
*Martin Senfileben**

Generative AI and Author Remuneration**

Abstract With the evolution of generative AI systems, machine-made productions in the literary and artistic field have reached a level of refinement that allows them to substitute human creations. Inevitably, the increasing sophistication of AI systems will disrupt the market for human literary and artistic creations. Generative AI systems provide literary and artistic output much faster and cheaper. It is foreseeable that authors of flesh and blood will be exposed to replacement effects. They may lose income due to machine substitution in sectors ranging from journalism and writing to music and visual arts. Considering this trend, the question arises whether it is advisable to take measures in copyright law to compensate human authors for the reduction of their market share and income. Copyright could serve as a tool to ensure the payment of equitable remuneration. In combination with mandatory collective rights management, the new revenue stream could be used to finance social and cultural funds that improve the working and living conditions of authors of flesh and blood.

Keywords copyright, text and data mining, freedom of expression, art autonomy, reservation of rights, three-step test, domaine public payant, equitable remuneration, levy system, collective rights management

1 Introduction

Generative AI systems¹ are only capable of mimicking human creativity because human works have been used as training material.² On the basis of existing literary and artistic creations that serve as input data, machine-learning algorithms are able to recognize patterns and similarities. Following this deductive method, a generative AI system learns how to produce novel literary

* Ph.D.; Professor of Intellectual Property Law and Director, Institute for Information Law (IViR), Amsterdam Law School, University of Amsterdam; Of Counsel, Bird & Bird, The Hague, The Netherlands.

** The author wishes to thank the participants of the Law & Technology Workshop, held at Zvi Meitar Center for Advanced Legal Studies, The Buchmann Faculty of Law, Tel Aviv University, on 7 November 2022, and the participants of the workshop ‘From the DMCA to the DSA – A Transatlantic Dialogue on Online Platform Liability and Copyright Law’, held at the Institute for Information Law (IViR), University of Amsterdam, on June 29-30, 2023, for comments and feedback on an earlier version of this article. All views expressed in the article (and all mistakes) are those of the author.

¹ For an attempt of a legal definition of generative AI, see European Parliament (2023), Article 28b(4). For examples of current generative AI products and services, see Stability.ai’s Stable Diffusion, available at: <https://stability.ai/stablediffusion>; Midjourney, available at: <https://www.midjourney.com/home/>; OpenAI’s DALL-E, available at: <https://openai.com/dall-e-2>; Adobe Firefly, available at: <https://www.adobe.com/sensei/generative-ai/firefly.html>.

² In this category, a distinction can be drawn between “machine-learning” and “deep-learning” algorithms. See Gervais (2020), 2055-2059; Ginsburg/Budiardjo (2019), 401-402; Deltorn (2018), 173-174; Bridy (2012), 3; Boden (2009), 23. For a practical example of AI-generated imitations of human vocals, see <https://www.theguardian.com/music/2023/apr/18/ai-song-featuring-fake-drake-and-weeknd-vocals-pulled-from-streaming-services>.

and artistic output by imitating the style of human works.³ The machine-learning algorithm enables the generative AI system to generate literary and artistic content on its own – based on the computational analysis of human works that served as training material.⁴

Taking this insight as a starting point, it becomes possible to lay theoretical groundwork for the introduction of a remuneration mechanism in favour of human authors. Whenever measures are proposed in copyright law to ensure that human authors receive an income, it is normally possible to argue that this income is intended to serve as an incentive and reward for the creation of literary and artistic works.⁵ The potential of AI systems to imitate and replace human expression, however, changes the equation. The moment AI systems are capable of flooding the market with literary and artistic productions, the question arises whether any additional incentive or reward for human creativity is still necessary. Why should society provide incentives for human literary and artistic creations when machines make similar literary and artistic products available in unlimited quantity and at lower costs? And why should society offer a reward for human literary and artistic labour when generative AI systems provide output that only reflects unprotected ideas, concepts and styles⁶ – and no longer displays traces of free, creative choices made by a human author?⁷ In this scenario, the act of creation is no longer carried out by a human author. Therefore, both the incentive rationale and the reward rationale do not have much power of persuasion.

This result, however, need not be the final word. Other justifications – ranging from the parasitic use of human literary and artistic works and central functions of human art in society to broader socio-political objectives and AI improvement arguments – offer strong support for the introduction of a remuneration system in favour of human authors (section 2). With regard to the practical implementation of remuneration mechanisms, the legislator has the choice between two different reference points. On the one hand, it is conceivable to impose an obligation to pay remuneration at the stage of AI training. Arguably, human authors should be compensated for the use of their works in AI training procedures, since the machine cannot produce results resembling human literary and artistic works unless it has had the opportunity to analyse human creations (*input* dimension, discussed in section 3). On the other hand, a legal obligation to pay remuneration could focus on the offer of generative AI products and services in the marketplace (*output* dimension). Instead of requiring the payment of remuneration at the training level, a levy could be imposed on the final AI system capable of producing literary and artistic output. This AI levy could then be used to offer financial support, training opportunities and new

³ Cf. Mok/Zinkula (2023); Quintais/Diakopoulos (2023); Beckett (2019), 24-25; Trendacosta/Doctorow (2023); Deltorn (2018), 173-174; Yanisky/Moorhead (2017), 662; Bridy (2016), 397; Denicola (2016), 251; Ralston (2005), 283.

⁴ Russell/Norvig (2010), 693-717.

⁵ For a more detailed discussion of incentive and reward arguments in the context of AI-generated content, see Senftleben/Buijelaar (2020), 804-808.

⁶ Article 9(2) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS”); Article 2 WIPO Copyright Treaty (“WCT”). As to the role of the idea/expression dichotomy in the generative AI debate, see Lemley/Casey (2021), 772-776. With regard to the approach in the EU, see Dutch Supreme Court, 29 March 2013, ECLI:NL:HR:2013:BY8661, Broeren/Duijsens, para. 3.5; Senftleben (2020), 27-28.

⁷ As to the traditional copyright originality test requiring free, creative choices of a human author, see CJEU, 16 July 2009, case C-5/08, Infopaq/DDF, para. 45; CJEU, 1 December 2011, case C-145/10, Painer, para. 89. As to the impact of this originality test on copyright protection for AI productions in the literary and artistic field, see Hugenholtz/Quintais (2021), 1212-1213; Burk (2020), 270-321; Ginsburg/Budiardjo (2019), 395-396; Janssens/Gotzen (2018), 325-327; Pearlman (2018), 4.

literary and artistic projects for authors of flesh and blood.⁸ Providers of AI systems with the potential to substitute human creations could be under an obligation to pay remuneration to collecting societies which would then use the revenue from remuneration payments to support human authors and their creative work.⁹ At the same time, the levy could make the use of generative AI systems more expensive. Adding remuneration payments as an additional cost factor, a levy system can contribute to the reduction of the price advantage following from the fact that AI systems need not pay honoraria or salaries for creative labour (section 4).¹⁰ Weighing the arguments for and against these different implementation strategies, a legislative approach focusing on the output/substitution dimension and seeking to introduce a lumpsum AI levy system seems more promising than an approach taking input and training activities as a reference point for remuneration payments (concluding section 5).

2 Theoretical Groundwork

With regard to the payment of remuneration for human authors, the aforementioned insight plays a central role that generative AI systems are no true creators. They can only imitate human literary and artistic expression because they had the chance of analysing human creations. Against this background, it can be said – as a first argument – that human authors should be compensated for the parasitic usurpation of the market for literary and artistic productions.¹¹ The machine is only capable of mimicking human literary and artistic works after it had the opportunity to derive patterns for its own literary and artistic productions from myriad human creations that served as resources for training purposes. Hence, it is only fair that human authors – providing the source material for AI ingenuity – receive a remuneration when AI productions finally kill the demand for the same human creativity that empowered the AI system to become a competitor in the first place.¹²

Second, it has been demonstrated in the cultural sciences that human literary and artistic creations have particular value to society as a whole.¹³ Artworks made by authors of flesh and blood provide important impulses for social and political changes by modelling experimental practices that open up new horizons for the development of society.¹⁴ Human literary and artistic expression can mirror shortcomings of present society, unmask defects of existing social and political conditions, and prepare society for the transition to a better community.¹⁵ Arguably, AI-generated productions in the literary and artistic field are incapable of providing comparable impulses for the improvement of societal conditions. An AI system may manage to

⁸ Cf. Senftleben (2022a), 112-114; Senftleben (2022b), 2-3.

⁹ For an earlier recommendation to rely on collecting societies to improve the living and working conditions of authors, see Dietz (1990), 15-17.

¹⁰ Senftleben (2022a), 114; Senftleben (2022b), 3.

¹¹ As to the potential of generative AI systems to replace human creativity in different sectors, see Mok/Zinkula (2023), who explicitly list “Media jobs (advertising, content creation, technical writing, journalism)” and “Graphic designers” as risk categories. See also Quintais/Diakopoulos (2023); Beckett (2019), 24-25; Trendacosta/Doctorow (2023); Deltorn (2018), 173-174; Yanisky/Moorhead (2017), 662; Bridy (2016), 397; Denicola (2016), 251; Ralston (2005), 283.

¹² Cf. Initiative Urheberrecht (2023); European Composer and Songwriter Alliance/European Writers’ Council et al. (2023); European Guild for Artificial Intelligence Regulation (2023).

¹³ Cf. Senftleben (2020), 54-64.

¹⁴ Osborne (2013), 208-211; Beebe (2017), 346-347; Cf. Cramer (2019), 15.

¹⁵ F. Schiller (1794-1795), 35-36 (Letter 9), 92 (Letter 23) and 120-121 (Letter 27); Adorno (1970), 9-10, 19, 25-26, 55-56, 127 and 199.

mimic human creativity and generate comparable literary and artistic output.¹⁶ However, an AI system does not have the capacity to permeate the surface of a human artwork, go beyond its mere form of appearance, and assess critically its message and meaning in the light of current societal conditions. AI systems do not perceive and experience social and political conditions as humans do. They are not affected by societal conditions in the same way as humans.¹⁷ Unable to experience and suffer contemporary societal conditions like a human, an AI system will inevitably fail to evoke visions of a new consensus on ethical norms that corresponds with people's current desires.¹⁸

Third, support for human authors is a good and important investment in new, innovative directions in literature, art and music – avant-garde movements that lead to new forms of expression and new reflections of societal conditions. AI systems cannot free themselves from the data input fuelling their algorithm. Therefore, they have difficulty to refuse rule obedience, negate historical work templates and autonomously create something that falls outside existing aesthetical categories – something that brings chaos in the established order to shed light on tensions and conflicts in society and propose changes.¹⁹ AI avant-garde experiments striving for societal relevance are doomed to fail. AI output cannot transcend the horizon of expectation that has evolved from known societal conditions.²⁰ To preserve the central societal function of new, unexpected directions in the literary and artistic realm, it is thus advisable to ensure that human creativity survives the dethroning of the human author by generative AI systems. The introduction of a remuneration system that channels money to human art projects makes sense from this perspective. It prevents the loss of future avant-garde movements and the loss of important impulses for the improvement of social and political conditions that can follow from the critical impetus of new, surprising directions in the literary and artistic field. Leaving literary and artistic productions to AI systems, society deprives itself of human impulses for future creativity and weakens its ability to evaluate and renew itself. With the introduction of an AI remuneration system, society can halt this trend.²¹

Fourth, there is a broader socio-political dimension. Inevitably, the replacement of the human author and the disruption of the market for literary and artistic productions require adequate countermeasures and investment. Authors who lose their job will need financial support. Investment in training activities will be necessary to enable them to change course and obtain new skills and credentials. New production projects will allow authors to enter new fields of activity. In this situation, the introduction of a remuneration system that provides money for financial support, training activities and new literary and artistic projects is an important and desirable step. In comparison with the preceding second argument, this broader socio-political rationale has a more universal field of application. AI productions may win prices and make their way into literary journals, concert halls, museums and galleries.²² Nonetheless, it seems unlikely (at least at this point in time) that AI output will replace human creations in the fine arts segment altogether. Creators of artworks with the above-described potential to reflect

¹⁶ For a description of the functioning of “creative” AI systems, see Senftleben/Buijtelaar (2020), 802-804.

¹⁷ Cf. Senftleben (2022a), 122-124; Senftleben (2022b), 10-11.

¹⁸ As to this contribution of artworks to the improvement of societal conditions, see Schiller (1794-1795), 120-121 (Letter 27).

¹⁹ As to this characteristic of human artworks, see Adorno (1970), 27-28, 32-34, 41, 197-198 and 337-338; Cramer (2019), 15.

²⁰ As to this requirement for societal relevance of literary and artistic productions, see Osborne (2013), 203-211.

²¹ Senftleben (2022a), 122-124; Senftleben (2022b), 10-11.

²² Senftleben/Buijtelaar (2020), 797-798.

societal conditions and provide impetus for social and political changes may be exposed to substitution effects to a lesser extent than authors of literary and artistic everyday products and works of applied art. It is likely that the impact of AI will be felt much more strongly in areas such as news articles, illustrations and decorations, background music for bars and restaurants, and so on.²³ In the latter segments, the mirror-of-society rationale may have less power of persuasion. Considering the substantially higher risk of substitution, however, the general socio-political objective to soften replacement effects gains more importance. Admittedly, general tax money could be used to enable humans in affected creative sectors to adapt to the challenges of generative AI systems. In comparison to a tax-based model, however, the copyright framework offers crucial advantages. With collecting societies and their remuneration and repartitioning schemes, the copyright system offers a well-established infrastructure for the appropriate distribution of collected money.²⁴ Moreover, a copyright-based solution seems much more stable than a general tax measure that could be undone in the next financial crisis or when the tax system is reformed.

Fifth, it can be added that human literary and artistic work has societal value in and of itself. As Barton Beebe has argued on the basis of pragmatist aesthetics,²⁵ it is particularly important to the everyday individual to be involved in aesthetic practice and aesthetic play.²⁶ The active assimilation, appropriation, and creative recombination of aesthetic expression in the aesthetic play has intrinsic value. It constitutes a source of pleasure, of moral and political cultivation, of imaginative freedom and self-actualization.²⁷ To the extent to which the aesthetic play is left to machines, humans in society lose opportunities for experiencing well-being, moral and political cultivation, imaginative freedom and self-actualization. When the machine displaces the human author from the literary and artistic field, it also deprives society of role models for human aesthetic engagement. Admittedly, generative AI systems provide tools for human users to experiment with different styles and motifs for art production. The act of developing and entering a prompt for an AI system, however, must not be confused with aesthetic play. The act of creation – the central element of aesthetic engagement – is not carried out by the human user. Instead, it becomes the task of the AI system. This has worrisome societal repercussions. Once literary and artistic production is primarily seen as the domain of the machine, people may no longer have any reason to develop an aesthetic practice and play with different forms of expression themselves. The active assimilation, appropriation and creative recombination of literary and artistic works becomes the machine's area of expertise. As a result, the potential of this practice to promote imaginative freedom and contribute to the cultivation and self-actualization of the individual in modern society is lost.²⁸ From this perspective, it is not decisive that generative AI systems are capable of imitating human literary and artistic works. This is only the final result of human creativity. The decisive factor in the equation, however, is the creative process: the aesthetic play. Giving instructions and pressing the button is not enough. The crucial element is the creative remix and reuse of literary and artistic sources of inspiration.²⁹ AI systems mimicking human works degrade the remix and reuse of literary and

²³ Cf. Mok/Zinkula (2023).

²⁴ Cf. Dietz (1990), 15-16.

²⁵ Beebe (2017), 346-347, 373-374 and 384-385. Cf. Dewey (2000), 143 and 208.

²⁶ Beebe (2017), 347.

²⁷ Beebe (2017), 346-347.

²⁸ As to the political dimension of this educational effect of art, see Beebe (2017), 336-337, who describes the belief of "early-republic Americans" that the progress of the fine arts promises to promote the "overall progress of civic virtue and good government."

²⁹ Beebe (2017), 390-391.

artistic source material to an automated process that can be left to machines. Establishing a remuneration system that provides human creators with financial means to survive in the field of aesthetic engagement, society can give the important signal that aesthetic practice is and remains an important human activity with particular value. Enabling human authors to stay in the literary and artistic field, this regulatory measure ensures that the role model of the human creator does not sink into oblivion and can inspire others to embark on aesthetic practice.

Sixth, the promotion of human literary and artistic productions is good for the AI industry itself. It is an important and wise investment in the continuous improvement of generative AI systems. By financially supporting the continuous flow of new human creations, the AI industry can ensure that a rich spectrum of fresh human training material for generative AI systems is constantly available. A continuously enriched reservoir of human source material appears as an important complement to known literary and artistic expressions of the past. Based on the analysis of historical human source materials, a generative AI system may be capable of producing endless recombinations of expressions that we have already seen. Adding the output of other AI systems to the training material, an AI system may also manage to recombine the recombinations of other machines. Ultimately, however, the generative AI process remains in a permanent loop. If the source repertoire for AI training is not constantly refreshed and enriched, the AI output can hardly be expected to go beyond monochrome variations of known forms and styles. Fresh human literary and artistic productions, thus, have particular value for the AI industry itself. To break out of the spiral of endless repetition of “the same old thing” it makes sense to invest in human creativity. From this point of view, the payment of remuneration for the purpose of supporting and fostering human literary and artistic projects constitutes a legitimate policy goal that is in the AI industry’s own interest.

Hence, there are several good reasons for the introduction of remuneration mechanisms that ensure the payment of remuneration for the use of generative AI systems in the literary and artistic field. As already indicated above, this insight gives rise to the question of how best to implement remuneration mechanisms in practice. On the one hand, the focus could be on the input dimension: the use of human literary and artistic creations for AI training purposes. On the other hand, the final output – the offer of generative AI products and services in the marketplace – could serve as a reference point for payment obligations. To identify the preferable implementation strategy, it is necessary to embark on a closer inspection of both approaches.

3 Input/Training Dimension

When remuneration mechanisms are aligned with the input dimension, particular importance is attached to the fact that human works are used to train the AI system. Interestingly, EU copyright law already contains a rule that offers a basis for a payment obligation focusing on the AI training process: Article 4(1) of the Directive on Copyright in the Digital Single Market (“CDSMD” or CDSM Directive)³⁰ contains a general exemption of text and data mining (“TDM”).³¹ Under this TDM rule, anyone, including commercial AI system developers and

³⁰ 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, *Official Journal of the European Communities* 2019 L 130, 92.

³¹ As to the potential of this rule in the author remuneration debate, see Keller (2023); Communia (2023).

trainers, may make copies of works or databases for the purposes of TDM and retain them as long as necessary for the AI training process.³²

With the adoption of a specific copyright exception in Article 4 CDSMD, the EU legislature has confirmed the copyright relevance of TDM and related AI training processes. This regulatory decision is not self-evident. In the TDM debate, it has been underlined around the globe that TDM copies have a specific nature. They fall outside the concept of reproduction in the traditional sense of making copies for the purpose of consulting and enjoying a work.³³ From a US perspective, Michael Carroll has pointed out that in the context of TDM:

copies are made only for computational research and the durable outputs of any text and data mining analysis would be factual data and would not contain enough of the original expression in the analysed articles to be copies that count.³⁴

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

if an exploitation of a work is aimed at neither enjoying it nor causing another person to enjoy it (e.g. text-and-data mining, reverse engineering), there is no need to guarantee the opportunity of an author or copyright holder to receive compensation and thus copyright does not need to cover such exploitation. In other words, exploitation of this kind does not prejudice the copyright holder's interests protected by a copyright law.³⁵

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

when acts of reproduction are carried out for the purpose of search and TDM, the work, although it might be reproduced in part, is not used as a work: the work only serves as a tool or data for deriving other relevant information. The expressive features of the work are not used, and there is no public to enjoy the work, as the work is only an input in a process for searching a corpus and identifying occurrences and possible trends or patterns.³⁶

In fact, the distinction between “works as works” and “works as data” is not entirely new in the European copyright debate. In 2011, Mauricio Borghi and Stavroula Karapapa already developed the concept of “de-intellectualized use”³⁷ against the background of mass digitization projects, such as the Google Book Search. As Borghi and Karapapa point out, mass digitization turns protected content into mere data – with the result that “the expression of the idea embodied in the work is not primarily used to communicate the ‘speech’ of the author to the public but rather to form the basis of machine-workable algorithms.”³⁸

³² Article 4(1) and (2) CDSMD. As to the relevance of Article 4 CDSMD to generative AI systems, see Quintais (2023).

³³ Cf. Senftleben (2022c), 1495-1502.

³⁴ Carroll (2019), 954.

³⁵ Ueno (2021), 150-151.

³⁶ Ducato/Strowel (2021), 334.

³⁷ Borghi/Karapapa (2011), 45.

³⁸ Borghi/Karapapa (2011), 44-45.

Considering these comments and observations, it becomes apparent that the EU legislator could have opted for a general exemption of TDM in the CDSMD Directive.³⁹ Instead, Article 4(1) CDSMD brings TDM under the umbrella of the right of reproduction and, therefore, within the reach of human authors seeking to receive a remuneration for the use of their works in AI training processes.⁴⁰ Article 7(2) CDSMD confirms in this context that the three-step test known from Article 5(5) of the Information Society Directive 2001/29/EC (“ISD”)⁴¹ is fully applicable. Accordingly, the TDM exception in Article 4(1) CDSMD:

shall only be applied in certain special cases which do not conflict with a normal exploitation of the work or other subject-matter and do not unreasonably prejudice the legitimate interests of the rightholder.⁴²

3.1 Three-step Test Arguments

From the three-step test, it is only a small step to arguments for the payment of remuneration. Pointing to the risk of substitution effects, copyright holders could argue that the TDM rule allows the development of generative AI systems that erode the market for human creations. An attempt could be made to demonstrate that TDM benefitting from the exception in Article 4(1) CDSMD enters into a conflict with a normal exploitation.⁴³ Alternatively, right holders could advance the argument that the TDM rule – allowing the use of human creations for the purpose of developing machines capable of killing demand for the very works used as training material – unreasonably prejudices legitimate income interests of human authors. The payment of remuneration could then be presented as a way out of the dilemma: as a tool to reduce the prohibited unreasonable prejudice to a permissible, reasonable level.⁴⁴

With the current configuration of Article 4 CDSMD, however, these potential three-step test arguments remain mere theoretical options. The outlined arguments are doomed to fail from the outset because Article 4(3) CDSMD expressly offers right holders the opportunity to reserve their rights, for instance, by employing machine-readable means. The proviso that right holders can exclude TDM via a machine-readable rights reservation means that AI trainers must take into account metadata, such as robots.txt files, but also the terms and conditions of a website or online service, in order to assess whether TDM is permitted with regard to a particular work or database.⁴⁵

In principle, right holders can thus rely on technical safeguards, such as robots.txt files, to prevent the use of human creations for AI training purposes. The impact of this rights

³⁹ Cf. Senftleben (2022c), 1502.

⁴⁰ Cf. Keller (2023); Communia (2023).

⁴¹ 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, *Official Journal of the European Communities* 2001 L 167, 10.

⁴² Article 5(5) ISD.

⁴³ The success of such an initiative is unclear. As CJEU, 17 January 2012, case C-302/10, Infopaq II, para. 51, indicates, the CJEU may confine the normal exploitation analysis to the economic significance of the exempted act of TDM as such. It is unclear whether the CJEU would be willing to consider the broader economic impact, including all following steps leading to the final offer of generative AI products and services in the marketplace.

⁴⁴ WIPO (1971), Report on the Work of Main Committee I, 1145-1146. Cf. Senftleben (2004), 127-133.

⁴⁵ See Recital 18 CDSMD which clarifies that “[i]n the case of content that has been made publicly available online, it should only be considered appropriate to reserve those rights by the use of machine-readable means, including metadata and terms and conditions of a website or a service.” Cf. Hugenholtz (2019), 170.

reservation option on the three-step test analysis must not be underestimated. Opt-out rules, such as the rights reservation mechanism offered by Article 4(3) CDSMD, can serve as a tool to avoid conflicts with a normal exploitation.⁴⁶ The underlying idea is simple: the right holder can render a copyright exception inapplicable by reserving her rights. This, in turn, will prevent beneficiaries of the copyright exception, such as AI trainers in the case of Article 4 CDSMD, from eroding a work's normal exploitation. In international law, the press privilege laid down in Article 10bis(1) of the Berne Convention for the Protection of Literary and Artistic Works ("BC") rests on the same opt-out solution:

It shall be a matter for legislation in the countries of the Union to permit the reproduction by the press, the broadcasting or the communication to the public by wire of articles published in newspapers or periodicals on current economic, political or religious topics, and of broadcast works of the same character, in cases in which the reproduction, broadcasting or such communication thereof is not expressly reserved.

The reservation of rights reflected in this provision entered the Berne Convention as an element of the debate on the protection of publications in newspapers and periodicals, and the freedom to use news information and newspaper articles with the exception of serial stories and tales.⁴⁷ From the perspective of the three-step test, the option to reserve rights can be deemed necessary to avoid a conflict with the normal exploitation. The forms of exploitation covered by Article 10bis(1) BC – reproduction, broadcasting and communication to the public – are central to the normal exploitation of press articles and broadcasts. Moreover, the exemption concerns the initial exploitation period. Article 10bis(1) BC explicitly refers to "current economic, political or religious topics." Hence, it exempts the use of articles that are still fresh and have news value. As the right holder can opt out by reserving her rights, however, the risk of a conflict with the normal exploitation is minimized.

Considering Article 10bis(1) BC, it can be said that opt-out rules, such as the rule enshrined in Article 4(3) CDSMD, offer an instrument to experiment with relatively broad copyright exceptions. To ensure compliance with the three-step test, the potential adverse effect on a work's normal exploitation can be minimized by giving right holders the opportunity to opt out. The use of this possibility in practice, then, will show whether right holders really see the copyright exception as a risk factor. The reservation of rights in Article 10bis(1) BC, for instance, evolved from industry practice more than a century ago. At the time, newspapers considered the reproduction of their articles in other newspapers as an advertisement and promotion of their activities.⁴⁸ In particular, local newspapers with limited financial resources could hardly have satisfied the news demand of their readers without reproductions of newspaper articles taken from bigger newspapers.⁴⁹

Applying these insights to the regulation of TDM in the EU, the specific role of the rights reservation option in Article 4(3) CDSMD clearly comes to the fore: it prevents a finding of incompliance with the three-step test. Allegations of a conflict with a normal exploitation or an unreasonable prejudice to legitimate right holder interests can easily be rebutted. As Article

⁴⁶ For a more detailed discussion, see Senftleben (2014), 12-16.

⁴⁷ As to the development of the provision in the Berne Convention, see Ricketson/Ginsburg (2022), 796-800; Guibault (2012), 447-450.

⁴⁸ Guibault (2002), 58, as to the rationales underlying the newspaper exemption.

⁴⁹ See Guibault (2012), 444-445: "Hardly any newspaper in those days could survive without citing or borrowing articles from prestigious foreign publications."

4(3) CDSMD contains an opt-out possibility, right holders who fear usurpation of the market for human creations can prevent the AI system from using their works as training resources. The risk of exploitation conflicts or unreasonable prejudices vanishes.

3.2 Rights Reservation Approach

While the rights reservation option has certainly been added to Article 4 CDSMD in order to strengthen the position of copyright owners in relation to the high-tech industries,⁵⁰ the preclusion of any conflict with a normal exploitation and any unreasonable prejudice appears as an unintended side effect from the perspective of remuneration interests. As the possibility of reserving copyright ensures compliance with the normal exploitation test and the unreasonable prejudice test, the three-step test – and the three-step test arguments outlined above – are no longer available to support a plea for the payment of remuneration.

Hence, the question arises whether the reservation of rights itself can lead to remuneration payments. In theory, this seems possible.⁵¹ It is conceivable that the creative industry and the AI high-tech industry reach agreement on machine-readable rights reservation protocols that express different right holder standpoints. One standpoint could be robots.txt that signals an outright exclusion of any use of the literary and artistic work at issue for AI training purposes. Using this version of robots.txt, a right holder can express her preference for an outright prohibition and prevent TDM of copyrighted material altogether. An alternative standpoint, however, could be robots.txt that prohibits use for AI training purposes only if the AI trainer behind the crawler is reluctant to pay remuneration. Using this alternative version, a right holder can thus express her willingness to permit the use against the payment of remuneration. In other words: in an ideal world, the rights reservation option in Article 4(3) CDSMD could serve as a catalyst to arrive at generally agreed, machine-readable remuneration protocols that trigger an automated process for the payment of remuneration.

3.3 Legal and Practical Obstacles

Unfortunately, it may be quite difficult to achieve this ideal result in the real world. First, the rights clearance infrastructure in the EU is highly fragmented.⁵² Even if standardized rights reservation protocols – capable of expressing remuneration wishes and modalities – become available, it is unclear whether copyright holders and collecting societies will ever manage to create efficient, pan-European rights clearance solutions that offer reliable and well-functioning payment interfaces with the technical safeguards – robots.txt files for example – that express the electronic remuneration caveat. As long as the automated, machine-based identification of right holders and the automated processing of payments remains complicated or unreliable, the rights reservation option in Article 4(3) CDSMD is unlikely to pave the way for a remuneration system that has success in practice. TDM requires the availability of vast amounts of literary and artistic works. The moment AI trainers are obliged to check rights ownership, observe specific payment conditions and obtain permission at the level of individual works or databases, the burden of rights clearance will inevitably put an end to the whole remuneration endeavour.⁵³

⁵⁰ As to this general objective of the CDSM Directive, see also Articles 18-23 CDSMD.

⁵¹ Cf. the positive assessment of the situation by Keller (2023); Communia (2023).

⁵² Cf. Senftleben/Margoni et al. (2022), 67, para. 7.

⁵³ Cf. Lemley/Casey (2021), 770-771; Hilty/Richter (2017), 1.

Second, the described need for standardized, machine-readable remuneration protocols under Article 4(3) CDSMD indicates that, if satisfactory rights clearance solutions become available at all, these solutions will most probably be the result of industry collaboration: the creative industry agrees with the high-tech industry on conditional rights reservation protocols that make use of protected material possible the moment the desired remuneration has been paid. As with all types of industry collaboration, this approach raises the question whether the new revenue stream accruing from AI training will ever reach individual creators. If collecting societies are underrepresented at the negotiation table, additional income from TDM may fill the pockets of large companies that own impressive repertoires of literary and artistic works.⁵⁴ Individual creators whose works form part of these repertoires, however, will not necessarily receive higher honoraria or an appropriate share of the TDM income.

Third, it is foreseeable that, with or without generally agreed rights reservation protocols, trust issues will remain. Who can guarantee that AI trainers will observe rights reservations that are made in accordance with Article 4(3) CDSMD? And who can convincingly prove that a given work has been part of the AI training dataset when the final AI-generated output only reflects general style elements and bears no direct resemblance to a specific pre-existing work? In the context of the proposed AI Act,⁵⁵ the compromise text tabled by the European Parliament explicitly provides for additional transparency measures seeking to open the “black box” of AI training in the field of literary and artistic works.⁵⁶ The Parliament proposes to add a new Article 28b(4) dealing specifically with generative AI systems that are intended to produce complex text, image, audio or video output.⁵⁷ In line with Article 28b(4)(c), providers of such systems shall:

without prejudice to national or Union legislation on copyright, document and make publicly available a sufficiently detailed summary of the use of training data protected under copyright law.⁵⁸

The proposal of specific transparency rules in the area of generative AI systems need not be understood as an indication that remuneration models based on the rights reservation option in Article 4(3) CDSMD, by definition, must fail. Nonetheless, the proposal sheds light on transparency and trust issues. Even if machine-readable remuneration protocols evolve from industry negotiations, it will remain difficult to control compliance with remuneration requirements and ensure remuneration payments that are accurate in the sense of capturing all works that have been used for AI training purposes.⁵⁹

Fourth, it must not be overlooked that main international competitors of the EU have chosen TDM approaches that markedly depart from the focus on licensing in the EU. The US, Canada,

⁵⁴ Cf. Trendacosta/Doctorow (2023), predicting “the perverse effect of limiting this technology development to the very largest companies, who can assemble a data set by compelling their workers to assign the ‘training right’ as a condition of employment or content creation.”

⁵⁵ European Commission, 21 April 2021, *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*, Document COM(2021) 206 final.

⁵⁶ As to statements pleading for this regulatory measure, see Initiative Urheberrecht (2023); European Composer and Songwriter Alliance/European Writers’ Council et al. (2023); European Guild for Artificial Intelligence Regulation (2023); Communia (2023).

⁵⁷ European Parliament (2023), Article 28b(4).

⁵⁸ European Parliament (2023), Article 28b(4)(c).

⁵⁹ Cf. the critical remarks by Quintais (2023).

Singapore, South Korea, Japan, Israel and Taiwan have opted for broader, more flexible copyright limitations.⁶⁰ Arguably, this regulatory approach enhances the innovation potential of high-tech companies in these countries in comparison with their EU counterparts. In the US, TDM has routinely been considered to be transformative fair use that is permissible without the prior authorization of the right holder and which does not generate claims for remuneration.⁶¹ Japan has implemented in its copyright legislation a broad TDM exception in 2009.⁶² 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.⁶³

Considering this global scenario, it is clear that impractical, complicated remuneration systems may disadvantage EU-based high-tech industries in comparison with their peers in other legal systems. The need to obtain individual authorizations and manage remuneration payments for AI training 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.⁶⁴ In other words: a remuneration system based on the rights reservation option in Article 4(3) CDSMD can easily lead to an unfortunate lose-lose scenario: no remuneration for authors; no access to copyrighted resources for AI trainers in the EU.⁶⁵ By virtue of Article 4(3) CDSMD, copyright holders may have success in reserving their rights and preventing the use of their works for AI training purposes. A successful rights reservation, however, need not lead to licensing agreements and remuneration payments. Instead, the high-tech industry may decide to move AI training activities to other regions that offer a more favourable AI training environment. As a result, the remuneration claim fails: the EU right holder does not receive money; the AI trainer looks for training resources elsewhere.

4 Output/Substitution Dimension

Luckily, the rights reservation mechanism in Article 4(3) CDSMD is not the only avenue that could lead to new remuneration rules in favour of human authors. The initiative of the European Parliament to introduce specific transparency rules for generative AI systems shows clearly that new legislative projects, such as the proposal of an AI Act, can supplement and enrich existing copyright rules on the use of AI in the literary and artistic field. It is conceivable that new legislation leads to the implementation of remuneration rules that aim specifically at the creation of a new revenue stream for human authors in the light of disruptive effects and income losses caused by generative AI systems. As already indicated above, a remuneration mechanism need not focus on the AI training phase. Alternatively, the literary and artistic output of generative AI systems can serve as a reference point for a legal obligation to pay remuneration. More specifically, it seems possible to create an AI system "levy."⁶⁶

⁶⁰ Senftleben/Margoni et al. (2022), 72-73, para. 11-12.

⁶¹ Sag (2019), 314-334; Samuelson (2021), 20-22; Lemley/Casey (2021), 760-779; Sag (2009), 1607-1682; Hargreaves (2011).

⁶² 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 Guibault/Margoni (2015), 373-414 and 396. See also Caspers/Guibault et al. (2016), 75-76; Ueno (2021), 145-152.

⁶³ Senftleben/Margoni et al. (2022), 72-73, para. 11-12.

⁶⁴ For a critique of the approach taken in the EU, see Geiger (2021), 383-394; Handke/Guibault/Vallbé (2015), 120-130.

⁶⁵ Cf. Lemley/Casey (2021), 770-771.

⁶⁶ As to theoretical groundwork for this approach, see Geiger (2018), 448-458.

4.1 Towards an AI Levy System

Following this alternative approach, providers of generative AI systems would be obliged to pay remuneration for the production of literary and artistic content that has the potential to serve as a substitute for human creations. The formulation of the existing legal obligation to pay remuneration for the use of phonograms could serve as a blueprint for this new remuneration regime. Using Article 8(2) of the Rental, Lending and Related Rights Directive⁶⁷ as a model, the rule could take the following shape:

Member States shall provide a right in order to ensure that a single equitable remuneration is paid by the provider of a generative AI system, if a literary and artistic output generated by the system, has the potential to serve as a substitute for a work made by a human author, and to ensure that this remuneration is paid to social and cultural funds of collective management organizations⁶⁸ for the purpose of fostering and supporting human literary and artistic work.⁶⁹

Admittedly, this text may require further refinement and clarification before it can be adopted as a legal basis for the introduction of an AI levy system that supports human creativity. Potential definition hurdles, however, seem surmountable. The Parliament text for the proposed AI Act, for instance, already defines “generative AI” in Article 28b(4) as “foundation models used in AI systems specifically intended to generate, with varying levels of autonomy, content such as complex text, images, audio, or video.”⁷⁰ As to the question which output quality is necessary to assume a substitution risk, it must be considered that the levy system is intended to serve as a lumpsum remuneration regime. Therefore, a general, abstract assessment of whether an AI system is capable of substituting human literary and artistic productions can be deemed sufficient to confirm a disruptive effect and impose a levy payment obligation.

The substitution test can also serve as a vehicle to draw a line between use of AI to replace human creativity and use of AI to support human creativity. Introducing this distinction when configuring and applying the substitution test, lawmakers and judges can clarify that no levy payment is necessary when human artists themselves use AI systems as mere tools to shape their own literary and artistic expression. In the traditional levy system for private copying, a similar distinction has been drawn between use of copying equipment, devices and media for private purposes (requiring levy payments) and use for professional purposes outside the private sphere (requiring no levy payments).⁷¹

The general conceptual contours of the lumpsum levy approach are as follows: the system would serve the overarching purpose of creating a new revenue stream to support the work of authors of flesh and blood. Revenue accruing from remuneration payments for the use of generative AI systems would be channelled to collecting societies which use the money for the purpose of improving the living and working conditions of human authors. In addition, the mandatory, inescapable obligation to pay equitable remuneration is intended to make the use of AI-generated content more expensive. AI system providers can no longer offer generative AI

⁶⁷ Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual, *Official Journal of the European Communities* 1992 L 346, 61.

⁶⁸ As to the room for social and cultural funds of collecting societies in EU copyright law, see CJEU, 11 July 2013, case C-521/11, *Amazon/Austro-Mechana*, para. 49-52. Cf. Senftleben (2017), 64-68.

⁶⁹ For an earlier discussion of this proposal, see Senftleben (2022a), 111-113; Senftleben (2022b), 1-3.

⁷⁰ European Parliament (2023), Article 28b(4).

⁷¹ CJEU, 21 October 2010, case C-467/08, *Padawan/SGAE*, para. 52-53 and 59.

tools for free – unless they are willing to pay the remuneration out of their own pocket. Hence, the introduction of a levy system also reduces the attractiveness of less expensive, automated AI content production. Theoretically, the AI remuneration could even be set at a level that counterbalances lower production costs and enhances the chances of human authors to compete with generative AI systems. On its merits, the proposed system, thus, seeks to *transform AI content revenue into human content revenue*.⁷²

More concrete guidelines for the use of collected levies can be derived from the six objectives described above. Following the argument that the levy system offers compensation for the parasitic use of human works for the purpose of enabling AI systems to kill the market for human creativity (first argument), the levy could be used broadly to support human literary and artistic productions. For instance, it is conceivable to distribute collected money in accordance with a general repartitioning scheme that is aligned with the use of certain work repertoires or work genres for AI training purposes. Insights into prompts entered by users could provide additional reference points for the calibration of the repartitioning scheme. Data showing that certain work categories, genres etc. figure prominently in user prompts could offer a basis for increasing the revenue share of human authors whose creative labour concerns these categories, genres etc. Support for a general repartitioning scheme can also follow from the objective to stimulate human aesthetic engagement and ensure that human role models remain visible in society to inspire everyday human literary and artistic practice (fifth argument). Considering the overarching goal to avoid the impression that the remix and reuse of literature and art is a task for the machine, the broad distribution of collected levies – across work categories and genres – seems appropriate. The adoption of a general repartitioning scheme can also make sense from the perspective of the AI industry’s own interest in the continuous evolution of fresh human creations that can finally become training material for the further improvement and diversification of AI output (sixth argument).

A more targeted approach, by contrast, follows from the insight that AI-generated content may lead to a loss of human works and avant-garde movements that, as a mirror of social and political conditions, can provide new directions for future creativity and impulses for improving society (second and third argument). To the extent to which AI output is capable of replacing human creativity serving this societal function, the establishment of cultural funds seeking to promote human production in the high arts sector seems warranted. Finally, the general socio-political goal of supporting human authors who lose their jobs due to competing AI content (fourth argument) justifies the establishment of social funds that serve as insurance against displacement effects caused by generative AI systems. The six rationales developed above, thus, offer a basis for different measures – ranging from the establishment of a general repartitioning scheme to more specific, targeted investment in social and cultural funds.

4.2 Foundation in Copyright Law

From a legal-doctrinal perspective, however, the question arises whether copyright law offers a sufficient basis for a remuneration claim relating to AI output. Content produced by a generative AI system need not display protected traces of individual human expression.⁷³ Compared to the AI training (input) perspective, the situation is different. During the AI training phase, protected human works are used as learning resources for the AI system. Hence, there is

⁷² Cf. Senftleben (2022a), 113-114; Senftleben (2022b), 2-3.

⁷³ Lemley/Casey (2021), 772-776.

a direct link between the machine-learning process and the use of protected human literary and artistic works. Qualifying copies made for AI training purposes as relevant reproductions,⁷⁴ the lawmaker can create a legal basis for a remuneration claim in copyright law. With regard to AI output, however, the copyright basis for levy payments is less clear. Instead of reproducing individual expression – protected free, creative choices by a human author⁷⁵ – AI output may merely reflect unprotected ideas, concepts and styles.⁷⁶

The absence of protected human expression in AI output, however, does not pose an insuperable obstacle. In fact, a copyright concept that, by analogy, can be invoked as a legal-doctrinal basis for the introduction of a levy system focusing on AI output has already been developed in the last century. In the discussion on the so-called *domaine public payant*, Adolf Dietz explained in a 1990 landmark article that, in addition to traditional exploitation and remuneration rights of individual authors, it is consistent and advisable to recognize in copyright law a new right to which a different right holder – the “community of authors”⁷⁷ – is entitled as a collective. Dietz pointed out that this step could be regarded as a corollary of a modern understanding of copyright law “as part of a more comprehensive concept of culture law.”⁷⁸ Once this broader role and responsibility of copyright is taken as a starting point, the law is no longer condemned to accept “harmful discrepancies”⁷⁹ between substantial profits made by exploiters of public domain works on the one hand, and precarious working and living conditions of current authors on the other.⁸⁰ Instead, copyright can be employed as a legal tool to introduce a remuneration right for the community of living and creating authors as a means of redress:

What we finally propose is simply to introduce another right owner, namely the community of living and creating authors, among several kinds of right owners already existing in copyright law. This community of authors should have the direct right to participate in the income from exploitation of works of dead authors after the individual term of copyright protection has expired.⁸¹

As this statement indicates, Dietz developed his concept of a new right for the community of authors with a focus on the exploitation of works in the public domain. He placed his proposal in the context of the discussion on the *domaine public payant* that had gained momentum after the Second World War.⁸² From his perspective, soaring prices and income from the exploitation of public domain works in the field of literature, music and art should, “at least partly and proportionally, also serve the living and creating generation of authors.”⁸³ Evidently, the introduction of a new – collective – right to participate in revenue accruing from the exploitation of public domain works begs the question how this new right of the community of living and creating authors might be exercised in practice. Dietz solves this problem by relying on the well-established system of collective rights management in Europe:

⁷⁴ For a more detailed discussion of this question, see Senftleben (2022c), 1495-1502.

⁷⁵ CJEU, 16 July 2009, case C-5/08, Infopaq/DDF, para. 45; CJEU, 1 December 2011, case C-145/10, Painer, para. 89.

⁷⁶ Article 9(2) TRIPS; Article 2 WCT. Cf. Dutch Supreme Court, 29 March 2013, ECLI:NL:HR:2013:BY8661, Broeren/Duijsens, para. 3.5; Senftleben (2020), 27-28

⁷⁷ Dietz (1990), 15.

⁷⁸ Dietz (1990), 13.

⁷⁹ Dietz (1990), 13.

⁸⁰ Dietz (1990), 13.

⁸¹ Dietz (1990), 14.

⁸² As to the historical origin and development of the *domaine public payant*, see Dillenz (1983), 920-922.

⁸³ Dietz (1990), 14.

[T]here must be a natural or legal person or body ready to interfere and, in particular, to control the market and claim the participation right, if necessary in a lawsuit. In addition, this body must be able to distribute the incoming money according to statutory purposes and rules, preferably under government supervision... We should not forget, however, that these kind of bodies already exist, and have done so for decades, in the form of collecting societies.⁸⁴

Before turning to parallels between this remuneration concept and the AI levy system discussed here, it is noteworthy that in the second half of the last century, the proposal of a *domaine public payant* did not remain a mere theoretical option. In Germany, it formed part of the official government proposal for new copyright legislation that was discussed in 1965.⁸⁵ Although the German legislator finally refrained from introducing a new remuneration right for the community of authors in the 1965 Copyright Act,⁸⁶ the fact that the *domaine public payant* was included in the government proposal shows that the concept and the underlying objective to improve the working and living conditions of authors had broad support in Germany.⁸⁷ An international UNESCO/WIPO survey conducted in 1982 also brought to light several starting points for implementing the *domaine public payant* in copyright law.⁸⁸ In more recent debates on recalibrating copyright, Rebecca Giblin confirmed the concept's continued relevance and importance. In a critical assessment of the term of copyright protection, she qualified the *domaine public payant* as a useful reference point for her proposal to draw a clearer distinction between incentive and reward goals and introduce an opt-in "creator-right" that would give authors access to remuneration systems in return for the registration of their works after an initial term of protection.⁸⁹

The parallels between the *domaine public payant* and the proposed AI levy system are striking. Both concepts concern creations that fall outside the scope of the exploitation rights of individual authors: literary and artistic works that never or no longer enjoy copyright protection in the case of the *domaine public payant*; general ideas, concepts and styles in the case of AI output that does not reproduce individual expression of a human author. At the same time, it is clear that both concepts concern literary and artistic subject matter: public domain works and public domain ideas, concepts and styles. With regard to AI output, it can even be added that pre-existing human creations have been a *conditio sine qua non* for the literary and artistic productions at issue. Without human training material, the machine could not have generated the content. The same cannot be said about public domain masterpieces made by authors from the past. Current authors can hardly assert that these masterpieces depended on their creative input. In a further respect, the remuneration argument in favour of the community of authors seems stronger in the case of AI output than in the case of public domain works from the past. As Dietz' line of reasoning shows very clearly, the proposal of a *domaine public payant* rested on the socio-political argument that something should be done in copyright law to overcome "the existential and financial misery of an artist's life."⁹⁰ While this argument certainly plays an important role in the AI levy debate as well (third argument developed above), it is only one

⁸⁴ Dietz (1990), 15.

⁸⁵ Dietz (1972), 14-15.

⁸⁶ Act on Copyright and Related Rights (*Urheberrechtsgesetz*), official English translation available at: https://www.gesetze-im-internet.de/englisch_urhg/ (last visited on 11 July 2023).

⁸⁷ Cf. Dietz (1972), 14-15.

⁸⁸ UNESCO/WIPO (1982).

⁸⁹ Giblin (2017), 200-203 and 207-208.

⁹⁰ Dietz (1990), 13.

of six arguments that, as explained, can be advanced to underpin the introduction of an AI levy system. Hence, there is even more reason to follow in the footsteps of Dietz and establish a system of mandatory levy payments with regard to generative AI systems. As a new right holder in copyright law, the community of authors⁹¹ should be entitled to benefit from levy payments under this new system. Moreover, the collective remuneration right should be administered and enforced by collecting societies – or, ideally, only one central pan-European collecting society⁹² – which distribute(s) collected money through repartitioning schemes and social and cultural funds.

The precursor of the *domaine public payant*, thus, shows that potential legal-doctrinal concerns need not thwart the introduction of an AI levy system focusing on AI output. Even if AI output merely reflects unprotected ideas, concepts and styles, it is still possible and consistent to incorporate a lumpsum remuneration right in copyright law as a collective right of the community of authors – a new right that is subject to mandatory collective rights management.

4.3 Legal and Practical Advantages

Finally, it must not be overlooked that an output-oriented AI levy system offers several important practical advantages in comparison to the above-described input-based remuneration architecture that could be built on the rights reservation option in Article 4(3) CDSMD.

First, an output-oriented AI levy system can be applied in a uniform manner to all providers of generative AI systems in the EU. In contrast to a remuneration obligation focusing on the input dimension and AI training activities, the output-oriented levy approach avoids the risk of disadvantages for EU high-tech industries. All providers of generative AI systems are equally exposed to the levy payment obligation the moment they offer their products and services in the EU. A levy approach focusing on the final offer of generative AI products and services may even reduce the above-described imbalances between the EU and other countries and regions at AI training level. With the rights reservation option in Article 4(3) CDSMD, the EU has adopted an AI training rule that is more burdensome than TDM rules in many other countries, including the US and Japan.⁹³ The introduction of the described AI levy system, however, could reduce content access barriers and rights clearance obstacles that may arise from the reservation of rights under Article 4(3) CDSMD. To achieve this goal, it could be clarified in the context of AI levy legislation that individual authors and right holders can only benefit from levy payments and related repartitioning schemes and social and cultural funds of collecting societies when they refrain from invoking Article 4(3) CDSMD to reserve their rights. Benefits accruing from AI levy payments would thus be used as a bait to convince authors and right holders not to exercise the rights reservation option and offer unrestricted access to their work repertoire instead. The introduction of an output-oriented AI levy system could thus transform the above-described lose-lose scenario into a win-win situation: authors receive remuneration; AI trainers obtain broader access to copyrighted material in the EU.

Second, an AI levy raises less trust and transparency issues. In contrast to remuneration systems taking AI training activities as a reference point, a levy approach need not require information

⁹¹ Dietz (1990), 15.

⁹² As to the advantages of one single collecting society covering the entire EU territory, see Senftleben (2019), 481-482.

⁹³ Senftleben/Margoni et al. (2022), 72-73, para. 11-12.

on the use of specific works as training resources – information which high-tech companies may qualify as protected secret information.⁹⁴ As already pointed out, the levy system can be based on the payment of a global lumpsum. For instance, the levy could consist of a certain percentage of revenue which AI companies derive from advertising, subscription fees or other payments they receive from users. In the case of profit-oriented providers of generative AI systems, the levy may also consist of a certain percentage of the annual turnover. It also seems possible to explore the possibility of aligning the levy with the number of AI-generated literary and artistic products or the number of prompts entered by users.

Third, mandatory collective rights management in the area of AI levies will ensure that, on the basis of repartitioning schemes complying with statutory purposes and the rules for social and cultural funds of collecting societies,⁹⁵ individual creators can benefit directly from the extra income accruing from levy payments. In contrast to industry collaboration in the field of Article 4(3) CDSMD, the proposed levy approach does not give rise to concerns that collected levies will hardly ever reach individual creators.⁹⁶

Fourth, a lumpsum levy approach does not require the management of use permissions at the level of individual works. As explained above, the reservation of copyright on the basis of Article 4(3) CDSMD will only lead to the payment of remuneration if a machine-readable rights reservation is combined with the offer of a TDM permission against the payment of remuneration. To achieve this goal, however, it is necessary to establish a well-functioning rights clearance infrastructure that is capable of interacting with content crawlers that are used for AI training purposes. An output-oriented AI levy approach, by contrast, does not pose comparable practical obstacles. It does not concern the AI training phase. As a collective right of the community of authors, it also does not require inquiries into individual rights ownership, use permissions and payment modalities.

5 Conclusion

Generative AI systems are likely to substitute human creations and usurp the market for human literary and artistic works. As they are capable of providing literary and artistic output much faster and cheaper, human authors may face shrinking market share and loss of income. This development has a broader societal dimension. Arguments for appropriate regulatory measures include the parasitic use of human works, the socio-political objective to offer financial support for human authors losing their jobs, the need to preserve important societal functions of human artworks, the desire to promote human aesthetic practice, and the AI industry's own interest in the continuous evolution of fresh human productions. To enable human authors to continue their socially valuable work and devote time and effort to the making of literary and artistic

⁹⁴ As to the protection of trade secrets in the EU, see Article 2(1) of Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure, *Official Journal of the European Union* 2016 L 157, 1. Cf. Article 39(2) TRIPS.

⁹⁵ Cf. CJEU, 11 July 2013, case C-521/11, *Amazon/Austro-Mechana*, para. 49-52.

⁹⁶ In the context of repartitioning schemes of collecting societies, the individual creator has a relatively strong position. As to national case law explicitly stating that a remuneration right leads to an improvement of the income situation of the individual creator, see German Federal Court of Justice, 11 July 2002, case I ZR 255/00, “Elektronischer Pressespiegel”, 14-15. For a discussion of the individual creator's entitlement to income from the payment of equitable remuneration, see Westkamp (2008), 55-59; Quintais (2017), 335-336, 340-341, 347-349 and 356-357; European Copyright Society (2015).

works, it is advisable to introduce remuneration rules that offer financial support for human creativity.

The rights reservation option following from Article 4(3) CDSMD could serve as a basis for a remuneration system focusing on the use of human creations for AI training purposes. Considering legal and practical difficulties arising from this approach, however, it is preferable to follow an alternative path and introduce an output-oriented levy system that imposes a general payment obligation on all providers of generative AI systems in the EU. In contrast to remuneration systems based on AI training activities, this alternative approach does not weaken the position of the European AI sector and the attractiveness of the EU as a region for AI development. Even more importantly, an output-oriented AI levy system can be combined with mandatory collective rights management. Collected levies can be distributed in accordance with repartitioning schemes that are established for this purpose. The levies can also be used to finance social and cultural funds that improve the working and living conditions of human authors who are subject to displacement effects. It is thus possible to ensure that the new revenue stream reaches individual creators directly.

References

- T.W. Adorno (1970), *Ästhetische Theorie*, edited by G. Adorno/R. Tiedemann, Frankfurt am Main: Suhrkamp 1970
- C. Beckett (2019), *New Powers, New Responsibilities – A Global Survey of Journalism and Artificial Intelligence*, London: London School of Economics 2019
- B. Beebe (2017), “Bleistein, the Problem of Aesthetic Progress, and the Making of American Copyright Law”, *Columbia Law Review* 117 (2017), 319
- A. Bridy (2012), “Coding Creativity: Copyright and the Artificially Intelligent Author”, *Stanford Technology Law Review* 5 (2012), 1
- A. Bridy (2016), “The Evolution of Authorship: Work Made by Code”, *Columbia Law Journal & Arts* 39 (2016), 395
- M. Boden (2009), “Computer Models of Creativity”, *AI Magazine* 30 (2009), 23
- M. Borghi/S. Karapapa (2011), “Non-display Uses of Copyright Works: Google Books and Beyond”, *Queen Mary Journal of Intellectual Property* 1 (2011), 21
- D. Burk (2020), “Thirty-Six Views of Copyright Authorship, by Jackson Pollock”, *Houston Law Review* 58 (2020), 263
- M.W. Carroll (2019), “Copyright and the Progress of Science: Why Text and Data Mining Is Lawful”, *U.C. Davis Law Review* 53 (2019), 893
- M. Caspers/L. Guibault et al. (2016), *Future TDM – Baseline Report of Policies and Barriers of TDM in Europe*, Amsterdam: Institute for Information Law 2016

Communia (2023), “Using Copyrighted Works for Teaching the Machine”, *Communia Policy Paper* 15, 26 April 2023, available at: <https://communia-association.org/policy-paper/policy-paper-15-on-using-copyrighted-works-for-teaching-the-machine/> (last visited on 26 September 2023)

F. Cramer (2019), “Crapularity-Ästhetik. Dystopien zeitgenössischer Kunst – und das unterschiedliche Erbe von kritischer Theorie und Konzeptualismus in der Bildenden Kunst und Neuen Musik”, *Neue Zeitschrift für Musik* 180, No. 4 (2019), 12

J.-M. Deltorn (2018), “Disentangling Deep Learning and Copyright”, *Tijdschrift voor auteurs-, media- en informatierecht* 2018, 172

R.C. Denicola (2016), “Ex Machina: Copyright Protection for Computer-Generated Works”, *Rutgers University Law Review* 69 (2016), 251

J. Dewey (2000), *Art as Experience*, New York: Perigee 1934, 4-10; R. Shusterman, *Pragmatist Aesthetics – Living Beauty, Rethinking Art*, 2nd ed., Lanham: Rowman and Littlefield 2000

A. Dietz (1972), “Die sozialen Bestrebungen der Schriftsteller und Künstler und das Urheberrecht”, *Gewerblicher Rechtsschutz und Urheberrecht* 1972, 11

A. Dietz (1990), “A Modern Concept for the Right of the Community of Authors (Domaine public payant)”, *Copyright Bulletin* 24 (1990), 13

W. Dillenz (1983), “Überlegungen zum Domaine Public Payant”, *Gewerblicher Rechtsschutz und Urheberrecht – International* 1983, 920

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

European Composer and Songwriter Alliance/European Writers’ Council et al. (2023), *Joint Statement from Authors’ and Performers’ Organisations on Artificial Intelligence and the AI Act – True Culture Needs Originals: Transparency and Consent are Key to the Ethical Use of AI*, available at: <https://screendirectors.eu/joint-statement-from-authors-and-performers-organisations-on-artificial-intelligence-and-the-ai-act/> (last visited on 26 September 2023)

European Copyright Society (2015), *Opinion on Rebel*, European Copyright Society 2015, available at: <https://europeancopyrightsociety.org/opinion-on-rebel/> (last visited on 26 September 2023)

European Guild for Artificial Intelligence Regulation (2023), *Manifesto for AI Companies Regulation in Europe*, available at: <https://www.egair.eu/#manifesto> (last visited on 26 September 2023)

European Parliament (2023), *Draft Compromise Amendments on the Draft Report – Proposal for a Regulation of the European Parliament and of the Council on Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts*, Document KMB/DA/AS, Version 1.1, dated 16 May 2023

C. Geiger (2018), “Freedom of Artistic Creativity and Copyright Law: A Compatible Combination?”, *UC Irvine Law Review* 8 (2018), 413

C. Geiger (2021), “The Missing Goal-Scorers in the Artificial Intelligence Team: Of Big Data, the Right to Research and the Failed Text-and-Data Mining Limitations in the CSDM Directive”, in: M.R.F.

Senftleben, J. Poort et al. (eds.), *Intellectual Property and Sports – Essays in Honour of Bernt Hugenholtz*, The Hague/London/New York: Kluwer Law International 2021, 383

D. Gervais (2020), “The Machine as Author”, *Iowa Law Review* 105 (2020), 2053

R. Giblin (2017), “Reimagining Copyright’s Duration”, in: R. Giblin/K. Weatherall (eds.), *What if We Could Reimagine Copyright?*, Canberra: ANU Press 2017, 177

J.C. Ginsburg/L.A. Budiardjo (2019), “Authors and Machines”, *Berkeley Technology Law Journal* 34 (2019), 343

L. Guibault (2002), *Copyright Limitations and Contracts – An Analysis of the Contractual Overridability of Limitations on Copyright*, The Hague/London/New York: Kluwer Law International 2002

L. Guibault (2012), “The Press Exception in the Dutch Copyright Act”, in: P.B. Hugenholtz/A.A. Quaendvlieg/D.J.G. Visser (eds.), *A Century of Dutch Copyright Law – Auteurswet 1912-2012*, Amstelveen: deLex 2012, 443

L. Guibault/T. Margoni (2015), “Legal Aspects of Open Access to Publicly Funded Research”, in: OECD (ed.), *Enquiries Into Intellectual Property’s Economic Impact*, Chapter: 7, OECD 2015, available at: <https://www.oecd.org/sti/ieconomy/intellectual-property-economic-impact.htm> (last visited on 26 September 2023)

C. Handke/L. Guibault/J.-J. Vallbé (2015), “Is Europe Falling Behind in Data Mining? Copyright’s Impact on Data Mining in Academic Research”, in: B. Schmidt/M. Dobrev (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

Ian Hargreaves (2011), *Digital Opportunities – A Review of Intellectual Property and Growth*, London: UK Department for Business, Innovation and Skills, 18 May 2011

R.M. Hilty/H. Richter (2017), “Position Statement of the Max Planck Institute for Innovation and Competition on the Proposed Modernisation of European Copyright Rules – Part B: Exceptions and Limitations – Art. 3 Text and Data Mining”, *Max Planck Institute for Innovation and Competition Research Paper Series* 2017-02, 1

P.B. Hugenholtz (2019), “Artikelen 3 en 4 DSM-richtlijn: tekst- en datamining”, *Tijdschrift voor auteurs-, media- en informatierecht* 2019, 167

P.B. Hugenholtz/J.P. Quintais (2021), “Copyright and Artificial Creation: Does EU Copyright Law Protect AI-Assisted Output?”, *International Review of Intellectual Property and Competition Law* 52 (2021), 1190

Initiative Urheberrecht (2023), *Joint Statement: Authors and Performers Call for Safeguards Around Generative AI in the European AI Act*, 19 April 2023, available at: <https://urheber.info/diskurs/call-for-safeguards-around-generative-ai> (last visited on 26 September 2023)

M.-C. Janssens/F. Gotzen (2018), “Kunstmatige Kunst. Bedenkingen bij de toepassing van het auteursrecht op Artificiële Intelligentie”, *Auteurs en Media* 2018-2019, 323

P. Keller (2023), “Protecting Creatives or Impeding Progress? Machine Learning and the EU Copyright Framework”, *Kluwer Copyright Blog*, 20 February 2023, available at:

<https://copyrightblog.kluweriplaw.com/2023/02/20/protecting-creatives-or-impeding-progress-machine-learning-and-the-eu-copyright-framework/> (last visited on 26 September 2023)

M.A. Lemley/B. Casey (2021), “Fair Learning”, *Texas Law Review* 99 (2021), 743

A. Mok/J. Zinkula (2023), “ChatGPT may be coming for our jobs. Here are the 10 roles that AI is most likely to replace”, *Business Insider* 4 June 2023

P. Osborne (2013), *Anywhere or Not at All – Philosophy of Contemporary Art*, London/New York: Verso 2013

R. Pearlman (2018), “Recognizing Artificial Intelligence as Authors and Investors under U.S. Intellectual Property Law”, *Richmond Journal of Law and Technology* 24 (2018), 1

J.P. Quintais, *Copyright in the Age of Online Access – Alternative Compensation Systems in EU Law*, Alphen aan den Rijn: Kluwer Law International 2017

J.P. Quintais (2023), “Generative AI, Copyright and the AI Act”, *Kluwer Copyright Blog*, 9 May 2023, available at: <https://copyrightblog.kluweriplaw.com/2023/05/09/generative-ai-copyright-and-the-ai-act/> (last visited on 26 September 2023)

J.P. Quintais/N. Diakopoulos (2023), “A Primer and FAQ on Copyright Law and Generative AI for News Media”, *Generative AI Newsroom*, 26 April 2023, available at: <https://generative-ai-newsroom.com/a-primer-and-faq-on-copyright-law-and-generative-ai-for-news-media-f1349f514883> (last visited on 26 September 2023)

W.T. Ralston (2005), “Copyright in Computer-Composed Music: HAL Meets Handel”, *Journal of the Copyright Society of the U.S.A.* 52 (2005), 281

S. Ricketson/J.C. Ginsburg (2022), *International Copyright and Neighbouring Rights – The Berne Convention and Beyond*, 3rd ed., Oxford: Oxford University Press 2022

S.J. Russell/P. Norvig (2010), *Artificial Intelligence: A Modern Approach*, Upper Saddle River: Pearson Education 2010

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

M. Sag (2021), “The New Legal Landscape for Text Mining and Machine Learning”, *Journal of the Copyright Society of the USA* 66 (2019), 291

P. Samuelson (2021), “Text and Data Mining of In-Copyright Works: Is It Legal?”, *Communications of the ACM* 64 (November 2021), 20

F. Schiller (1794-1795), *Über die ästhetische Erziehung des Menschen*, edited by K.L. Berghahn, Stuttgart: Reclam 2000

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

- M.R.F. Senftleben (2014), “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
- M.R.F. Senftleben (2017), Copyright, Creators and Society’s Need for Autonomous Art – The Blessing and Curse of Monetary Incentives, in: Giblin/Weatherall (eds.), *What if We Could Reimagine Copyright?*, Canberra: ANU Press 2017, 25
- M.R.F. Senftleben (2019), “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
- M.R.F. Senftleben (2020), *The Copyright/Trademark Interface – How the Expansion of Trademark Protection Is Stifling Cultural Creativity*, The Hague/London/New York: Kluwer Law International 2020
- M.R.F. Senftleben (2022a), “Works of Authorship and the Single Equitable Remuneration for AI Substitutes”, in: V. Fischer/G. Nolte/M.R.F. Senftleben/L. Specht-Riemenschneider (eds.), *Gestaltung der Informationsrechtsordnung – Festschrift für Thomas Dreier zum 65. Geburtstag*, München: C.H. Beck 2022, 111
- M.R.F. Senftleben (2022b), “A Tax on Machines for the Purpose of Giving a Bounty to the Dethroned Human Author – Towards an AI Levy for the Substitution of Human Literary and Artistic Works”, *IViR Working Paper*, available at: <https://ssrn.com/abstract=4123309> (last visited on 25 September 2023)
- M.R.F. Senftleben (2022c), “Compliance of National TDM Rules with International Copyright Law – An Overrated Nonissue?”, *International Review of Intellectual Property and Competition Law* 53 (2022), 1477
- M.R.F. Senftleben/L. Buijtelaar (2020), “Robot Creativity: An Incentive-Based Neighbouring Rights Approach”, *European Intellectual Property Review* 42 (2020), 797
- M.R.F. Senftleben/T. Margoni et al. (2022), “Ensuring the Visibility and Accessibility of European Creative Content on the World Market – The Need for Copyright Data Improvement in the Light of New Technologies and the Opportunity Arising from Article 17 of the CDSM Directive”, *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 13 (2022), 67
- K. Trendacosta/C. Doctorow (2023), “AI Art Generators and the Online Image Market”, *Electronic Frontier Foundation Blog*, 3 April 2023, available at: <https://www.eff.org/deeplinks/2023/04/ai-art-generators-and-online-image-market> (last visited on 25 September 2023)
- T. Ueno (2021), “The Flexible Copyright Exception for ‘Non-Enjoyment’ Purposes Recent Amendment in Japan and Its Implication”, *Gewerblicher Rechtsschutz und Urheberrecht International* 70 (2021), 145
- UNESCO/WIPO (1982), 10 March 1982, “Committee of Non-Governmental Experts on the ‘Domaine Public Payant – Analysis of the Replies to the Survey of Existing Provisions for the Application of the System of ‘Domaine Public Payant’ in National Legislation”, Document UNESCO/WIPO/DPP/CE/I/2, available at: <https://unesdoc.unesco.org/ark:/48223/pf0000048044> (last visited on 26 September 2023)
- G. Westkamp (2008), “The ‘Three-Step Test’ and Copyright Limitations in Europe: European Copyright Law Between Approximation and National Decision Making”, *Journal of the Copyright Society of the U.S.A.* 56 (2008), 1

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

S. Yanisky/S. Moorhead (2017), “Generating Rembrandt: Artificial Intelligence, Copyright and Accountability in the 3A Era”, *Michigan State Law Review* (2017), 659