations opens new business opportunities for data-handlers and services for individuals. A noticeable feature of the current data landscape is the rise of companies looking to make sense of data in this way as part of their overall data strategy and to deploy privacy enhancing technologies (PETs).[15] And, in an academic con-

13 For a review of some of the practical challenges raised by data disposal, see Deloittes, Data Destruction Survey Report (2020) <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/risk/in-ra-data-destruction-survey-report-noexp.pdf> accessed 29 September 2021.

14 See Clayton R Christensen and Michael E Raynor, The Innovator's Solution: Creating and Sustaining Successful Growth (Harvard University Press 2003); Josef Drexl, 'Connected devices: An unfair competition law approach to data access rights of users' in German Federal Ministry of Justice and Consumer Protection, Max Planck Institute for Innovation and Competition (eds), Data Access, Consumer Interests and Public Welfare (Nomos, Baden-Baden 2021) 477.

15 For a review of some of the key technologies see, Gwyneth Iredale, 'Top 10 privacy enhancing technologies (PETs) in 2021' 101 Blockchains (July 29, 2021) <https://101blockchains.com/top-privacy-enhancing-technologies/> accessed 29 September 2021.

text, there is some important work on the ethnography and anthropology of these technologies and the 'quantified selves' that such technologies and systems have produced.[16]

15 The general understanding of the value of personal data is most frequently approached from the angle of large technology companies: it is calculated that technology titans such as Facebook and Google are making approximately two US dollars per month from the data about each individual.[17] However, their business models rely on the value of the aggregate data of large groups of individuals, which is utilized to offer targeted advertisements to specific categories of individuals. For instance, the annual revenue of Google's Advertising business in 2020 was 147 billion US dollars.[18] A more challenging issue relates to these companies controlling both the supply and demand side of the advertising platforms which Google and Facebook have created.

16 But, what about the value of personal data to the individuals themselves? A recent study by Angela Winegar and Cass Sunstein from Harvard showed that individuals put a much higher price tag on the value of their data.[19] That empirical study showed individuals' increasing concern about how their personal data is used—something that authors described as the 'super-endowment effect.' However, we argue that the value of personal data should not be viewed from the transactional perspective—asking how much would I be willing to pay to have my data secure? Or how much would I like to receive if I sell my data to a third party?—but rather from the utility perspective. More specifically, to assess the value of personal data, we should ask, 'If I was able to have all the data that I have generated with me, how could I benefit from such data?'

16 Deborah Lupton, The Quantified Self: A Sociology of Self-Tracking (Polity Press 2016) and Deborah Lupton, 'How do data come to matter? Living and becoming with personal data' (2018) Big Data & Society 1.

17 Leonid Bershidsky, 'Let users sell their data to Facebook' Bloomberg (31 January 2019) <https://www.bloomberg.com/opinion/articles/2019-01-31/facebook-users-should-be-free-to-sell-their-personal-data> accessed 29 September 2021.

18 Megan Graham and Jennifer Elias, 'How Google's $150 billion advertising business works' CNBC (31 May 2021) <https://www.cnbc.com/2021/05/18/how-does-google-make-money-advertising-business-breakdown-.html> accessed 29 September 2021.

19 Angela Winegar and Cass Sunstein, 'How much is data privacy worth? A preliminary investigation' (2019) 42(3) Journal of Consumer Policy 425.

17 *Table 1* below indicates the main types of insights that might be gained from user-generated data. There is overlap between the various categories, but the point is to emphasize the potential of how such insights can be deployed, and generate value, across every aspect of our lives:

Table 1. Types of Personalized Data Insights

Knowledge	Bare facts about the condition or product/service usage of end-users based on sensor-generated input data. For example, wearables can deliver data on heart rates or sleep patterns, and an e-reader might deliver data on reading habits.
Unknowable Insights	Non-intuitive correlations and connections derived from the data that are unknowable to the end-user and yet are of great personal interest. This data can be normalized, i.e., contingent factors can be removed to provide an abstract yet clearer picture of a condition or event under standard, normal conditions, allowing more accurate assessments and adjustments.
Tips	Relevant suggestions and recommendations on how to improve performance based on analysis of personalized data .
Models & Anti-Models	Instructive, personally relevant examples—either good practice or bad practice—of other people's behavior based on the data.
Reminders	Relevant and timely notification and encouragement to implement advice to improve performance based on data. For example, enhancements designed for older patients might remind them to regularly take their medications.
Predictions	Bespoke predictions about likely future events derived from data.

18 From a technological point of view, some companies in Silicon Valley and elsewhere are currently working on new data ecosystems based on the so-called 'user-centric data model.'[20] In this new user-centric data ecosystem, individuals can collect their data from various sources such as wearables, connected IoT devices, and online activities (e.g., payments online, location history from Google Maps or watch history from one's Netflix account) in one single place—let's call it their 'personal data cloud.' Only the individual has access to their personal data cloud—think of it

20 See Jurcys et al (n 7).

as your very own data Dropbox with a pre-installed software 'robot' that helps normalize and integrate data collected from different sources.

19 What might an individual do with such data? How could we unlock the value from such data? The data collected in the personal data cloud represents the most accurate set of information about the individual. Instead, this data could be 'activated' by installing new applications which would bring value to individual users. Such apps would run locally (i.e., data never leaves an individual's personal data cloud). For example, if a person is a movie fan, there could be an app that provides recommendations based on watch history on different platforms (e.g., Netflix, YouTube, etc.) and available public databases (e.g., IMDB). Or if a person is an avid runner, there could be an app that augments one's calendar with public weather forecast data and turns off the alarm if it rains outside.

20 Those apps could simply provide insights based on the data in the personal data cloud. Third-party developers could also build apps augmented with algorithms that could be used to create predictions based on previous data. Such applications could ignite the emergence of personal AI—tools and resources that help individuals automate certain tasks based on the user-held data.

III. Individual and Societal Benefits of a User-Held Data Model

21 Advocates of user-centric approaches to data believe that this type of service enhances the capacities of end-users by giving them clear, actionable information that allows them to improve their performance in a specific arena of their lives, notably health, diet, work, or leisure.[21] The frictionless communication of feedback data holds out the promise of providing end-users with the means to make better choices in an increasingly complex and uncertain world.

22 Such improvements can occur either through conscious awareness of and reflection on relevant facts and a deliberate choice or via a more subtle—and, possibly, paternalistic—process of nudging.[22] On this optimistic view, actionable insights are a valuable resource that deepens our self-understanding and allows us to overcome illusions about superiority, self-attribution bias, or just pure complacency. The idea here is to move decisions from what the psychologist Daniel Kahneman calls from System 1 (our automatic, reactive brain) to System 2 (our metacognitive brain, with which we can consciously reason, analyze, and better manage our decisions).[23] We are given reliable, real-time information about ourselves. This helps better orient future action in that it is relevant. It forms the basis of future decisions: data fuels a deeper and richer self-understanding and better performance for everyone that brings benefits for all.

23 Consider data on a person's driving habits and the potentially positive impact of giving that data back to drivers. The overwhelming majority of drivers—over 90% in some studies[24]—believe that they are good drivers, in the sense that they are better than average. Moreover, the cost of road accidents, both in human and material terms, is exceptionally high.[25] Data insight mechanisms might provide actionable information that would enable drivers to be more aware of their deficiencies and improve their performance, making the roads safer. Information on a user's driving (involving all the above types of data insights) could be given back to them in a non-manipulative way that would help end-users achieve clear goals, namely driving more safely, avoiding accidents, and minimizing risks and costs. This would seem to be ethical if it is implemented transparently and with the user's consent. Individuals would be given a choice to opt-in to such services, avoiding any concerns about manipulation. Adopting a user-held data model could reduce the risks and liability that manufacturers of cars and car devices face. In this way, sensitively structured data insights can add value for multiple actors in the automobile ecosystem, not only drivers and car manufacturers but also insurance companies and public service providers, such as the ambulance service and police.

21 Natasha Singer, 'Technology that prods you to take action, not just collect data' The New York Times (19 April 2015) <https://www.nytimes.com/2015/04/19/technology/technology-that-prods-you-to-take-action-not-just-collect-data.html> accessed 29 September 2021.

22 Karin Klieber, Claudia Luger-Bazinger, and Veronika Hornung-Prauhaser, 'Nudging sustainable behavior: Data-based nudges for smart city innovations' XXXI ISPIM Innovation Conference: Innovating in Times of Crisis (7-10 June 2020) <https://www.researchgate.net/publication/345768043_Nudging_sustainable_behaviour_Data-based_nudges_for_smart_city_innovations> accessed 29 September 2021.

23 Daniel Kahneman, Thinking Fast and Slow (Farrar, Straus and Giroux 2013).

24 Ola Svenson, 'Are we all less risky and more skillful than our fellow drivers?' (1981) 47 Acta Psychologica 143–148.

25 Wim Wijnen and Henk Stipdonk, 'Social costs of road crashes: An international analysis' (2016) 94 (September) Accident Analysis and Prevention 97–106.

24 In addition to improved performance, actionable data insights also can reduce asymmetries in the information ecosystem and introduce greater transparency into social systems. In this way, data feedback can benefit everyone in society by redressing many asymmetries that have traditionally existed between information gatekeepers and ordinary people.[26]

25 Take the example of healthcare and the wellness industry. Historically, the healthcare system has operated as a closed and hierarchical system, having the hospital as the institutional hub and medical doctors as the primary gatekeepers of medical knowledge.[27] The boundaries of the system were clearly defined, and there were high barriers to entry. Information flow was hierarchical and linear, flowing *from* the expert physician (located in and authorized by the hospital) *to* the patient. However, because of digitization and expanded data insights, information flow is becoming more ubiquitous and flatter. A growing number of healthcare providers and startups are leveraging the developments outlined above to offer apps that provide a continuous personalized information service to patients and help them make better lifestyle choices, manage health conditions, or identify medical problems. In this way, the free flow of information combines with enhanced self-understanding to create positive feedback effects.

26 Finally, the commercial providers of personalized insights also stand to benefit from developing and deploying such services. A key factor in business success in a digital economy is the capturing and retention of consumer attention.[28] This is best achieved by delivering relevant products or services. Relevancy, in this context, refers to the fact that the products and services of a particular company matter to consumers.[29] Relevancy involves a positive attribution of meaning to the activities or experiences that the product or services facilitate—a product or service directly or indirectly enables actions and experiences meaningful for consumers. In this context, data insights can function as a powerful source of relevancy. Leveraging data in this way is now widely seen as one of the best ways to future-proof a business.[30]

27 Therefore, delivering the best possible user experience (UX) that attracts and retains most users is vital.[31] Consumer attention has always been limited, valuable, and scarce. However, what distinguishes the economy today is that technological advances have placed user attention at the very center of the economy and made an overwhelming amount of information available for strategically capturing that attention. In this way, consumer expectations and demands impact and drive supply. Data insights provide a powerful mechanism for capturing and retaining user attention and can become a crucial site of differentiation in the attention economy. Such services offer the attractive possibility (for end-users) of a better UX, better decisions, and a healthier life. Moreover, it points to the shared interest that both consumers (because it empowers them) and businesses (because it offers them a powerful means to differentiate themselves from competitors) have in promoting personalized insights.

C. Mapping Our Transhuman Future

28 The emergence of transhuman enhancements and user-centric technologies offers hope for more transparent and equitable data practices. Nevertheless, concerns about these enhancements remain.

I. From Surveillance to Control

29 In thinking about the broader meaning and implications of these technologies and services for an understanding of privacy, an obvious starting point are debates around surveillance, normalization, and control, and the loss—or, at least, the complica-

26 Mark Fenwick, Joseph A McCahery and Erik PM Vermeulen, 'Will the world ever be the same after COVID-19: Two lessons from the first global crisis of a digital age' (2021) 21(1) European Business Organization Law Review 1–21.

27 Michel Foucault, The Birth of the Clinic: An Archaeology of Medical Perception (Vintage 1994).

28 Celis Bueno, The Attention Economy (Rowman & Littlefield 2017); Timothy Wu, The Attention Merchants: The Epic Scramble to Get Inside Our Heads (Alfred A. Knopf 2016).

29 Mark Fenwick and Erik PM Vermeulen, 'The new firm: Staying relevant, unique and competitive' (2015) 16(4) European Business Organization Law Review 595–623; Mark Fenwick, Joseph A McCahery and Erik P M Vermeulen, 'The end of 'corporate' governance: Hello 'platform' governance' (2019) 20(1) European Business Organization Law Review 171-199.

30 Aaron De Smet, Chris Gagnon and Elizabeth Mygatt, 'Organizing for the future: Nine keys to becoming a future ready company' <https://www.mckinsey.com/business-functions/organization/our-insights/organizing-for-the-future-nine-keys-to-becoming-a-future-ready-company> accessed 29 September 2021.

31 Ann Cavoukian, 'Privacy-by-design: The seven foundational principles' Information and Privacy Commission of Ontario <https://www.ipc.on.ca/wp-content/uploads/resources/7foundationalprinciples.pdf> accessed 29 September 2021; Steve Krug, Don't Make Me Think (New Riders 2005).

tion—of personal autonomy in contemporary data settings. The proliferation of wearables, IoT, and all types of sensors across diverse fields marks a shift in the dominant forms of observation and information acquisition post-digital transformation. Specifically, there is a shift from bounded, purposeful, and discrete forms of surveillance and information acquisition to 'always-on' data collection across all aspects of everyday life.[32] In this respect, surveillance breaks out of the confined disciplinary spaces described by Michel Foucault and becomes ubiquitous.[33]

30 On Foucault's account, surveillance, normalization, and control primarily occur in the bounded institutional spaces of the school, the factory, the clinic, and—most famously—the prison (Jeremy Bentham's 'Panopticon').[34] Today, however, surveillance, normalization, and control occur everywhere and at any time across all areas and aspects of a person's life.[35] This thought—the unbounded and ubiquitous character of contemporary forms of surveillance—constitutes the standard development of the Foucauldian account.[36] However, what has not received the same degree of attention is how data increasingly flows back *to* the individual *from* data-controllers, and that individual choice is heavily implicated in contemporary forms of surveillance.

31 This is where an observation of Giles Deleuze made in the context of his of Foucault became relevant. A feature of what Deleuze characterized as 'societies of control' is that across many spheres of life, we are presented with more freedom, but this freedom has a deeply ambiguous character.[37] Take, for example, working from home during the COVID-19 lockdown. This involves a new form and degree of freedom, at least compared to working in the enclosed space of the office or factory. However, a Deleuzean account of such freedom would emphasize how this new freedom creates a different kind of responsibility—understood as an obligation or burden—in every moment of our lives. In one sense, it is pleasant to work from home (most obviously, we can control our own time), but the effect of such responsibility is that work starts to intrude upon *all* our time. We must be constantly aware of and sensitive to how much work we are doing (or not doing) and be responsive to the demands of work as and when it arrives. For instance, we are expected to respond to emails promptly (i.e., within minutes, rather than hours), as notification functionality (a form of feedback that informs us when we have received a message) becomes ubiquitous. While 'freed' from the enclosed Foucauldian workspaces of the past, the demands of work come to intrude upon and dominate our whole lives, and the traditional separation of work and 'free' time is eroded.

32 Deleuze's observations about freedom as a form of control provide a useful starting point for thinking about the ambiguous character of technological enhancements and personalized insights. We deploy such augmentations to improve ourselves, but in doing so, we consent to and embrace a curious mixture of empowerment (ownership and better choices) *and* control (the pressure of being constantly monitored and being subjected to the discipline and demands of a new form of data-driven normalization). Empirical studies show how users often experience joy and frustration with such functionality.[38] Personalized insights improve our self-understanding and orient, facilitate, and nudge our future actions. In a real sense, this enhances our autonomy, but these technologies also come to define the choices we make and the horizons and scope of personal freedom.

33 Personalized insights make an endless demand of us, and this demand creates new forms of subjectivity and subject. Data insights come with expectations attached—such information makes either an explicit or implicit claim—typically to change some aspect of our behavior and to become more than who we currently are, namely a safer driver, a healthier person, or a better golfer. Such technologies aim to put us to work in the pursuit of our self-improvement—they take the form of a demand to unleash some untapped potential within ourselves and become more than who we currently are. Dissatisfaction with the present—an unsatiated

32 David Lyon, The Surveillance Society (Polity Press 1994).

33 Stefan Poslad, Ubiquitous Computing: Smart Devices, Environments, and Interactions (Wiley 2011).

34 Michel Foucault, Discipline and Punish (Penguin 1979).

35 Zygmunt Bauman and David Lyon, Liquid Surveillance (Polity Press, 2013); Lance Whitney, 'Data privacy is a growing concern for more consumers' TechRepublic (17 August 2021) <https://www.techrepublic.com/article/data-privacy-is-a-growing-concern-for-more-consumers/?utm_source=dlvr.it&utm_medium=linkedin#ftag=RSS56d97e7> accessed 29 September 2021.

36 Shoshana Zuboff, The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power (Public Affairs 2019).

37 Gilles Deleuze, 'Postscript on the societies of control' (1992) 59 October 3–7; Gilles Delueze, 'Having an idea in cinema' in Eleanor Kaufman & Kevin Jon Heller (eds), Deleuze and Guattari: New Mapping in Politics, Philosophy and Culture (The University of Minnesota Press 1998) 14, 18.

38 Deborah Lupton, 'How do data come to matter? Living and becoming with personal data' (2018) 5(2) Big Data and Society 1-18.

demand for self-improvement—becomes the default position of this mode of being-in-the-world.

34 In short, there is something paternalistic about this process. Feedback data is a gift—albeit a gift that we are paying for—but it is a Maussian gift—in the sense that it creates a continued obligation on the part of the recipient to reciprocate by behaving in the right kind of way.[39] Not only with our continued subscription to the data insights service, but reciprocity in the form of an on-going choice to submit ourselves to the insights and claims of the data.

35 Therefore, a defining feature of our contemporary transhuman identity is a growing dependency on the data and the quantified self that is constituted by that data delivered to us in a continuous, endless stream of demands. Personalized insights function as the new super-ego of a post-digital transformation world.

36 In this way, our sense of identity becomes a co-production of the human and the digital. In an important sense, we outsource our identity to data providers, and a digital identity is given back to us. This digital version of ourselves then blends with our real identity to the point where the border and differences between the real and the digital become increasingly difficult to discern. The boundary between 'us' and the 'data about us' becomes blurred, as does the line between 'who we are' and who 'we should be.' As such, we have become increasingly dependent on these enhancements and their demands over us. They become part of our lives and part of who we are and whom we will become.

37 Moreover, although we always retain a certain amount of residual freedom and control, the coders and designers of these systems exert a significant influence in setting the terms of our engagement with the data. We identify with the feedback and become that person. We are becoming quantified selves—human-digital cyborgs, if you prefer—as a direct consequence of the ubiquitous and insistent presence of the always-on enhancements, the judgments they deliver on us, and the demands they make.[40]

38 The pressure of transhuman enhancements is incessant and occurs across multiple dimensions of our lives. Significantly, multiple sources provide these services—most of whom are now private (and not public) actors. The vast privatization of surveillance technologies raises the costs and possibility of democratic oversight and transparency.[41] Moreover, contemporary transhuman identities are fragmented, and unlike more spatially bounded forms of Foucauldian normalization, we are subject to activity-specific standards. A fractured or blinkered perspective on our lives is central to the very logic of the enhancement.

39 As subjects, we are increasingly fractured but also rendered incomplete—in need of technological enhancement and in need of the actionable insights that such enhancements provide. Of course, this gives us more opportunities to get better at things that matter to us, but this process also creates a permanently incomplete and dissatisfied identity. We are never finished with anything. We never become the better driver, the healthier person, or the improved golfer that is promised or, at least, placed before us as the ideal. We submit ourselves to limitless postponement, deferral, and a state of permanent aspiration *and* dissatisfaction. The alluring promise of the enhancement is never fulfilled. They sell the fantasy of self-improvement and closure when their actual effect is to leave us perpetually disappointed and without the possibility of satiation and the closure or completion that such satiation might bring.

40 The companies providing these services are becoming masters of delivering a UX that captures our attention and connects us to the endless drip of information that they provide.[42] Having relevancy becomes a powerful mechanism for turning us against ourselves. We identify with the person that the data insights offer us—our quantified or digital self defines what we do and ultimately how we think about ourselves and who we are. We do not necessarily become different people, but these insights judge us and intrude on who we are and how we think about ourselves. We outsource our identities, or at least our human and digital selves interconnect in complex and dynamic ways. Furthermore, this unsupervised, un-transparent fusion of person and data differentiates contemporary forms of surveillance from anything that has come before.

41 In short, personalized data insights become a condition of navigating everyday life. Technologies that generate feedback data communicated in a frictionless way provide us with the resources to successfully navigate the world. But the effect of this is to make us dependent on that data and the claims it

39 Marcel Mauss, The Gift: The Form and Reason for Exchange in Archaic Societies (Routledge 2011).

40 Different concepts have been used to describe the same phenomenon – for example, the 'quantified self' or 'human-data assemblages' but here, the terms transhuman and digital self are used to connect with ideas and possibilities of such hybrid identities.

41 James M Harding, Performance, Transparency, and the Cultures of Surveillance (University of Michigan Press 2018).

42 See Wu (n 29).

makes of us.[43] This drives a trend towards even more sophisticated information processing and data analysis by data-controllers. Specifically, the emergence of federated learning, differential privacy, edge computing, complex machine learning, and decentralized ledger technologies make it possible to conduct large-scale data processing locally (i.e., on end-user devices or in user's personal data cloud). The internal logic of enhancement technologies is circular and continuous—more and better sensors create more and better data, which facilitates more and better forms of data analysis, which promotes more and better feedback data and personalized insights that take ever greater hold over us.

II. The Quantified Self

42 The apparent effect of technological developments, including the growth of transhuman enhancements, is the sheer volume of accumulated data—so-called Big Data. As a result of the proliferation of sensors, the amount of personal data generated has been increasing incrementally, from 33 zettabytes of data produced in 2018 to an expected 175 zettabytes in 2025—numbers so vast that they become meaningless.[44] As a result, it is normal for medium and large businesses to have Terabytes—and even Petabytes—of data in storage devices and servers. More data and more sophisticated data analysis results in more insights and correlations at the input and derived data layers. Crucially, these insights are un-intuitable to the data subject—without the service provider, they are unknown and unknowable—and this exponentially increases the possibilities for more and, in a sense better, data insights.

43 As such, near-future data analysis is increasingly beyond the limits of human comprehension, in the sense that no individual, including those most intimately familiar with their design and construction of the analysis, understands the full extent of their operations and capacities. Mathematician Samuel Arbesman, for example, has used the term 'overcomplicated' to describe this trend, and technologies beyond human comprehension have become the norm for the first time in history, further detaching the personalized insights from human understanding and meaningful oversight.[45]

44 But something else is also happening; not only is the quantity and sophistication of data increasing exponentially, but more powerful sensors and data analysis capabilities drive a shift in the *quality* of the resulting data.[46] With new forms of data generation and analysis emerging, data-as-representation is supplemented by what might be thought of as simulated data. Data 'about us' increasingly takes on a simulated character; it is no longer a simple representation of reality (i.e., the states or events of a person) but increasingly includes and integrates predictions about future conditions and events derived from pre-existing data and increasingly sophisticated data analytics. Such simulated data is not 'made up,' but, nor is it entirely real, in the sense of representing any reality—it is an extrapolation from fact and reality. This simulated data can have real effects on a data subject's behavior and self-understanding. It exerts a certain kind of authority and influence over us; as derived data takes on this simulated character, it does not become less pressing for data subjects. Quite the contrary, it increases the hold that such data has over us.

45 William Bogard's work on the 'simulation of surveillance' is instructive here.[47] Influenced by Jean Baudrillard on the simulacrum and writing at the formative stages of the digital transformation, Bogard observed how surveillance in the Foucauldian model as a technology of monitoring and ex-post correction was evolving into a technology which operates 'in advance of itself'.[48] Digital surveillance technologies can 'know' prior to the event itself, which is a significant evolution in the form of contemporary control mechanisms. Surveillance is omniscient—it knows everything—not just what has occurred or what is occurring in real-time, but also what will occur, or is, at least, likely to occur based on data analysis. Reality is simulated in these predictions, and interventions are based on that simulation and communicate insights based on that simulation. Surveillance is no longer simply about recording past events

43 Andrew McStay, 'Emotional AI, soft biometrics and the surveillance of emotional life' (2020) 7(1) Big Data & Society 1-12.

44 European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A European Strategy for Data COM (2020) 66 final.

45 Samuel Arbesman, Overcomplicated: Technology at the Limits of Comprehension (Portfolio 2017).

46 Jouko Ahvenainen, 'Massive data versus relevant data: Simply a case of quantity over quality?' Medium (10 September 2021) https://medium.com/prifina/massive-data-versus-relevant-data-simply-a-case-of-quantity-over-quality-c4267a2efb91> accessed 30 September 2021.

47 William Bogard, The Simulation of Surveillance (Cambridge University Press 1996).

48 Ibid 25–34.

or current states but the simulation of future events that inform the present.[49]

46 Again, what is important here is the extent to which this knowledge of the future is now given back to the data subject and our choices are heavily implicated in this normalization process. Our decisions today are based on whom we will become tomorrow. The paradox of personalized interventions, however, is that things that have not yet happened—predictions of a future state or behavior—come to us from the future to inform our current decision-making in the present. The result is an even richer quantified self that is 'overcomplicated' in that it is beyond the capacity of any human understanding or control of even the system designers. The digital version of us is no longer a copy of our real self but, in some sense, a determiner of we who we are and who we will become, and the boundary between original and copy becomes blurred.

47 Such technologies seem to preclude a priori the possibility of meaningful transparency, at least transparency understood as substantive comprehension of a particular situation or system. At the very least, we need to re-evaluate our conceptions of transparency to manage such technologies, as consent, transparency, and disclosure are increasingly used against us to justify the behavior of data controllers. And yet, the reality is that individuals will be hugely influenced by such insights and identify with their simulated or quantified self. Human identity can (or should) never be reduced to a quantified self, however complex; as that digital self becomes more sophisticated and intrudes on our real-world identities, the gap increases between the autonomous subject of modern law and liberal politics, and the realities of transhuman life in a digital age.

D. Augmenting Privacy Rights with User-Centric Design

48 The thought explored here is that the traditional legal conception of privacy becomes strained in the context of this evolving new data environment, and, in response to this change, data-controllers have adapted by developing alternative approaches to privacy protection. We are experiencing a shift from a grand narrative of the legal protection of the privacy right of persons to a more technology and UX-driven model in which emphasis is placed on delivering privacy via human-centered design. This shift is triggered by a widespread perception that the rights model is failing users and recognition on the part of service providers that privacy protection matters for consumer choice and has become an effective mechanism for distinguishing a firm from its competitors. And to be clear, it is not being suggested that privacy as a right has disappeared or that privacy through design is better in any straightforward sense. Rather both conceptions now co-exist and interact with each other creating a more complex data ecosystem than in the past.

I. Privacy as Right and the Sense of Data Empowerment

49 Privacy has traditionally been conceptualized as the right of a 'person' to be free from external interference in matters of a personal nature.[50] This definition can be broken down into three core elements. First, there is the subject of the right, the person, i.e., 'something' possessing the quality of personhood. Typically, this is a natural person, and privacy rights have not been extended to legal persons, such as companies. Second, there is the object of the right, i.e., matters of a personal nature—a private life—a domain that is properly 'ours' in some important way and is worthy of protection. This private domain includes some of the most personally meaningful choices that a person makes (whom they wish to choose as a partner or marry, for example) and, more recently, personal information. Some aspects of our lives are deemed so necessary to us *as persons* that they must remain inviolable by anyone else, at least without our prior consent. Third, the scope of the right and the character of the obligation imposed on third parties. Traditionally, the right to privacy imposed a negative obligation: it prohibited any third party—historically, public authorities but more recently anyone—from any unlawful intrusion into the private life of the right-holder.

50 However, this right-based model of privacy becomes harder to sustain in a world of transhuman enhancements, Big Data, and quantified selves. Each of the three elements of the classical notion of privacy is problematized. The fiction of the unity of personhood—which has always occupied an uncertain position in modern law—is uncertain. The idea of the person—a subject of legal rights—relies on a fiction of unity and autonomous decision-making capacity. However, if the quantified self is always fragmented,

49 Philip E Tetlock and Dan Garner, Superforecasting: The Art and Science of Prediction (Crown 2016).

50 It is worth acknowledging here that we proceed from one conception of privacy and that privacy might be alternatively understood as a more open-ended category encompassing several different but overlapping conceptions. For more on this argument and the richness of the concept of privacy more generally, see Daniel J Solove, Understanding Privacy (Harvard University Press 2008); Megan Richardson, Advanced Introduction to Privacy Law (Edward Elgar 2020).

multiple, and contingent on bundles of data scattered across the globe, that myth becomes harder for people to believe in and identify with. Transhuman identities are—to use Haraway's suggestive expression, 'disturbingly lively'[51]—and, if nothing else, this means we struggle to accept the fantasy of organic wholeness and agency that the traditional legal concept of personhood and privacy seems to presuppose and require. Instead, the digital self 'skips the step of original unity'[52] and operates in the more dislocated and messy spaces at the hinterlands of law's possibility.

51 Moreover, the idea of a space or domain that is properly ours—understood either as a set of choices or a body of information 'about' us—becomes unsustainable in a world of Big Data, personalized insights, and digital identities. Undoubtedly, it has always been the case that we are influenced by the institutions within which we are raised, and it makes little sense, either from a psychological or philosophical point of view, to think of personhood and personal identity in atomistic, rather than relational, terms. And yet, in a world where multiple third parties—most of whom are unknown to us—are collecting and generating data 'about' us and then via personalized insights influencing our choices, it becomes difficult to conceive of a sovereign individual or what it is precisely that such a person has sovereignty over, in terms of an independent and settled space or domain that is de-limitable and distinctly their own.

52 Finally, there is the character of the obligation imposed in a rights-based conception of privacy. The obligation on third parties *not* to do something—to intrude on a person's private domain without prior permission—seems inadequate and arrives too late when our choices and identities are already made based on and by our interaction with data about us. Instead, it might be better to think in terms of an on-going positive obligation imposed on service providers requiring them to do certain things, specifically to handle data in a responsible manner, rather than a purely negative duty not to intrude on a private sphere without permission.[53] Consent can, therefore, seem a flimsy protection against abuse and intrusion in the vast and complex data ecosystems of today.

53 This is not to suggest that privacy as a legal right has become irrelevant or unimportant. Nevertheless, any legal framework that thinks about the issue of personalized data insights in terms of a settled personal space over which we—as unitary, autonomous subjects—enjoy meaningful control becomes deeply problematic when the border between 'us' and the 'data about us' is so blurred, and where 'data about us' increasingly takes on the 'simulated' character described above. The disruption of these two borders—between us and the data and between data as representation and data as a simulation—seems to significantly complicate the context in which privacy is conceptualized and the scope and character of the obligation imposed on data-handlers. Both the subject and the object of the right have become indeterminable and disconnected from the realities of life in a digital age. And the typical legal mechanism for the protection of privacy rights—the formal consent of a person—seems an inadequate tool of protection given the realities of the information ecosystem and the reach and power of service providers.[54]

54 If this seems a little abstract, it isn't. The overwhelming majority of people are acutely aware of the limitations of consent and are unconvinced by the claim that a traditional rights-based model of privacy is working or even appropriate. Everyone is familiar with the experience of consenting to terms and conditions that are not read, and this has become nothing but a minor irritation on the way to accessing content or service. This feeds into a more general sense of mistrust of technology firms, and a significant factor in this diminishing confidence concerns privacy.[55] The result is so-called 'techlash' and a demand for more regulation of the large technology firms, including how such firms handle personal data.[56] High-profile scandals—most obviously the Cam-

51 Haraway (1991) (n 3) 152.

52 Ibid 151.

53 For more on this argument that privacy imposes a positive negative, as well as negative obligations, see Bart van der Sloot, 'Privacy from a legal perspective' in A. De Groot & B. Van der Sloot (eds), Handbook of Privacy Studies: An Interdisciplinary Introduction (Amsterdam University Press 2018).

54 It is worth noting that while in an online environment, consent is typically used as the mechanism for legitimizing the processing of private information, it is not the case that consent is not always required in relation to privacy incursions relating to other aspects of our lives.

55 Jamie Doward, 'The big tech backlash' The Guardian (28 January 2018) <https://www.theguardian.com/technology/2018/jan/28/tech-backlash-facebook-google-fake-news-business-monopoly-regulation> accessed 29 September 2021; Anne-Marie Slaughter, 'Our struggle with big tech to protect trust and faith' Financial Times (26 February 2018) <https://www.ft.com/content/ff7b7ec4-1aec-11e8-a748-5da7d696ccab> accessed 29 September 2021; Irving Wladawsky-Berger, 'Why techlash is a threat to growth and progress' Wall Street Journal (6 June 2020) <https://www.wsj.com/articles/why-the-techlash-is-a-threat-to-growth-and-progress-01591464654> accessed 29 September 2021.

56 Scott Galloway, The Four: The Hidden DNA of Amazon,

bridge Analytica and Facebook case—provide a focal point to these general concerns. As a result, there have been numerous pieces of legislation on commercial use of consumer data, most obviously the GDPR in Europe and the CCPA in California.[57]

55 And yet, as Gillian Hadfield points out, the 'avalanche' of click to agree boxes that emerged as a response to the GDPR and similar laws elsewhere has not changed anything, and it may even have made the situation worse.[58] It has only revealed how people don't understand what they agree to and how difficult it is for consumers to monitor what companies are doing with 'their' data. Privacy protection mechanisms—legalistic terms and conditions based on complex laws focused on formal consent—are not working and merely serve to feed sincere deep-felt public anxiety and skepticism regarding technology and corporations. Therefore, from a normative point of view, it is worth asking—why is the burden of knowing data processing nuances of a service provider placed on the shoulders of an individual consumer? How could we move forward and create a more equitable ecosystem where individuals are not merely statistical sources of data? How might personal data be utilized to empower individuals with the data they generate?

II. Privacy-by-Design, Transparency, and User-Control

56 An emerging alternative to a rights-based conception of privacy combines legal and technological tools with user-centric design *and* transparency. It moves beyond first-generation privacy-by-design by embracing human-oriented design principles at both the technology *and* the user-experience layer. Such an approach embeds privacy protection in the technology but adds much greater openness and engagement in explaining how data is collected and handled, i.e., it moves beyond formal consent and legalistic terms and conditions. Crucially, both these elements—embedding privacy protection in the technology and more authentic communication—emphasize human design principles and a more multi-disciplinary and human-centered design process.

Apple, Facebook, and Google (Random House 2017).

57 Gwen E Kennedy, Data Privacy Law: A Practical Guide to the GDPR (Bowker 2019).

58 Gillian Hadfield, 'Governments can't handle tech regulation. It is time for companies to take over' Quartz (2 July 2018) <https://qz.com/1316426/weve-disrupted-technology-now-its-time-to-disrupt-its-regulation/> accessed 29 September 2021.

57 The following observations are not intended as a complete defense of this emerging model—it introduces a different set of difficulties that we will briefly address in the conclusion, and which connect back to the earlier discussion on normalization in a digital age—but a more user-centric data model augmented with privacy-by-design principles is certainly better aligned to the realities of a post-digital transformation world than the rights-based conception described above. Understanding the interaction between these two models of privacy protection—and mapping the precise character of what we call the augmentation of a right to privacy by data ownership and user-centric design—is now a pressing issue in contemporary debates around privacy.

58 The idea of privacy by design was first widely presented by Ann Cavoukian and emphasized the concept of embedding privacy measures directly into the design of information systems and technologies, i.e., integrating privacy features at early stages of the development of services or technologies and thereby protecting privacy by default.[59] It entails the notion of embedding privacy and data protection requirements directly into the architectural design of the technology rather than relying on ex post legal controls and right-based interventions.[60] Technology companies and data handlers are incentivized to adopt this approach by default, which should not only help them comply with the requirements of such data privacy regulations as the GDPR and CCPA but also benefit from the reduced risk that results from 'data minimization' and the possible use of 'pseudonymization'.[61] Furthermore, privacy-by-design principles are important because rather than facing a difficult choice between increasing revenue from products or services or providing greater protection of customer privacy, businesses can combine both (i.e., increased revenue as well as providing greater privacy protection by implementing more user-centric privacy approaches).

59 There are now many examples of embedding privacy protection in the technology itself and privacy

59 Cavoukian (n 32). See also Ann Cavoukian, 'Privacy-by-design: origins, meaning, and prospects for assuring privacy and trust in the information era' *Privacy Protection Measures and Technologies in Business Organizations: Aspects and Standards* (IGI Global 2012). This approach has been embraced by policymakers, see, for example General Data Protection Regulation, Article 25.

60 Lawrence Lessig, Code & Other Laws of Cyberspace (Basic Books 1999); William J Mitchell, City of Bits: Space, Place, and the Infobahn (MIT Press 1996).

61 Orla Lynskey, The Foundations of EU Data Protection Law (Oxford University Press 2015) 206.

enhancing technologies such as homomorphic encryption, differential privacy, secure multi-party computation, or identity management.[62] Anti-tracking mechanisms, for instance, limit the data that can be collected or email software that hides a users' IP addresses and their location, so companies sending emails can't link that information to a user's other online activities. Some virtual assistants—like Apple's Siri—process inputted requests locally on the device rather than in a remote server. Also, there is much more expansive use of encryption for any traffic leaving a user's device so that no third parties can intercept and gather information. Finally, privacy functionality is built into apps, for example, a 'hide my email' feature that uses a randomly created email address when signing up for an account on a new website that then forwards messages to their inbox—thus reducing the number of companies that have direct access to a user's main email address.

60 The second element in the contemporary re-making of privacy is the more transparent disclosure of data handling practices. Transparency, in this context, does not mean a formalistic, 'box-ticking' approach in which opaque, legalistic language is used to disclose the minimum information necessary to meet some legal standard or limit liability, but more open communication that aims to enlighten end-users about the actual situation and usage regarding their data. At this layer, things have moved beyond what was originally proposed by Cavoukian, even if the basis of many of the current trends towards greater transparency are articulated in her original statement.

61 Whatever their origins, there is now a much greater emphasis on a user-oriented model of frictionless, engaged communication of data-handling practices. More generally, this connects with a growing recognition of the importance of legal design in communicating information about privacy and other legal rights and obligations.[63] Here, legal design refers to human-centered design to prevent or solve legal problems by prioritizing the point of view of end-users, specifically individual consumers. Legal design builds on the vision of a legal system that is more straightforward, more engaging, and more 'user-friendly'.[64] This creates a new emphasis on user-interfaces and the user-experience: how information is presented, how processes are set up, and how policies are established and explained. The goal is to improve how lawyers communicate, deliver services, and make rules and policies—all with the aim of enhancing the experience, comprehension, and empowerment of the users. The goal is to eradicate friction from the user experience, which at the same time builds trust in how data is handled. As such, it represents an attempt to engage with and define the scope and content of the positive obligation on data collectors to handle data in a responsible way that is clearly explained to users.

62 Legal design offers several ways to respond to the challenges of communicating complex legal information about the handling of data. Foremost amongst them are design patterns and pattern libraries, which provide a systematic way to identify, collect, and share good practice. In essence, design patterns are reusable solutions to a commonly occurring problem—something that practitioners can develop, organize, and share. Over the last few years, they have been deployed in a privacy context.[65]

63 A significant development, in this context, are so-called 'privacy labels,' which have emerged as an essential strategy for achieving greater transparency. Influenced by global trends in food safety, which now require nutrition labels for all packaged food products, privacy labels are increasingly used by data-handlers to disclose in a more meaningful way what data is accessed, collected, and shared.[66] Crucially, this is done in a non-legalistic way compared to the traditional terms and conditions approach.

64 The most prominent example of data privacy labels has been implemented by Apple which currently requires that all applications offered in the App

62 Giuseppe D'Acquisto, Josep Domingo-Ferrer, Pagiotis Kikiras, Vicenç Torra, Yves-Alexandre de Montjoye and Athena Bourka, 'Privacy by design in big data: An overview of privacy-enhancing technologies in the era of big data analytics' European Union Agency for Network and Information Security (ENISA) <https://arxiv.org/pdf/1512.06000.pdf> accessed 29 September 2021.

63 See generally Marcelo Corrales Compagnucci, Helena Haapio and Mark Fenwick (eds), The Research Handbook on Contract Design (Edward Elgar forthcoming 2022).

64 Marcelo Corrales Compagnucci, Mark Fenwick and Helena Haapio, 'Technology-driven disruption of healthcare & UI layer privacy-by-design' in Marcelo Corrales Compagnucci, Mark Fenwick and Michael Lowery Wilson, Nikolaus Forgo and Timo Minssen (eds) Artificial Intelligence in eHealth (Cambridge University Press forthcoming 2022).

65 Helena Haapio and Stefania Passera, 'Contracts as interfaces: Visual representation patterns in contract design' in Daniel Martin Katz, Ron Dolin, and Michael J Bommarito (eds), Legal Informatics (Cambridge University Press 2021).

66 Lily Hay Newman, 'Apple's app privacy labels are here: And they're a big step forward' Wired (14 December 2020) <https://www.wired.com/story/apple-app-privacy-labels/> accessed 29 September 2021; Paulius Jurcys, 'Privacy icons and legal design' Towards Data Science (16 July 2020) <https://towardsdatascience.com/privacy-icons-4ca999a6f2db> accessed 29 September 2021.

Store provide an overview of what data about the individual user is being collected by an app. Such privacy labels are created based on the information which app developers provide to Apple before publishing or updating an app. The users can see such privacy labels in the description of an app; the intent is to make sure that an average consumer could determine the scope of personal data that would be exposed to the app developers and, likely, other unknown third parties. The privacy label contains a set of icons as well as the key buzzwords describing the categories of data accessed. Gradually, such data privacy app icons are becoming the norm: in 2021, Google announced their intention to introduce privacy labels to Google Play sometime in 2022.[67]

65 This new emphasis on transparency creates the opportunity for a more reputation-driven enforcement model in which 'bad actors' are called out and exposed or revealed to be hypocrites. Rather than formal sanction by the legal system, the discipline of the market becomes the primary means of ensuring compliance and—ideally—better behavior by service providers.

66 With this combination of technology-based solutions *and* open communication, there is a shift from a legalistic conception of privacy in which service providers act freely based on the formal consent of users to a more technology and communication-driven model in which service providers design privacy into their services to signal virtue and then communicate clearly and transparently what they are doing. This new model still requires consent, but it is not formalistic and empty consent—the so-called 'biggest lie on the Internet'.[68]

67 This is not meant to suggest that the law becomes irrelevant or disappears in this new user-centric landscape. From the perspective of the companies providing personalized data insights, things look very different, and investing in the mitigation of legal risk has become a costly and difficult exercise for any company that handles data, i.e., all companies. New data privacy laws such as the GDPR or the CCPA have created significant dangers for data-controllers and managing the result legal risk is a significant burden and responsibility.[69]

68 However, at the same time, it is also important for lawyers and policymakers to acknowledge that the law may acquire a more modest role and function in this new model. Privacy can no longer be conceived as a fundamental right of a person but a more evolving and situational concept that needs to be managed at the intersection of technology and user experience in specific settings in specific use cases. This brings us back to the important suggestion of Daniel Solove that, privacy should be thought of a 'family resemblance' concept comprising various contested views, rather than as a single, settled idea.[70]

69 Such an account also reveals something important about the future role of law and lawyers in the data ecosystem. The law—and rights—still matter in a design-driven model, and law will continue to be coded into the architecture of such systems. Nevertheless, the law becomes overcomplicated, as traditional notions of legal certainty are replaced by more dynamic and situational concepts.[71] Law becomes something like a force field—a space of possibility or resource, an indeterminable presence that must be constantly engaged with and navigated—rather than a site or source of certainty and clear resolution. The fragmentation of law as a relatively certain, stable, and closed normative order and proliferation of norms.

70 Traditionally, law operated as a discourse of stable, monadic subjects. The legal subject of rights was an attribution of the system—it was a convenient and powerful fiction—but this fiction is disrupted by the digital transformation, and we are all now nomadic subjects, and identity and closure are replaced by difference and capture.

71 Regulation will continue to form a necessary background to what the data-controllers are doing, and regulation must be considered during and integrated into their design choices at all the technology and UX layers. Lawyers will be vital for accomplishing this task. But lawyers will also need to accept a more modest supporting role as members of the multi-disciplinary design teams, comprising coders and graphic designers, and other professionals that design the technical, UI-facing privacy solutions of the future. As such, the future role of lawyers—partic-

67 Sarah Perez, 'Following Apple's launch of privacy labels, Google to add a 'safety' section in Google Play' TechCrunch (6 May 2021) <https://techcrunch.com/2021/05/06/following-apples-launch-of-privacy-labels-google-to-add-a-safety-section-in-google-play/> accessed 29 September 2021.

68 Jonathan A Obar and Anne Oeldorf-Hirsch, 'The biggest lie on the Internet: Ignoring the privacy policies and terms of service policies of social networking services' (2016) <https://ssrn.com/abstract=2757465> accessed 29 September 2021.

69 Paul Voigt and Axel von dem Bussche, The EU General Data Protection Regulation: A Practical Guide (Springer 2017).

70 Daniel J Solove (n. 50).

71 See Mark Fenwick, Mathias M. Siems and Stefan Wrbka, The Shifting Meaning of Legal Certainty in Comparative and Transnational Law (Hart 2017).

ularly lawyers working in data protection and privacy—will be operating at the intersection of these different actors and mediating between them in the pursuit of effective and legally-compliant solutions.[72]

E. Towards a More Equitable Data Ecosystem?

72 Traditional conceptions of privacy are being hollowed out by technology, and the settled identities and spaces of a pre-digital conception of privacy have been stretched by technology, as any clear distinction between a person or sphere worthy of protection and external actors intruding on that space via data collection become blurred and distorted by the incessant presence of data in our lives and the importance of this data in constituting our identities (what we call our digital or quantified selves). The proliferation of user-centric data models and personalized data insights is a significant development in this on-going process.

73 In response, alternative concepts of privacy are emerging in which privacy is embedded in the design of technologies, and data-handling practices as well as legal and other types of information are communicated in more engaged and user-friendly ways. An earlier rights-based conception of privacy is not replaced but augmented by the idea that human-centered design, both at the technology and the communication layers, can provide more substantive control and transparency over what information is gathered and used about us.

74 Nevertheless, we should remain vigilant, particularly as larger tech companies embrace the latest versions of privacy-by-design. This brings us back to the discussion on normalization and surveillance. The delivery of feedback data—personalized data-insights as a service—is analogous to what Spotify delivers in the context of music, Microsoft or Apple offer in gaming (with the X-Box Pass or Arcade), or Netflix and other streaming services provide with TV shows and movies. All these services offer the promise of a complete or, at least, a much greater degree of self-understanding, freedom, and choice in our consumption, but such freedom is accompanied by subtle and constant control over the choices that we make. Moreover, these controls are still present, even if data-handling practices are made more transparent and communicated in a user-friendly manner.

75 There is always a degree of hidden restriction to our freedom when we consume the information or experience offered by such services. It is, *by design*, a highly structured and controlled form of freedom. To take an obvious example, consider the algorithms that decide what content to recommend to a user. Crucially, the boundaries of our freedom when using such systems remain obscured. Everything is curated—it 'just for you' by design—and even a user-friendly explanation of that fact and disclosure of how the information is collected and curated seems destined to be inadequate, given the captivating grasp that such information and the related experience has over us. And, as Deleuze observed when discussing the 'freedom' of driving on the freeway: 'people drive infinitely and 'freely' without being at all confined yet while being perfectly controlled. This is our future'.[73] We may well have left behind the enclosed spaces of Foucault, but can user-centric data models and privacy-by-design indeed release our transhuman digital selves from the dangers of 'perfect control' and the uncertainties of privacy today, or is something altogether different required?

72 See Mark Fenwick, Wulf A Kaal and Erik P M Vermeulen, 'Legal education in a digital age: Why coding for lawyers matters' (2018) U of St. Thomas (Minnesota) Legal Studies Research Paper No. 18-21 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3227967> accessed 29 September 2021.

73 Deleuze (1998) (n 38) 18. See also Alexander R Galloway, Protocol: How Control Exists After Decentralization (MIT Press 2004); Btihaj Ajana, Governing Through Biometrics (Springer 2013).

The Sanitised Platform

by **Rachel Griffin***

Abstract: Feminist legal scholar Vicki Schultz argues that US law on sexual harassment has created a "sanitised workplace", by encouraging employers to suppress any kind of sexual behaviour, while ignoring broader issues around gender equality. This paper employs Schultz's concept of sanitisation as a frame to critique current trends in European social media regulation, focusing on the 2019 Copyright Directive, 2021 Terrorist Content Regulation and the Digital Services Act proposed in 2020. EU law incentivises the deletion of various broadly-defined types of illegal content, which is also likely to suppress large amounts of legal and harmless content. Evidence of how social media platforms moderate content suggests that this over-enforcement will disproportionately suppress marginalised users and non-mainstream viewpoints, while increasing the influence of platforms' commercial goals on online communications. Yet at the same time, by focusing primarily on content (i.e. individual posts and uploads) over broader contextual and design factors, European regulation fails to effectively address many social harms associated with major social media platforms. Schultz's approach not only draws our attention to these failings, but provides theoretical insights as to how private ordering heightens these problems, enforces dominant discourse norms and subordinates online communication to commercial priorities.

Keywords: social media regulation; content moderation; digital services act; platform governance

Recommended citation: Rachel Griffin, The Sanitised Platform, 13 (2022) JIPITEC 36 para 1

A. Introduction

1 In a widely-cited 2003 article, revisited and updated in 2010, feminist legal scholar Vicki Schultz argues that US law on sexual harassment has created a "sanitised workplace", by encouraging employers to suppress any kind of sexual behaviour, while ignoring broader issues around gender equality.[1] This paper employs Schultz's concept of sanitisation as a frame to critique current trends in European social media regulation. It argues that European law is both under- and overinclusive in ways that parallel Schultz's arguments about the sanitised workplace. It incentivises platforms to frequently suppress harmless or valuable behaviour, while ignoring many individual behaviours and—more importantly—systemic problems that do cause harm. Schultz's approach not only draws our attention to these failings, but provides theoretical insights as to how private ordering heightens these problems, enforces dominant discourse norms and subordinates online communication to commercial priorities.

2 Schultz forcefully criticises the "sexual model" of sexual harassment prevalent in American jurisprudence on Title VII, the 1964 Civil Rights Act provision that banned sex discrimination in the workplace and was later interpreted (influenced by the campaigns of feminist legal scholars) as making employers liable for failing to prevent workplace sexual harassment. As Schultz's review of the case law shows, a focus on unwanted sexual conduct as

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1 Vicki Schultz, 'The Sanitized Workplace' (2003) 112 *Yale Law Journal*, 2061-2194; Vicki Schultz, 'The Sanitized Workplace Revisited' in Martha Albertson Fineman, Jack E. Jackson and Adam P. Romero (eds), *Feminist and Queer Legal Theory: Intimate Encounters, Uncomfortable Conversations* (Routledge 2010).

the key criterion for unlawful sex discrimination came to eclipse other types of behaviour or features of the work environment which could reasonably be called discriminatory. Schultz argues that the sexual model is both over- and underinclusive, and as a result signally fails to address the real causes and impacts of discrimination in the workplace, while causing significant collateral damage.

3 Schultz considers the sexual model underinclusive in two ways. First, it excludes important forms of sexist misconduct that are not obviously sexual in nature. Cases based on non-sexualised sexist behaviour have generally been less likely to succeed; claimants have been incentivised to frame hostile behaviour as sexualised to strengthen their claims, even where such interpretations are strained. Second, in focusing on individual sexual misconduct, the sexual model excludes consideration of broader, structural causes and manifestations of gendered discrimination. At the same time, Schultz argues that it is overinclusive, as the threat of liability for sexual misconduct incentivises workplaces to suppress and punish forms of sexualised behaviour which are not harmful. In practice, this typically disproportionately impacts employees from marginalised groups, and ultimately serves managerialist ideology and corporate interests.

4 In the context of social media governance, some parallels are already evident. Scholars, journalists and activists have long criticised large platforms' content moderation practices for simultaneous under- and overinclusivity, noting that illegal and dangerous content proliferates while legal and harmless content is frequently censored.[2] Moreover, current approaches to social media regulation and to workplace sexual harassment law share some structural features. Both primarily aim to regulate the behaviour of individuals (users/employees), although this may be difficult without also considering how it is influenced by the broader environment. Both utilise liability incentives to delegate the enforcement of legal norms to private actors (platforms/employers), who exercise a degree of direct control over the individuals in question. This paper contends that Schultz's theory of the sanitised workplace provides a useful lens to understand the flaws of current EU regulatory strategies. Her feminist approach to legal scholarship not only shows that the law is not achieving its purported goals, but focuses attention on why it has been interpreted in this way and whose interests it serves, as well as problematising the supposedly clear categories of behaviour it aims to regulate.

5 The paper proceeds as follows. Section B introduces recent trends in EU regulation of social media. Section C details the parallels between Schultz's arguments for the simultaneous under- and overinclusivity of US sex discrimination jurisprudence and the platform regulation context. Section D considers the relevance of Schultz's underlying theoretical insights. It argues that her feminist and sociolegal approach can sharpen critiques of social media law, by highlighting the ambiguity of the categories used to define "illegal content", and how in practice the enforcement of these rules is subordinated to commercial priorities. Section E concludes by advocating for a more structural approach to social media regulation, focusing on platform design and business models over suppressing individual pieces of content.

B. Developments in EU social media regulation

6 Regulating "big tech" has become a major focus for European policymakers, culminating in the proposals released in late 2020 for the twin Digital Services and Digital Markets Acts, a flagship initiative of the Von der Leyen Commission.[3] Social media content has been a prominent strand in these policy debates, spurred by intense media coverage of online extremism and hate speech, the potential influence of "fake news" on elections and the "infodemic" of health misinformation during the Covid-19 pandemic.[4]

2 Jillian C. York and Corynne McSherry, 'Content Moderation is Broken. Let Us Count the Ways' (Electronic Frontier Foundation, 29 April 2019) <https://www.eff.org/deeplinks/2019/04/content-moderation-broken-let-us-count-ways> accessed 17 November 2021; Carolina Are, 'How Instagram's algorithm is censoring women and vulnerable users but helping online abusers' (2020) 20(5) *Feminist Media Studies* 741 <https://doi.org/10.1080/14680777.2020.1783805> accessed 17 November 2021; Ángel Díaz and Laura Hecht-Fellela, *Double Standards in Social Media Content Moderation* (Brennan Center for Justice, 2021) <https://www.brennancenter.org/our-work/research-reports/double-standards-social-media-content-moderation> accessed 17 November 2021.

3 European Commission, 'The Digital Services Act Package' (European Commission, 2020) <https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package> accessed 18 November 2021.

4 Kirsten Gollatz and Leontine Jenner, *Hate Speech und Fake News – Zwei verwobene und politisierte Konzepte* (Humboldt Institut für Internet und Gesellschaft, 2018) <https://www.hiig.de/hate-speech-fake-news-two-concepts-got-intertwined-politicised/> accessed 17 November 2021; evelyn douek, 'The Year That Changed the Internet' (*The Atlantic*, 28 December 2021) <https://www.theatlantic.com/ideas/archive/2020/12/how-2020-forced-facebook-and-twitter-step/617493/> accessed 17 November 2021; Věra

7 Historically, EU regulation of social media content has been relatively light-touch, governed mostly by the "safe harbour" conditional immunity provisions in the 2000 E-Commerce Directive.[5] However, academics agree that we are currently seeing significant and far-reaching changes in the regulatory landscape.[6] Two overarching trends can be identified. First, platforms are subject to increasingly wide-ranging and stringent obligations to rapidly remove illegal content, as detailed in section B.I. Second, they are increasingly expected to undertake extensive private, semi-voluntary content regulation, including in relation to legal content. As section B.II. outlines, this is encouraged both through informal pressure from policymakers, and by legal provisions mandating the establishment of industry best practices, codes of conduct, etc.

I. Obligations to remove illegal content

8 Under Article 14 of the E-Commerce Directive, which remains in force and will be replicated largely unchanged by the Digital Services Act[7], hosting services (which include social media) are immune from liability for making available illegal content posted by users, as long as they are not aware of the illegal content or remove it expeditiously on becoming aware of it. In practice, this has created a notice-and-takedown regime in which aggrieved parties can contact platforms to inform them about illegal content, with the result that the platform must remove it to avoid liability.[8] However, this general immunity is now complicated by three developments.

9 First, Article 14 precludes civil or criminal liability for user-generated content, but not injunctions. Since the E-Commerce Directive's introduction, injunctive relief has in particular played a key role in copyright enforcement.[9] More recently, the ECJ has accepted the use of injunctions to impose stringent moderation obligations on social media platforms. In its controversial *Glawischnig-Piesczek* [2019] decision, the ECJ upheld an Austrian court's imposition of an injunction requiring Facebook not only to delete posts which had been held to defame the claimant, but to find and delete, on an ongoing basis, all identical or equivalent content.[10] This marks a significant shift from its earlier rulings in *Scarlet v SABAM* [2011] and *SABAM v Netlog* [2012] that injunctions could not require an internet service provider to actively check all user uploads for copyright-infringing content.[11]

10 In *Glawischnig-Piesczek*, both the judgment and the Advocate General's opinion attached significant weight to the supposed availability of technological tools that could automatically detect content equivalent to that deemed illegal.[12] Experts consider this confidence in automated moderation tools unwarranted. They remain highly unreliable[13], and

Jourová, 'Speech of Vice President Věra Jourová on countering disinformation amid COVID-19 "From pandemic to infodemic"' (European Commission, 11 October 2021) <https://ec.europa.eu/commission/presscorner/detail/en/speech_20_1000> accessed 17 November 2021.

5 Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market [2000] OJ L.178 ('E-Commerce Directive').

6 Aleksandra Kuczerawy, 'General Monitoring Obligations: A New Cornerstone of Internet Regulation in the EU?' in CiTiP (ed), *Rethinking IT and IP Law: Celebrating 30 years CiTiP* (Intersentia 2019); Giancarlo Frosio and Martin Husovec, 'Accountability and Responsibility of Online Intermediaries' in Giancarlo Frosio (ed), *The Oxford Handbook of Online Intermediary Liability* (Oxford University Press, 2020).

7 Article 5, 'Proposal for a Regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and amending Directive 2000/31/EC' <https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-european-parliament-and-council-single-market-digital-services-digital-services> accessed 18 November 2021 ('Digital Services Act').

8 Some member states have formalised this system with explicit provisions on the content and format of notices: see Aleksandra Kuczerawy, 'From "Notice and Takedown" to "Notice and Stay Down": Risks and Safeguards for Freedom of Expression' in Giancarlo Frosio (ed), *The Oxford Handbook of Online Intermediary Liability* (Oxford University Press, 2020).

9 Christina Angelopoulos, 'Harmonizing Intermediary Copyright Liability in the EU: A Summary' in Giancarlo Frosio (ed), *The Oxford Handbook of Online Intermediary Liability* (Oxford University Press, 2020).

10 Case C-18/18 *Eva Glawischnig-Piesczek v Facebook Ireland Limited* [2019] (ECJ, 3 October 2019).

11 Case C-70/10 *Scarlet Extended SA v Société belge des auteurs, compositeurs et éditeurs SCRL (SABAM)* [2011] ECR I-11959; Case C-360/10 *Belgische Vereniging van Auteurs, Componisten en Uitgevers CVBA (SABAM) v Netlog NV* [2012] (ECJ, 16 February 2012).

12 *Glawischnig-Piesczek* [2019] (n 10).

13 Robert Gorwa, Reuben Binns and Christian Katzenbach, 'Algorithmic content moderation: Technical and political challenges in the automation of platform governance' (2020) 7(1) *Big Data & Society* <https://doi.org/10.1177/2053951719897945> accessed 17 November

their use poses severe risks to users' freedom of expression and privacy rights.[14] Nonetheless, given the political pressure on platforms to take action on harmful content and the at-least-apparent promise that AI technologies can enable more comprehensive enforcement, the use of injunctions to impose such sweeping moderation obligations may become more common.

11 Second, the EU has introduced different liability regimes in some areas, specifically for terrorist content (under the 2021 Terrorist Content Regulation[15]) and copyright infringement (under the 2019 Copyright Directive[16]). The Terrorist Content Regulation requires platforms to remove terrorist content (which is broadly and vaguely defined, such that it could frequently include journalistic content[17]) within one hour after receiving a removal order from law enforcement.[18] They may also be required by competent national authorities to take further proactive measures to find and remove terrorist content.[19] Article 17 of the Copyright Directive, on the other hand, creates a new liability regime in which platforms are treated as primarily liable for copyright infringement unless they make best efforts to obtain a license from the rightsholder and, in the absence of a license, make best efforts to remove copyright works which have been notified to them by rightsholders and prevent all future uploads.[20] The latter obligation is widely acknowledged by academic experts[21], and by the Advocate General in his recent opinion in Poland's judicial review case against Article 17[22], to require automated filtering of all user uploads in order to identify and block the notified copyright works.

12 Both pieces of legislation were highly controversial, due in large part to the perceived risks of "overblocking" of legal content.[23] Kuczerawy[24] and Frosio and Mendis[25] have suggested that, in combination with the *Glawischnig-Piesczek* ruling, these laws could mark the abandonment of the foundational principle in Article 15 E-Commerce Directive, as interpreted by the ECJ in the *SABAM* cases, that platforms cannot be under a general obligation to monitor all content for illegality. The principle has effectively been reinterpreted, such that an impermissible general monitoring obligation will not be taken to exist as long as platforms are only required to search for certain specific content, even if all content on the platform must be monitored for that purpose.[26]

2021.

14 Daphne Keller, 'Facebook Filters, Fundamental Rights, and the CJEU's *Glawischnig-Piesczek* Ruling' (2020) 69(6) *GRUR International* 616 <https://doi.org/10.1093/grurint/ikaa047> accessed 17 November 2021. Keller has further argued that intermediary liability litigation structurally fails to account for users' rights and interests, whether those whose content is removed or the far greater number of users who might have been interested in having access to such content. In *Glawischnig-Piesczek*, as in most intermediary liability cases, users were not represented before the court.

15 Regulation (EU) 2021/784 of the European Parliament and of the Council of 29 April 2021 on addressing the dissemination of terrorist content online [2021] OJ L.172 ('Terrorist Content Regulation').

16 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 [2019] OJ L.130 ('Copyright Directive').

17 Joris Van Hoboken, *The Proposed EU Terrorism Content Regulation: Analysis and Recommendations with Respect to Freedom of Expression Implications* (Transatlantic High Level Working Group on Content Moderation Online and Freedom of Expression, 2019) <https://www.ivir.nl/publicaties/download/TERREG_FoE-ANALYSIS.pdf> accessed 17 November 2021.

18 Article 3, Terrorist Content Regulation (n 15).

19 Article 5, Terrorist Content Regulation (n 15).

20 Article 17, Copyright Directive (n 16).

21 Giancarlo Frosio and Sunimal Mendis, 'Monitoring and Filtering: European Reform or Global Trend?' in Giancarlo Frosio (ed), *The Oxford Handbook of Online Intermediary Liability* (Oxford University Press, 2020); Maria Lillà Montagnani, 'A New Liability Regime for Illegal Content in the Digital Single Market Strategy' in Giancarlo Frosio (ed), *The Oxford Handbook of Online Intermediary Liability* (Oxford University Press, 2020); Martin Senftleben, 'Institutionalized Algorithmic Enforcement—The Pros and Cons of the EU Approach to UGC Platform Liability' (2020) 14(2) *FIU Law Review* 299 <https://dx.doi.org/10.25148/lawrev.14.2.11> accessed 17 November 2021.

22 Case C-401/19 *Poland v Parliament and Council*, Opinion of AG Øe.

23 James Vincent, 'Europe's controversial overhaul of online copyright receives final approval' (*The Verge*, 26 March 2019) <https://www.theverge.com/2019/3/26/18280726/europe-copyright-directive> accessed 17 November 2021; Mathieu Pollet, 'EU adopts law giving tech giants one hour to remove terrorist content' (*Euractiv*, 28 April 2021) <https://www.euractiv.com/section/cybersecurity/news/eu-adopts-law-giving-tech-giants-one-hour-to-remove-terrorist-content/> accessed 17 November 2021.

24 Kuczerawy, 'General Monitoring Obligations' (n 6).

25 Frosio and Mendis (n 21).

26 Bernd Justin Jütta and Giulia Priora, 'On the necessity of

13 Finally, at the same time, some member states have introduced national measures requiring deletion of illegal content within short time limits, such as the German NetzDG[27], Austrian *Kommunikationsplattformen-Gesetz*[28], and French *loi Avia* (although most provisions of the latter were struck down by the Constitutional Council in June 2021[29]). While these laws can be regarded as simply specifying in more detail what constitutes "expeditious" removal under Article 14 E-Commerce Directive, their compatibility with the Directive is questionable, given that its aim was to create harmonised EU-wide standards and that it calls for platforms to be regulated only in the EU member state where they are headquartered.[30]

II. Informal pressure and private ordering

14 A second feature of the developing regulatory landscape is the active encouragement of private ordering, through the encouragement of self-regulation and the creation of legal duties outside the intermediary liability framework.[31] Article 5 of the Terrorist Content Regulation requires platforms designated by regulators as exposed to terrorist content to take "specific measures" to address it. These measures remain largely at their own discretion, though one example specified in the provision is introducing new restrictions in their contractual community standards—a notable step towards privatised enforcement.[32] Article 17(10) Copyright Directive and Section 5 of the proposed Digital Services Act both mandate the Commission to work with businesses to develop industry codes and best practices.[33] Such co-regulatory measures have already significantly affected how platforms moderate both legal and illegal content, encouraging them to go beyond notice-and-takedown regimes and introduce more proactive content removal measures, including increasing use of automated moderation.[34]

15 European policymakers have also placed informal pressure on platforms to introduce new content governance measures, often with the threat that harder regulation will otherwise follow.[35] In response to rising public and political concerns about racist hate speech and disinformation following the 2015 "refugee crisis", the 2016 Brexit referendum and the 2016 US election, leading European policymakers initially showed a clear preference for encouraging industry self-regulation.[36] The Commission negotiated a Code of Conduct on Hate Speech and Code of Practice on Disinformation with leading platforms in 2016 and 2018 respectively.[37] Informal pressure from European policymakers was also

filtering online content and its limitations: AG Saugmandsgaard Øe outlines the borders of Article 17 CDSM Directive' (*Kluwer Copyright Blog,* 20 July 2021). <http://copyrightblog.kluweriplaw.com/2021/07/20/on-the-necessity-of-filtering-online-content-and-its-limitations-ag-saugmandsgaard-oe-outlines-the-borders-of-article-17-cdsm-directive/> accessed 17 November 2021.

27 Gesetz zur Verbesserung der Rechtsdurchsetzung in sozialen Netzwerken [2017] BGBl. I S. 3352 ('NetzDG').

28 Bundesgesetz über Maßnahmen zum Schutz der Nutzer auf Kommunikationsplattformen (Kommunikationsplattformen-Gesetz – KoPl-G) [2020] BGBl. I Nr. 151/2020 ('Kommunikationsplattformen-Gesetz').

29 Décision n° 2020-801 DC du 18 juin 2020, *Loi visant à lutter contre les contenus haineux sur internet* [2020].Loi visant à lutter contre les contenus haineux sur internet.

30 Marc Liesching, *Stellungnahme zum Entwurf eines Gesetzes zur Änderung des Netzwerkdurchsetzungsgesetzes* (Deutscher Bundestag Ausschuss für Recht und Verbraucherschutz, 2020) <https://www.bundestag.de/resource/blob/700788/83b06f596a5e729ef69348849777b045/liesching-data.pdf> accessed 11 October 2021; Robert Gorwa, 'Elections, institutions, and the regulatory politics of platform governance: The case of the German NetzDG' (2021) 45(6) *Telecommunications Policy* <https://doi.org/10.1016/j.telpol.2021.102145> accessed 17 November 2021.

31 Montagnani (n 21); Frosio and Husovec (n 6).

32 Van Hoboken (n 17).

33 Article 17(10) Copyright Directive (n 16); Section 5 Digital Services Act (n 7).

34 Hannah Bloch-Wehba, 'Automation in Moderation (2020) 53 *Cornell International Law Journal* 41.

35 Paddy Leerssen, 'Cut Out by the Middle Man: The Free Speech Implications of Social Network Blocking and Banning in the EU' 6(2) *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 99 <https://www.jipitec.eu/issues/jipitec-6-2-2015/4271> accessed 17 November 2021; Molly K. Land, 'Against Privatized Censorship: Proposals for Responsible Delegation' 60 *Virginia Law Review* 363.

36 Gorwa (n 30).

37 European Commission, *The EU Code of conduct on countering illegal hate speech online* (European Commission, 2016) <https://ec.europa.eu/info/policies/justice-and-fundamental-rights/combatting-discrimination/racism-and-xenophobia/eu-code-conduct-countering-illegal-hate-speech-online_en> accessed 18 November 2021; European Commission, *Code of Practice on Disinformation* (European Commission, 2018) <https://digital-strategy.ec.europa.eu/en/policies/code-practice-disinformation> accessed 18 November 2021.

instrumental in leading major platforms to set up the GIFCT, an industry body which coordinates the removal of terrorist content across all participating platforms, using a hash database to flag any future uploads that are identical to previously removed content.[38]

C. Under- and overinclusive regulation

16 It is widely recognised that content moderation is inevitably both under- and overinclusive, in the sense that all available methods of identifying banned content involve significant rates of both false negatives and false positives.[39] Land suggests that this is an inherent structural feature of online content moderation: given the scale at which platforms operate and the increasing use of automation, enforcement tends to consider only the content of posts and to ignore contextual factors which would enable a more nuanced consideration of their meaning and whether they are harmful.[40] The inevitability of errors must be taken into account when imposing new moderation obligations on platforms; inadequate safeguards against overblocking were a key point of criticism of both the Terrorist Content Regulation and the Copyright Directive.

17 However, EU platform regulations not only create incentives for under- and overinclusive enforcement at the level of individual pieces of content which might be incorrectly left up or deleted. As this section will show, they are also under- and overinclusive in terms of the types of content, behaviour and circumstances that are deemed problematic and targeted for intervention in the first place.

I. Underinclusivity

18 Schultz argues that the sexual model of workplace sex discrimination both ignores and distracts from other important aspects of discrimination: it diverts employers', employees' and the courts' attention from sexist conduct which is not sexual in nature and from structural discrimination which cannot be reduced to individual misconduct. In platform regulation, it is important to question whether liability for certain types of illegal content distracts attention from other issues. Liability risks evidently influence how platforms allocate resources to moderation and other "trust and safety" programmes: this is illustrated by the major platforms' immediate investment of significant additional resources and moderation staff in Germany following the introduction of NetzDG.[41] However, as recent leaks from within Facebook revealed, even the biggest and wealthiest tech companies make very limited resources available for trust and safety projects.[42] Any deployment of resources and personnel to areas that do not generate revenue is unlikely to be approved by private corporations unless there is another clear financial justification, such as regulatory compliance. Thus, it can be assumed that any regulation requiring platforms to invest resources in one aspect of content governance risks reducing the resources available to investigate and address other social issues.

19 Like the narrow definition of sex discrimination that Schultz criticises, the tendency in European regulation to single out illegal content for deletion risks diverting attention from other types of harmful behaviour. Taking hate speech as an example, Ben-David and Matamoros-Fernández have documented how hate can systematically be spread on social media through content that does not itself fall under hate speech bans.[43] For example, users can post

38 evelyn douek, *The Rise of Content Cartels* (Knight First Amendment Institute, 2020) <https://knightcolumbia.org/content/the-rise-of-content-cartels> accessed 11 October 2021; Bloch-Wehba, 'Automation in Moderation' (n 34).

39 evelyn douek, 'Governing Online Speech: From "Posts-As-Trumps" to Proportionality and Probability' 121(3) *Columbia Law Review* 759. <https://www.columbialawreview.org/content/governing-online-speech-from-posts-as-trumpsto-proportionality-and-probability/> accessed 17 November 2021.

40 Land (n 35).

41 Philip Oltermann, 'Tough new German law puts tech firms and free speech in spotlight' (*The Guardian,* 5 January 2018) <https://www.theguardian.com/world/2018/jan/05/tough-new-german-law-puts-tech-firmsand-free-speech-in-spotlight> accessed 17 November 2021; Amélie Heldt, 'Reading between the lines and the numbers: an analysis of the first NetzDG reports' (2019) 8(2) *Internet Policy Review* 336 <https://doi.org/10.14763/2019.2.1398> accessed 17 November 2021.

42 Jeff Horwitz, 'The Facebook Whistleblower, Frances Haugen, Says She Wants to Fix the Company, Not Harm It' (*Wall Street Journal*, 3 October 2021) <https://www.wsj.com/articles/facebook-whistleblower-frances-haugen-says-she-wants-to-fix-the-company-not-harm-it-11633304122> accessed October 11 2021.

43 Anat Ben-David and Ariadna Matamoros Fernández, 'Hate Speech and Covert Discrimination on Social Media: Monitoring the Facebook Pages of Extreme-Right Political Parties in Spain' (2016) 10 *International Journal of Communication* 1167 <https://ijoc.org/index.php/ijoc/article/view/3697/1585> accessed 17 November 2021.

something just within the law which encourages hate speech in the comments, or like and comment on posts containing hate speech to increase their visibility to other users. Focusing only on the legality of content (posts, comments etc.) also ignores other types of abusive behaviour, such as coordinated malicious reporting of other users for legal or policy violations.[44] This may even be actively facilitated by rules requiring expeditious removal of illegal content, since incentivising quick responses may increase the likelihood of spurious complaints being upheld. There is anecdotal evidence of coordinated malicious reporting being used against victims of discrimination under the German NetzDG system.[45]

20 Moreover, most EU regulation overlooks the structural factors which contribute to policy problems like online racism, disinformation and discrimination. In general, it targets the level of individual pieces of content—not only by requiring illegal content to be removed, but also by providing safeguards for freedom of expression which largely involve individual users complaining that their individual posts should be reinstated.[46] Focusing only on the content level fails to take into account how the harmfulness of content can differ widely depending on its context.[47] For example, one of the most harmful aspects of online harassment is its networked nature: users can easily incite others to join them in harassing a target with large numbers of abusive messages and other harmful actions, such as revealing personal information.[48] In such cases, examining the legality of individual messages may entirely overlook the primary harm they cause, as well as being practically unlikely to address enough of the harassment to have a significant impact.

21 Focusing on the content level also ignores important contextual and structural factors. Even in instances where harm is inflicted by individual pieces of content and can be remedied by content removal, considering contextual factors such as platform design and user cultures is crucial to ensure effective moderation. For example, much harmful behaviour is not reported to moderators because platform interfaces make it laborious for users to report it or because they do not expect a helpful response.[49] More broadly, structural factors such as platform algorithms, architectures and business models can contribute to significant social harms which cannot be resolved by removing individual pieces of content.

22 The typical social media business model, which is based on maximising user engagement and time on site in order to gather as much data and sell as much advertising space as possible, is frequently criticised for exacerbating social harms such as hate speech and disinformation. In particular, algorithms optimised for maximum user engagement are accused of promoting divisive, extremist and sensationalist content, and driving users towards harmful content and ideologies by showing them more extreme versions of whatever they are interested in.[50]

44 Kate Crawford and Tarleton Gillespie, 'What is a flag for? Social media reporting tools and the vocabulary of complaint' (2016) 18(3) *new media & society* 410 <https://doi.org/10.1177/1461444814543163> accessed 17 November 2021; Stefanie Duguay, Jean Burgess and Nicolas Suzor, 'Queer women's experiences of patchwork platform governance on Tinder, Instagram, and Vine' (2019) 26(2) *Convergence* 237 <https://doi.org/10.1177/1354856518781530> accessed 17 November 2021; Ari Ezra Waldman, 'Disorderly Content' (2021) 97 *Washington Law Review* (forthcoming) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3906001> accessed 17 November 2021.

45 Janosch Delcker, 'Germany's balancing act: Fighting online hate while protecting free speech' (*Politico*, 24 February 2020) <https://www.politico.eu/article/germany-hatespeech-internet-netzdg-controversial-legislation/> accessed 18 November 2021; Nicole Shephard, 'Digitale Gewalt an Frauen: Was kann das NetzDG?' (Heinrich Böll Stiftung, Gunda-Werner-Institut für Feminismus und Geschlechterdemokratie, 3 March 2020) <https://www.gwi-boell.de/de/2020/03/03/digitale-gewalt-frauen-was-kann-das-netzdg> accessed 18 November 2021.

46 For comments on the inadequacy of individual user appeals as a safeguard against overblocking see Keller, 'Facebook Filters' (n 14), Frosio and Mendis (n 21).

47 Richard Ashby Wilson and Molly K. Land, 'Hate Speech on Social Media: Content Moderation in Context' (2021) 52 *Connecticut Law Review* 1029 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3690616> accessed 11 January 2022; Owen Bennett, 'The promise of financial services regulatory theory to address disinformation in content recommender systems' (2021) 10(2) *Internet Policy Review* <https://doi.org/10.14763/2021.2.1558> accessed 18 November 2021.

48 Sarah Jeong, *The Internet of Garbage* (The Verge 2018); Cynthia Khoo, *Deplatforming Misogyny: Report on Platform Liability for Technology-Facilitated Gender-Based Violence* (Women's Legal Education and Action Fund (LEAF), 2021) <https://www.leaf.ca/publication/deplatforming-misogyny/> accessed 11 January 2022; Mary Anne Franks, 'Beyond the Public Square: Imagining Digital Democracy' (2021) 131 *Yale Law Journal Forum* < https://www.yalelawjournal.org/forum/beyond-the-public-square-imagining-digital-democracy> accessed 11 January 2022.

49 Duguay et al (n 44); Rachel Griffin, 'New School Speech Regulation and Online Hate Speech: A Case Study of Germany's NetzDG' (GigaNet Symposium, Warsaw, December 2021) <https://www.giga-net.org/2021SymposiumPapers/GigaNet%20paper%20NetzDG.pdf> accessed 11 January 2022.

50 Siva Vaidhyanathan, *Antisocial Media: How Facebook Discon-*

Systematic studies of this phenomenon are lacking (and are hampered by the inaccessibility of platform data to independent researchers).[51] However, there is some evidence to support these claims. Journalistic investigations have found that Facebook, Instagram, YouTube and TikTok (all of which rely heavily on algorithmic content ranking and recommendations) actively recommend extremist content, as well as other harmful content such as self-harm, and show increasingly extreme content to users based on their previous interests.[52]

23 Platforms' profiling and categorisation of users can also have more subtle impacts, such as reinforcing social inequalities. To target content and ads, platforms commonly profile users based on sensitive identity categories like gender and race, often using simplistic and offensive categorisations (e.g. imposing binary gender categories irrespective of user preferences).[53] These tend to symbolically further marginalise historically oppressed groups, by positioning them as deviations from a default "normal" user who is white, straight, etc.[54] They can also materially harm such groups in various ways: for example, by exposing sensitive information to advertisers[55], allowing advertisers to deliberately target vulnerable groups[56], or excluding them from economic opportunities.

24 A particularly well-studied example which obviously replicates historical patterns of discrimination is when marginalised users are excluded from adverts for jobs or housing. Facebook in the past allowed advertisers to explicitly exclude certain "ethnic affinities" from their ad audiences, which attracted heavy criticism.[57] However, researchers have shown

nects Us and Undermines Democracy (Oxford University Press 2018); Lance Bennett, Alan Borning, Martin Landwehr, Daniela Stockmann and Volker Wulf, *Treating Root Causes, not Symptoms: Regulating Problems of Surveillance and Personal Targeting in the Information Technology Industries* (G20 Insights, 2021) <https://www.g20-insights.org/policy_briefs/treating-root-causes-not-symptoms-regulating-problems-of-surveillance-and-personal-targeting-in-the-information-technology-industries/> accessed 18 November 2021.

51 Mathias Vermeulen, *The Keys to the Kingdom* (Knight First Amendment Institute, 2021) <https://knightcolumbia.org/content/the-keys-to-the-kingdom> accessed 11 October 2021.

52 Jonas Kaiser and Adrian Rauchfleisch, 'Unite the Right? How YouTube's Recommendation Algorithm Connects The U.S. Far-Right' (*Medium*, 11 April 2018) <https://medium.com/@MediaManipulation/unite-the-right-how-youtubes-recommendation-algorithm-connects-the-u-s-far-right-9f1387ccfabd> accessed 18 November 2021; Jeff Horwitz and Deepa Seetharaman, 'Facebook Executives Shut Down Efforts to Make the Site Less Divisive' (*Wall Street Journal*, 26 May 2020) <https://www.wsj.com/articles/facebook-knows-it-encourages-division-top-executives-nixed-solutions-11590507499> accessed 18 November 2021; Rob Barry, Georgia Wells, Joanna Stern and Jason French, 'How TikTok's Algorithm Serves Up Sex and Drug Videos to Minors' (*Wall Street Journal*, 8 September 2021) <https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944> accessed 18 November 2021; Keach Hagey and Jeff Horwitz, 'Facebook Tried to Make Its Platform a Healthier Place. It Got Angrier Instead' (*Wall Street Journal,* 15 September 2021) <https://www.wsj.com/articles/facebook-algorithm-change-zuckerberg-11631654215> accessed 18 November 2021; Center for Countering Digital Hate, *Malgorithm: How Instagram's Algorithm Publishes Misinformation and Hate to Millions During a Pandemic* (Center for Countering Digital Hate, 2021) <https://www.counterhate.com/malgorithm> accessed 11 October 2021; Brandy Zadrozny, '"Carol's Journey": What Facebook knew about how it radicalized users' (*NBC News*, 23 October 2021) <https://www.nbcnews.com/tech/tech-news/facebook-knew-radicalized-users-rcna3581> accessed 23 October 2021.

53 Rena Bivens, 'The gender binary will not be deprogrammed: Ten years of coding gender on Facebook' (2015) 19(6) *new media & society* 880 <https://doi.org/10.1177/1461444815621527> accessed 17 November 2021.

54 Kelley Cotter, Mel Medeiros, Chankyung Pak and Kjerstin Thorson, '"Reach the right people": The politics of "interests" in Facebook's classification system for ad targeting' (2021) 8(1) *Big Data & Society* <https://doi.org/10.1177%2F2053951721996046> accessed 11 January 2022.

55 Eduard Fosch-Villaronga, Adam Poulsen, Roger A. Søraa and Bart Custers, 'Gendering Algorithms in Social Media' (2021) 23(1) *ACM SIGKDD Explorations Newsletter* 24 <https://doi.org/10.1145/3468507.3468512> accessed 11 January 2022.

56 Nadine Bol, Joanna Strycharz, Natali Helberger, Bob van de Velde and Claes H. de Vreese, 'Vulnerability in a tracked society: Combining tracking and survey data to understand who gets targeted with what content' (2018) 22(11) *new media & society* 1996 <https://doi.org/10.1177%2F1461444820924631> accessed 11 January 2022. See also McMillan Cottom's theoretical work on "predatory inclusion": Tressie McMillan Cottom, 'Where Platform Capitalism and Racial Capitalism Meet: The Sociology of Race and Racism in the Digital Society' (2020) 6(4) *Sociology of Race and Ethnicity* 441 <https://doi.org/10.1177%2F2332649220949473> accessed 11 January 2022.

57 Julia Angwin and Terry Parris Jr., 'Facebook Lets Advertisers Exclude Users By Race' (*ProPublica*, October 28 2016) <https://www.propublica.org/article/facebook-lets-advertisers-exclude-users-by-race> accessed 11 January 2022; Thao Phan and Scott Wark, 'What Personalisation Can Do for You! Or: How to Do Racial Discrimination Without "Race"' (2021) 20 *Culture Machine* <https://culturemachine.net/vol-20-machine-intelligences/what-personalisation-can-do-

that even without using criteria referring to race or other protected characteristics, advertisers can use proxies such as language or place of residence to exclude certain groups.[58] Moreover, even where there is no intention to discriminate, predictive targeting may automatically select audiences which are heavily skewed by race, gender and other protected characteristics[59]: this may, for example, reinforce the disadvantage women face in many professions by preventing them from seeing adverts for jobs that have historically been more appealing to men.[60] The use of predictive "affinity profiling" rather than concrete data about how users identify may allow such profiling to escape the ambit of anti-discrimination and data protection law.[61]

25 The failure to address structural issues such as these, and the near-exclusive focus on illegal content as the key vector for harm, is a major flaw of the current European approach to platform regulation. It should be noted that the Digital Services Act represents a partial shift away from this approach, in that it introduces new obligations for platforms to assess and take action on "systemic risks stemming from the functioning and use of their services".[62] Article 27 explicitly encourages them to make structural changes in order to mitigate these risks, such as altering platform design and algorithms, or reforming internal processes and organisation.[63] This represents a positive step away from a narrowly content-focused approach.

26 However, these changes should not be overstated. First, the relevant obligations apply only to the category of "very large online platforms", those with over 45 million EU users.[64] Smaller platforms also have new obligations, but these mostly address the content level (e.g. complaints and redress mechanisms for individual content removal decisions). Second, how effective the new regulations for very large online platforms will be in practice remains to be seen. They rely heavily on self-regulation and privatised enforcement. While the Commission will have new oversight powers including the right to require disclosure of information from very large online platforms and to conduct on-site inspections[65], the primary procedures intended to identify and address systemic risks will be platforms' internal risk assessments and voluntary measures, and yearly independent expert audits.[66] These types of privatised regulatory enforcement are intransparent and prone to capture[67], especially in complex, high-tech, information-based industries—such as social media—where external oversight is difficult.[68]

27 In another influential critique of Title VII, Edelman theorised a process of "legal endogeneity" whereby formalities used to demonstrate compliance come to eclipse the substantive goals of regulation.[69] This allows businesses to influence the law to their own advantage, as courts and regulators increasingly defer to industry "best practices" when deciding whether legal standards have been met. Edelman's theory has been applied to technology regulation by Waldman[70], who finds ample evidence for similar processes taking place in privacy law enforcement. The Digital Services Act's regulatory approach may create similar problems, with formalities like risk assessments taking precedence over meaningful change in industry practices and ultimately reinforcing the status quo. A regulatory focus on

for-you-or-how-to-do-racial-discrimination-without-race-thao-phan-scott-wark/> accessed 17 November 2021.

58 Phan and Wark (n 57); Till Speicher, Muhammad Ali, Giridhari Venkatadri, Filipe Nunes Ribeiro, George Arvanitakis, Fabrício Benevenuto, Krishna P. Gummadi, Patrick Loiseau, and Alan Mislove, 'Potential for discrimination in online targeted advertising' (2018) 81 *Proceedings of Machine Learning Research* 1 <http://proceedings.mlr.press/v81/speicher18a/speicher18a.pdf> accessed 11 January 2022.

59 Jinyan Zang, 'How Facebook's Advertising Algorithms Can Discriminate By Race and Ethnicity' (2021) 2021101901 *Technology Science* <https://techscience.org/a/2021101901/> accessed 17 November 2021; Phan and Wark (n 57).

60 Muhammad Ali, Piotr Sapiezynski, Miranda Bogen, Aleksandra Korolova, Alan Mislove and Aaron Rieke, 'Discrimination through Optimization: How Facebook's Ad Delivery Can Lead to Biased Outcomes' (2019) Vol 3 CSCW Article 199 *Proceedings of the ACM on Human-Computer Interaction* 1 <https://doi.org/10.1145/3359301> accessed 17 November 2021.

61 Sandra Wachter, 'Affinity Profiling and Discrimination by Association in Online Behavioral Advertising' (2020) 35 *Berkeley Technology Law Journal* 367.

62 Article 26 Digital Services Act (n 7).

63 Article 27 Digital Services Act (n 7).

64 Article 25(1) Digital Services Act (n 7).

65 Articles 50-66 Digital Services Act (n 7).

66 Article 26-8 Digital Services Act (n 7).

67 Michael Power, *The Audit Society: Rituals of Verification* (Oxford University Press 1999).

68 Julie Cohen, *Between Truth and Power: The Legal Constructions of Informational Capitalism* (Oxford University Press 2019).

69 Laura Edelman, *Working Law: Courts, Corporations and Symbolic Civil Rights* (University of Chicago Press 2016).

70 Ari Ezra Waldman, 'Privacy Law's False Promise' (2020) 97(3) *Washington University Law Review* 773.

mitigating discrete risks also overshadows broader questions about how technologies are used and for whose benefit.[71] Typically, harms that diverge from what powerful industry actors deem "normal" are classified as risks, while harms that stem from underlying structural features of an industry are not.[72] As will be discussed in more detail in section D, when private actors are charged with the definition and identification of risks, they will tend to construct those risks in the ways that best serve their own business interests.

II. Overinclusivity

28 Equally, EU regulation of social media content is overinclusive in significant respects. Like the American sex discrimination jurisprudence that Schultz criticises, it incentivises platforms to delete and suppress a wide range of content and behaviour that should not be considered harmful. Perhaps the best-documented example is the suppression by almost all major platforms of content that is sexually suggestive and/or related to sex work.[73] This causes significant material harm to sex workers by cutting off income sources, driving them towards more dangerous offline work and preventing them from advocating politically for their interests.[74] Blanket bans on sexual content also affect other users' wellbeing, for example by hampering access to sexual health advice[75], and lead to much broader policing of online art, culture and self-expression. For example, museums have regularly been blocked from posting images of nude art when promoting exhibitions.[76] Such policies could aptly be described as creating a "sanitised" internet.

29 These strict policies are significantly influenced by the US' 2018 FOSTA/SESTA legislation, which removed platforms' intermediary liability exemptions for content related to sex work.[77] Many platforms which did not already ban sexual content for commercial reasons responded to the legislation by implementing strict bans on sexual content worldwide, including in countries where sex work is legal.[78] However, the impact of European regulatory choices in this context should not be overlooked. First, if European legal systems did not grant platforms near-unfettered discretion to remove legal content under their contractual terms of service, they would not be able to arbitrarily impose US standards worldwide. Second, an important factor driving platforms to ban sexual content is app store policies: social media platforms rely heavily on users accessing them through mobile apps, and Apple (one of the two dominant app stores) is particularly notorious for banning apps that permit any kind of sexual content.[79] While the Commission is currently investigating Apple's App Store for anticompetitive behaviour relating in particular to its enforcement of in-app payments from which it takes a commission[80],

71 James Wilsdon and Rebecca Willis, *See-Through Science: Why Public Engagement Needs to Move Upstream* (Demos, 2004) <http://sro.sussex.ac.uk/id/eprint/47855/1/See_through_science.pdf> accessed 17 November 2021.

72 Cohen (n 68).

73 Jillian C. York, *Silicon Values: The Future of Free Speech Under Surveillance Capitalism* (Verso, 2021); Reina Sultan, 'Inside Social Media's War on Sex Workers' (*Bitch Media,* 23 August 2021) <https://www.bitchmedia.org/article/inside-social-medias-war-on-sex-workers> accessed 17 November 2021.

74 Sophie K. Rosa, 'Sex Workers Denounce Instagram's "Puritanical" New Rules' (*Novara Media*, 21 November 2020). <https://novaramedia.com/2020/11/21/sex-workers-denounce-instagrams-puritanical-new-rules/ accessed 17 November 2021; York (n 73); Danielle Blunt and Zahra Stardust, 'Automating whorephobia: sex, technology and the violence of deplatforming – An interview with Hacking//Hustling' (2021) 8(4) *Porn Studies* 350 <https://doi.org/10.1080/23268743.2021.1947883> accessed 11 January 2022; Are (n 2).

75 Danielle Blunt, Stefanie Duguay, Tarleton Gillespie, Sinnamon Love and Clarissa Smith, 'Deplatforming Sex: A roundtable conversation' (2021) 8(4) *Porn Studies* 420 <https://doi.org/10.1080/23268743.2021.2005907> accessed 11 January 2022.

76 Elle Hunt, 'Vienna museums open adults-only OnlyFans account to display nudes' (*The Guardian*, 16 October 2021) <https://www.theguardian.com/artanddesign/2021/oct/16/vienna-museums-open-adult-only-onlyfans-account-to-display-nudes> accessed 17 November 2021.

77 An Act to amend the Communications Act of 1934 to clarify that section 230 of such Act does not prohibit the enforcement against providers and users of interactive computer services of Federal and State criminal and civil law relating to sexual exploitation of children or sex trafficking, and for other purposes [2018] Public Law 115–164 ('FOSTA-SESTA').

78 Catherine Barwulor, Allison McDonald, Eszter Hargittai and Elissa M. Redmiles, '"Disadvantaged in the American-dominated Internet": Sex, Work and Technology' (2021) *CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* 563 <https://doi.org/10.1145/3411764.3445378> accessed 17 November 2021.

79 Katrin Tiidenberg, 'Sex, power and platform governance' (2021) 8(4) *Porn Studies* 381 <https://doi.org/10.1080/23268743.2021.1974312> accessed 11 January 2022.

80 European Commission, 'Antitrust: Commission opens investigations into Apple's App Store rules' (European

European authorities have chosen not to intervene in Apple's use of its infrastructural power to enforce content policies that suppress sexual content across a wide swathe of the internet. Finally, some European countries have similar laws restricting pornography and advertising for sex work: examples include the German *Jugendschutzgesetz*, which sets broad requirements for online media accessible to under-18s to be child-friendly[81], and Article 380ter of the Belgian Criminal Code, which criminalises all advertising of sex work.[82] These would in any case incentivise platforms to take a restrictive approach.

30 Similar over-enforcement can be seen in regard to other types of content. Over-removal in copyright cases, based on obviously spurious notices from rights-holders, has been extensively documented.[83] Commentators have raised particular concerns about the inability of automated classifiers to identify legally protected uses of a work such as parody and quotation.[84] Copyright notices have also been abused to effect the removal of political content.[85] Attempts by platforms to remove terrorist content regularly censor activists aiming to challenge extremism or document violent incidents.[86] There have also been numerous documented instances of social media posts in which people of colour describe their experiences of racism being tagged as racist hate speech and deleted[87], or reclaimed slurs that are widely used in a positive sense in LGBTQ+ communities being indiscriminately censored.[88]

31 Schultz highlights that the over-enforcement of harassment law is not evenly distributed, but reflects existing inequalities and power structures. She describes cases where sexual harassment claims were used to target LGBTQ+ employees, or where sexualised behaviour which was tolerated from white employees was treated as inappropriate when it came from people of colour. Similarly, the disproportionate impact of online content moderation on minorities and marginalised groups has been well documented. Policies on sexual content and nudity not only frame female and non-binary bodies as problematic[89]; they have also consistently

Commission, 2020) <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1073> accessed 11 January 2022.

81 Jugendschutzgesetz [2002] BGBl. I S. 2730 ('JuSchG').

82 Article 380ter, Code Pénal [1867].

83 Daphne Keller, *Empirical Evidence of Over-Removal by Internet Companies Under Intermediary Liability Laws: An Updated List* (Center for Internet and Society at Stanford Law School, 2021) <http://cyberlaw.stanford.edu/blog/2021/02/empirical-evidence-over-removal-internet-companies-under-intermediary-liability-laws> accessed 17 November 2021.

84 Dan L. Burk, 'Algorithmic Faire Use' (2019) 86 *University of Chicago Law Review* 283; Bloch-Wehba, 'Automation in Moderation' (n 34); Montagnani (n 21).

85 Felix Reda, 'How Copyright Bots Are Governing Free Speech Online' (*Digital Freedom Fund Blog*, 3 May 2021) <https://digitalfreedomfund.org/how-copyright-bots-are-governing-free-speech-online/> accessed 11 October 2021.

86 WITNESS, *Content Regulation in the Digital Age Submission to the United Nations Human Rights Council Special Rapporteur for Freedom of Expression* (OHCHR, 2018) <https://www.ohchr.org/Documents/Issues/Opinion/ContentRegulation/Witness.pdf> accessed 11 October 2021; Ellery Roberts Biddle, '"Envision a new war": the Syrian Archive, corporate censorship and the struggle to preserve public history online (*Global Voices*, 1 May 2019) <https://globalvoices.org/2019/05/01/envision-a-new-war-the-syrian-archive-corporate-censorship-and-the-struggle-to-preserve-public-history-online/> accessed 17 November 2021; Mathew Ingram, 'Social networks accused of censoring Palestinian content' (*Columbia Journalism Review,* 19 May 2021) <https://www.cjr.org/the_media_today/social-networks-accused-of-censoring-palestinian-content.php> accessed 17 November 2021; Isabella Barroso, 'Colombians "save the evidence" as they denounce social media censorship of protests' (*Global Voices*, 29 May 2021) <https://globalvoices.org/2021/05/29/colombians-save-the-evidence-as-they-denounce-social-media-censorship-of-protests/> accessed 17 November 2021.

87 Jessica Guynn, 'Facebook while black: Users call it getting "Zucked," say talking about racism is censored as hate speech' (*USA Today,* 24 April 2019) <https://eu.usatoday.com/story/news/2019/04/24/facebook-while-black-zucked-users-say-they-get-blocked-racism-discussion/2859593002/> accessed 17 November 2021; Kishonna L. Gray and Krysten Stein, '"We 'said her name' and got zucked": Black Women Calling-out the Carceral Logics of Digital Platforms' (2021) 35(4) *Gender & Society* 538 <https://doi.org/10.1177%2F08912432211029393> accessed 17 November 2021.

88 Dottie Lux and Lil Miss Hot Mess, 'Facebook's Hate Speech Policies Censor Marginalized Users' (*Wired*, 14 August 2017) <https://www.wired.com/story/facebooks-hate-speech-policies-censor-marginalized-users/> accessed 11 January 2022; Oliver L. Haimson, Daniel Delmonaco, Peipei Nie and Andrea Wegner, 'Disproportionate Removals and Differing Content Moderation Experiences for Conservative, Transgender, and Black Social Media Users: Marginalization and Moderation Gray Areas' Vol 5 CSCW2 Article 466 *Proceedings of the ACM on Human-Computer Interaction* 1 <https://dl.acm.org/doi/10.1145/3479610> accessed 11 January 2022.

89 Tarleton Gillespie, *Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media* (Yale University Press 2018); Ysabel Gerrard

been disproportionately enforced against women of colour and people who do not meet normative beauty standards, while celebrities and conventionally attractive white women are treated more leniently.[90] Waldman has also comprehensively detailed how the suppression of sexual content disproportionately affects LGBTQ+ users, maintaining social media platforms as "straight spaces".[91] Major platforms often permit queer visibility only where it is desexualised, unthreatening and integrated into heteronormative family structures and values.[92] In the context of terrorist content—a regulatory priority for the EU—moderation unfolds through close cooperation between platforms and European security agencies[93], which primarily target Islamist terrorism and have long histories of racist and Islamophobic discrimination.[94] Bloch-Wehba has shown how the way platforms define and identify terrorist content is heavily shaped by security discourses which have consistently stigmatised and targeted Muslims, while downplaying threats from the extreme right.[95] This appears to be one reason that Arabic social media users—including activists and journalists—are particularly vulnerable to indiscriminate censorship.[96]

D. What can we learn from Schultz's analysis?

32 As the previous section showed, there are clear parallels between Schultz's account of the sanitised workplace and the failings of current European platform regulation. However, her theory is not only useful in framing a descriptive account of these failings. This paper contends that Schultz models a feminist and sociolegal approach to legal scholarship which can sharpen our understanding and critique of current regulatory approaches.

I. Ambiguous categories and the power of interpretation

33 In the tradition of feminist and queer legal theory, Schultz problematises the supposedly clear legal categories on which the allocation of liability is based. She argues that clearly defining sexuality and walling it off from other aspects of social life is impossible; attempts to do so typically enforce dominant norms around sexual conduct and are imbued with bias against minority groups. The same could be said of defining "terrorist content", a broad and vague category which has long been used to legitimise anti-Muslim bias[97]; or even of "hate speech", a category which is meant to protect marginalised groups. Hate speech remains a deeply contested concept, and its interpretation is influenced by established social norms and power structures. As Post highlights, the term is rarely applied to elite discourse, even where it has evident discriminatory effects.[98] In practice, it has been used by social media platforms to suppress marginalised groups' challenges to oppressive social

and Helen Thornton, 'Content Moderation: Social Media's Sexist Assemblages' (2020) 22(7) *new media & society* 1286 <https://doi.org/10.1177%2F1461444820912540> accessed 17 November 2021.

90 Alex Peters, 'Nyome Nicholas-Williams took on Instagram censorship and won' (*Dazed Digital*, 28 August 2020) <https://www.dazeddigital.com/life-culture/article/50273/1/nyome-nicholas-williams-instagram-black-plus-size-censorship-nudity-review> accessed 17 November 2021; Carolina Are and Susanna Paasonen, 'Sex in the shadows of celebrity' (2021) *Porn Studies* <https://doi.org/10.1080/23268743.2021.1974311> accessed 17 November 2021.

91 Waldman, 'Disorderly Content' (n 44).

92 Clare Southerton, Daniel Marshall, Peter Aggleton, Mary Lou Rasmussen and Rob Cover, 'Restricted modes: Social media, content classification and LGBTQ sexual citizenship' (2021) 23(5) *new media & society* 920 <https://doi.org/10.1177%2F1461444820904362> accessed 11 January 2022.

93 Rocco Bellanova and Marieke de Goede, 'Co-Producing Security: Platform Content Moderation and European Security Integration' (2021) *Journal of Common Market Studies* <https://doi.org/10.1111/jcms.13306> accessed 11 January 2022.

94 Liz Fekete, 'Anti-Muslim Racism and the European Security State' (2004) 46(1) *Race and Class* 3 <https://doi.org/10.1177/0306396804045512> accessed 11 January 2022; Marie Martin, *Growing racism not just a member state issue* (Statewatch, 2012) <https://www.statewatch.org/media/documents/analyses/no-196-eu-racism.pdf> accessed 11 January 2022.

95 Bloch-Wehba, 'Automation in Moderation' (n 34).

96 Marwa Fatafta, 'Facebook is bad at moderating in English. In Arabic, it's a disaster' (*Rest of World*, 18 November 2021) <https://restofworld.org/2021/facebook-is-bad-at-moderating-in-english-in-arabic-its-a-disaster/> accessed 11 January 2022.

97 Van Hoboken (n 17); Bloch-Wehba 'Automation in Moderation' (n 34).

98 Robert Post, 'Hate Speech', in Ivan Hare and James Weinstein (eds) *Extreme Speech and Democracy* (Oxford University Press 2009).

structures.[99] Overall, when European policymakers exhort platforms to be "responsible"[100] and act in accordance with European values[101], they are strategically glossing over the contested nature of these values.

34 Schultz also makes a forceful case for a sociolegal approach that highlights the gaps between how the "law on the books" allocates liability and how businesses respond to liability incentives in practice. This is closely related to the former point since ambiguous legal categories give businesses greater latitude for selective and self-interested enforcement. In the context of social media regulation, Frosio and Husovec have highlighted how formal legal liabilities are just one factor influencing platforms' content governance: "The real responsibility landscape is equally determined by a mixture of voluntary agreements, self-regulation, corporate social responsibility, and ad hoc deal-making."[102] This is especially and increasingly the case as the EU promotes private ordering measures such as self-regulation and flexible legal obligations based on industry "best practices", as outlined in section B.I.

35 This has implications for the normative orientation of the law. Edelman and Waldman's work on legal endogeneity shows empirically how, when the law charges private actors with enforcing vaguely-defined legal standards, they are likely to be interpreted in a way that serves corporate interests and dominant social norms more than the nominal goals of the regulation—even where these are supposedly progressive and egalitarian.[103] Schultz further argues that corporate actors will interpret the law in simplified ways to streamline enforcement processes, over-enforce to minimise liability risks and focus on suppressing economically unproductive behaviour over behaviour which is actually harmful.

36 These problems are equally present in social media regulation. Speech rules must be simplified and streamlined to enable industrial-scale content moderation for global platforms[104]: the injustices that can result from such reductive interpretations are exemplified by the 2017 leak revealing that Facebook's content moderation guidelines defined invective against white men as "hate speech" but not equivalent content targeting black children.[105] This dynamic is exacerbated by increasing reliance on algorithmic enforcement, which is actively encouraged by EU law, given the limitations of currently-existing technology in understanding the meaning and context of expressions.[106] Speech rules shift to reflect what algorithms are capable of assessing, rather than what is actually considered desirable on policy grounds: for example, when all nudity is treated as pornography because it is what can most easily be identified by image recognition software.[107]

37 Overblocking to minimise liability risks is also a much-discussed problem[108], and the influence of

99 Chloé Nurik, '"Men Are Scum": Self-Regulation, Hate Speech, and Gender-Based Censorship on Facebook' (2019) 13 *International Journal of Communication* 2878 <https://ijoc.org/index.php/ijoc/article/viewFile/9608/2697> accessed 17 November 2021; Gray and Stein (n 87); Human Rights Watch, 'Israel/Palestine: Facebook Censors Discussion of Rights Issues' (*Human Rights Watch*, 8 October 2021) <https://www.hrw.org/news/2021/10/08/israel/palestine-facebook-censors-discussion-rights-issues> accessed 18 October 2021; Elizabeth Dwoskin, Nitasha Tiku and Craig Timberg, 'Facebook's race-blind practices around hate speech came at the expense of Black users, new documents show' (*Washington Post*, 21 November 2021) <https://www.washingtonpost.com/technology/2021/11/21/facebook-algorithm-biased-race/> accessed 11 January 2022.

100 Ursula Von der Leyen, 'Speech by President von der Leyen at the Lisbon Web Summit. European Commission' (European Commission, 2 December 2020) <https://ec.europa.eu/commission/presscorner/detail/en/speech_20_2266> accessed 11 October 2021.

101 European Commission, 'Europe fit for the Digital Age: Commission proposes new rules for digital platforms' (European Commission, 15 December 2020) <https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2347> accessed 17 November 2021.

102 Frosio and Husovec (n 6), 614.

103 Edelman (n 78); Waldman, 'Privacy Law's False Promise' (n 79).

104 Robyn Caplan, *Content or Context Moderation? Artisanal, Community-Reliant and Industrial Approaches* (Data & Society, 2018) <https://datasociety.net/library/content-or-context-moderation/> accessed 11 January 2022; Sarah T. Roberts, 'Digital detritus: "Error" and the logic of opacity in social media content moderation' (2018) 23(3) *First Monday* <https://doi.org/10.5210/fm.v23i3.8283> accessed 17 November 2021.

105 Julia Angwin and Hannes Grassegger, 'Facebook's Secret Censorship Rules Protect White Men From Hate Speech But Not Black Children' (*ProPublica*, 28 June 2017) <https://www.propublica.org/article/facebook-hate-speech-censorship-internal-documents-algorithms> accessed 17 November 2021.

106 Gorwa et al. (n 13).

107 Gillespie (n 89).

108 Jack Balkin, 'Old-School/New-School Speech Regulation' 127 *Harvard Law Review* 2329; Keller, 'Facebook Filters' (n 14).

platforms' economic interests on their content moderation practices is evident. Content moderation experts point out that apparent inconsistencies in moderation policies tend to line up with whether the content in question is valuable for advertisers.[109] Recalling the ambiguities of the term "hate speech" discussed above, it is notable that major social media companies have openly negotiated with the World Federation of Advertisers to align the definition of hate speech in their platform content policies with what advertisers consider harmful to their "brand safety".[110]

38 Considering how commercial priorities shape the application of the law is particularly important given the increasing turn towards private ordering in EU platform regulation. Platforms are not only being co-opted to enforce state speech regulation.[111] They are required to make "best efforts" on enforcement[112], choose the appropriate "specific measures" to respond to harmful content[113], utilise contractual terms and conditions to forbid harmful behaviour[114], and agree self-regulatory industry codes and best practices.[115] As Land suggests, these very broad discretionary powers over how the law is interpreted and how offline norms are adapted to the online context effectively amount to legislative power.[116]

39 In the context of sexual harassment, Schultz shows that this delegation of power leads to a wide discrepancy between what the law states is illegal and what is actually banned in workplaces in practice. Similarly, delegating the interpretation of speech laws to platforms can significantly change what they are understood to mean. For example, contextual factors that are traditionally considered relevant in applying the law but are harder to incorporate into industrial-scale moderation processes may be excluded entirely.[117] As noted above, this is exacerbated by automated enforcement, as standards shift to reflect the limited evaluative capabilities of software.[118] Safeguards provided by law—such as appeals systems for users, which the EU relies upon heavily in the Terrorist Content Regulation, Copyright Directive and Digital Services Act[119]—may not be effective or widely used in practice.[120] For example, Bloch-Wehba argues that where regulations heavily incentivise automated removal but stipulate that appeals should involve human review, in practice this will mean that the former takes place at scale but the latter cannot.[121]

40 As well as disproportionately affecting marginalised groups through specific enforcement decisions, such private ordering is likely to more broadly reinforce mainstream or dominant norms about permissible views, discourse and sexual expression. Regulators' appeals for platforms to act "responsibly" and in accordance with public values[122] may risk incentivising a majoritarian approach, where platforms simply try to regulate content in line with dominant tastes and ideologies, while suppressing controversial or non-mainstream viewpoints—as observed by Waldman in his study of platforms as "straight spaces".[123]

41 Moreover, the EU's reliance on private ordering measures means that enforcement of regulatory objectives is in practice inseparably intertwined with platforms' pursuit of their own commercial goals. As discussed in section B.II., platforms are encouraged by the Copyright Directive and Terrorist Content Regulation (as well as the *Glawischnig-Piesczek* ruling) to design and deploy automated moderation solutions, and by the Terrorist Content Regulation and Digital Services Act to use their contractual terms and conditions to forbid undesired behaviour. These regulatory devices mean that there will be

109 Roberts (n 104); Are and Paasonen, (n 90).

110 World Federation of Advertisers, 'WFA and platforms make major progress to address harmful content' (*World Federation of Advertisers*, 23 September 2020) <https://wfanet.org/knowledge/item/2020/09/23/WFA-and-platforms-make-major-progress-to-address-harmful-content> accessed 11 October 2021.

111 Rory Van Loo, 'The New Gatekeepers: Private Firms as Public Enforcers' 106 *Virginia Law Review* 467; Balkin (n 108).

112 Copyright Directive (n 16).

113 Terrorist Content Regulation (n 15).

114 Terrorist Content Regulation (n 15); Digital Services Act (n 7).

115 European Commission, 'Code of Conduct on Hate Speech' (n 37); European Commission, 'Code of Practice on Disinformation' (n 37); Copyright Directive (n 16); Digital Services Act (n 7).

116 Land (n 35).

117 Land (n 35).

118 Gillespie (n 89); Burk (n 84).

119 Article 10 Terrorist Content Regulation (n 15); Article 17(9) Copyright Directive (n 16); Article 17 Digital Services Act (n 7).

120 Keller, 'Facebook Filters' (n 14); Frosio and Mendis (n 21); Senftleben (n 21).

121 Bloch-Wehba, 'Automation in Moderation' (n 34).

122 Frosio and Husovec (n 6).

123 Waldman, 'Disorderly Content' (n 44).

little distinction between content moderation for law enforcement purposes and commercial purposes. Platforms typically remove content under their contractual terms and conditions where possible, in order to apply consistent standards worldwide, even where it would anyway have to be removed based on applicable national law.[124] Legally-mandated moderation, voluntary moderation and content curation more generally are all based on the same technical tools and classifications.[125] In practice, this means that any automated tools developed for law enforcement will likely also be deployed more widely in platforms' voluntary and commercially-motivated content governance.[126] The increasing use of automated content moderation tools subjects all online communication to the distorting influence of platforms' commercial goals.[127] This is likely to exacerbate the issues of overinclusivity and discrimination discussed in section C.

II. Whose interests does the law serve?

42 As with Schultz's analysis of sexual harassment law, we should not only observe that content regulation is over- and underinclusive, but ask who benefits from this state of affairs. Schultz argues that bright-line rules aiming to eliminate any kind of sexual conduct resonate with corporate interests and managerialist ideologies, which aim to make workplaces maximally efficient and rational.[128] Feminists arguing for a ban on sexual harassment found it politically expedient to put forward arguments that aligned with these perspectives, arguing that harassment made female employees less productive.[129]

43 Similarly, we should question whose interests are served by the current approach to platform regulation. It is first relevant to note big tech companies' gargantuan lobbying expenditures in the EU, which outstrip all other sectors.[130] They also influence broader academic and policy debates by funding think tanks, research centres etc.[131] Leading platforms have been willing to accept greater regulation, as long as it strengthens dominant market players and does not demand fundamental changes to their business models.[132] These lobbying and advocacy efforts are not only about getting the regulatory results that they want, but shifting regulators' attention to the topics that are least threatening by amplifying "the criticism they can structurally live with".[133] In this context, we should be attentive to potential ways that the orientation and priorities of European regulation might align with platforms' interests, even if individual regulatory requirements are unwelcome and burdensome.

44 Just as the focus on individual sexual misconduct in sex discrimination law excuses businesses from considering organisational context and structural inequality, European regulation arguably gives platforms obligations that are easy for them to "live with" instead of demanding structural changes that might discourage harmful speech and create more

124 Heldt (n 41); Liesching (n 30).

125 Niva Elkin-Koren and Maayan Perel, 'Separation of Functions for AI: Restraining Speech Regulation by Online Platforms' 24 *Lewis & Clark Law Review* 857.

126 Bloch-Wehba, 'Automation in Moderation' (n 34).

127 Jennifer Cobbe, 'Algorithmic Censorship by Social Platforms: Power and Resistance' (2020) *Philosophy & Technology* <https://doi.org/10.1007/s13347-020-00429-0> accessed 18 November 2021.

128 Schultz's interpretation of early twentieth-century managerialist philosophies has been challenged by Lee: Rebecca K. Lee, 'The Organization as a Gendered Entity: A Response to Professor Schultz's The Sanitized Workplace' (2006) 13 *Columbia Journal of Gender and Law* 609. However, I believe Schultz's overall argument – that employers and managers will frequently see advantages in suppressing sexual conduct, which could be seen as undermining efficiency and discipline – is convincing.

129 Abigail C. Saguy, 'Sexual harassment in France and the United States: activists and public figures defend their definitions' in Michèle Lamont and Laurent Thévenot (eds) *Rethinking Comparative Cultural Sociology: Repertoires of Evaluation in France and the United States* (Cambridge University Press 2010).

130 Corporate Europe, 'Big Tech takes EU lobby spending to an all time high' (Corporate Europe Observatory, 31 August 2021) <https://corporateeurope.org/en/2021/08/big-tech-takes-eu-lobby-spending-all-time-high> accessed 11 October 2021.

131 Laurie Clarke, Oscar Williams and Katharine Swindells, 'How Google quietly funds Europe's leading tech policy institutes' (*New Statesman,* 30 July 2021) <https://www.newstatesman.com/science-tech/2021/07/how-google-quietly-funds-europe-s-leading-tech-policy-institutes> accessed 18 November 2021.

132 Aaron Sankin, 'What Does Facebook Mean When It Says It Supports "Internet Regulations"?' (*The Markup*, 16 September 2021) <https://themarkup.org/ask-the-markup/2021/09/16/what-does-facebook-mean-when-it-says-it-supports-internet-regulations> accessed 18 November 2021.

133 Clarke et al. (n 116).

equal and inclusive online environments. European regulation has been criticised for focusing on the content of individual posts, rather than contextual factors like platform design.[134] However, this orientation serves platforms' interests insofar as it aligns with their current moderation practices[135], and with their commercial priorities. Irrespective of regulatory considerations, platforms have incentives to find and remove the most obviously offensive or illegal content, which is likely to repel users and advertisers.[136] They have much less incentive to redesign recommendation algorithms and platform architectures that contribute to social harms, given that these architectures in their current form are optimised for profit. In focusing on moderation at the content level rather than broader contextual, structural and design considerations, EU regulation effectively aligns with platform priorities more than the public interest.

45 It also reflects the influence of other powerful stakeholders. The new forms of private ordering that the EU has promoted in areas like terrorist content and disinformation involve close cooperation between platforms and national authorities. This not only enables those authorities to censor content online while circumventing formal legal channels and the checks and balances they entail[137], but also facilitates security agencies' collection of data on platform users and their activities.[138] EU regulation has also been particularly heavily influenced by lobbying from the copyright industries[139]—so much so that platforms are now, rather counterintuitively, subject to stricter intermediary liability for copyright infringement than for any other type of content, including terrorist content or child sexual abuse material.[140] Copyright owners are primarily interested in restricting the availability of specific content in which they have an economic interest, not in broader considerations about how online environments are constructed. This natural tendency towards a content-level orientation in one of the EU's highest-priority policy areas may have influenced its approach in other areas of social media regulation: an example is the notice and takedown system, which was originally developed in the US Digital Millennium Copyright Act but now applies to all illegal content in the EU.[141] Thus, the over- and underinclusivity of the EU's platform regulation seems to reflect the interests of a variety of state and corporate actors in prioritising content-level regulation and surveillance over designing safe and egalitarian online spaces.

E. Conclusion

46 Schultz's theory of the sanitised workplace invites us to question whether the law as implemented in practice actually serves the goals it nominally pursues; whether the legal and semantic categories we use to delimit unacceptable behaviour can really be clearly and stably defined; and how the delegation of law enforcement to private actors can result in the law being twisted to serve commercial goals. These questions are highly relevant in the context of European social media regulation—especially at the present moment, when the regulatory landscape

134 Wilson and Land (n 47); Bennett (n 47).

135 Land (n 35).

136 Kate Klonick, 'The New Governors: The People, Rules and Processes Governing Online Speech' (2018) 131 *Harvard Law Review* 1598 <https://harvardlawreview.org/2018/04/the-new-governors-the-people-rules-and-processes-governing-online-speech/ > accessed 18 November 2021; Roberts (n 104).

137 Land (n 35); Daphne Keller, 'Who Do You Sue? State and Platform Hybrid Power Over Online Speech' (Hoover Institution Aegis Series Paper No. 1902, 2019) <https://www.hoover.org/research/who-do-you-sue> accessed 11 January 2022.

138 Hannah Bloch-Wehba, 'Content Moderation As Surveillance' 36 *Berkeley Technology Law Journal* (forthcoming) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3872915> accessed 11 January 2022; Joris van Hoboken and Ronan Ó Fathaigh, 'Regulating Disinformation in Europe: Implications for Speech and Privacy' (2021) 6 *UC Irvine Journal of International, Transnational and Comparative Law* 9 <https://scholarship.law.uci.edu/ucijil/vol6/iss1/3/> accessed 11 January 2022.

139 Corporate Europe, 'Copyright Directive: how competing big business lobbies drowned out critical voices' (Corporate Europe Observatory, 10 December 2018) <https://corporateeurope.org/en/2018/12/copyright-directive-how-competing-big-business-lobbies-drowned-out-critical-voices> accessed 11 January 2022; Lucia Bertuzzi, 'Guidance on copyright law the result of "hefty lobbying", campaign groups say' (*Euractiv*, 8 June 2021) <https://www.euractiv.com/section/copyright/news/guidance-on-copyright-law-the-result-of-hefty-lobbying-stakeholders-say/> accessed 11 January 2022.

140 Folkert Wilman, 'The EU's system of knowledge-based liability for hosting service providers in respect of illegal user content – between the e-Commerce Directive and the Digital Services Act' (2021) 12(3) *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 317 <https://www.jipitec.eu/issues/jipitec-12-3-2021/5343> accessed 11 January 2022.

141 Wilman (n 140).

is rapidly shifting and new systems of privatised governance are being developed.

47 This paper contends that European regulation is functioning in tandem with, and actively reinforcing, commercial pressures to create "sanitised platforms". As section C shows, the tendencies towards under- and overinclusive regulation are already visible, as are its unevenly distributed effects. A wide range of content classed as illegal must be rapidly deleted, sweeping up significant portions of legal and harmless content along with it, and disproportionately suppressing marginalised groups and non-mainstream views. At the same time, beyond the limited provisions on systemic risk in the proposed Digital Services Act, platforms have few regulatory incentives to consider the broader social harms associated with their profit-optimised design choices and surveillance-based business models. We may end up with sterile social media platforms, increasingly empty of unconventional self-expression, creative uses of copyright works and controversial political views—even while hate speech, disinformation and more insidious social harms, such as the discriminatory effects inherent in data-based profiling and ad targeting, continue to thrive.

48 As Schultz's analysis shows, these over- and underinclusive effects are connected with underlying regulatory structures. Where liability incentives are used to delegate the interpretation and enforcement of ambiguous and contested legal categories to private companies, there is an inherent risk that they will target behaviour which is unprofitable, rather than behaviour and organisational structures which are actually harmful. The turn to private ordering in European social media regulation exacerbates this risk further. By encouraging platforms to develop their own organisational and technical systems for enforcing speech law, and then to use the same enforcement systems to enforce their private, commercially-driven speech policies, European law effectively subordinates all social media communications to commercial priorities.

49 Schultz's policy prescriptions for workplace harassment focus on how work environments influence sexist behaviour, and gender equality more broadly. She advocates a tiered liability system, with reduced liability risks for companies which create more egalitarian and less gender-segregated workplaces. The feasibility of these detailed proposals in the employment context has been questioned[142], but the focus on structural and environmental factors could certainly provide a useful orientation for European platform regulation in the future. Instead of demanding "sanitised platforms" that indiscriminately suppress non-normative content, European regulators should be asking how the law can ensure social media platforms are incentivised to mitigate the harmful effects of advertising-driven business models—or to adopt different business models entirely—and to design diverse and inclusive online public spaces.

142 In particular, Williams suggests that creating blunt incentives for employers to have a gender-balanced workforce overlooks the complexity and durability of gender segregation in employment and the ways that women's work is frequently undervalued: Christine L. Williams, 'The Unintended Consequences of Feminist Legal Reform: Commentary on The Sanitized Workplace' (2006) 26 *Thomas Jefferson Law Review* 101.

Start-ups and the proposed EU AI Act

Bridges or Barriers in the path from Invention to Innovation?

by **Letizia Tomada***

Abstract: Start-ups and small-scale providers play a crucial role in our tech and innovation-driven society. The advent of artificial intelligence may represent either a driving force or an insurmountable challenge for their growth and the setup of an AI regulatory framework is decisive in determining whether small-scale providers will encounter bridges or barriers during their innovation life-cycle. In this context, this article questions whether the recent European Commission proposal for a Regulation laying down harmonised rules on artificial intelligence (AI Act) presented on 21 April 2021 would, in practice, represent a catalyst or a hindrance to the AI innovation of start-ups. It presents the challenges that AI may pose for small-scale providers and analyses selected AI provisions in light of their needs and vulnerabilities. Further, it questions to what extent the envisaged measures in support of innovation are suited to tackle the current challenges and proposes new ways to construe more bridges in the path from Invention to Innovation.

Keywords: Start-ups; Artificial Intelligence; EU AI Act; Innovation

Recommended citation: Letizia Tomada, Start-ups and the proposed EU AI Act: Bridges or Barriers in the path from Invention to Innovation?, 13 (2022) JIPITEC 53 para 1

A. Introduction

1 In the context of the EU's work on the regulation of Artificial Intelligence ("AI"), on 21 April 2021 the European Commission presented its proposal for a Regulation laying down harmonised rules on artificial intelligence ("AI Act").[1] Stemming from the policy objectives enshrined in the previously published White Paper on AI[2] the current proposal adopts a 'human centric' approach and envisages a legal framework for trustworthy AI. The proposal aims at addressing the problems linked to the use of AI, without hindering its further development. While dealing with the implications for society at large, the envisaged rules and associated recitals pay attention to the needs of SMEs and start-ups.[3] The focus on this business category is noteworthy, in light of the important role that these market players have in the

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1 European Commission, Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on Artificial Intelligence and amending certain union legislative acts, COM(2021) 206 final, 2021. The present analysis is based on the text presented on 21 April 2021, as it was the only proposal available at the time of writing.

2 European Commission, White Paper on Artificial Intelligence – A European approach to excellence and trust, COM(2020) 65 final, 2020.

3 The specific provisions will be analysed in detail in Section 6 below.

European innovation ecosystem.[4] Furthermore, the safeguard of small and early-stage businesses is all the more relevant for larger and more established ones, as they often acquire and further develop start-ups' innovations and thus can also benefit from their existence and growth. However, despite the introduction of tailored rules for small-scale providers and start-ups, it is not yet clear whether the implementation of the proposed AI Act would, in practice, represent a catalyst or a hindrance to AI innovation of start-ups. To this aim, the present contribution first provides an overview of the proposed AI Act and analyses which businesses are included in the definition of 'start-ups' and of 'small scale providers'. Further on, Section D presents the challenges that AI may pose for small scale businesses. Against this background, Section E analyses selected AI Act provisions in light of the needs of small-scale market participants and Section F questions the extent at which the envisaged measures introduced to safeguard small-scale providers' innovation are suited to address the highlighted challenges. To conclude, Section G examines the implications that the implementation of the AI Act can have on AI innovation of start-ups and proposes ways forward to address shortcomings. The scope of the analysis is limited to the implications for start-ups as providers of AI systems.

B. Overview of the AI Act and its Aims

2 AI systems are defined in Article 3(1) as "software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with". Annex I contains a list of approaches and techniques for the development of AI which integrate this definition.[5] The Commission can amend Annex I in accordance with the new market and technological developments and on the basis of characteristics that are similar to the mentioned techniques and approaches. The definition and the related list of techniques and approaches are very broad and seem to encompass a wide range of programs.[6]

3 The AI Act follows a "risk-based approach" (recital 14) with the aim to avoid risks to the health or safety or to the protection of fundamental rights of natural persons concerned (see e.g. recitals 1, 13, 27, 32, Arts. 7(1)(b), 65). The proposal distinguishes four types of risk categories. First, it prohibits the implementation and use of AI systems that present unacceptable risks. Further on, it permits the uses of both AI systems presenting high-risks and the ones with limited risks. The high-risk systems are subject to compliance with specific requirements and obligations, while the limited risk systems must comply with transparency obligations. Lastly, the proposal mentions AI systems which present only minimal risks, and which are not directly targeted in the AI Act. The present paper focuses on the development and implementation of the high-risk AI systems category and on their implications for start-ups' innovation. The specific obligations accompanying the development and implementation of high-risk systems may hinder entry of start-up AI products in the market and thus deserves particular analysis. Conversely, it is evident that AI systems causing unacceptable risks will not reach the market *by default.* The minimal-risk ones do not raise compliance issues, while the transparency requirements for limited-risk AI systems shall be respected with regard to the high-risk category. Thus, potentially related issues will be addressed in the context of that analysis. The focus on the high-risk category is also justified as many AI products may well be deemed high-risk in the future. In fact, the 'high-risk' definition encompasses AI systems that are used as a safety component of a product or products regulated by existing legislation referred to in Annex II, such as medical devices, toys, machinery or that are required to undergo a third-party conformity assessment (Article 6(1)). In addition, AI systems in Annex III are considered high-risk (Article 6(2)). Annex III contains a list of

4 In this regard it is important to note that between the 1940s and 1970s large companies used to contribute more than start-ups and SMEs to the innovation system, which was mainly based on economies of scale in R&D, production and distribution at large volumes. Instead, in the last two decades the innovative potential of early-stage and small firms has increased, in light of their ability to exploit commercial opportunities that arise from market changes, of the lower cost of entry and the role of venture capital and of networks where open innovation is shared. See OECD, *SMEs entrepreneurship and innovation* (Paris: OECD, 2010) 16.

5 They include not only (a) various ML approaches, but also (b) 'Logic- and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems' as well as (c) 'Statistical approaches, Bayesian estimation, search and optimization methods'.

6 Sebastian Felix Schwemer, Letizia Tomada, and Tommaso Pasini, 'Legal AI Systems in the EU's proposed Artificial Intelligence Act' (2021) *Joint Proceedings of the Workshop on AI and Intelligent Assistance for Legal Professionals in the Digital Workplace* (LegalAIIA 2021). CEUR Workshop Proceedings, 2. http://ceur-ws.org/Vol-2888/.

eight selected areas that can be amended by the Commission (Article 7(1)) to update it according to the technological developments.[7]

4 In the context of the establishment of a regulatory framework for AI systems, the legislator emphasizes the needs of start-ups and small-scale businesses. In fact, even the explanatory memorandum to the proposal, stresses the importance of introducing provisions aimed at reducing the regulatory burden and supporting SMEs and start-ups. The stakeholder consultations prove the attention paid to their needs: 41.5% of the 352 business and industry representatives consulted were micro, small or medium-sized enterprises.[8] The explanatory memorandum highlights the need to address possible disadvantages for SMEs thereby introducing provisions to supporting their compliance and reducing their costs. Recital 72 demonstrates this intent by clarifying that the proposal foresees the establishment of regulatory sandboxes with the aim—among others—to enhance legal certainty for innovators and remove barriers for SMEs and start-ups. Both the explanatory memorandum and the recital provide a context and a basis for interpreting Title V of the AI Act, which provides for "measures in support of innovation" and in particular Article 55 envisaging the setup of measures for "small-scale providers, start-ups and users".[9]

5 Thus, the safeguard of the interests and needs of SMEs and start-ups is certainly among the objectives of the proposed regulatory framework for AI systems. Yet, to understand both the aims of the legislator and the proposal's implications, it is necessary to analyse what is meant with SMEs and start-ups and to examine in more detail the AI Act provisions relevant for this business category.

C. What are Small-scale Providers and Start-ups? Definitions, Relevance, and Characteristics

6 When referring to measures in support of innovation, both the explanatory memorandum and the relevant recital mention the categories of 'SMEs' and 'start-ups'. Interestingly, the articles of the proposed AI Act refer instead more specifically to 'small-scale providers' and 'start-ups'. Article 3 AI Act clarifies that 'small-scale provider' means a provider that is a micro or small enterprise within the meaning of Commission Recommendation 2003/361/EC.[10] Pursuant to the Commission definition, the category of micro, small and medium-sized enterprises ("SMEs") encompass enterprises that have less than 250 employees and have an annual turnover not exceeding EUR 50 million and/or an annual balance sheet total not exceeding EUR 43 million. In particular, within the SME category, a small enterprise is defined as an enterprise with less than 50 employees and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million, while a microenterprise employs less than 10 persons and has an annual turnover and/or annual balance sheet total less than EUR 2 million.[11] From the explanatory memorandum and the recitals it is clear that the intent of the legislator is to safeguard the interests and needs of the category of SMEs as a whole. In this framework, the referral to 'small-scale providers' as limited to small and micro enterprises does not seem justified. The scope of Article 3 should therefore be broadened as to encompass the whole SMEs category.[12] Expanding the addressees would in fact result in a more ample and more efficient use of the measures in support of innovation. In addition, it is relevant to note that while the SMEs category and subcategories are well-defined within the EU legislative framework, the same cannot be said as regards the term 'start-ups'. In fact, the AI Act does not specify which types of businesses are deemed to be included under this category. This raises the question on whether start-ups are meant to be identified always as a sub-category of SMEs or whether they refer to enterprises also above the SMEs' ceilings but with specific features and characteristics. This lack of clarity is noteworthy as it may well lead to uncertainty when deciding who is entitled to benefit from support measures.

7 In general, corporate law does not refer to 'start-ups' as a specific form of a company and often categorises the start-up enterprise under one of the more traditional types of legal entities depending

7 The additional AI systems that can be included shall first be intended to be used in any of the areas included in Annex III and second, they shall pose an equivalent or worse risk of harm to health and safety or to fundamental rights, than the risk posed by the systems already enumerated in Annex III.

8 Explanatory Memorandum, p. 8.

9 The provisions included in Title V AI Act are analysed in detail in Section III below.

10 Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (OJ L 124, 20.5.2003).

11 Article 2, Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (OJ L 124, 20.5.2003).

12 Therefore including companies with between 50 to 250 employees and whose annual turnover and/or annual balance sheet is between EUR 10 to 50 million.

on the type of the formal elements such as legal personality, limited liability, management, the nature of the shares and the relationships between stakeholders.[13] Yet, there is no widely accepted legal definition of a start-up.[14] In this framework, the literature has identified different categories with the aim to empirically assess the innovative activity of early-stage market entrants and, namely, 'new-technology based firms' ("NTBFs"),[15] "gazelles",[16] 'young innovative enterprises ("YIE")'.[17] However, regardless of different nomenclatures and despite the absence of a clear legal definition, it is evident that start-ups present specific features that distinguish them from established businesses and enhance their high innovative potential thereby justifying the attention to their needs and interests. Usually the start-ups' life cycle consists of a seed phase, an early-stage phase, a growth and expansion phase, and lastly a mature exit and success phase.[18] And the dynamics in which a start-up organisation operates foster a favourable environment for the development of innovation activities. First of all, within the start-up framework, the inventor does not feel a strong risk of misappropriation, and this encourages their innovative activity.[19] It is in fact unlikely that any investor would misappropriate the business plan invention. Secondly, during its lifecycle, the start-up organisation operates via cooperation between entrepreneurs and investors, which results in an alignment of their incentives to produce innovation. Furthermore, since the investment is usually divided in stages and the investors supporting the first round may not invest in the subsequent ones,[20] this creates a strong incentive for entrepreneurs to improve their output and innovative performance.[21] Lastly, start-ups do not have a "fear of cannibalisation", or fear of displacing already existing product lines and thus have a stronger incentive to implement new technologies.[22] Overall, these dynamics facilitate the development of innovative activities. The attention that the EU legislator gives to the safeguard of the interest and needs of small and new market entrants is therefore welcomed, in light of the relevant role these businesses play for the innovation policy. Yet, a clearer legal definition on this business category would allow to overcome uncertainty as regards rights and entitlement, and is therefore called for.

8 Along similar lines, defining the concept of innovation is not straightforward. The present analysis relies on the definition of the Oslo Manual of the OECD that refers to innovation as "a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)."[23] In other words, innovation oc-

13 Alexandra Andhov, 'Importance of Start-up Law for Our Legal systems' in Alexandra Andhov (eds) *Start-up Law* (Edward Elgar 2020) 9, 11.

14 Ibid.

15 Defined as independently owned businesses, not older than 25 years and based on the exploitation of a technological innovation which implies substantial technological risks Arthur D. Little, 'New technology-based firms in the United Kingdom and the Federal Republic of Germany' (Report for the Anglo-German Foundation for the Study of Industrial Society 1977).

16 Defined on the sole basis of their fast growth and without the need to be young and small. Thomas Philippon and Nicolas Véron 'Financing Europe's fast movers' (Bruegel Policy Brief, No. 2008/01).

17 European Commission, "Handbook on community State Aid Rules – Including temporary State aid measures to support access to finance in the current financial and economic crisis" (2009) 14, where they are defined as small enterprises, younger than 6 years and are capable to develop technologically new or substantially improved products or processes and that have less than 250 employees and carry a high risk of commercial failure.

18 The division in phases follows the division designed in Gerald B. Halt, John C. Donch, et al. *Intellectual Property and Financing Strategies for Technology Startups* (Springer, 2017). For more details on the different organisational structures and approaches within different phases see also John Freeman and Jerome S. Engel "Models of Innovation: Startups and Mature Corporations" (2007) 50 (1) California Management Review 94, 104.

19 Ronald J. Gilson, 'Locating Innovation: The Endogeneity of Technology, Organisational Structure, and Financial Contracting' (2010) 110 Colum. L. Rev. 885, 897.

20 See William A. Sahlman, 'The Structure and Governance of Venture-Capital Organizations' (1990) 27 Journal of Financial Economics 473, 475.

21 Ronald J. Gilson, 'Locating Innovation: The Endogeneity of Technology, Organisational Structure, and Financial Contracting' (2010) 110 Colum. L. Rev. 885, 902.

22 Michael J. Meurer, 'Inventors, Entrepreneurs, and Intellectual Property Law' (2008) 45 Houston Law Review 1201, 1211.

23 OECD, OSLO MANUAL: Guidelines for collecting and interpreting innovation data, 60 (4th ed. 2018), available at <https://www.oecd.org/science/oslo-manual-2018-9789264304604-en.htm> (accessed 20.05.2020). According to Schumpeter, innovation consists of novel goods, production methods, markets, production inputs and forms of organization. See Joseph A. Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* (1934) 88-89.

curs once the invention is implemented and brought into the market. Thus, the question is whether the set-up of the envisaged AI legal framework is likely to facilitate or hinder the innovation process.

D. AI Challenges for Small-scale Businesses

9 When it comes to the challenges related to the uses of AI in organisations in general, as a starting point, it is relevant to highlight that, currently, many AI systems are only experimental and not deployed in production.[24] In fact, it may be feasible and not too cumbersome to develop and demonstrate the technical functionality of a pilot AI project. However, deployment requires a much higher variety of skills and infrastructure, such as integration with already existing technical and legal structures, reskilling of employees and changes in business processes and management.[25] And the barrier between experiment and deployment is even harder to break down for a small-scale business. The extent at which the envisaged AI Act will answer these challenges can inform the evaluation on how far it can be deemed to support innovation by small-scale providers. This Section addresses in more detail some of the main challenges that small-scale businesses face in relation to the use and deployment of AI.

I. Lack of Talent and Resources

10 Both the identification and the development of business use cases for AI systems, require a deep understanding of AI technologies, of their limitations and of their usage in the business. These tasks require a broad set of skills that encompass computer science with a focus in machine learning, robotics and physics.[26] At present, there is an AI skills gap, which can hinder the opportunities of start-ups to enter the market. And even start-ups that use already made and developed AI solutions, need skilled and trained employees able to manage and use them and to correctly interpret their results. To overcome these skills gaps, the business entity can either train existing employees or hire and attract AI specialists.[27] Both cases, however, require considerable expenses.

II. Poor IT Infrastructure and Data Scarcity

11 Moreover, to develop machine learning and deep learning solutions with the use of AI, businesses need advanced computers and processors to solve problems at high speed. In particular, when the volume of data grows and deep learning develops even more complex algorithms, the business may well need very advanced IT infrastructure, able to process data more quickly than other computers. It goes without saying that a robust IT infrastructure, including high-performing hardware and advanced computer systems is very expensive to set-up, implement and run. In addition, even when those systems are available, start-ups need to have relevant data. And although at present, businesses have access to a greater amounts of data than ever before, it is also true that the most powerful AI machines are the ones trained on supervised training, which usually requires labelled data. Thus, a business which wants to implement AI strategies, needs to have a basic set of data and keep a source of relevant information and make sure that it can be relevant and useful for the specific industry. For a start-up this can be problematic as the data both available and relevant to it may often be very scarce.[28]

III. Detecting Bias and Privacy related Issues

12 Further on, all types of businesses when developing and deploying AI, should be aware and have to try to avoid possible dysfunctions, including risks of bias, lack of accountability or privacy issues.

13 First, the use of AI systems in prediction or classification tasks, often raises issues of bias.[29] Thus, busi-

24 Hind Benbya, Thomas H. Davenport, and Stella Pachidi 'Artificial Intelligence in Organizations: Current State and Future Opportunities' (2020) 19 (4) MIS Quarterly Executive 1, 5.

25 Ibid.

26 See 'Top Six Challenges Startups Face While Implementing Artificial Intelligence' (14.03.2020) available at <https://analyticsindiamag.com/top-6-challenges-startups-face-while-implementing-artificial-intelligence/> (accessed 7 May 2021).

27 Hind Benbya, Thomas H. Davenport, and Stella Pachidi 'Artificial Intelligence in Organizations: Current State and Future Opportunities' (2020) 19 (4) MIS Quarterly Executive 1, 6.

28 See 'Top Six Challenges Startups Face While Implementing Artificial Intelligence' (14.03.2020) available at <https://analyticsindiamag.com/top-6-challenges-startups-face-while-implementing-artificial-intelligence/> (accessed 7 May 2021).

29 Hind Benbya, Thomas H. Davenport, and Stella Pachidi

nesses need to perform experiments and simulations and implement debiasing techniques,[30] thereby evaluating the datasets used and involving human reviewers, with the aim to avoid and mitigate biased outcomes. Secondly, both large- and small-scale enterprises shall comply with explainability requirements. They shall be able to explain which data are used and how the model works in order to ensure trust and avoid lack of transparency.[31] Thirdly, business managers need to be also aware of accountability concerns, they should be careful of potential processes that may cause harm and should try to clarify responsibility and legal liability between the different actors interacting with the AI system upfront.[32] Fourthly, business entities need to identify and check which are the data and variables that the algorithm uses, in order to use and process data in compliance with existing regulations and to avoid any possible privacy violation.[33]

14 It can be challenging for an early-stage businesses to be aware of and adopt a strategy against the mentioned risks. To some extent, the proposed AI Act addresses these concerns and foresees related and specific requirements and obligations in particular in relation to the high-risk category.

E. Analysis of AI Act Selected Provisions in light of Start-ups' Needs and Concerns

15 When the AI system that the start-up has implemented is deemed as high-risk, the business must ensure that it complies with the requirements included in Chapter 2 of the AI Act. The Regulation indeed sets several obligations, encompassing the establishment and maintenance of a risk management system, with the aim to identify and analyse possible current and foreseeable risks that may arise in relation to the high-risk system (Article 9). In addition, detailed requirements concern data governance, documentation and transparency, human oversight measures and accuracy and the need to follow a conformity assessment procedure. Against the backdrop of the above-mentioned start-ups' concerns, this Section provides an overview of some of the envisaged requirements, highlighting the potential challenges that their compliance may pose for small scale businesses.

I. Data and Data Governance

16 For high-risk AI systems using techniques which require the training of models, the proposed Article 10 of the AI Act establishes quality criteria for training, validation and testing data sets. Data sets must be subject to specific data governance and management practices, which, among others, concern for example, the design choices, data collection, data preparation processing operations, the examination in view of possible biases and the identification of any possible data gaps or shortcomings (Article 10(2))). Further on, datasets shall be "relevant, representative, free of errors and complete" and datasets shall take into account the specific geographical, behavioural or functional setting, considering the intended purpose for the AI (Articles 10(3) and (4)). It is evident that in order to fulfil these requirements the business must—in the first place—have access to relevant databases. Moreover, in order to setup and implement the envisaged data governance and management practices and to evaluate and analyse the specific datasets, the organisation shall possess advanced computer systems and highly specialised expertise. In particular, especially when the training datasets are large or when the models rely on large knowledge bases (e.g. Wikidata, Wikipedia, etc.), it will be extremely challenging, if not practically impossible, to verify the representativeness, completeness and correctness of the datasets.[34] If this requirement

'Artificial Intelligence in Organizations: Current State and Future Opportunities' (2020) 19 (4) MIS Quarterly Executive 1, 7. For a review of definition of bias see Xavier Ferrer, Tom van Nuenen et al. 'Bias and Discrimination in AI: a cross-disciplinary perspective' (2020) available at < https://arxiv.org/abs/2008.07309 > (accessed on 15 March 2021).

30 Daniel McDuff, Roger Cheng et al. 'Identifying Bias in AI using Simulation' (2018) available at < https://arxiv.org/abs/1810.00471 > (accessed on 13 April 2021). Supporting the use of algorithms to detect discrimination and bias see Jon Kleinberg, Jens Ludwig et al. 'Discrimination in the Age of Algorithms' (2018) 10 Journal of Legal Analysis 113 – 174.

31 Joshua A. Kroll, Joanna Huey 'Accountable Algorithms' (2016) 165 University of Pennsylvania Law Review 3-66.

32 Paul Dourish, 'Algorithms and their others: Algorithmic culture in context' (2016) 3(2) Big Data & Society, 1-11.

33 Hind Benbya, Thomas H. Davenport, and Stella Pachidi 'Artificial Intelligence in Organizations: Current State and Future Opportunities' (2020) 19 (4) MIS Quarterly Executive 1, 8; Brent Mittelstadt, 'Automation, Algorithms, and Politics: Auditing for Transparency in Content Personalization Systems' (2016) International Journal of Communication, 10, 12. For empirical evidence of start-ups' challenges related to GDPR compliance see James Bessen, Stephen Michael Impink et al., 'GDPR and the Importance of Data to AI Start-ups' available at < https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3576714 > (accessed on 20 May 2021).

34 Sebastian Felix Schwemer, Letizia Tomada, and Tommaso Pasini, 'Legal AI Systems in the EU's proposed Artificial In-

also poses great compliance challenges for large established businesses and across different domains of application, the problems are exacerbated as far as start-ups and small-scale businesses are concerned.

17 Moreover, Article 10(5) provides a legal basis for the processing of special categories of personal data for the purposes of debiasing.[35] The introduction of this provision is remarkable and should be welcomed. In fact, pursuant to Article 9 GDPR, the collection and processing of sensitive data for these purposes would have required explicitly and freely given consent.[36] This newly introduced legal basis instead, facilitates compliance with privacy and data protection requirements, thereby lowering the burden for businesses, including small scale and start-up ones.[37]

II. Documentation and Transparency

18 Providers shall also supplement the high-risk AI system with technical documentation demonstrating the compliance with relevant requirements (Article 11) and shall develop them with logging capabilities to ensure that its functioning can be traced during its lifecycle (Article 12). In addition, providers have to make sure that the AI system operates in a transparent manner and is accompanied by instructions of use.[38] Despite the potential difficulty of drafting instructions that are 'relevant, accessible and comprehensible to users', the documentation and transparency requirements do not appear particularly burdensome and merely call for an organisational setup within the small business.

III. Human Oversight

19 Pursuant to Article 14, providers shall also design and develop the high-risk AI systems in order to guarantee proper human oversight, meaning that the AI system can be effectively overseen by natural persons while in use, with the aim to prevent or minimise potentially emerging risks to health, safety or fundamental rights. The measures aimed at ensuring human oversight shall be either identified and built into the AI system when technically feasible or identified by the provider and implemented by the user (Article 14(3)(a)(b)). The proposal provides that the measures shall allow the humans to whom the oversight is assigned, to carry out several tasks.[39] Of particular interest in this context, the accompanying recital 48 specifies that the measures guarantee that the individuals to whom human oversight has been assigned have the 'competence, training and authority to carry out that role'. As highlighted elsewhere,[40] it is interesting to note that a previous leaked draft of the proposal included a specific referral on setting up 'organisational measures' in that regard.[41] This

telligence Act' (2021) *Joint Proceedings of the Workshop on AI and Intelligent Assistance for Legal Professionals in the Digital Workplace* (LegalAIIA 2021). CEUR Workshop Proceedings, 6. http://ceur-ws.org/Vol-2888/

35 Art. 10(5) AI Act reads: "To the extent that it is strictly necessary for the purposes of ensuring bias monitoring, detection and correction in relation to the high-risk AI systems, the providers of such systems may process special categories of personal data referred to in Article 9(1) of Regulation (EU) 2016/679, Article 10 of Directive (EU) 2016/680 and Article 10(1) of Regulation (EU) 2018/1725, subject to appropriate safeguards for the fundamental rights and freedoms of natural persons, including technical limitations on the re-use and use of state-of-the-art security and privacy-preserving measures, such as pseudonymisation, or encryption where anonymisation may significantly affect the purpose pursued".

36 Ibid.; Michael Veale and Reuben Binns 'Fairer machine learning in the real world: Mitigating discrimination without collecting sensitive data' (2017) 2 Big Data & Society, 2, 1–17.

37 For empirical evidence of start-ups' challenges related to GDPR compliance see James Bessen, Stephen Michael Impink et al., 'GDPR and the Importance of Data to AI Start-ups' available at <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3576714 > (accessed on 20 May 2021).

38 For a comparative overview of the main categories of information to be provided to the public, to the users and kept by providers in technical documentation, see Michael Veale, Frederik Z. Borgesius, 'Demystifying the Draft EU Artificial Intelligence Act' (2021) 24 Computer Law Review International, 1, 13 (forthcoming).

39 These include the ability to fully understand the capacities and limitations of the high-risk AI system and monitor its operation, to remain aware of the tendency of automatically relying on the system output, to correctly interpret the system's output, to decide not to use the high-risk AI system in any particular situation and to intervene on its operation (Article 14(4)).

40 Sebastian Felix Schwemer, Letizia Tomada, and Tommaso Pasini, 'Legal AI Systems in the EU's proposed Artificial Intelligence Act' (2021) *Joint Proceedings of the Workshop on AI and Intelligent Assistance for Legal Professionals in the Digital Workplace* (LegalAIIA 2021). CEUR Workshop Proceedings, 7. http://ceur-ws.org/Vol-2888/.

41 The previous draft of the Article 11(3) read as follows: '3. Organisational measures as referred to in paragraph 1 shall be identified so as to ensure that the natural persons to whom human oversight is assigned by the user have the competence, expertise training and authority necessary to carry

is not included anymore in the current version. Interestingly, the requirement to ensure that the human has the 'authority and competence' to modify or disregard the decision, has been previously referred to as a 'social and organisational challenge' already in the context of the GDPR and of Article 29 Working Party interpretations.[42] The development and implementation of human oversight measures undoubtedly requires competence, training and authority within the organisation, which can be hard to achieve for a start-up or small scale entity. A regulatory framework encouraging the setup of measures at an organisational level to achieve those objectives would therefore be welcomed. Thus, it is suggested to reintegrate the referral to the organisational measures in the wording of the law and in particular in the context of recital 48, rather than in Article 14, so that it can be read as a mere guidance and not as a strict requirement instead. In any case, when it comes to small business entities, a mere—although concrete—referral to organisational measures may well not suffice and should instead be accompanied by the availability of concrete and external support for the setup of both the organisational and the related oversight measures.

IV. Obligations of Providers – Quality Management System, Conformity Assessment Procedure and EU Declaration of Conformity

20 Article 16 of the proposed Regulation lists several obligations of providers of high-risk AI systems which are further explained in Chapter 3. The present contribution examines in more detail only the ones that may be more relevant for start-ups and small-scale businesses to the extent that their compliance influences the entrance of the product in the market and thus, start-ups' innovation. The listed obligations require providers to ensure that the high-risk AI system is compliant with Chapter 2 requirements (Article 16 (a)), to take action if it is not in compliance (g), to draw up the technical documentation (c), to control and keep the logs automatically generated by the AI system (d), to comply with registration obligations (f), to keep the dialogue with the relevant national competent authorities for providing information on and demonstrating the conformity with the requirements (h)(j). In particular, providers shall also set up a quality management system (b) and ensure that the AI system undergoes the relevant conformity assessment procedure and affix the CE marking accordingly (e)(i).

21 The quality management system that providers must put in place for the operation of the high-risk AI system to ensure compliance with the relevant requirements (Article 17) shall be documented and include several aspects, for example, a strategy for regulatory compliance, examination, test and validation procedures, technical specifications, systems and procedures for data management, as well as other features. The existence of a quality management system is therefore a prerequisite to be able to bring the high-risk AI system in the market. However, the setup of such a system requires a high degree of structured organisation, which start-ups may be able to achieve only through appropriate support and assistance.

22 Moreover, pursuant to Article 19, prior to going to market with a high-risk AI system, providers must ensure that the system undergoes a specific "conformity assessment procedure" in accordance with Article 43 and shall draw up an "EU declaration of conformity" in accordance with Article 49. Article 43 clarifies that there are two different types of procedure: one based on internal control and referred to in Annex VI and one based on assessment of the quality management system and of the technical documentation with the involvement of a notified body as explained in Annex VII. In particular, for high-risk AI systems listed in Annex III, point 1, where the provider has applied harmonised standards or common specifications referred to in Articles 40 and 41, they must choose either one of the two procedures.[43] When instead

out their role.' See also Michael Veale, Frederik Z. Borgesius, 'Demystifying the Draft EU Artificial Intelligence Act' (2021) 24 Computer Law Review International, 1, 13 (forthcoming).

42 Michael Veale and Lilian Edwards 'Clarity, Surprises, and Further Questions in the Article 29 Working Party Draft Guidance on Automated Decision-Making and Profiling' (2018) 34 Computer Law & Security Review 398-404; Sebastian Felix Schwemer, Letizia Tomada, and Tommaso Pasini, 'Legal AI Systems in the EU's proposed Artificial Intelligence Act' (2021) *Joint Proceedings of the Workshop on AI and Intelligent Assistance for Legal Professionals in the Digital Workplace* (LegalAIIA 2021). CEUR Workshop Proceedings, 7. http://ceur-ws.org/Vol-2888/

43 In more detail in this regard see Michael Veale, Frederik Z. Borgesius, 'Demystifying the Draft EU Artificial Intelligence Act' (2021) 24 Computer Law Review International, 1, 16 (forthcoming), highlighting how SMEs and under-represented consumer organisations and SMEs have difficulties in engaging in private standardisation processes and that it is unclear whether the currently existing efforts to include their representation would allow their meaningful participation. In fact, these stakeholders do not have experience in standardisation and may well lack proper representation. See Rob van Gestel and Hans-W Micklitz, 'European Integration through Standardization: How Judicial Review is Breaking down the Club House of Private Standardization Bodies'

the harmonised standards have been applied only in part or do not exist, the provider shall follow the procedure involving a notified body according to Annex VII. This procedure is based, first, on the assessment of quality management system by the notified body which will send the provider a notification containing the conclusions of the quality assessment and secondly, on the control of the technical documentation by the notified body which issues a technical documentation assessment certificate when in conformity with the relevant requirements. Conversely, the high-risk AI systems referred to in Annex III, points 2 to 8, must follow the procedure merely based on internal control, as indicated in Annex VI. This procedure appears to be faster as it does not involve a notified body and it poses only on the provider the burden to verify the compliance with the relevant requirements of both the quality management system and of the technical documentation. In addition, the provider must also verify that the design and development process of the AI system and the post-market monitoring is consistent with the technical documentation.

23 The proposal provides that high-risk AI systems must follow a new conformity assessment procedure when they are substantially modified and specifies that for those that continue to learn after having been placed on the market, the changes that had been predetermined by the provider shall not be regarded as a substantial modification. In addition, the conformity procedures in Annex VI and VII can be updated in light of technical developments via delegated acts. Interestingly, a derogation from conformity assessment procedure is foreseen for a limited period of time and for exceptional reasons of "public security, protection of life and health of persons, environmental protection and the protection of key industrial and infrastructural assets." It is evident that, with the exception of the cases in which derogations are allowed, both the administrative and organisational costs and the time required to undergo the conformity assessment procedure may hinder the process from ideation to deployment, and this can be particularly challenging for small scale businesses. On one hand, the envisaged Annex VII procedure appears more cumbersome as it involves the activity of a notified body and requires more steps. On the other hand, the procedure based on internal control in Annex VI seems smoother. Yet, it poses all the burden of the relevant verifications on the provider. And this requires skills and organisation that start-ups hardly possess. In addition, the burden on small-scale business providers becomes higher and more relevant considering that, pursuant to Article 48, they are required to draw up a written EU declaration of conformity for each AI system and to keep it at disposal of the national competent authorities for 10 years after the placing on the market. The EU declaration of conformity must state that the high-risk AI system at hand meets the requirements set in Chapter 2 and must contain the information indicated in Annex V, including "a statement that the EU declaration of conformity is issued under the sole responsibility of the provider" (Annex V, point 3). This means that when small-scale providers draw up the EU declaration of conformity and affix the CE marking (Article 49), they do entirely take the responsibility of declaring and monitoring the compliance with Chapter 2 requirements and related relevant obligations. This is a very challenging task that only few start-ups may be both able and willing to take up. The proposal foresees a detailed post-market monitoring and enforcement regime, which is outside of the scope of the present contribution. However, it is relevant to highlight here that non-compliance with the practices and requirements laid down in Articles 5 or 10 can be fined up to 30.000.000 EUR or up to 6% of the total worldwide annual turnover of the company. The non-compliance with any other requirement or obligation will be fined up to 20.000.000 EUR or up to 4% of the company`s total annual turnover (Article 71). Although the proposal requires providers to take into account "the interests of small-scale providers and start-up and their economic viability" and calls for the effectiveness, proportionality and dissuasiveness of penalties, it must be seen how Member States will in practice take into consideration the needs of small businesses in this context and how fragmented the approaches may be. Any considerable penalty, or at times even only the risk thereof, may well cause the business to fail or even impede their access to the market. It appears essential to, first, provide them with the means to achieve compliance and secondly, foresee and implement manners to mitigate or share liability in specific circumstances.

F. The Envisaged Measures in Support of Innovation

24 In light of the challenges that the analysed provisions leave open, this Section examines the measures that the proposal envisages in support of innovation and evaluates the extent to which they may be suited to overcome challenges.

25 Among the measures in support of innovation included in Title V, the legislator envisages the setup and use of so-called 'regulatory sandboxes'. This is an example of legal experimentation, whereby "experimental law or regulation" can be defined as a legislative or regulatory instrument with limited geographic or subject-matter application and of temporary character, designed to test a

(2013) 50 Common Market Law Review, 179.

new legal solution or policy to be evaluated at the end of a defined period.[44] In particular, the term 'sandbox' in computer science refers to a testing environment where a system is monitored and prevents and impedes malicious programs from damaging a computer system.[45] In regulation instead, a regulatory sandbox is a system created to test new products and services in an artificially created regulatory environment. They allow a limited number of private firms and the supervising regulators to engage in learning, testing of novel ideas and in enabling regulatory adjustments.[46] Thus, regulatory sandboxes represent an experimental space for innovators, where they can benefit from an inapplicability or significant loosening of otherwise applicable regulation.[47] Against this backdrop, the proposed AI Act, enables the competent authorities and the European Data Protection Supervisor of Member States to establish AI regulatory sandboxes that must provide a controlled environment to allow "the development, testing and validation of innovative AI systems before their placement on the market" (Article 53(1)). The possibility to participate in a sandbox, considerably facilitates for a start-up the burden of checking compliance with the existing regulatory framework. In fact, the experiment is meant to be supervised by the competent national authorities with the aim to ensure compliance with the AI Act requirements and other relevant Union legislation. In addition, national data protection authorities or other relevant national authorities shall be "associated to the operation of the AI Regulatory sandbox" when the innovative AI systems involve the processing of personal data (Article 53(2)). Nevertheless, the fact that the national competent authorities contribute to supervising and ensuring compliance with relevant legislation, does not impair their supervisory and corrective powers. In fact, any existing risk to health, safety and fundamental rights must be immediately mitigated or the development and testing process will be suspended (Article 53(3)).

26 Further on, the proposed AI Act attempts to overcome the concern of fragmentation of the European approach possibly resulting from the setup of national regulatory sandboxes.[48] Article 53(5) therefore provides that the competent authorities that have established regulatory sandboxes in the Member States must "coordinate their activities and cooperate within the framework of the European Artificial Intelligence Board", thereby submitting annual reports and sharing good practices, lessons learnt and recommendations. This may well help to avoid that the small-businesses concerned receive a different treatment, depending on the Member State of operation. Yet, aiming at the harmonisation of the sandboxes framework and design is necessary, but it is also of primary importance that cooperation on best practices does take into account the social and economic specificities inherent in the different national settings as well. And it may well be the role of the Board to find the optimal balance between uniformity and diversity in this context. In any case, it is clear that the legislator attempts to tackle a potential too great risk of fragmentation. The same cannot be said regarding legal certainty in this context. In fact, the proposal does not regulate in detail the design and functioning of the regulatory sandboxes. And, at the time of writing, there is actually no specific reason why further details in this regard will or should be included within the AI Act.[49] The Act provides that the modalities and conditions of the functioning of the AI regulatory sandboxes, such as the eligibility criteria, the procedure of application, the selection, the participation in and exit from the sandbox and the rights and obligations of the participants are to be established in implementing acts, adopted by the Commission in accordance with the examination procedure referred to in Article 74(2) (Article 53(6)).

44 Sofia Ranchordas, 'Experimental Regulations for AI: Sandboxes for Morals and Mores' (2021) 1 Morals and Machines, 1, 10 [forthcoming] available at < https://ssrn.com/abstract=3839744 > (accessed 20 May 2021). For more detailed literature on experimental legislation see Sofia Ranchordás, *Constitutional Sunsets and Experimental Legislation* (Edward Elgar 2014); Michiel A. Heldeweg, 'Experimental legislation concerning technological & governance innovation – an analytical approach' (2015) 3 The Theory and Practice of Legislation, 169- 193; Rob Van Gestel and Gijs V. Dijck 'Better Regulation through Experimental Legislation' (2011) 17 (3) European Public Law 539-553.

45 Katerina Yordanova, 'The Shifting Sands of Regulatory Sandboxes for AI' (KU Leuven CITIP 18 July 2019) available at < https://www.law.kuleuven.be/citip/blog/the-shifting-sands-of-regulatory-sandboxes-for-ai/> (accessed on 15 June 2021).

46 Hillary J Allen 'Regulatory Sandboxes' (2019) 87 George Washington Law Review 579-645.

47 Ross P Buckley, Arner Dougles et al., 'Building Fintech Ecosystems: Regulatory Sandboxes, Innovation Hubs and Beyond' (2020) 61 Washington University Journal of Law & Policy 55-98.

48 Sofia Ranchordas, 'Experimental Regulations for AI: Sandboxes for Morals and Mores' (2021) 1 Morals and Machines, 1, 20 [forthcoming] available at < https://ssrn.com/abstract=3839744 > (accessed 20 May 2021).

49 Stressing that there is no expectation for this to happen see Sofia Ranchordas, 'Experimental Regulations for AI: Sandboxes for Morals and Mores' (2021) 1 Morals and Machines, 1, 19 [forthcoming] available at < https://ssrn.com/abstract=3839744 > (accessed 20 May 2021).

27 In addition to the proper procedure and conditions of access and functioning, it is also not yet clear which is the design and the type of legal experimentation that will be adopted. In this regard, more clarification in the context of the EU legislative acts providing a legal basis for future AI regulatory sandboxes should be welcomed. In particular, a regulatory sandbox can be limited to providing guidance to the innovator (bespoke guidance) or can foresee temporary derogations and exemptions from given rules (derogations) or provide for 'regulatory comfort' about what regulators deem as compliant behaviour and their approach towards enforcement over a certain period of time (regulatory comfort-shared risk).[50] Given the wide variety of potential options and in order to guarantee uniformity at least at the level of the regulatory sandboxes' design, it should be clarified which types of experimental regimes the competent authorities of the Member States will be able to establish. In particular, it appears that a complete temporary regulatory waiver will be excluded, since Article 53(4) explicitly clarifies that the participant in the AI regulatory sandboxes "shall remain liable under applicable Union and Member States liability legislation for any harm inflicted on third parties as a result from the experimentation taking place in the sandbox." Although it is not yet clear which is the type of harm the provision refers to, namely material harm only or also harms due to a breach of rights (e.g. privacy, fundamental rights), it is evident that this provision may prove particularly problematic for a small-scale regulatory sandbox participant.

28 In this context, in order to evaluate and opt for the most suited design, it can be instructive to consider the currently existing regulatory sandboxes experiences already developed in relation to the GDPR. For example, in the United Kingdom the Beta phase of a sandbox launched by the Information Commissioner's Office is designed to foster and safeguard data protection while supporting businesses using personal data to develop innovative products and services with a proven public benefit.[51] Moreover, the Norwegian Data Protection Authority (Datatilsynet) introduced in 2020 a regulatory sandbox to guide selected companies in the development of products in compliance with data protection law and in respect of fundamental rights.[52] During the development phase of the service or product, the sandbox prevents any enforcement measure against the companies. Yet, it does not provide a complete waiver from the Data Protection Act.[53] Along similar lines, the French Data Protection regulator (CNIL) has also introduced a regulatory sandbox that will not exempt companies from GDPR application, but will support businesses in designing and developing compliant products and services.[54]

29 Overall, the initial and currently existing legal uncertainty as for the design, modalities and conditions of the functioning of the sandbox, may result in an initial reluctance from private companies in participation. However, the adoption of subsequent EU implementing acts and the powers of the competent authorities of the Member States, leave room for the necessary flexibility and possibility of adaptation to the requirements and best practices that are deemed most appropriate in a technologically developing European legal landscape. In this framework, the establishment of regulatory sandboxes is in general of clear benefit for start-ups and small-businesses, in particular for the product development phase. Yet, at the time of writing, the absence of more detailed information concerning the design and the procedural modalities of the sandboxes' operation, do not allow to assess to what extent these will be concretely beneficial.

30 In addition, the proposal envisages specific measures tailored for small-scale providers that Member States must undertake (Article 55). Similarly, to the above discussion concerning the regulatory sandboxes, the introduction of tailored measures to support small-scale businesses shall be welcomed. Also in this context, it will be for the Board, whose tasks are referred to in Article 58, to set an appropriate balance between uniformity and diversity among the relevant practices. And only their concrete implementation can evaluate their real efficiency. Nevertheless, despite the lack of further details at the time of writing, the envisaged measures appear to provide

50 For more details in this regard see Sofia Ranchordas, 'Experimental Regulations for AI: Sandboxes for Morals and Mores' (2021) 1 Morals and Machines, 1, 21 [forthcoming] available at <https://ssrn.com/abstract=3839744 > (accessed 20 May 2021).

51 Six companies are currently part of the sandbox and are active in different areas, including mental health, child-centered content moderation etc). See Information Commissioner's Office, Regulatory Sandbox (2021) available at < https://ico.org.uk/for-organisations/regulatory-sandbox/ > (accessed 13 June 2021).

52 Birgitte K. Olsen,. Sandbox for Responsible Artificial Intelligence. Data Ethics. (14 December 2020) available at <https://dataethics.eu/sandbox-for-responsible-artificial-intelligence/> (accessed 13 June 2021).

53 Sofia Ranchordas, 'Experimental Regulations for AI: Sandboxes for Morals and Mores' (2021) 1 Morals and Machines, 1, 18 [forthcoming] available at <https://ssrn.com/abstract=3839744 > (accessed 20 May 2021).

54 For more details see CNIL, 'Bac à sable » données personnelles de la CNIL : appel à projets 2021' (2021) available at https://www.cnil.fr/fr/bac-a-sable-2021 (accessed 03 December 2021).

useful, but only marginal support, to small-scale businesses. In fact, on one hand, providing small-scale businesses and start-ups with priority access to the regulatory sandboxes is of great importance (Article 55 (1)(a)). While on the other hand, however, the organisation of awareness activities on the application of the AI regulation tailored to their needs and the establishment of 'channels of communication' between small-scale stakeholders—both as providers and users—and other innovators (Articles 55(1) (b) (c)) risks remaining at the level of a mere 'claim' if not accompanied by concrete support measures for the AI system operation. Similarly, a reduction of the level of fees for the conformity assessment under Article 43, proportionate to the size and market size of the small provider concerned (Article 55(2)) is helpful, but may be not sufficient for comprehensively supporting the business in undergoing the entire cumbersome procedure that will enable its product or service to reach the market.

31 In light of the above, despite the currently existing legal uncertainty and the difficulty of finding an appropriate level of fragmentation and uniformity, the introduction of measures in support of small-scale businesses and of innovation shall be welcomed. However, the result is that all the measures currently envisaged by the legislator are keen to provide great support to start-ups and small-scale businesses more during the development phase than at the deployment stage. For example, in the context of a sandbox the business participant can receive support as for the availability and use of advanced IT infrastructure, access to data and for checking compliance with existing legislation. Also, the envisaged awareness measures encourage great initiatives. Yet, these are not sufficient to support businesses at the deployment stage, i.e. for both entering and navigating the market.

G. Implications and Ways Forward

32 It is remarkable that in the context of the political ambition of a European AI development agenda, the legislator gives so much attention to the needs of small-scale businesses. Yet, considering that the envisaged measures in support of innovation are mainly limited to the 'development phase', this Section addresses solutions to overcome the existing gaps and uncertainties and highlights directions for further research. It first reviews and proposes best practices that can enhance the support at the experimental stage in the development phase. Furthermore, it promotes the adoption of additional measures and suggests amendments to the proposal that can foster and facilitate deployment for small-scale market players.

I. Development Phase

33 Some best practices that either are already in use or require further research and that can be implemented both within and outside the context of a sandbox, include tools for ongoing model improvement, for enhancing transparency and allowing the use of models with reduced data requirements. First of all, companies are currently developing tools (MLOps – machine learning operations) to monitor the models for potential inaccuracies and improve them over time.[55] When it comes to transparency and explainability, research on how to better approach those issues is still at the early-stages. There exist 'prediction explanation' tools that highlight influential variables or features, but these cannot yet be used for most complex models as the ones in deep learning neural networks.[56] In addition, research is still at early stages when it comes to new approaches to AI that can use less data. This area is relevant in light of the fact that the trend in the volume of data that many AI systems require, in particular in deep learning neural networks, may become unsustainable.[57]

34 Regarding best practices to be developed in the context of a sandbox, it is clear that a potential sandbox model cannot foresee a complete waiver from all applicable rules considering that Article 53(4) clarifies that the participants remain liable under applicable Union liability legislation for any harm to third parties resulting from the experimentation. Nevertheless, in the author's view, a sandbox regime modelled along the lines of the currently existing Norwegian 'GDPR' sandbox can be a viable solution to both ensure compliance and safeguard the interests of small-scale businesses. In fact, within this model the participant companies could find guidance in developing products and services compliant with the AI Act, data protection law and fundamental rights. And, while providing for an—at least partial—waiver from the AI Act and GDPR, the selected companies cannot be target of enforcement measures. In light of Article 53(4), the

55 Hind Benbya, Thomas H. Davenport, and Stella Pachidi 'Artificial Intelligence in Organizations: Current State and Future Opportunities' (2020) 19 (4) MIS Quarterly Executive 1, 9.

56 Ibid.; Royal Society 'Explainable AI: the basics' Policy Briefing (2019) 19 available at < https://royalsociety.org/-/media/policy/projects/explainable-ai/AI-and-interpretability-policy-briefing.pdf > (accessed on 11 June 2021).

57 James Wilson, Paul R. Daugherty, and Chase Davenport, 'The future of AI will be about less data, not more' (2019) Harvard Business Review available at <https://hbr.org/2019/01/the-future-of-ai-will-be-about-less-data-not-more> (accessed on 18 June 2021).

waiver can relate to aspects that do not involve the risk of causing harm to third parties. In addition, for the other relevant aspects a regime of shared risk and liability can be implemented.

35 The introduction of these practices and further research in these areas will provide support to small-businesses in complying with requirements of data governance, human oversight and will allow them to overcome the challenges concerning the lack of infrastructures and expertise.

II. Deployment phase

36 To support small-businesses in overcoming the boundaries between the development and the concrete implementation of the invention, the set-up of management and governance practices should be fostered and encouraged. Several organisations have already implemented different types of structures and roles to handle AI projects. These include appointing AI experts, creating a centre of excellence and developing an AI strategy.[58] The implementation of these or of similar practices should occur during the development phase but their maintenance and improvement during all of the business-lifecycle is key. In this regard, entities such as start-up hubs or venture capital investors may play a relevant role in supporting small-scale businesses with the set-up and maintenance of those organisational measures. The external support in the establishment of management and governance measures and the monitoring of their activities will in turn allow start-ups to implement the measures aimed at ensuring human oversight and data governance, to follow the conformity assessment procedure and to respond to the need of skills and expertise.

37 Furthermore, once the product or service has been put into the market, businesses shall keep monitoring the compliance of the AI system with all relevant requirements. As analysed above, the envisaged reduction of penalties in cases of non-compliance on the basis of the size and market-size of the business involved, is very much welcomed. However, it may well not be sufficient and small-businesses will likely keep being discouraged from deploying their AI innovations in light of the risks of considerable penalties and liability they still may face. In this framework, it is suggested to, first, encourage mergers and acquisitions, so that the established businesses can buy out or absorb the small-business innovative activity thereby taking over all related conformity requirements and responsibilities. In a similar vein, for cases in which a complete merger is not the preferred business solution, alternative ways of cooperation with more established businesses and investors should be developed and encouraged. This would allow them to agree on regimes of shared-liability whereby the more established organisation offers concrete support to the small-business in facing the burden of the liability risk. Secondly, it is recommended to explicitly introduce a waiver, or partial waver, from liability and penalties in cases of absence of fault.[59] Such a provision would represent a 'safe-harbour' for small businesses who have adopted measures and practices to comply with all relevant requirements but might have unintentionally overlooked some compliance aspects due to their lack of appropriate resources or expertise.

38 Lastly, it is suggested to provide support to small scale providers also in the context of enforcement before national courts, for example by reducing attorney-fees or by implementing fast-track procedures. This would mitigate the risks and possible negative consequences that an action before a court would represent for small-scale businesses.

H. Conclusion

39 In conclusion, the setup of a regulatory framework for trustworthy AI may have overall positive implications for start-ups' AI innovation. In fact, the legal framework provides a safety net that helps small-scale business providers avoid becoming prey to the indiscriminate behaviour of larger incumbents. In addition, the presence of specific rules aimed at addressing and safeguarding their category is positive. However, the referral to 'small-scale providers' as limited to small and micro enterprises does not seem justified and it is therefore recommended to broaden the scope of Article 3 as to encompass the whole SMEs category. Expanding the addressees would result in a more ample and more efficient use of the measures in support of innovation. Moreover, several requirements set forth in provisions—such as those for 'human oversight', conformity assessment, and others—represent a compliance burden for small-scale providers, thereby constituting a barrier that hinders the passage from invention to in-

58 In this regard see the survey in Thomas H. Davenport, 'The AI advantage: How to put the artificial intelligence revolution to work' (MIT Press, 2018). For further details see Thomas Davenport and Vikram Mahidhar 'What's your cognitive strategy?' (MIT Sloan Management Review 2018) available at < https://sloanreview.mit.edu/article/whats-your-cognitive-strategy/ > (accessed on 12 June 2021); Hind Benbya, Thomas H. Davenport, and Stella Pachidi 'Artificial Intelligence in Organizations: Current State and Future Opportunities' (2020) 19 (4) MIS Quarterly Executive 1, 11.

59 The details and implications of such a clause will be further researched and analysed in a separate paper.

novation. Moreover, the article finds that the measures in support of small-scale providers envisaged by the legislator are mostly addressed to the development phase rather than also at the level of deployment and implementation. Thus, the envisaged measures are not sufficient to support businesses in both entering and navigating the market and their positive implications are limited.

40 In this framework, the article suggests improvements to further detail and strengthen the measures to be adopted at development level and proposes additional measures targeted at the deployment and implementation phase. These include strengthening the role of venture capital investors and start-up hubs and fostering mergers with a view to encourage the set-up of organisational and governance measures and to support small-scale businesses with their compliance-obligations. These actors shall also take into account the adoption of regimes of shared-liability. At the same time, the possibility of introducing a waiver from liability in cases of 'absence of fault' should be taken into consideration. Furthermore, support must be provided also in the event of possible actions before Courts.

41 These improvements will constitute building blocks for construing strong bridges between early-stage inventions and implemented innovation within the EU innovative ecosystem landscape.

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

by **Martin Senftleben, Thomas Margoni, Daniel Antal, Balázs Bodó, Stef van Gompel, Christian Handke, Martin Kretschmer, Joost Poort, João Quintais and Sebastian Schwemer**

Abstract: In the European Strategy for Data, the European Commission highlighted the EU's ambition "to acquire a leading role in the data economy." At the same time, the Commission conceded that the EU would have to "increase its pools of quality data available for use and re-use." In the creative industries, this need for enhanced data quality and interoperability is particularly strong (section A). Without data improvement, unprecedented opportunities for monetising the wide variety of creative content in EU Member States and making this content available for new technologies, such as artificial intelligence ("AI") systems, will most probably be lost (section B). The problem has a worldwide dimension. While the US have already taken steps to provide an integrated data space for music as of 1 January 2021, the EU is facing major obstacles not only in the field of music but also in other creative industry sectors (section C). Weighing costs and benefits (section D), there can be little doubt that new data improvement initiatives and sufficient investment in a better copyright data infrastructure should play a central role in EU copyright policy. The work notification system following from Article 17(4)(b) of the Directive on Copyright in the Digital Single Market may offer an unprecedented opportunity to bundle and harmonize data in a shared EU copyright data repository (section E). In addition, a trade-off between data harmonisation and interoperability on the one hand, and transparency and accountability of content recommender systems on the other, may pave the way for new initiatives (section F).

Keywords: copyright; metadata; cultural diversity; licensing; enforcement; recommender systems; text and data mining

Recommended citation: Martin Senftleben, Thomas Margoni et al., 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 13 (2022) JIPITEC 67 para 1

A. Introduction

1 Since the early days of the digital revolution, the dream of the free flow of information across cultures and continents has been accompanied by the hope that digital rights management ("DRM") in the area of copyright would maximise the spectrum of available literary and artistic productions (including content for niche audiences), minimise transaction costs, pave the way for ubiquitous and differentiated licensing solutions and allow creative industries to thrive. In reaction to the challenges arising from the digital environment, the 1996 WIPO "Internet" Treaties[1] introduced new international standards against the circumvention of technological measures that are employed to protect copyrighted works, and the removal or alteration of copyright management information.[2] The 2001 Directive on the Harmonisation of Copyright and Related Rights in the Information Society ("Information Society Directive" or "ISD")[3] transposed these international standards into EU law.

2 Besides applications by individual companies, the issue of copyright data management—in the sense of attaching and standardising metadata to works stemming from various authors and producers—has traditionally played a crucial role in the area of collective licensing of creative content. Nowadays, content distribution platforms that operate internationally, such as Spotify, Apple Music, YouTube, Netflix and Getty Images, play a central role as well. With Article 17 of the Directive on Copyright in the Digital Single Market ("Digital Single Market Directive" or "CDSMD"),[4] the topic receives an important additional dimension.[5] Article 17 addresses specifically online platforms that allow users to upload and share user-generated content ("UGC"). The collaboration between the creative industry and these platforms—Online Content Sharing Service Providers ("OCSSPs")[6]—has already led to the creation of content identification systems (and corresponding databases) in the past, and can be expected to foster the establishment of more extensive content libraries and corresponding metadata for the purposes of online content identification and moderation in the future.[7] Article 17(4)(b) CDSMD requires OCSSPs to make

> *"in accordance with high industry standards of professional diligence, best efforts to ensure the unavailability of specific works and other subject matter for which the rightholders*

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1 WIPO Copyright Treaty and WIPO Performances and Phonograms Treaty, adopted in Geneva on December 20, 1996.

2 Articles 11 and 12 of the WIPO Copyright Treaty; Articles 18 and 19 of the WIPO Performances and Phonograms Treaty.

3 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.

4 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.

5 For a more detailed discussion of the relationship between the data economy and the creative industries depending on copyright, see Valérie-Laure Benabou, in collaboration with Célia Zolynski and Laurent Cytermann, *Droit de la propriété littéraire et artistique, données et contenus numériques*, Paris: CSPLA 2018.

6 See the definition in Article 2(6) CDSMD. For a more detailed discussion, see Axel Metzger and Martin R.F. Senftleben, "Comment of the European Copyright Society: Selected Aspects of Implementing Article 17 of the Directive on Copyright in the Digital Single Market into National Law", *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 10 (2020), 115-131.

7 For a proposal to use Article 17 CDSMD as a catalyst to build a public repository of public domain works and openly licensed works, see Julia Reda and Paul Keller, "A Proposal to Leverage Article 17 to Build a Public Repository of Public Domain and Openly Licensed Works", *Kluwer Copyright Blog*, 23 September 2021, available at: http://copyrightblog.kluweriplaw.com/2021/09/23/a-proposal-to-leverage-article-17-to-build-a-public-repository-of-public-domain-and-openly-licensed-works/.

have provided the service providers with the relevant and necessary information;..."

3 Evidently, this provision imposes more than a content moderation obligation on OCSSPs.[8] At the same time, it gives copyright and neighbouring right holders a strong incentive to provide work-related data, including accurate and up-to-date ownership information. A rightholder who does not provide "the necessary and relevant information" in the sense of Article 17(4)(b) CDSMD cannot benefit from the new content moderation obligation. As a result, infringing user uploads may become available on online platforms.

4 With this new incentive scheme for notifying work-related data, Article 17(4)(b) CDSMD may play a central role as a catalyst bringing about new pan-European copyright data repositories, at least for content shared on OCSSP platforms. Such a catalyst seems crucial. In theory, the digital environment offers unprecedented opportunities for commercialising literary and artistic productions and serving consumers. To this day, however, several practical problems have prevented the creative industries from realising the full potential of copyright data management and digital modes of exploitation. The lack or inaccuracy of metadata prevents or delays the disbursement of royalties. Moreover, inaccurate and incomplete metadata make content hard to find, or license, and, as a result, may contribute to digital piracy.

5 From an economic perspective, it may be said that even if certain content is technically available via legal channels, inaccurate and incomplete metadata may increase search costs for users to such an extent that data problems de facto create incentives to make unauthorised use where copyright enforcement is weak. Alternatively, potential uses of works may simply be forgone due to such transaction costs. In addition to these problems at the level of individual data sets, the lack of interoperability between data management systems and related data libraries forces stakeholders to deal with a highly inefficient, and often inaccurate, piecemeal network of data providers, systems, datasets and standards. It increases all types of transaction costs because it obliges stakeholders to learn about, identify, and deal with various types of metadata, as well as individual terms and modalities of use. The high costs of dealing with inaccurate and incomplete metadata may moreover favour big providers of copyright-intensive products and services who can afford to invest in database building, data cleansing, and who are capable of bearing the costs of lawsuits arising from data-related conflicts. This enhances the risk of economic concentration in the digital content distribution market and a corresponding

8 As to the underlying debate on new licensing and content moderation obligations, see Axel Metzger and Martin R.F. Senftleben, "Understanding Article 17 of the EU Directive on Copyright in the Digital Single Market – Central Features of the New Regulatory Approach to Online Content-Sharing Platforms", *Journal of the Copyright Society of the U.S.A.* 67 (2020), 279 (284-308); Christophe Geiger and Bernd Justin Jütte, "Platform liability under Article 17 of the Copyright in the Digital Single Market Directive, Automated Filtering and Fundamental Rights: An Impossible Match", *Gewerblicher Rechtsschutz und Urheberrecht International* 70 (2021), 517; Sebastian Felix Schwemer, "Article 17 at the Intersection of EU Copyright Law and Platform Regulation", *Nordic Intellectual Property Law Review* 2020, 400-435; Martin R.F. Senftleben, "Institutionalized Algorithmic Enforcement – The Pros and Cons of the EU Approach to Online Platform Liability", *Florida International University Law Review* 14 (2020), 299-328; Martin Husovec and João Pedro Quintais, "How to License Article 17? Exploring the Implementation Options for the New EU Rules on Content-Sharing Platforms under the Copyright in the Digital Single Market Directive", *Gewerblicher Rechtsschutz und Urheberrecht International* 70 (2021), 325 (325-348); João Pedro Quintais, Giancarlo Frosio, et al. "Safeguarding User Freedoms in Implementing Article 17 of the Copyright in the Digital Single Market Directive: Recommendations from European Academics", *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 10 (2020), 277-282; Giancarlo Frosio, "Reforming the C-DSM Reform: A User-Based Copyright Theory for Commonplace Creativity", *International Review of Intellectual Property and Competition Law* 51 (2020), 709 (724-726); Sebastian Felix Schwemer and Jens Schovsbo, "What is Left of User Rights? – Algorithmic Copyright Enforcement and Free Speech in the Light of the Article 17 Regime", *Intellectual Property Law and Human Rights,* 4th ed., Alphen aan den Rijn: Wolters Kluwer 2020, 569-589; Martin R.F. Senftleben, "Bermuda Triangle: Licensing, Filtering and Privileging User-Generated Content Under the New Directive on Copyright in the Digital Single Market" *European Intellectual Property Review* 41 (2019), 480 (483-484); Martin R.F. Senftleben, Christina Angelopoulos, et al., "The Recommendation on Measures to Safeguard Fundamental Rights and the Open Internet in the Framework of the EU Copyright Reform", *European Intellectual Property Review* 40 (2018), 149; Christina Angelopoulos, "On Online Platforms and the Commission's New Proposal for a Directive on Copyright in the Digital Single Market", 2017, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2947800; Giancarlo Frosio, "From Horizontal to Vertical: An Intermediary Liability Earthquake in Europe", *Oxford Journal of Intellectual Property and Practice* 12 (2017), 565-575; Giancarlo Frosio, "Reforming Intermediary Liability in the Platform Economy: A European Digital Single Market Strategy", *Northwestern University Law Review* 112 (2017), 19; Reto M. Hilty and Valentina Moscon (eds.), *Modernisation of the EU Copyright Rules – Position Statement of the Max Planck Institute for Innovation and Competition*, Max Planck Institute for Innovation and Competition Research Paper No. 17-12, Max Planck Institute for Innovation and Competition: Munich 2017.

power imbalance between copyright holders and content distributors, such as online platforms.

B. Need for Improved Copyright Data Management

6 Emerging new technologies that require the use of large repertoires of creative content shed light on the dimension of transaction cost problems in the creative industries and the risk of losing substantial revenue. The situation in the field of AI systems can serve as an example. For a long time, mankind assumed that only humans were capable of creating literary and artistic works. With developments in the field of AI giving birth to a new kind of algorithmic work creation in the realm of cultural creativity, this assumption no longer seems valid. Today, AI systems increasingly assist in the creation of works of art and literature ("AI-assisted works"). Sometimes, on the basis of appropriate training material, they may also be capable of mimicking human literary and artistic productions, such as poems, music and paintings ("AI-generated works").[9] The technology enabling their creative functions is becoming more and more advanced and instead of fully relying on human instructions, contemporary AI systems are becoming increasingly autonomous. Certain types of deep-learning systems may give users the impression of being capable of cultural creation, potentially almost independently, allowing for broad-scale production of cultural objects that eye and ear often fail to distinguish from human creations.[10]

7 In this context, however, it must not be overlooked that "artificial creativity" is impossible without source material in a harmonised and interoperable format that can be used for feeding and instructing AI systems. Without machine-readable literary and artistic input stemming from authors of flesh and blood, an AI system has no template for its own processes of mimicking human creativity. Modern data-driven AI often uses Text-and-Data Mining ("TDM")[11] techniques to extract the data needed for machine learning. TDM has emerged as one of the most powerful digital tools in the AI environment which enables the discovery and extraction of patterns, correlations and more generally of (often hidden) knowledge from existing content and data.[12] Both high-tech and creative industries are currently being revolutionised by the advancements in this data-driven type of AI. Techniques that are currently

9 See Ahmed Elgammal, Bingchen Liu et al., "*CAN:* Creative Adversarial Networks Generating "Art" by Learning About Styles and Deviating from Style Norms", June 2017, available at: https://www.researchgate.net/publication/317823071_CAN_Creative_Adversarial_Networks_Generating_Art_by_Learning_About_Styles_and_Deviating_from_Style_Norms, 17 (Elgammal and his fellow researchers carried out an experiment to determine whether humans were capable of distinguishing computer-generated art from human art by its appearance. 75% of the research subjects assumed that the computer-generated paintings were created by a human artist). Cf. Dan Burk, "Thirty-Six Views of Copyright Authorship, by Jackson Pollock", *Houston Law Review* 58 (2020), 263 (270-321); P. Bernt Hugenholtz and João Pedro Quintais, "Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?", *International Review of Intellectual Property and Competition Law* 52 (2021), 1190 (1212-1213); Martin R.F. Senftleben and Laurens D. Buijtelaar, "Robot Creativity: An Incentive-Based Neighbouring Rights Approach", *European Intellectual Property Review* 42 (2020), 797-812; Daniel Gervais, "The Machine as Author", *Iowa Law Review* 105 (2020), 2053; Jane C. Ginsburg and Luke Ali Budiardjo, "Authors and Machines", *Berkeley Technology Law Journal* 34 (2019), 343 (395-396); Marie-Christine Janssens and Frank Gotzen, "Kunstmatige Kunst. Bedenkingen bij de toepassing van het auteursrecht op Artificiële Intelligentie", *Auteurs en Media* 2018-2019, 323 (325-327); William T. Ralston, "Copyright in Computer-Composed Music: HAL Meets Handel", *Journal of the Copyright Society of the U.S.A.* 52 (2005), 281; Shlomit Yanisky-Ravid and Samuel Moorhead, "Generating Rembrandt: Artificial Intelligence, Copyright and Accountability in the 3A Era", *Michigan State Law Review* (2017), 659 (662); Annemarie Bridy, "The Evolution of Authorship: Work Made by Code", *Columbia Journal of Law and the Arts* 39 (2016), 395 (397); Robert C. Denicola, "Ex Machina: Copyright Protection for Computer-Generated Works", *Rutgers University Law Review* 69 (2016), 251.

10 The impact that AI is having in the field of IP, and copyright in particular, has been recognised by the European Commission, which has specifically identified a number of ambitious interventions in this area in its recent "IP Action Plan", see European Commission, 15 November 2020, *Making the Most of the EU's Innovative Potential – An Intellectual Property Action Plan to Support the EU's Recovery and Resilience*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Document COM(2020) 760 final, 12. See also the report by Alexandra Bensamoun and Joëlle Farchy, in collaboration with Paul-François Schira, *Intelligence artificielle et culture*, Paris: CSPLA 2020.

11 The abbreviation "TDM" is used here for text-and-data mining in accordance with the use that has become customary in the domain of copyright. It is not to be confused with "term document matrix" – an important standard organizational form of data describing natural language texts for NLP algorithms.

12 Thomas Margoni, "Computational Legal Methods: Text and Data Mining in Intellectual Property Research", in: Irene Calboli and Maria Lillà Montagnani (eds.), *Handbook on Intellectual Property Research*, Oxford: Oxford University Press 2021, 487-505.

discussed under the headings of Machine Learning ("ML"), Natural Language Processing ("NLP") and Deep Neural Networks ("DNN") require the "training" on vast amounts of content and data in order to achieve reliable results that may finally lead to new scientific and technological advancements, products and services. This information is often deduced, through automated machine-reading processes from books, magazine articles, music works, or films enjoying copyright protection. Not surprisingly, the insatiable appetite of "creative" AI systems for literary and artistic data input is often regarded as a promising new source of revenue for the creative industries.[13]

8 The use of copyrighted works as training material for these types of AI applications, however, raises complex questions. When humans learn a new task or skill (e.g. a new language), they usually store the training information (e.g. the textbook rules and examples used to learn the language) as an electrochemical trace in the area of the brain dedicated to language. Humans do not need a copyright exception in order to store that copy. However, it is far from clear that when a computer makes the corresponding digital copy of training material in order to learn a language—or any other task for that matter—that this activity is likewise excluded from the copyright domain.[14] On the contrary, the use of any digital copy, temporary or permanent, in whole or in part, direct or indirect, may amount to the infringement of the right of reproduction laid down in Article 2 ISD.

9 The right of reproduction thus constitutes a pivotal element in AI training processes. ML-based systems may require numerous and different types of reproductions: certain copies may be just temporary (the conversion of .pdf into .xml for annotation and enrichment purposes), others may be permanent (the initial creation of *corpora* or databases of training material, or the final storage of said material for replicability, accountability and verifiability of the training process). Some copies may be in whole (such as the initial reproduction of the *corpora*), while other copies may be in part (such as the information stored in the "trained models" which will be used by the AI algorithm to perform the intended task). Finally, some reproductions may be direct and others may be only indirect (again the final "trained models" may contain only partial and modified copies of the original material). Further steps in the AI training process and the distribution and use of the final outcome may involve additional rights that are exclusively reserved to copyright holders, such as the right of distribution and the right of communication to the public. If no exceptions or limitations permit the use of copyrighted material without authorisation,[15] the current formalistic interpretation that the CJEU embraces, especially in relation to the right of reproduction,[16] points towards the conclusion that all these individual acts of use require licenses.[17]

10 Against this background, appropriate copyright data management and licensing infrastructures are not only desirable to offer the creative industries the opportunity of exploiting the promising new market for AI training data. Improved copyright data management is also indispensable to enable EU high-tech industries to compete with AI system developers in other regions. In Article 3(1) CDSMD, EU legislation has granted a statutory permission to reproduce literary and artistic works for AI training purposes. This limitation of copyright protection, however, only covers TDM in the context of scientific research carried out by eligible research organisations and cultural heritage institutions.[18] Article 4(1) CDSMD supplements this research privilege with a general TDM exemption that can also be invoked by commercial AI system developers. This broader copyright limitation, however, is only applicable as long as copyright holders refrain from reserving their ex-

13 Cf. Paul Covington, Jay Adams and Emre Sargin, "Deep Neural Networks for Youtube Recommendations", in: *Proceedings of the 10th Acm Conference on Recommender Systems*, RecSys '16, New York: Association for Computing Machinery 2016, 191-198, available at: https://doi.org/10.1145/2959100.2959190; Kurt Jacobson, Vidhya Murali et al., "Music Personalization at Spotify", in: *Proceedings of the 10th Acm Conference on Recommender Systems*, RecSys '16, New York: Association for Computing Machinery 2016, 373, available at: https://doi.org/10.1145/2959100.2959120.

14 For a more detailed discussion of this point, see Rossana Ducato and Alain Strowel, "Ensuring Text and Data Mining: Remaining Issues with the EU Copyright Exceptions and Possible Ways Out", *European Intellectual Property Review* 43 (2021), 322-337.

15 Thomas Margoni and Martin Kretschmer, "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.

16 For a critique of this approach, see Martin R.F. Senftleben, "Flexibility Grave – Partial Reproduction Focus and Closed System Fetishism in CJEU, *Pelham*", *International Review of Intellectual Property and Competition Law* 51 (2020), 751-769.

17 Cf. Ducato and Strowel, supra note 17, 322-337, who propose a different interpretation of the relationship between "right" and "infringement" in the realm of Article 2 ISD relying *inter alia* on the "recognisability" test which the CJEU expressed in its *Pelham* decision (CJEU, 29 July 2019, case C476/17, Pelham).

18 Cf. the definition in Article 2(1) and (3) CDSMD.

clusive rights under Article 4(3) CDSMD.[19] The need to obtain licenses for commercial applications is thus the rule in EU copyright law; a use permission without prior rightholder authorisation is the exception. With regard to commercial AI training, Article 5(1) ISD only provides a loophole for TDM processes that keep within the confines of transient, temporary copying.[20] This restrictive approach may be insufficient for the needs of high-tech firms focusing on AI development. Considering current industry practices, it seems safe to assume that more than temporary takings from copyrighted source material will be necessary in many cases.

11 Main international competitors of the EU have chosen approaches that markedly depart from the focus on copyright licensing adopted in Europe. Countries such as the US, Canada, Singapore, South Korea, Japan, Israel or Taiwan have adopted regulatory measures which, in the natural tension between the protection of investments and the promotion of innovation, have opted for broader copyright limitations arguably favouring the latter over the former. The specific measures that have been adopted in order to gauge the proper balance have evolved from, and thus mirror, the domestic legal culture and characteristics. In the US, for instance, TDM and ML analyses are routinely considered to be transformative uses and as such to constitute fair use which is permissible without the prior authorisation of the rightholder and which does not generate claims for fair compensation. This means that using protected works not as works but as input data to extract information that will be used to create new knowledge—so called non-consumptive or non-expressive uses[21]—is considered a free activity that does not require licensing efforts. Japan is another interesting example as its copyright law can be considered closer to continental-European models. Instead of a broad standard (i.e. fair use), Japanese copyright legislation provides for a list of exceptions and limitations that resembles to a certain degree the approach taken in Article 5 ISD. Japan has implemented in its copyright legislation a broad TDM exception in 2009. This provision refrains from precluding commercial users from invoking the TDM exception.[22] The US and Japan are interesting examples because, while belonging to different copyright traditions, they both have thriving creative and cultural industries as well as a highly competitive high-tech sector in the field of AI.

12 Considering this global scenario, it is of particular importance to establish efficient copyright data creation, management and licensing infrastructures, and employ Article 17(4)(b) CDSMD as a tool to amass copyright metadata that can help to achieve this goal. In the current policy debate, creative industry representatives in European countries often express a preference for a restrictive approach that only leaves room for narrow copyright exceptions. They fear that a more flexible solution would allow the high-tech industry to exploit copyrighted source material for AI training purposes without sharing the benefits that accrue from the development of AI products and services on this basis. This approach may disadvantage EU-based high-tech industries in comparison with their peers in other legal systems that are willing to favour the high-tech sector. The need to obtain an authorisation to train AI algorithms on vast amounts of data—including copy-

19 For a discussion of opt-out systems as tools to reduce the impact of use privileges on the commercialisation of the work, see Martin R.F. Senftleben, "'How to Overcome the Normal Exploitation Obstacle: Opt-Out Formalities, Embargo Periods, and the International Three-Step Test", *Berkeley Technology Law Journal Commentaries* 1, No. 1 (2014), 1-19.

20 CJEU, 16 July 2009, case C-5/08, Infopaq/Danske Dagblades Forening, para. 56-58; CJEU 17 January 2012, case C-302/10, Infopaq II, para. 36, 44 and 51-56. Cf. Christophe Geiger et al., "Text and Data Mining in the Proposed Copyright Reform: Making the EU Ready for an Age of Big Data?", *International Review of Intellectual Property and Competition Law* 49 (2018), 814 (814-844); Thomas Margoni, "AI, Machine Learning and EU Copyright Law: Who owns AI?", *Annali Italiani del Diritto d'Autore, della Cultura e dello Spettacolo* XXVII (2018); 281 (281-304); Rossana Ducato and Alain Strowel, "Limitations to Text and Data Mining and Consumer Empowerment: Making the Case for a Right to 'Machine Legibility'", *International Review of Intellectual Property and Competition Law* 50 (2019), 649; Eleonora Rosati, "An EU Text and Data Mining Exception for the Few: Would it Make Sense?", *Journal of Intellectual Property Law and Practice* 13 (2018), 429 (429-430); Andres Guadamuz and Diane Cabell, "Data Mining in UK Higher Education Institutions: Law and Policy", *Queen Mary Journal of Intellectual Property* 4 (2014), 3 (3-29).

21 Matthew Sag, "Copyright and Copy-Reliant Technology", *Northwestern University Law Review* 103 (2009), 1607-1682; Ian Hargreaves, *Digital Opportunities – A Review of Intellectual Property and Growth*, London: UK Department for Business, Innovation and Skills, 18 May 2011.

22 The Japanese Copyright Act envisages an exception for TDM that is not limited to non-commercial or to research only purposes, see Article 47-septies Japanese Copyright Act reported and discussed in Lucie Guibault and Thomas Margoni, "Legal Aspects of Open Access to Publicly Funded Research", in: OECD (ed.), *Enquiries Into Intellectual Property's Economic Impact*, Chapter: 7, OECD 2015, 373-414, 396 available at: https://www.oecd.org/sti/ieconomy/intellectual-property-economic-impact.htm. See also Marco Caspers, Lucie Guibault et al., *Future TDM – Baseline Report of Policies and Barriers of TDM in Europe*, Amsterdam: Institute for Information Law 2016, 75-76; Tatsuhiro Ueno, "The Flexible Copyright Exception for 'Non-Enjoyment' Purposes Recent Amendment in Japan and Its Implication", *Gewerblicher Rechtsschutz und Urheberrecht International* 70 (2021), 145-152.

righted works—constitutes an additional cost factor in the form of transaction costs and licensing fees. When the costs involved are too high, it will negatively impact the ability of the EU's AI sector to compete on the world market and consequently reduce the potential economic value of licensing content for training purposes.[23] If, however, information on the reservoir of available European training material and copyright holders entitled to grant a license is missing or incomplete, the conclusion of licensing agreements is beyond reach from the outset and the creative industries in the EU will lose income that could have come from the use of copyrighted works for AI training purposes.

13 Against this background, the concern must be taken seriously that, despite legislation seeking to ensure revenue streams on the basis of licensing obligations, the creative industries in the EU may fail to reap benefits that could accrue from the use of copyrighted material in the AI sector simply because ownership and repertoire information is not available. In terms of regulatory competition, foreign countries opting for less strict regulatory solutions and less licensing and rights clearance obligations may also appear more attractive to high-tech businesses. The EU may thus be confronted with a double failure of the selected regulatory design: neither new income for creative industries nor sufficient investment in promising new high-tech products and services.

14 Appropriate solutions for copyright data creation and management in the EU, however, may change the equation. Enhanced cooperation between high-tech companies and the creative industries on the basis of licensing agreements, mutually-agreed use protocols and safeguards against algorithms that disregard competition and media regulations, may even increase the quality and customisation of AI input. Benefits flowing from enhanced cooperation and better input for AI training may compensate the costs arising from an obligation to obtain licenses while, at the same time, ensuring that the benefits of copyright-based AI training are fairly shared. For this positive scenario to take shape, however, it is indispensable to have a well-functioning copyright data infrastructure in place that offers comprehensive, up-to-date ownership and repertoire information across EU Member States. As a legislative tool that binds copyright owners in all EU Member States and generates relevant data streams in the whole EU territory, Article 17(4)(b) CDSMD can play an important role in this respect. Imposing the obligation on rightholders to provide "relevant and necessary information" with regard to works and other protected subject matter, Article 17(4)(b) CDSMD creates an important legal mechanism to collect ownership and repertoire information. When notifications of works from all corners of the Union are bundled and harmonised, the resulting overarching database makes works and copyright holders visible. In this way, it offers high-tech companies looking for AI training material valuable information on the spectrum of available works in the EU and a solid basis for identifying relevant rightholders.

15 Discussing the need for copyright data creation, improvement and harmonisation, the increasing use of automated content recommender systems must be factored into the equation as well.[24] Various providers of digital services, including Spotify,[25] Netflix[26] and YouTube, employ content recommender systems to a growing extent to recommend copyrighted content to users.[27] Copyright data improvement also has an important role to play in relation to these systems, e.g., in relation to the visibility of niche repertoires and the enhancement of cultural diversity.[28]

23 For a critique of the approach taken in the EU, see Christophe Geiger, "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: Martin R.F. Senftleben, Joost Poort et al. (eds.), *Intellectual Property and Sports – Essays in Honour of Bernt Hugenholtz*, The Hague/London/New York: Kluwer Law International 2021, 383-394; Christian Handke, Lucie Guibault and Joan-Josep Vallbé, "Is Europe Falling Behind in Data Mining? Copyright's Impact on Data Mining in Academic Research", in: Birgit Schmidt and Milena Dobreva (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, 120-130.

24 For a broader discussion of new trends in the use of AI tools, including recommender systems, see Juliette Denis and Joëlle Farchy, *La culture des données: Intelligence artificielle et algorithmes dans les industries culturelles*, Paris: Transvalor - Presses des mines 2020.

25 See https://towardsdatascience.com/how-spotify-recommends-your-new-favorite-artist-8c1850512af0.

26 See https://medium.com/@springboard_ind/how-netflixs-recommendation-engine-works-bd1ee381bf81.

27 Such system is in the context of the proposed Digital Services Act ("DSA") defined as "a fully or partially automated system used [by an online platform] to suggest in its online interface specific information to recipients of the service, including as a result of a search initiated by the recipient or otherwise determining the relative order or prominence of information displayed.", see Article 2(o) Proposal for a Regulation of the European Parliament and of the Council on a Single Market For Digital Services (Digital Services Act) and Amending Directive 2000/31/EC, COM(2020) 825 final.

28 A different but related issue relates to filter bubbles in the

Without appropriate metadata that enhance the visibility of European content for automated recommender systems, the lack of niche repertoire recommendations may be due to inaccurate or missing data rather than being the result of a discriminatory mainstream orientation of the content recommender system. In this context, however, the lack of transparency of recommender systems, in particular with regard to the parameters used to select content and target consumers, prevents the identification of data issues and the development of appropriate solutions. The (proposed) legal framework in the EU addresses only certain aspects of this dilemma.[29]

C. Herculean Task of Copyright Data Improvement

16 A scenario with mutual benefits for creative and high-tech industries, however, will only arise if the considerable problems in the field of copyright data creation and management can be overcome. To better illustrate data obstacles in European creative industries, the situation in the music sector can serve as a starting point.

I. Experiences in the Music Industry

17 The music segment of the creative industry offers several well-known examples of data infrastructures, such as the Common Information System ("CIS") of the International Confederation of Societies of Authors and Composers ("CISAC"). With its different nodes in several regions of the world, the CIS-Net system and accompanying standards constitute a global tool seeking to facilitate music licensing and the distribution of revenues.[30] In terms of data standardisation, the International Standard Work Code ("ISWC") of the music publishing industry,[31] the International Standard Recording Code ("ISRC") of the recording industry, the Interested Party Information ("IPI") number, and the International Standard Name Identifier ("ISNI") offer prime examples of existing initiatives to enable the exchange of accurate data related to the identification of repertoire or related to the mitigation of ex post transaction costs that arise in relation to the operation of licensing agreements.

18 At the same time, these examples reveal data deficiencies and interoperability problems arising from different sets of metadata and different approaches to data identification and verification. To this day, initiatives to harmonize ISWC and ISRC metadata and incorporate them into a single, comprehensive database have failed. In the EU, former Commissioner Neelie Kroes launched a working group to stimulate the establishment of a Global Repertoire Database ("GRD") in 2008. While the working group participants, including producers, collective management organisations ("CMOs") and distribution platforms, arrived at recommendations on the way

context of entertainment recommender systems, see e.g. Martin Koppe, "Do algorithms keep playing the same old song?", *CNRS News*, 27.11.2021, available at: https://news.cnrs.fr/articles/do-algorithms-keep-playing-the-same-old-song.

29 The proposed Digital Services Act, supra note 27, stipulates in Article 29(1) that very large online platforms using recommender systems "shall set out in their terms and conditions, in a clear, accessible and easily comprehensible manner, the main parameters used in their recommender systems, as well as any options for the recipients of the service to modify or influence those main parameters that they may have made available, including at least one option which is not based on profiling" within the meaning of Article 4(4) GDPR. For a critique on the proposed opt-out, see also European Data Protection Supervisor, *Opinion 1/2021 on the Proposal for a Digital Services Act*, 10 February 2021, https://edps.europa.eu/system/files/2021-02/21-02-10-opinion_on_digital_services_act_en.pdf. Furthermore, under certain circumstances relating to significant systemic risks, very large online platforms may be obliged to adjust their content recommender systems in line with Article 27(1)(a) DSA. Importantly, however, this transparency and opt-out obligation, within its DSA context, only relates to hosting services. Cf. Article 2(h) DSA. Transparency of copyright recommender systems appears neither to be addressed in the recently proposed *Artificial Intelligence Act* which focusses on high-risk AI systems, see Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), and Amending Certain Union Legislative Acts, COM(2021) 206 final. See Sebastian Felix Schwemer, "Recommender Systems in the EU: from Responsibility to Regulation?", FAccTRec Workshop '21, held from 27 September to 1 October 2021 in Amsterdam, paper available at: https://ssrn.com/abstract=3923003.

30 See https://www.cisac.org/What-We-Do/Information-Services/CIS-Net.

31 ISWC has been developed by CISAC, in collaboration with ISO, as "a unique, permanent, and internally recognized reference number for the identification of musical works". As an example of a further unique identifier system, see also GRiD (Global Release Identifier) which has been developed by IFPI. Cf. Ariel Katz, "The Potential Demise of Another Natural Monopoly: New Technologies and the Administration of Performing Rights", *Journal of Competition Law and Economics* 1 (2005), 276.

forward,[32] the project was abandoned in 2014.[33] Other unsuccessful attempts include the International Music Joint Venture in 2000, which was formed by several CMOs in Europe and North America, and a project initiated by the World Intellectual Property Organization ("WIPO") aiming at the establishment of a common rights database in 2011.[34]

19 In the US, by contrast, a new initiative to form a comprehensive database followed from the 2018 Music Modernization Act ("MMA").[35] In Title I, the MMA establishes the Mechanical Licensing Collective ("MLC") as a one-stop shop for obtaining music licenses. For this new licensing body to function properly, it is necessary to have an authoritative and comprehensive database of music rights in place.[36] The MLC seeks to achieve this goal by working closely together with major providers of music streaming services, in particular Apple and Spotify.[37] The new licensing hub offers a US-wide platform for licence administration, enforcement and royalty processing as of 1 January 2021.[38]

20 This recent US initiative shows that—despite general metadata infrastructures, such as the CIS-Net system and the ISWC/ISRC standards—a strong need is felt in the music industry to combine, streamline and improve rights databases and establish overarching licensing platforms. New initiatives in Europe point in the same direction.[39] The Technical Online Working Group Europe ("TOWGE") brings together a large group of European CMOs, music publishers and rights agencies developing a digital royalty processing system. TOWGE is based on a small group of direct licensors reporting back to local societies.[40] An initiative with similar objectives has been taken by the Finnish CMO Teosto. A collaboration between Teosto and the start-up company Mind Your Rights has led to the "Concertify" platform seeking to provide—on top of existing industry structures—an efficient and transparent cross-border copyright licensing system. Concertify allows artists, copyright holders, including CMOs, music publishers and event organisers to interact directly by using modules, such as a module for setlist reporting.[41] With the support of the Slovak Art Council, a collaboration between the CMO SOZA and various stakeholders has led to the creation of a prototype for a comprehensive data and metadata database of the Slovak music repertoire. The consortium also created the prototype of a "Listen Local" recommender system that meets the requirements of the trustworthy AI recommendations of the High-Level Working Group on AI.[42] The accompanying feasibility study highlighted and quantified the problems that arise from incomplete copyright data in existing databases and commercial AI-solutions. For example, it demonstrated that at least 15% of Slovak, Estonian, Hungarian and Dutch works are unlikely to be ever exploited due to data

32 Cf. Mark Isherwood, "Global Repertoire Database", presented at: World Intellectual Property Organization, *Enabling Creativity in the Digital Environment: Copyright Documentation and Infrastructure*, WIPO Meeting wipo_cr_doc_ge_11, 13-14 October 2011, Geneva: WIPO 2011, available at: https://www.wipo.int/meetings/en/2011/wipo_cr_doc_ge_11/prov_program.html.

33 Cf. Paul Resnikoff, "Global Repertoire Database Declared a Global Failure", Digital Music News, 10 July 2014, available at: https://www.digitalmusicnews.com/2014/07/10/global-repertoire-database-declared-global-failure/; Sebastian Felix Schwemer, *Licensing and Access to Content in the European Union. In Licensing and Access to Content in the European Union: Regulation between Copyright and Competition Law*, Cambridge: Cambridge University Press 2019, 68-73.

34 Schwemer, supra note 33, 69-70.

35 House Report 1551, Pub. L. 115–264.

36 Cf. Frank Lyons, Hyojung Sun et al., *Music 2025 – The Music Data Dilemma: Issues Facing the Music Industry in Improving Data Management*, Newport: UK Intellectual Property Office 2019, available at: https://www.gov.uk/government/publications/music-2025-the-music-data-dilemma, 34.

37 See https://www.appleworld.today/blog/2019/11/18/apple-spotify-to-fund-new-music-royalties-collective.

38 See https://www.themlc.com/press/mechanical-licensing-collective-begins-full-operations-envisioned-music-modernization-act. As to the underlying planning and preparations, see U.S. Copyright Office Library of Congress, MLC Comments in Reply to the Designation Proposal of the American Music Licensing Collective, Inc., Docket No. 2018-11, 21, available at: https://bw-98d8a23fd60826a2a474c5b4f5811707-bwcore.s3.amazonaws.com/photos/Proposed_MLC_-_Reply_Comments.pdf.

39 For a discussion of further data integration and harmonisation opportunities in the EU, see Norbert Gronau and Martin Schaefer, "Why Metadata Matters for the Future of Copyright", *European Intellectual Property Review* 43 (2021), 488-494; Martin Schaefer, "Why Metadata Matter for the Future of Copyright", *Kluwer Copyright Blog*, 27 November 2020, available at: http://copyrightblog.kluweriplaw.com/2020/11/27/why-metadata-matter-for-the-future-of-copyright/.

40 See https://www.digitalmusicnews.com/2019/07/26/towge-digital-royalty-group/.

41 See https://www.mindyourrights.fi/.

42 See https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai.

problems.[43] In the area of standardisation, the work of Digital Data Exchange ("DDEX") is of particular interest. The DDEX system has continuously been expanded to all aspects of the digital music value chain. At the interface between ISWC and ISRC, it provides linkages between work and recording data.[44]

II. Steps Taken in Other Creative Industry Segments

21 Other sectors of the creative industry are facing similar data problems and have embarked on initiatives for data improvement, harmonisation and combination as well. In the field of book publishing, industry initiatives, such as the establishment of different e-book platforms and catalogues, play an important role. Flickr and Google Images offer a search option for material covered by a creative commons licence.[45] Another example is the Entertainment Identifier Registry (EIDR), which is a universal unique identifier system for movie and television assets based on DOI technology.[46] As to standardisation, the International Standard Book Number ("ISBN"), the International Standard Serial Number ("ISSN") for journals, the International Standard Music Number ("ISMN") for notated music, and the International Standard Audiovisual Number ("ISAN") for audiovisual works can serve as examples. Moreover, the standardisation work of the international EDItEUR group—leading to the "ONIX" family of standards[47]—is important in the field of books, e-books and serials.[48] With regard to the digital environment, the International DOI Foundation provides the aforementioned Digital Object Identifier ("DOI") services and registration: a technical and social infrastructure for the registration and use of persistent interoperable identifiers for use on digital networks, including identifiers for literary and artistic works.[49]

22 In the area of visual arts, CISAC's Visual Arts Council has extended its initial work on the right of resale and established an online licensing hub[50] under the umbrella of the International Council of Creators of Graphic, Plastic and Photographic Arts ("CIAGP").[51] OnLineArt ("OLA") is a one-stop shop for obtaining licenses for worldwide online use of works of visual art currently encompassing works of 60,000 artists.[52] Existing initiatives in the visual arts sector—in particular museums and other cultural heritage institutions digitising works in their holdings—have substantially extended the data coverage of works of fine art; however, the situation in the field of photography and illustrations is much less transparent.[53] Major visual arts libraries, such as Getty Images, may consistently use data management tools. The costs of properly documenting individual works, however, may be prohibitively high for smaller providers of photography and illustrations in the light of the low average value of individual works.[54] In comparison with the status quo reached in the field of music, the process of harmonising, attaching and bundling (meta-)data still seems in its infancy in the area of visual arts.

III. Supportive New Technologies

23 In the discussion on copyright data improvement, it is important to note that the lack of high quality, publicly accessible metadata for copyrighted material also prompted intense innovation among technology developers. Existing initiatives show that new technologies, in particular AI and blockchain, may support the streamlining and improvement of copyright data. The aforementioned Concertify platform, for instance, is the result of a collaboration between Teosto and the start-up company Mind Your Rights. The nucleus of the Concertify system for efficient and transparent cross-border copyright licensing was a setlist app which Mind Your Rights had initially developed for Teosto to facilitate setlist

43 Daniel Antal, *Feasibility Study On Promoting Slovak Music in Slovakia and Abroad*, The Hague: Reprex 2020, available at: https://reprex.nl/publication/listen_local_2020/.

44 See https://ddex.net/about-ddex/purpose/.

45 See https://www.theverge.com/2020/8/31/21408305/google-images-photo-licensing-search-results (Google Images) and https://www.flickr.com/creativecommons/ (Flickr).

46 See https://www.eidr.org/.

47 See https://www.editeur.org/8/ONIX/.

48 See https://www.editeur.org/2/About/#Intro.

49 See https://www.doi.org/.

50 See https://www.cisac.org/What-We-Do/Creators-Relations/CIAGP.

51 See http://www.ciagp.org/.

52 See https://onlineart.info/.

53 For a closer analysis of the particular situation and dynamics in the visual arts sector, see the report by Tristan Azzi and Yves El Hage, *Les métadonnées liées aux images fixes*, Paris: CSPLA 2021.

54 Cf. Richard A. Posner, "Transaction Costs and Antitrust Concerns in the Licensing of Intellectual Property", *John Marshall Review of Intellectual Property Law* 4 (2005), 325.

reporting on the basis of blockchain technology.[55] Similarly, ASCAP, SACEM and PRS launched a partnership[56] to "prototype a new shared system of managing authoritative music copyright information using blockchain technology."[57] The concept of the project is to develop a blockchain-based solution built on IBM's Hyperledger Fabric that links and manages two standards for copyright-protected content used for music recordings: the International Standard Recording Code (ISRC) and the International Standard Work Code (ISWC). The link between these data would improve royalty matching and licensing. The ultimate goal of the project is to enable a "shared, decentralized database of musical work metadata with real-time update and tracking capabilities."[58]

24 These examples reflect initiatives to employ distributed ledger (blockchain) technology as a technological architecture for creating and operating shared metadata resources in highly fragmented domains of literary and artistic production. The underlying projects seek to recognise and respond to the metadata issues in the area of copyright. The initiatives, however, may stem from tech companies outside the literary and artistic field—a fact that may indicate structural problems preventing the incumbent creative industries from embracing and fully developing the potential of new technologies. Substantial further innovation in the field was clearly limited by the lack of high quality, comprehensive metadata, which prompted some start-ups to experiment with bottom-up, collaborative metadata pooling, similar to the efforts made for establishing Wikidata.[59]

IV. Different Settings for Data Improvement

25 The described experiences with existing data infrastructures and current initiatives to arrive at better results shed light on different settings for the improvement and harmonisation of copyright (meta-)data. The initiative to harmonise, combine and enhance the coverage of work-related data may come from different actors in the public and private sphere, and employ different tools of public and private law:

- *legislation*: the MLC, for instance, is the result of US legislation that explicitly mandates the establishment of a nationwide licensing hub for mechanical music rights. In the EU, Article 17(4)(b) CDSMD, indirectly, may have similar effects if the new obligations to license user-uploaded content and exchange work-related data for content moderation purposes leads to shared data standards and content identification libraries. In addition, the 2014 Directive on Collective Management of Copyright and Related Rights ("Collective Rights Management Directive" or "CRMD")[60] incentivizes CMOs to cooperate in licensing hubs for multi-territorial licensing of online rights in musical works and adopt voluntary industry standards to improve efficiency in the exchange of data. Any legislation at national or EU level for the improvement of copyright data management, however, must observe Article 5(2) of the Berne Convention for the Protection of Literary and Artistic Works ("BC"), which prohibits subjecting the enjoyment and exercise of copyright to mandatory formalities, such as registration requirements;[61]

- *public institutions*: impulses for the further development of the copyright data infrastructure may also arise from non-legislative initiatives taken by national, European or international public bodies. The 2008 GRD working group, for instance, came together under the auspices of former Commissioner Neelie Kroes. WIPO initiated the aforementioned 2011 project for the establishment of a common rights database and has embarked on surveys on voluntary registration systems for copyright and related rights in 2005, 2010 and 2021;[62]

55 See https://www.mindyourrights.fi/.

56 See https://www.ascap.com/press/2017/04-07-ascap-sacem-prs-blockchain.

57 See https://societe.sacem.fr/en/press-resources/per-publication/press-releases/ascap-sacem-and-prs-for-music-initiate-joint-blockchain-project-to-improve-data-accuracy-for-rightsholders.

58 Id. See also https://www.ascap.com/press/2017/04-07-ascap-sacem-prs-blockchain.

59 Cf. Balász Bodó, Daniel Gervais and João Pedro Quintais, "Blockchain and Smart Contracts: The Missing Link in Copyright Licensing?", *International Journal of Law and Information Technology* 26 (2018), 311-336.

60 Directive 2014/26/EU of the European Parliament and of the Council of 26 February 2014 on collective management of copyright and related rights and multi-territorial licensing of rights in musical works for online use in the internal market, *OJ* 2014 L 84, 72.

61 For an in-depth analysis of the impact of this international ban on formalities, see Stef van Gompel, *Formalities in Copyright Law: An Analysis of Their History, Rationales and Possible Future*, Alphen aan den Rijn: Kluwer Law International 2011.

62 WIPO Survey of National Legislation on Voluntary Registration Systems for Copyright and Related Rights, prepared by

- *private entities*: the initiatives that have led to TOWGE, the Concertify platform and SOZA's Listen Local platform show that private entities, in particular CMOs, may play a decisive role in the further harmonisation and combination of copyright-related data. In addition, individual companies, such as Apple and Spotify, may obtain a market position that allows them to bring together an unprecedented volume of data and establish de facto data standards with a major impact on the sector. External technology start-ups also invest heavily in solutions based on blockchain or related technologies.

26 For the analysis of copyright data management issues, it is important to bear these different settings in mind. To arrive at a substantial improvement of the copyright data infrastructure, it may be necessary to combine public and private initiatives and seek to offer both legislative and market incentives. The legislation-made MLC initiative in the US, for instance, relies on Apple and Spotify as central sponsors and data providers. A similar, large-scale public/private partnership may be necessary to allow European creative industries to compete at eye level with data and licensing improvement on the other side of the Atlantic.

V. Sector-Specific Stumbling Blocks

27 For the success of European initiatives, however, it is also important to consider potential stumbling blocks and corrosive dynamics which large-scale data improvement projects may unleash in the creative industry sector:

- *rivalry between small and big players*: small players and repertoire holders may perceive the establishment of overarching, comprehensive data infrastructures and licensing hubs in the creative industries as a threat. For example, small European CMOs may fear to be left behind[63] when major European CMOs take joint initiatives and organise data and licensing processes in a way that enhances the visibility and availability of their content—potentially at the expense of repertoire administered by other CMOs which do not have comparable tools to enhance content visibility and availability.[64] At the global level, individual companies with considerable market power, such as Apple, Spotify, YouTube and Netflix, may establish individual data standards that require European rightholders to deal with different data systems for the purposes of distributing content and monitoring the volume of use. European artists and music distributors may also fear being left behind. In fact, they may lose visibility and market shares on the world market. With the MMA, the US managed to establish a licensing hub in collaboration with US-based streaming services. If this infrastructure becomes a central data resource in the sector, insufficient weight may be lent to non-US (niche) repertoire;

- *fear of losing traditional gatekeeper position:* in sectors with a less developed data infrastructure, such as the field of visual arts, traditional content gatekeepers—holders of individual work libraries, including CMOs—may feel uneasy about initiatives to systematically attach metadata to copyrighted content and include resulting data sources in a comprehensive database and licensing infrastructure. Once a comprehensive and authoritative platform for rights clearance is in place, traditional "middlemen" in the rights clearance process may fear that they become obsolete. The creation of non-harmonised and non-interoperable coding systems and data silos may be part of a survival strategy seeking to preserve a position on the content market, which a more efficient, overarching system for copyright data management may put at risk;

- *path dependence*: stakeholders are likely to have invested substantially in their own proprietary, and often incompatible (meta-)data systems. This investment in individual data infrastructures causes considerable switching costs in case an overarching, harmonised standard is set. This provides a strong disincentive to support initiatives to establish a common, harmonised data standard that requires changes to pre-existing individual data management systems.

28 This outline of problems arising from data harmonisation and improvement projects sheds light on

the Secretariat, SCCR/13/2, November 9, 2015, available at: https://www.wipo.int/meetings/en/doc_details.jsp?doc_id=52829; WIPO Second Survey on Voluntary Registration and Deposit Systems (2010), available at:https://www.wipo.int/copyright/en/registration/registration_and_deposit_system_03_10.html; and WIPO Survey on Voluntary Copyright Registration Systems: Final Report, prepared by Stef van Gompel and Saule Massalina, Amsterdam, 23 April 2021, available at: https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_crr_ge_2_21/wipo_crr_ge_2_21_report.pdf.

63 The risk of a "de facto copyright register in the hands of dominant platforms" was also identified by Germany in its statement accompanying the Council vote on the CDSM Directive. See Schwemer, supra note 8, 400-435.

64 Cf. Lucie Guibault and Stef van Gompel, "Collective Management in the European Union", in: Daniel Gervais (ed.), *Collective Management of Copyright and Related Rights*, 3rd ed., Alphen aan den Rijn: Kluwer Law International 2015, 139 (172).

central obstacles to the establishment of integrated data spaces which the European Commission also highlighted in its *European Strategy for Data*.[65] In this Communication, the Commission referred not only to insufficient data quality and interoperability as problem drivers but also to imbalances in market power, a lack of trust and insufficient economic incentives as obstacles to initiatives seeking to ameliorate and finally overcome the problematic status quo.[66]

D. Costs and Benefits

29 Considering difficulties and obstacles, it becomes apparent that the improvement of the copyright data infrastructure in the EU is not an easy task. As a highly complex endeavour, it can hardly be accomplished without substantial investment in metadata creation and improvement, technical data management infrastructure and harmonisation initiatives. The foregoing analysis already offers first insights into the costs that an initiative to improve copyright data may entail in different creative industry sectors.

I. Considerable Investment Necessary

30 With regard to the overall costs of setting up and maintaining a comprehensive copyright data management system, the music industry examples again provide some indications. Reportedly, the European GRD initiative that had commenced in 2008, finally collapsed after an investment of £8 million because the CMOs involved could no longer agree on the funding of the project.[67] The MLC project in the US rests on a start-up investment of $33.5 million.[68] After the start-up phase, MLC expenditures are expected to average $30 million annually and amount to $227 million from 2021 to 2028.[69]

31 According to these figures, there might be a substantive gap between the investment which interested parties in the EU, such as CMOs, are willing to make, and the budget that would be necessary to establish a comprehensive data infrastructure and, if this is desired, run a licensing hub. Before leaning too heavily on cost estimates made in a US context, however, it is important to note that MLC calculations were based on data input from only two central sources: iTunes (Apple Music) and Spotify. Given the cultural diversity and wide variety of copyright data sources in the EU, a European data integration project (not relying exclusively on US-based Apple and Spotify data) would probably require an even larger investment in the start-up phase and following years.

32 Looking at the visual arts sector, an additional cost dilemma comes to the fore: the individual costs to be made in respect of each individual content item. In the field of photography, for instance, databases would have to contain an extremely high number of works. In many cases, these works will have a relatively low average licensing value. This constellation raises the problem that, even if a harmonised data format and a central data recording system become available, the required investment in metadata entry and maintenance may still not come forward because the revenue accruing from visibility and "findability" in the comprehensive database can hardly be expected to outweigh the costs of data entry. The expected market value does not justify the time and money that would have to be spent for each individual content item. Hence, the mere existence of a comprehensive and authoritative data infrastructure in a given sector does not automatically ensure that all rightholders provide the data necessary to maintain data accuracy and completeness. Revisiting the potential discrepancy between the interests of small and big players, continuous data entry and maintenance may be less burdensome for holders of big work libraries in the light of economies of scale. For instance, it is conceivable that holders of big repertoires are able to switch from manual data entry to the use of automated or machine-learning systems, which substantially reduce the cost per unit.

33 Finally, it is to be noted that "costs" can also be understood in a broader sense. Instead of confining the analysis to monetary aspects, it is important to con-

65 European Commission, 19 February 2020, "A European Strategy for Data", Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Document COM(2020) 66 final, 1, available at: https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy.

66 European Commission, id. 7-8.

67 See https://completemusicupdate.com/article/prs-confirms-global-repertoire-database-cannot-move-forward-pledges-to-find-alternative-ways/.

68 See https://www.appleworld.today/blog/2019/11/18/apple-spotify-to-fund-new-music-royalties-collective.

69 U.S. Congressional Budget Office Cost Estimate, S. 2823 – Music Modernization Act, as reported by the Senate Committee on the Judiciary on 12 September 2018 (revised version of 17 September 2018), 3, available at https://www.cbo.gov/system/files/2018-09/s2823.pdf.

sider broader cultural repercussions, in particular the impact of standardised data formats and comprehensive copyright data systems on *cultural diversity*, recognition and attribution (in the sense of the moral rights enjoying protection under international copyright law and the national copyright systems of EU Member States) and the visibility and availability of the full spectrum of European creative works. In the case of photography, for instance, the commercial value of a work for rightholders, as explained, will often be smaller than the cost of documenting the work. The outlined problem raises concerns about large economies of scale favouring large repertoire owners who can automate the documentation and indexation process. Considering this potential problem, it becomes apparent that the burden of documenting and promoting content in large, supra-national content repositories should not increase data management burdens to such an extent that it becomes unprofitable for smaller entities to comply with data standards and data entry requirements. Otherwise, the measures taken to improve copyright data management may discriminate against holders of small repertoires—and potentially even against smaller national repertoires in the EU—and reduce the cultural diversity which the improved data system is intended to reflect.

II. Benefits Accruing from Improved Copyright Data

34 Benefits that can be expected to flow from an improved data management infrastructure are enhanced licensing opportunities, more efficient enforcement of rights, the reduction of royalty losses and the enhancement of access of high-tech industries to copyright data. Conversely, missing or inaccurate copyright metadata can lead to various types of welfare losses:

a) work is not found and therefore not licensed. That is, the licensing transaction does not take place, depriving both rightholders and consumers of the potential welfare gains (producer surplus and consumer surplus) which a transaction would generate in the counterfactual of accurate metadata;

b) work is found or the potential licensee is aware of the work, but information to license is missing. This may result in two outcomes:

i) the work is not used/consumed, as under (a);

ii) the work is pirated/used without a license. In this case, all welfare effects of the transaction are generated on the demand side, while rightholders do not benefit;

c) The work is found and licensed, but no proper remuneration is provided to rightholders as a consequence of the inaccurate metadata, i.e., licensing revenues are collected but do not reach the rightholders due to metadata issues.

35 Missed licencing and remuneration opportunities not only entail so-called static welfare losses; there can be dynamic effects as well. Efficient licensing can enable more creators to draw on existing copyrighted works, reducing the costs of follow-on creativity. Secondly, smaller markets for copyrighted works and greater costs of licensing will entail lower incentives to invest in innovative complementary goods and services (e.g. innovative ways of disseminating copyrighted works online or innovative recommender systems). Thirdly, high transaction costs, legal uncertainty, competition from unlawful competitors, market concentration and barriers to entry that result from (the requirement to incur) sunk costs can inhibit innovation. Efficient licensing systems—including metadata—can mitigate these issues. An obvious remedy, therefore, would be to correct and complete the metadata.

36 In addition, the aforementioned cultural dimension must be taken into account. Better visibility and availability of European cultural productions on the world market and the (possibly even more important) domestic European market offers important benefits. To the extent that EU creative industries do not have their own comprehensive repertoire databases, they depend on the configuration of content recommendation and licensing systems developed elsewhere. This entails the risk of insufficient influence on the promotion, sales and distribution process.[70] In theory, the repertoire databases of Apple Music, Spotify, YouTube or Deezer, for instance, may offer all providers of cultural content similar opportunities to reach out to end consumers. In practice, however, the visibility and success of a work will depend, *inter alia*, on the way in which these providers organise work- and creator-related (meta-)data and generate recommendations for end consumers. This implies that European content producers depend heavily on metadata and recommendation systems that have been developed by powerful individual companies. In the field of music, the MLC initiative that follows from US legislation may strengthen this trend. As the MLC database has been established with a focus on the US market

70 As to existing legislation seeking to enhance the visibility and prominence of European content, see Article 13(1) of the Audiovisual Media Services Directive 2010/13/EC, as amended by Directive 2018/1808/EU.

and in collaboration with Apple and Spotify, European content is unlikely to occupy the centre stage.

37 A further risk arises from the diversity of European content in terms of cultural backgrounds and languages. There are various cultural and media policy tools employed in Europe—mainly introduced in national law, such as various local content regulations (for example, in the form of radio or television "quotas" or programming guidelines set for public broadcasters). These instruments aim at the development of local audiences for local content. For these instruments to be efficient and measurable, usable and timely metadata are necessary. Descriptive metadata, however, are usually connected with natural languages. The costs of documenting in smaller European languages relative to the expected sales value can be significantly higher for language groups with fewer potential buyers. This creates an incentive to replace higher cost-to-market repertoires from smaller language groups with (translations of) lower cost-to-market repertoires from large language groups, such as works for English-speaking audiences, in unregulated markets. It also creates incentives to bypass regulations, like in television or radio broadcasting streams, when neither the regulated programmer nor the public authorities measuring local content guidelines have high quality data available.[71]

E. Article 17 CDSMD as a Catalyst

38 Considering the described complexity of data improvement initiatives, the various factors impacting data creation and management, and the different dynamics, costs and benefits in individual sectors of the creative industry, Article 17 CDSMD can hardly be expected to solve all dilemmas surrounding copyright data in the EU. Nonetheless, the provision—in particular the mechanism of notifying works under Article 17(4)(b)—seems to offer an unprecedented opportunity for data improvement, in particular with regard to those categories of creative content that feature prominently on OCSSP platforms: music, film, photography and other forms of visual art.[72]

I. Tapping Into the Data Flow From Rightholders to OCSSPs

39 As already explained above, Article 17(4)(b) requires OCSSPs to make best efforts to ensure the unavailability of works and other protected subject matter for which rightholders have provided OCSSPs with "relevant and necessary" information. This notification mechanism generates a data flow from rightholders to OCSSP platforms, covering any unlicensed content that rightholders want to have removed from the platforms.[73] The notification of works gives rightholders the opportunity to ensure the application of measures to block and remove infringing content. "[R]elevant and necessary information" in the sense of Article 17(4)(b) can be expected to go beyond mere work-related data. A copyright owner sending information must inform the OCSSP about their identity, address and contact details, and the nature and (territorial) scope of the rights that are asserted. Article 17(8) CDSMD stipulates that OCSSPs should "provide rightholders, at their request, with adequate information on the functioning of their practices with regard to the cooperation referred to

71 Cf. Daniel Antal, Amelia Fletcher and Peter L. Ormosi, "Music Streaming: Is It A Level Playing Field?", *Competition Policy International* 2021, 23 February 2021, available at: www.competitionpolicyinternational.com.

72 Cf. the OCSSP definition in Article 2(6) CDSMD. As to the underlying user activity of sharing literary and artistic works, see Martin R.F. Senftleben, "User-Generated Content – Towards a New Use Privilege in EU Copyright Law", in: Tanya Aplin (ed.), *Research Handbook on IP and Digital Technologies*, Cheltenham: Edward Elgar 2020, 136-162; Jean-Paul Triaille, Séverine Dusollier et al., *Study on the Application of Directive 2001/29/EC on Copyright and Related Rights in the Information Society*, Study prepared by De Wolf & Partners in collaboration with the Centre de Recherche Information, Droit et Société (CRIDS), University of Namur, on behalf of the European Commission (DG Markt), Brussels: European Union 2013, 457-510; Steven D. Jamar, "Crafting Copyright Law to Encourage and Protect User-Generated Content in the Internet Social Networking Context", *Widener Law Journal* 19 (2010), 843; Natali Helberger, Lucie Guibault et al., *Legal Aspects of User Created Content*, Amsterdam: Institute for Information Law 2009; Mary W.S. Wong, "Transformative User-Generated Content in Copyright Law: Infringing Derivative Works or Fair Use?", *Vanderbilt Journal of Entertainment and Technology Law* 11 (2009), 1075; Edward Lee, "Warming Up to User-Generated Content", *University of Illinois Law Review* 2008, 1459; Betty Buckley, "SueTube: Web 2.0 and Copyright Infringement", *Columbia Journal of Law and the Arts* 31 (2008), 235; Tom W. Bell, "The Specter of Copyism v. Blockheaded Authors: How User-Generated Content Affects Copyright Policy", *Vanderbilt Journal of Entertainment and Technology Law* 10 (2008), 841; Steven Hechter, "User-Generated Content and the Future of Copyright: Part One – Investiture of Ownership", *Vanderbilt Journal of Entertainment and Technology Law* 10 (2008), 863; Greg Lastowka, "User-Generated Content and Virtual Worlds", *Vanderbilt Journal of Entertainment and Technology Law* 10 (2008), 893; OECD, 12 April 2007, *Participative Web: User-Created Content*, Doc. DSTI/ICCP/IE(2006)7/Final, available at: https://www.oecd.org/sti/38393115.pdf.

73 Strictly speaking, data flows following from the practical implementation of Article 17(4)(b) CDSMD do not cover information on (i) licensed content; and (ii) unlicensed content, in respect of which rightholders refrain from actively enforcing their rights under Article 17 CDSMD.

in paragraph 4." Without contact information, this reporting duty cannot be fulfilled. In the context of the complaint and redress mechanism following from Article 17(9) CDSMD, rightholders "shall duly justify the reasons for their [content blocking] requests." Rightholders are thus under an obligation to substantiate their claims. Evidently, the information exchange between rightholders and OCSSPs is intended to create not only up-to-date libraries of fingerprints or other reference information to identify works, but also an accurate and constantly updated collection of data concerning rights ownership and contact information. Otherwise, OCSSPs can hardly report on content moderation practices and invite rightholders to substantiate blocking requests in the framework of complaint procedures.

40 Considering these proportions of the data flow and the need for up-to-date information on protected works, rights ownership, and the nature and scope of rights, the specific opportunity arising from Article 17(4)(b) CDSMD becomes manifest: if all notifications that are sent to OCSSPs across EU Member States are collected and bundled in a central EU copyright data repository, the accumulation of EU copyright data can lead to an unprecedented data reservoir that outperforms pre-existing data silos of CMOs, rightholders and distribution platforms.[74] As the described cooperation between rightholders and OCSSPs—enabling content moderation reporting and collaboration in complaint cases—requires that the information on rights and rights ownership be updated continuously, the central EU copyright data repository fed by Article 17(4)(b) notifications can be expected to achieve a relatively high degree of data currentness and accurateness.

41 To establish this EU copyright data repository, it is necessary to tap into Article 17(4)(b) notifications. Instead of sending "relevant and necessary information" only to OCSSPs, rightholders would have to make this information available, in parallel, to a central institution administering the EU copyright data repository.[75] This data aggregation mechanism could overcome the traditional resistance of central gatekeepers, such as CMOs, to share valuable information on works and copyright owners. Arguably, the incentive to block infringing content uploads with Article 17(4)(b) notifications is strong enough to make use of the notification system, even if notified information is also included in an overarching EU database. At the same time, the bundling and harmonisation of copyright metadata in an open format EU repository would lead to data access and transparency for all OCSSPs—regardless of their size—and other interested users (including other online platforms). As a result, big OCSSPs with broader access to copyright data because of more comprehensive activities are less likely to become new gatekeepers with competitive advantages because of superior knowledge of works and copyright owners. The larger copyright data flow to big OCSSPs would automatically enrich the EU data repository as well. The information will thus be available to all interested OCSSPs and other potential users.

II. Implementation Templates and Data Interoperability

42 A template for legislation that would ensure this redirection of copyright (meta-)data to a central data collection point can be found in Article 3(6) of the 2012 Orphan Works Directive[76] (regarding information on the use of orphan works) and Article 10(1) CDSMD (regarding information on the use of out-of-commerce works). Article 3(6) of the 2012 Orphan Works Directive provides:

> *"Member States shall take the necessary measures to ensure that the information referred to in paragraph 5 [information on diligent searches, orphan work use, orphan work status and contact information of cultural heritage institutions] is recorded in a single publicly accessible online database established and managed by the Office for Harmonization in the Internal Market ('the Office') in accordance with Regulation (EU) No 386/2012."*[77]

74 In the legislative process leading to the adoption of Article 17 CDSMD, Germany suggested in this vein "public, transparent notification procedures" as a potential concept to "counteract a de facto copyright register in the hands of dominant platforms." see Council of the European Union, Statement by Germany, (5 April 2019), point 5, 4, https://data.consilium.europa.eu/doc/document/ST-7986-2019-ADD-1-REV-2/en/pdf.

75 As to this additional data transmission obligation, the question of enforcement arises. What should be the consequence of not reporting? A ban on content blocking may be problematic if it leads to delays. If rightholders directly engage with OCSSPs, the latter can directly act upon the received information. If they must wait until the information is registered at EUIPO, this may be different. For orphan works, the "penalty" is not being able to use the work in accordance with the use privilege prescribed in the Orphan Works Directive.

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

77 Article 10(1) CDSMD includes a similar requirement for information on out-of-commerce works: "Member States shall ensure that information from cultural heritage institutions, collective management organisations or relevant public authorities, for the purposes of the identification of the out-of-commerce works or other subject matter, cov-

43 Interestingly, Article 3(6) of the Orphan Works Directive and Article 10(1) CDSMD also mention the institution that could take care of the central EU copyright data repository: the European Union Intellectual Property Office in Alicante ("EUIPO"), known as Office for Harmonization in the Internal Market until 23 March 2016.

44 To achieve data interoperability, the legal obligation to send Article 17(4)(b) CDSMD notifications not only to OCSSPs but also to the EUIPO could be accompanied by an additional obligation to provide the data in a specific, standardised format. In this way, Article 17(4)(b) could be employed as a vehicle to tackle not only issues of data accuracy and recentness, but also the problem of data interoperability and data harmonisation. One could also think of imposing an obligation on OCSSPs to accept notifications in the standardised format used by the EUIPO. In this way, the parallel data transmission obligation would have the benefit for rightholders of creating one data submission standard that is generally accepted and allows the universal application of notifications. Rightholders would no longer have to deal with data submission standards that may vary from OCSSP to OCSSP.

III. No Conflict With International Prohibition of Formalities

45 The international prohibition of formalities following from Article 5(2) of the Berne Convention for the Protection of Literary and Artistic Works ("BC") need not constitute an insurmountable obstacle in this respect. According to Article 5(2), "[t]he enjoyment and the exercise" of the rights granted in Article 5(1) BC shall not be subject to any formality. Article 5(1) covers the rights which the laws of Berne Union countries "do now or may hereafter grant to their nationals, as well as the rights specially granted by this Convention." As Stef van Gompel explains in his in-depth analysis of the scope of the prohibition following from Article 5(2) BC, the ban on formalities:

> *"includes formalities relating to the coming into existence, the maintenance and the enforcement of copyright. The Berne prohibition on formalities does not extend to formalities that regulate the extent of protection or the means of redress afforded to authors to protect their rights. This suggests that formalities are allowed if they establish the manner of exercising copyright, but not if their non-compliance renders the exercise of rights completely impossible."*[78]

46 Within this matrix, the notification system following from Article 17(4)(b) CDSMD falls within the category of permissible formalities concerning the "manner of exercising copyright" and the regulation of "the extent of protection." By stipulating that OCSSPs perform an act of communication to the public, or an act of making available to the public, when they give the public access to protected works that have been uploaded by users, Article 17(1) CDSMD establishes a direct, primary liability of online platforms[79] in an area that, traditionally, has been regulated from the perspective of secondary liability for infringing content uploads.[80] Quite clearly, the

ered by a licence granted in accordance with Article 8(1), or used under the exception or limitation provided for in Article 8(2), as well as information about the options available to rightholders as referred to in Article 8(4), and, as soon as it is available and where relevant, information on the parties to the licence, the territories covered and the uses, is made permanently, easily and effectively accessible on a public single online portal from at least six months before the works or other subject matter are distributed, communicated to the public or made available to the public in accordance with the licence or under the exception or limitation. The portal shall be established and managed by the European Union Intellectual Property Office in accordance with Regulation (EU) No 386/2012."

78 Van Gompel, supra note 61, 212.

79 For a more detailed discussion of the nature of the right recognized in Article 17 CDSMD, see Husovec and Quintais, supra note 8, 325-348.

80 Cf. Matthias Leistner, "European Copyright Licensing and Infringement Liability Under Art. 17 DSM-Directive Compared to Secondary Liability of Content Platforms in the U.S. – Can We Make the New European System a Global Opportunity Instead of a Local Challenge?", *Zeitschrift für Geistiges Eigentum/Intellectual Property Journal* 26 (2020), 123-214; Stefan Kulk, *Internet Intermediaries and Copyright Law – Towards a Future-Proof EU Legal Framework*, Utrecht: University of Utrecht 2018; Martin R.F. Senftleben, "Content Censorship and Council Carelessness – Why the Parliament Must Safeguard the Open, Participative Web 2.0", *Tijdschrift voor Auteurs-, Media- & Informatierecht* 2018, 139 (139-140); Martin Husovec, *Injunctions Against Intermediaries in the European Union – Accountable But Not Liable?*, Cambridge: Cambridge University Press 2017; Christina Angelopoulos, *European Intermediary Liability in Copyright: A Tort-Based Analysis*, Alphen aan den Rijn: Kluwer Law International 2016; Martin R.F. Senftleben, "Breathing Space for Cloud-Based Business Models – Exploring the Matrix of Copyright Limitations, Safe Harbours and Injunctions", *Journal of Intellectual Property, Information Technology and E-Commerce Law* 4 (2013), 87 (87-90 and 94-95); Thomas Hoeren and Silviya Yankova, "The Liability of Internet Intermediaries – The German Perspective", *International Review of Intellectual Property and Competition Law* 43 (2012), 501; Rita Matulionyte and Sylvie Nérisson, "The French Route to an ISP Safe Harbour, Compared to German and US Ways", *International Review of Intellectual Property and Competition Law* 42 (2011), 55; Miguel Peguera, "The DMCA Safe Harbour and Their European Counterparts: A Comparative Analysis of Some Common Problems", *Columbia Journal of Law and the Arts* 32 (2009), 481; Christiaan

more detailed specification of this exclusive right, including the option to escape liability with best efforts to obtain licenses and apply content filters (Article 17(4)(a) and (b) CDSMD), regulate "the extent of protection."[81] The fact that rightholders are obliged to provide "relevant and necessary information" under Article 17(4)(b) shows that the provision establishes a specific "manner of exercising copyright."[82] In any event, in situations where no authorisation has been granted to OCSSPs, rightholders can still enforce their rights against individual uploaders.[83] Instead of rendering the exercise of rights impossible, Article 17(4)(b) thus offers rightholders an additional possibility to ensure the unavailability of their works on OCSSP platforms.

47 On balance, the notification system following from Article 17(4)(b) is a permissible formality because it enhances the extent of protection and regulates the manner of exercising copyright in the specific context of cooperation with OCSSPs. Against this background, it is possible to extend the notification mechanism and add an obligation to send notifications not only to OCSSPs but also to a central EU data collection point that could be established at the EUIPO. The prohibition of formalities in Article 5(2) BC does not preclude the introduction of this data improvement mechanism in the EU.

IV. Extension to Right of Reproduction

48 Before painting an overly positive picture and presenting Article 17(4)(b) notifications as the ultimate cure for copyright data issues in the EU, however, it is important to point out that the aggregation of Article 17(4)(b) data is only one piece of a more complex puzzle. As explained, this piece seems important and promising enough to take the described steps towards an overarching EU data repository. Nonetheless, it is important to add several nuances and warn against exaggerated expectations.

49 First, the regulatory framework of Article 17 CDSMD focuses on the right of communication to the public and acts of making available to the public. This follows clearly from Article 17(1) and (2) CDSMD.[84] Accordingly, the notification mechanism arising from Article 17(4)(b) CDSMD concerns these exclusive rights. While the right of communication to the public and the right of making available to the public are central to online platforms and various other forms of digital services, new technologies offering promising revenue prospects may require rights clearance in the area of the right of reproduction instead. The use of copyrighted material for AI training purposes (discussed in section B above) can serve as an example. As the text and data mining provisions in Articles 3 and 4 CDSMD show, the right of reproduction[85] occupies centre stage in this context.

50 However, the question arises whether an EU data repository fuelled by data from Article 17(4)(b) notifications is capable of providing useful information for work identification and rights clearance initiatives in new technology areas, such as the AI sector, that require information on reproduction rights. The answer to this question depends on the expression "relevant and necessary information" in Article 17(4)(b). For the purpose of ensuring the unavailability of protected works on OCSSP platforms, it is relevant and necessary to know who is entitled to prohibit the sharing of user-uploaded content because they hold the rights of communication and making available to the public. As the EU data repository enhances the visibility of protected works and increases licensing opportunities, however, it may make sense for copyright holders to provide information on a broader spectrum of exclusive rights and include ownership information covering reproduction rights as well. The mere fact that ownership and repertoire information notified under Article 17(4)(b) CDSMD will make its way into the EU copyright data repository may lead to "enriched" notifications that go beyond the information that is strictly "relevant and necessary" in the OCSSP platform context. As pointed out above, Article 17(4)(b) CDSMD may have the effect of a catalyst that sets in motion a broader process of copyright data aggregation. This broader process may capture additional exclusive rights, such as the right of reproduction.

Alberdingk Thijm, "Wat is de zorgplicht van Hyves, XS4All en Marktplaats?", *Ars Aequi* 2008, 573; Matthias Leistner, "Von "Grundig-Reporter(n) zu Paperboy(s)" Entwicklungsperspektiven der Verantwortlichkeit im Urheberrecht", *Gewerblicher Rechtsschutz und Urheberrecht* 2006, 801.

81 Cf. van Gompel, supra note 61, 212.

82 Cf. van Gompel, supra note 61, 212.

83 Article 17(2) CDSMD merely exonerates non-commercial uploaders whose activities do not generate significant revenues from liability for copyright infringements in situations where an OCSSP has obtained authorisation, for instance through a licensing agreement.

84 See also Article 3(1) and (2) ISD. For a discussion of the relationship between Article 17(1) and (2) CDSMD on the one hand, and Article 3(1) and (2) ISD on the other, see Husovec and Quintais, supra note 8, 325-348.

85 Article 2 ISD.

V. Extension to Data Reflecting Nature and Contents of Works

51 Second, rightholders notify work-related information under Article 17(4)(b) CDSMD for the purpose of detecting unauthorised user uploads on OCSSP platforms. The notification data serves the purpose of identifying works and infringing copies.[86] Given this focus, Article 17(4)(b) notifications may fail to provide insights into the nature and contents of the work itself (such as information on the genre, theme and subject, language and other metadata of the work). A prospective user looking for a specific type of work, such as an AI developer looking for a specific category of music, text or images, may thus find the information that can be derived from Article 17(4)(b) notifications unsatisfactory. However, this need not be the final word on the matter. Again, it is to be considered that, as source material for an EU data repository, Article 17(4)(b) notifications would lead to enhanced visibility of work repertoires and broaden licensing opportunities for copyright holders. Arguably, these benefits provide a strong incentive for copyright holders to go beyond data for work identification purposes and enrich notifications with additional data reflecting the nature and contents of the work. When the institution administering the EU data repository is included in the stakeholder dialogue following from Article 17(10) CDSMD, the discussion of best practices can address the need for copyright data improvement and support the evolution of appropriate notification standards, including data enrichment besides harmonisation and interoperability issues, to maximise beneficial effects of the bundling of Article 17(4)(b) notifications.

F. Conclusion

52 To enhance the visibility and accessibility of the European repertoire and allow the creative industries to benefit from new licensing opportunities in the field of new technologies, it is important to arrive at a comprehensive database with a focus on European content, including smaller and less-known repertoires reflecting the full cultural diversity across EU Member States. An improved copyright data infrastructure is likely to enhance licensing, enforcement and royalty opportunities for creative industries. This added value is a core argument in the cost-benefit analysis that can tip the scales in favour of new efforts to create and harmonise metadata. At the same time, a central EU copyright data repository could provide developers of new technologies, such as AI system developers, broad access to diverse data resources. As a counterweight to initiatives in other regions, such as the MLC in the US, it can be expected to allow European creative industries to innovate and emancipate themselves from other data infrastructures and related content distribution and recommendation systems. It may also prevent a non-European bias in globally dominant AI systems trained on copyright data.

53 The foregoing discussion, however, also reflects the considerable obstacles on the way to more comprehensive and accurate European copyright (meta-) data. In addition to substantial financial resources that will be necessary, a key to new and successful initiatives lies in the creation of appropriate incentives for the creative industries, providers of digital content distribution services and high-tech companies in the field of AI to jointly develop solutions. For a trade-off across these industry sectors, the analysis provides an important starting point. The requirement of providing "relevant and necessary information" for the blocking of infringing content in Article 17(4)(b) CDSMD offers room for establishing an obligation to provide data concerning the protected work, the nature and scope of exclusive rights, and the identity and contact details of the rightholder in a standardised and interoperable format. If all Article 17(4)(b) notifications that are sent to OCSSPs across EU Member States are collected and bundled in a central EU copyright data repository, the accumulation of EU copyright data could lead to an unprecedented data reservoir that outperforms pre-existing data silos of CMOs, rightholders and distribution platforms.

54 All industry branches involved—the creative industries, the providers of online platforms and the high-tech industry—could benefit from an improved and harmonised EU data infrastructure. Content distribution platforms and AI companies may have a particular interest in rules that make copyright enforceability and remuneration obligations conditional on the provision of metadata in a specific, interoperable format. To achieve this goal, it could be said that information on protected literary and artistic creations is only "relevant" in the sense of Article 17(4)(b) when it is provided in a form that allows content moderation systems to read it.[87] At the core of

86 As to the functioning of content identification tools and the data required for this process, see the report by Jean-Philippe Mochon and Alexis Goin, in collaboration with the Haute autorité pour la diffusion des oeuvres et la protection des droits sur Internet (Hadopi) and the Centre national du cinéma et de l'image animée (CNC), *Les outils de reconnaissance des contenus et des oeuvres sur les plateformes de partage en ligne II*, Paris: CSPLA 2021.

87 As to the use of the requirement of "relevant and necessary information" as a tool to promote specific notification standards, see Martin R.F. Senftleben and Christina Angelopoulos, *The Odyssey of the Prohibition on General Monitoring Obligations on the Way to the Digital Services Act: Between Article*

these considerations lies the more general principle that rights must be clearly drawn to be enforceable. In this vein, it can be posited that rightholders must provide interoperable, accessible information to benefit from enhanced enforcement opportunities. In addition, it could be said that Article 17(4)(b) notifications should be detailed and rich enough to allow an EU data repository to enhance the visibility of the European repertoire in a meaningful way and broaden licensing opportunities for copyright holders. This objective may require Article 17(4)(b) notifications that cover a broad spectrum of exclusive rights—not only the rights of communication and making available to the public but also reproduction rights—and metadata reflecting the nature and contents of notified works.

55 In sum, new approaches in the area of copyright data improvement can evolve from a trade-off addressing interoperability and transparency interests. On the one hand, the interest of online content distributors and AI trainers in standardised and interoperable data formats could be recognised. On the other hand, transparency and accountability in respect of algorithmic content selection, moderation and recommendation systems should be ensured to pave the way for the eradication of systems that may disadvantage small and lesser-known enterprises and repertoires or creators with specific racial, ethnic or other minority backgrounds. To make this incentive scheme for collaboration attractive to a broad spectrum of copyright holders, further research is necessary to develop appropriate solutions not only for big companies but also for independent labels and other SMEs in the creative industries. In addition, it remains an open question whether the prospect of enhanced collaboration in the area of interoperability and transparency would also be sufficient to convince central gatekeepers, in particular CMOs, to contribute to fully standardised and interoperable copyright metadata. As pointed out above, the fear of losing their exclusive position in controlling relationships with their members may trigger resistance against injecting data into a fully standardised copyright data system. A central data accumulation system built on Article 17(4)(b) CDSMD offers an important data improvement opportunity against this background.

15 of the E-Commerce Directive and Article 17 of the Directive on Copyright in the Digital Single Market, Amsterdam: Institute for Information Law/Cambridge: Centre for Intellectual Property and Information Law 2020, 31, available at: https://ssrn.com/abstract=3717022.

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