A Report for IFPI

Generative AI Models at the Gate

Licensing frameworks for the effective and efficient protection of copyright protected content in an AI world

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1 Introduction

1.1 A generative AI model is a type of artificial intelligence designed to create new content, such as text, images, music, or even code, based on patterns it has learned from existing data. These models are likely to have a material impact on all sorts of fields, including writing assistance, video generation, marketing, education, healthcare, gaming and finance.

1.2 Generative AI models are not designed to memorize data. They predict the next best word, pixel, or note based on learned probabilities. Then, when given a prompt, the models create responses that are coherent and contextually relevant. To derive those probabilities, generative AI models are trained on vast quantities of content – e.g., text, images, music, video, and/or code. While some of the data and content needed for their training can be freely used, some other is proprietary, and may be copyright protected and require prior authorisation. The widespread scraping of publicly-accessible data online raises concerns about the unauthorized use of copyrighted content for training AI and its impact on creative industries.

1.3 The core issue is, therefore, how the training of generative AI models interacts with copyright. Generative AI poses material threats to industries that rely on copyright protection, such as publishing, music, and film. AI-generated articles, books, and scripts are challenging traditional publishing by producing content at scale. The risk is that such AI-generated publishing content will flood the market, reducing the demand for human authors, and that publishers and news organizations will suffer from AI scraping and repurposing their copyrighted content without compensation. Likewise, because AI-generated music can mimic famous artists' styles or produce convincing deepfakes, concerns have been raised about personality rights and copyright infringement in the music industry. In parallel, AI-generated scripts, deepfakes, and voice cloning are disrupting the audio-visual industries.

1.4 Copyright is a legal framework that grants creators exclusive rights to their original works, including literature, music, films, and visual art. It ensures that authors have control over how their work is reproduced, distributed, and monetized. Copyright law protects against unauthorized use, fostering a system where creativity is rewarded. We argue that the future of generative AI in the creative industries depends on protecting human creativity, which requires granting the rights that enable copyright holders to protect the content that generative AI models train on. Such protection is essential for the continuous development of valuable human-created content, which is essential for the development of valuable generative AI models. AI can serve as a powerful tool that enhances, rather than undermines, human artistic expression if copyright protection is secured.

1.5 Content creators (which, for the purposes of this paper, encompasses all categories of right holders – authors, artists, publishers and producers) have expressed concern over the unauthorised use of their content and have pursued legal actions for infringement of their intellectual property rights.[1] If copyright content is not, or only insufficiently, protected, there is a risk that those who create and invest in content may not obtain an appropriate remuneration for their investments. Generative AI developers could essentially 'free ride' on content creators' investment, so that the incentive to produce content in the first place would falter. Ultimately, this not only could reduce the quantity

[1] Lim, D. (2023). *Generative AI and copyright: principles, priorities and practicalities*. Journal of Intellectual Property Law and Practice, 18(12), 841-842, available at https://doi.org/10.1093/jiplp/jpad081.

and quality of human content directly consumed by firms and end consumers, but also could result in inferior generative AI models, which heavily rely on such content.

1.6 In response, policymakers across the globe have proposed regulations intended to ensure that generative AI models work well in the broad interest of society. Examples include the EU AI Act,[2] the proposed US Generative AI Disclosure Act,[3] and NO FAKES Act,[4] the Chinese Interim Measures for the Management of Generative AI Services,[5] etc. Some of these regulations are meant to foster transparency and accountability in AI development. The EU AI Act, for example, mandates that providers of generative AI models disclose information about the data used for training, including any copyright protected content,[6] which should enable right holders to protect the content that generative AI models train on.

1.7 Some appear to be concerned about a different risk, however; namely, that copyright could become a barrier for the development of new generative AI models. They fear that if copyright protected content, especially high-quality content, is not accessible in sufficient quantity and at a reasonable cost, generative AI developers, especially small start-ups, might not be able to rely on that content to train their models, which could result in inferior models with less valuable applications. In short, start-up providers of generative AI may be foreclosed.

1.8 Some of those so concerned have argued that training AI models should regarded as 'fair use', or outright exempted, so that it does not require any authorisation from copyright holders.[7] Others have proposed alternatives to market-based licensing by right holders, arguing for a downgrade of their exclusive rights in favour of statutory licences, levy mechanisms, compulsory collective management systems, or extended collective licensing.[8] In their view, the challenge is to design a

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2 Artificial Intelligence Act (Regulation (EU) 2024/1689) ("EU AI Act"), Official Journal version of 13 June 2024, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689, last accessed 9 December 2024.

3 H.R.7913 - Generative AI Copyright Disclosure Act of 2024, available at https://www.congress.gov/bill/118th-congress/house-bill/7913/text, last accessed 9 December 2024.

4 S.4875 - NO FAKES Act of 2024 118th Congress (2023-2024), available at https://www.congress.gov/bill/118th-congress/senate-bill/4875, last accessed 17 February 2025.

5 Interim Measures for the Management of Generative Artificial Intelligence Services, available at https://www.cac.gov.cn/2023-07/13/c_1690898327029107.htm, last accessed 9 December 2024.

6 EU AI Act, Article 53 (1(d)): "*draw up and make publicly available a sufficiently detailed summary about the content used for training of the general-purpose AI model, according to a template provided by the AI Office*" and Recital 107: "*In order to increase transparency on the data that is used in the pre-training and training of general-purpose AI models, including text and data protected by copyright law, it is adequate that providers of such models draw up and make publicly available a sufficiently detailed summary of the content used for training the general-purpose AI model*".

7 See Open AI's statement, and statements of others made to the US Copyright office therein, available at https://openai.com/index/openai-and-journalism/, last accessed 14 October 2024.

8 See, for example, the Opinion of the French Competition Authority on the competitive functioning of generative AI, in particular Proposal 8, which "*could encourage rights holders to take account of the economic value of data according to the use case (for example, by introducing differentiated pricing), and to propose bundled offers to reduce transaction costs, in order to safeguard the innovation capacities of model developers*" (emphasis added), available at https://www.autoritedelaconcurrence.fr/en/press-release/generative-artificial-intelligence-autorite-issues-its-opinion-competitive , last accessed 14 October 2024. See also Mission launched by the French High Council for the Literary and Artistic Property (CDPLA), which calls for *"a balanced data market"* which ensures *"both fair remuneration for rights holders and legal certainty for AI model providers",* available at https://www.culture.gouv.fr/fr/nous-connaitre/Organisation-du-ministere/Conseil-superieur-de-la-propriete-litteraire-et-artistique-CSPLA/Travaux-et-publications-du-CSPLA/Missions-du-CSPLA/avril-2024-le-cspla-lance-une-mission-relative-a-la-remuneration-des-contenus-culturels-utilises-par-les-systemes-d-intelligence-artificielle, last accessed 14 October 2024.

copyright policy that offers enough protection to content creators, so that their incentives to invest in high quality content are maintained, without erecting a barrier for the development of new, high-quality generative AI models.[9]

1.9 In this paper, commissioned by the International Federation of the Phonographic Industry ("IFPI"), we assess whether there is any reason properly grounded in economics to depart from the *status quo* in the way copyright rules are applied to AI. Our answer is that the voluntary bilateral licensing of exclusive copyright rights is likely to maintain and promote the investment incentives of content creators and producers, as well as facilitate the development of better generative AI models.

1.10 The remainder of the paper is structured as follows. In section 2, we present a summary of our main conclusions. In section 3, we explain that copyright holders must be remunerated for the training of generative AI models. In section 4, we explain that copyright holders should have the right to deny the use of their protected content for the training of generative AI models. In section 5, we explain that the terms of use of copyright protected content for the training of generative AI models should be left to bilateral negotiations. In section 6, we rebut the arguments made in favour of the free use of copyright protected content for the training of generative AI models. In section 7, we offer a few concluding remarks.

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9 U.S. Copyright Office. (2025). *Identifying the economic implications of artificial intelligence for copyright policy*. https://www.copyright.gov/economic-research/economic-implications-of-ai/Identifying-the-Economic-Implications-of-Artificial-Intelligence-for-Copyright-Policy-FINAL.pdf ("U.S. Copyright Office (2025)"), page 2: "*Nonetheless, because the existence of works is a prerequisite for the consumption of those works, we must ensure that creative works are produced at optimal quantity and quality levels and that the public can access those works. That is, copyright policy is intended to efficiently balance incentives to create and distribute works on the one hand, with the cost to consumers and future creators of accessing those works on the other—two factors that are mainly at odds with one another*".

2 Executive Summary

2.1 This report considers three policy questions. First, should generative AI companies remunerate copyright holders when they use their content exclusively for training purposes (as opposed to using it for free, or paying at a later stage)? Second, should copyright holders be allowed to deny the use of their protected content for the training of generative AI models (as opposed to being mandated to authorise it)? Third, should the terms for use for copyright protected content for the training of generative AI models be left to be decided through bilateral negotiations (as opposed to being forced to be negotiated collectively)?

2.2 We find the answer to each of the above questions to be affirmative. We thus conclude that the *status quo* in the implementation of copyright in the creative industries, characterised by voluntary bilateral licensing off the back of exclusive rights, provides the appropriate framework for the use of copyright protected content for the training of generative AI models. It promotes investment by content creators and facilitates generative AI model developers access to the copyright protected content best suited to train their models on reasonable terms.

Copyright holders must be appropriately remunerated for the use of content for the training of generative AI models

2.3 **An appropriate proportion of the value to consumers generated by the use of copyright protected content in training generative AI models should be shared with copyright holders**. As economists, we expect that generative AI models would not be trained unless they were monetised appropriately, whether that is done by the generative AI developers directly or via third-party application deployers. The revenues thus raised reflect, among other value drivers, the value that the copyright protected content used for training adds to the generative AI models and their applications. As a matter of economic efficiency, an appropriate proportion of that value should be appropriated by content creators and apportioned among them in accordance with their incremental contributions, so that that they are properly incentivised to develop that valuable content in the first place.

2.4 Any failure to do so would be inefficient, as it would limit or misallocate the incentives to invest in new creative works, reducing creativity, harming the wider economy related to the creative industries, and reducing the amount of premium human-created content available to train generative AI models to the ultimate detriment of AI model performance. Training future AI models on synthetic (i.e., non-human) content is likely to result in greater bias, more hallucinations, and possibly model collapse. Lack of remuneration for content developers, or a level of remuneration that is not properly reflective of the incremental value of content, likely will have a negative impact on the development of human-created content and, as a result of that, new and better generative AI models.

2.5 The risks and costs of under-remunerating content creators are bound to be particularly stark in the case of copyright protected music content. This is because most of the investment into creating music content is *upfront, risky,* and *sunk*. Record labels do not, and cannot, know whether a given piece of content will perform well when investing in it, as its value is only realised at a later stage. A substantial majority of music albums do not attain commercial success, and typically only one to two projects out of ten prove profitable, as the UK Competition and Markets Authority (“CMA”) has

noted. Record labels that make these risky, upfront, and sunk investments will only do so if they reasonably believe that they will have an opportunity to be appropriately remunerated for the use of their content. The impact of underinvestment in the music industry is likely to be particularly damaging to society, since – unlike some other forms of training data – human creativity is of immense economic and social value, and therefore its degradation may be significantly harmful.

Copyright holders should be allowed to deny the use of their protected content for the training of generative AI models

2.6 As a matter of economics, any production activity that requires *ex-ante* investment and may be subject to *ex-post* imitation requires a specific rights structure to be viable. Content creators, technology and pharmaceutical innovators will only make the *ex-ante* investments needed to produce their works if they have a reasonable expectation that those works will be remunerated appropriately in the future. However, if once developed, their works are imitated or cloned, then much or all of their remuneration will be competed away. Producers anticipate this risk and limit investment upfront. This is why rights structures, such as copyright and patents, have been introduced across the world. These structures protect creators and innovators from *ex-post* competition and, therefore, ensure that they have the opportunity to amortise their investments appropriately.

2.7 Such structures determine the ability of right holders to (a) choose whether, and which fraction of, their works/products to license; (b) to negotiate the terms of those licences; and (c) agree or deny licences. In creative industries, such as the music industry, where there is plenty of available high-quality content in the hands of multiple content creators, rights structures that empower content creators in all the previous dimensions will facilitate licensing at a fair market value, as the licensor's compensation is constrained by the knowledge that the licensee can walk away and license someone else's content. More generally, rights structures of that sort will not result in excessive compensation or create a competition problem among the actual and potential users of such content, except under very exceptional circumstances which do not apply to the music industry.

2.8 The simplest way to ensure appropriate remuneration for content used to train generative AI models is thus to allow content creators and AI developers to engage in voluntary licensing – i.e., licensing where content creators are free to authorise or deny the use of their protected content. Voluntary licensing is preferred, because it provides a tested, effective, and efficient mechanism for ensuring that both content creators and generative AI developers enter into licenses at prices that reflect the incremental value of the content. This is particularly beneficial with respect to licensing of music content for generative AI, because both the content and the AI models – their technical specifications, their intended applications and monetisation strategies – are highly differentiated. In such heterogeneous environment, voluntary licensing allows for bespoke contracts, reflecting differences amongst content creators, generative AI developers and remuneration structures.

2.9 The alternative to voluntary licensing, i.e., compulsory licensing, only makes sense as a matter of economics where there is the demonstrable possibility of market failure. This has been said to be the case of the licensing of standard essential patents ("SEPs"), because every implementer must have a licence to every single SEP in order to produce a standard compliant product. As a result, bargaining power may be skewed in favour of licensors, who thus may be able to negotiate high royalties, resulting in an inefficiently low adoption of the technology. SEP licensors are required to commit to offer fair, reasonable and non-discriminatory ("FRAND") terms as a way to limit the resulting 'hold up' risk. Generative AI developers, however, do not in general depend on any particular piece of content to train their models, which eliminates the risk of hold up and makes FRAND commitments unnecessary.

2.10 An alternative to the use of FRAND commitments is compulsory licensing. Compulsory licensing may also balance the distribution of bargaining power between licensors and licensees. It may be justified in 'exceptional circumstances' – e.g., when the licensor holds a dominant position, a licence is indispensable to compete, a refusal to license eliminates all effective competition, and the prospective licensee is seeking to commercialise a new product for which there is considerable demand. However, these circumstances do not apply to the licensing of copyright protected content for the training of generative AI models. Generative AI developers do not need a licence to every piece of copyright protected content to properly train their models. In particular, as concerns specialised models, such as music models, AI developers can substitute content from different creators. There is, therefore, no need for regulated fees or commitments given that competition amongst copyright content holders is effective. The vast and increasing volume of content, the large number of content producers, and the strength of competition among content creators, is sufficient to ensure that the remuneration agreed on a voluntary basis does not exceed the incremental value of the copyrighted content.

The terms of use for protected content should be left to bilateral negotiations

2.11 The simplest and most ubiquitous form of voluntary licensing is bilateral licensing – e.g. each content creator negotiates separately with each separate generative AI model developer. The key reason is that bilateral negotiations offer both licensor and licensee the flexibility to set the terms and conditions that are most suitable to their unique relationship. In commercial negotiations, both parties focus on those terms and conditions that are critical to their businesses and put less weight on those factors that are trivial to them. In the case of copyright licensing, flexibility is particularly valuable because copyright holders are very different from each other, both in terms of the value and size of their copyright portfolios, and generative AI developers are also heterogeneous, both in terms of their business model and in the AI products and services that they hope to deliver based on the trained models. Different content creators offer different value to AI developers and different generative AI developers have different requirements. This is exacerbated by the fact that the market for generative AI tools is still nascent, meaning that business models and monetisation strategies are likely to evolve.

2.12 Some commentators have argued that bilateral licensing may be prohibitive in the context of training generative AI, because it would involve a large number of agreements and thus material transaction costs. They therefore advocate for measures, such as mandatory collective licensing to facilitate access to copyright content.

2.1 We find this proposition misconceived in general and, in particular, unjustified and counterproductive regarding music content. First, insofar as generative AI developers want third party copyright content, they do so for commercial reasons, not for overriding reasons of public interest. That being the case, the starting point should be that generative AI developers conduct a commercial cost / benefit analysis factoring in potential IP costs, as any other commercial operator. Second, practice demonstrates that transaction costs are not prohibitive and that the transaction costs involved in bilateral licensing will be modest enough to not sacrifice the benefits of flexibility. The viability of bilateral licensing in the music industry is evidenced by the fact that hundreds of online services offering well over one hundred million recordings have been licensed worldwide. Because copyright holders, such as record companies, depend on licensing to recover their initial investment in content, they are incentivised to make the process as easy as possible. For instance, a number of small music companies have voluntarily chosen to license their rights via representative groups, such as the Merlin Network, which negotiates premium licensing deals with major digital service providers ("DSPs"), such as Spotify, YouTube, and others. Independent rights aggregators or distributors, such as Tunecore, CDBaby and Distrokid, also provide access to significant

catalogues of music from independent artists. And, in any event, if negotiations may take time and effort, that is because they reflect the complexities of the business models at play and the challenges involved in assessing the incremental value of content in the particular use cases. Artificially streamlining the process and adopting mandatory rules of thumb would likely reduce competition and destroy value, particularly given there is no evidence of market failure.

2.2 The only economically justified reason to make collective licensing compulsory is if bilateral licensing leads to market failure. Arguably, this may be the case in scenarios where licensors' intellectual property portfolios are 'perfect complements'. That is, when licensors setting individual royalties will not just affect the demand for their own IP but also for other IP holders' portfolios. In such a scenario, bilateral licensing could result in royalties that are too high (generating a 'royalty stack') compared to the socially optimal level. This risk may be reduced by means of collective licensing via pools or aggregators. However, as described above, in the specific context of the training of AI, content from various content creators is likely substitutable, sometimes may be complementary, but not perfectly complementary. To the best of our understanding, no generative AI developer needs a licence to every single copyright protected work or sound recording in order to train a model successfully. Even for specialist music generative models, developers can substitute between lots of different and equally attractive music content, and indeed they would certainly prefer to do so, if the same quality content is cheaper. Thus, royalty stacking is not even a theoretical risk that may be fenced off via compulsory collective licensing in music.

2.3 Moreover, collective licensing risks creating a market failure where none previously existed. Where even *voluntary* collective management has been held to acceptable only in specific limited circumstances, *compulsory* collective licensing poses an even higher risk to competition if copyright holders' content is substitutable from the point of view of the AI developers seeking to train their models. In a bilateral licensing scenario, if negotiations with one copyright holder fail, the AI developer can negotiate access to training data from another copyright holder. Compulsory collective licensing will eliminate this competitive pressure. It is no surprise that there is a longstanding precedent from competition cases in the US, EU and UK, where authorities have been concerned about collective licensing.

2.4 Finally, compelling licensors to license their products jointly may prove difficult and inefficient. Since the quality of competing intellectual property portfolios is very different, copyright holders may find it difficult to agree on how to apportion among themselves the aggregate royalty collectively negotiated. Or they may agree on an allocation mechanism that fails to be efficient – i.e., that provides the right incentives to invest to each and every one of them.

Arguments made in favour of free use are flawed and unconvincing

2.5 Some have argued that the use of content for training typically does not interfere with the content creators' existing revenue streams, and so content creators' remuneration will remain unaffected by the development and adoption of generative AI models and their applications. Because of this, these commentators regard any charge to generative AI developers for the training of their models as windfall income on top of the content creators' existing revenue streams. They thus argue that such payments will not increase content creators' incentives to develop new and better content. Proponents of this view aver that, since there is no impact on investment incentives, policy should be focussed on reducing transaction costs by facilitating the free use of copyright protected content.

2.6 This line of argument is flawed. While the training of AI models may not impact any of the content creators' revenue streams, their monetised applications are likely to reduce them. The scale of this effect will depend, among other factors, on how specialised the applications are. An application in healthcare or defence is unlikely to impact the sales of sound recordings, but if the application is in

music, then it is inevitable that content creators will see some degree of cannibalisation of their core businesses. Such cannibalisation will reduce content creators' income and therefore limit their ability and incentive to invest. Furthermore, training is not a 'one-off' activity. Because more recent content is likely to be much more informative for model predictions than older content, generative AI models likely will need to be augmented and retrained with new content periodically, which will give rise to a dynamic incentive problem for content creators. Content creators will have to be given additional incentives to continue producing high-quality content in the future, so that future models relying on such content are also of high quality. Without these additional incentives, even if investment in content remains at current levels, that will be suboptimal, because the socially optimal level of investment will be greater than the current level.

2.7 Some other commentators have alluded to transaction costs, and argued that unless exempted, copyright protected content will not be used in training, producing worse models to the detriment of end consumers. Or, alternatively, AI developers will engage in 'jurisdiction shopping', moving their training to regions that do not have strong copyright protection, ultimately resulting in regional bias and model forking. This reasoning is also flawed. First, even if transaction costs were high, that does not imply that AI developers should be allowed to use valuable content for free. Second, for music content, and as explained above, there is no reason to believe that the transaction costs involved would be greater than those currently faced by many other users of copyright protected content, such as streaming services. Copyright owners have the incentive, and have demonstrated the ability, to find ways of ensuring that their content can be effectively licensed at scale so that their investments can be adequately monetised.

2.8 A third group of proponents of the free use of copyright protected content have argued that determining the appropriate remuneration is fraught with difficulty. Even if remuneration was appropriate, they argue, there is no guidance on how that should be calculated, which risks creating an over-remuneration issue. We note that individual negotiations between a willing buyer and a willing seller are the best way to determine the market value of any good or service, and in any case any perceived or real complexity has not stopped the market from determining the appropriate terms in all sorts of new industries, for example in streaming, or even in other areas of IP, like cellular SEPs, where licensors and implementers quite routinely have to determine the incremental value of new and improved technologies.

2.9 Other commentators have argued that remuneration may be required, but not at the training level. They opine that, while training generative AI models is 'fair use', it is those deploying the models who might be infringing. From a legal perspective, we understand that the use of copyright protected content for training purposes, and the use of copyright protected content for producing an output, may be considered two different forms of use of the rights, and so there may be reason to remunerate at both the level of training and the level of output. From an economic point of view, what matters for end-consumer welfare is that content creators (as well as other participants in the value chain, of course) are appropriately rewarded for their value-increasing investments, irrespective of which level (or levels) of the value chain benefiting from those investments is (are) asked to contribute. The remuneration received by copyright holders should thus be independent of the level of licensing, whether it be at the training level or the deployment level, or split across both levels. Instead, the choice of licensing level should aim to achieve the minimisation of transaction costs.

2.10 Finally, some other commentators have argued that strong copyright protection will distort competition amongst AI developers, because only large AI developers with deep pockets will be able to afford to license higher quality content. They claim that smaller AI developers will be marginalised, either because they will be unable to pay as much for copyright protected content, or because larger developers will incentivise content creators to sign exclusive licences. This line of

argument is also flawed, because content creators will have neither the ability nor the incentive to foreclose smaller AI developers. This is so because no content creator holds content indispensable for the training of generative AI models. Therefore, rather than foreclose, we expect content creators to compete fiercely to license at competitive terms to AI developers, who can choose which content to use to train their models. The emerging market for copyright content for training generative AI, for instance for music and news content, would seem to prove as much.

Conclusion

2.11 Our analysis supports the view that the voluntary, bilateral licensing, off the back of exclusive rights, is the best way to develop socially beneficial generative AI solutions. It allows content creators and generative AI developers to negotiate independently and come to an agreement on how to share the precise value of the content of each competing creator for the particular use case of each competing AI developer. In doing so, it allows for bespoke contracts, reflecting the heterogeneity amongst content creators, generative AI developers, and remuneration structures, and thereby achieves a proper balance between the need to ensure the wide availability of quality content for generative AI developers and the need to remunerate content creators appropriately.

2.12 It is, therefore, unsurprising that licensing in most creative industries, including the digital music industry, is characterised by voluntary bilateral arrangements, which once and again have been shown to be workable, effective, efficient, and robust to large shifts in the applications of the copyright protected content and monetisation strategy, including in new technology sectors like streaming.

2.13 In conclusion, we find no support for interventions aimed at reducing the scope of copyright protection for music content in relation to AI.

3 Copyright holders must be appropriately remunerated for the use of content for the training of generative AI models

Introduction

3.1 As long as the use of copyright protected content adds value to the generative AI models trained on such content or the applications that rely on those models, some of that value should be shared appropriately with the copyright holders. A failure to do so would be inefficient, as it would limit the incentives of content creators to invest in the creation of new works and, as a result, will also have an adverse impact on the generative AI models that train on that content.

3.2 This is particularly the case when, as it is the case for music content, the investments made by content creators are largely upfront (i.e., before the music is monetised), risky, and sunk (since a large proportion of music content does not earn profits and so the investments cannot be fully recovered). The impact of underinvestment in the music industry is also likely to be particularly damaging to society, since human creativity in music is of immense economic and social value, and therefore its under-remuneration may be particularly harmful.

Economic efficiency requires the remuneration of copyrighted content

3.3 Generative AI developers invest large amounts of money in training their models. These significant investments can only be recouped if those models are monetised at some stage. Many generative AI developers already sell, and others will sell, related products, applications and services. These include text generation services (writing assistants like ChatGPT or Jasper), image generation services (e.g., DALL.E or Canva), audio generation services (e.g., AIVA or Soundraw), personal assistants (e.g., Bard or ChatGPT), and a range of education and entertainment services.[10] In some instances these models and their associated services are marketed directly by developers of generative AI models (e.g., OpenAI or Meta), and in others by third-party application developers (e.g., Jasper,[11] Copy.ai,[12] Canva[13]). AI models and applications may be monetised via one off payments, subscription and freemium models,[14] or monetised indirectly through the sale of

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10 Andreessen Horowitz. *The top 100 genAI consumer apps*, available at https://a16z.com/100-gen-ai-apps/, last accessed 26 November 2024.

11 Jasper. (2024, June 4). *The 16 Best GPT-4 Tools (and How to Use Them)*, available at https://www.jasper.ai/blog/gpt3-tools, last accessed 9 December 2024

12 "What Does GPT Stand For? A Simple Guide", available at https://www.copy.ai/blog/what-does-gpt-stand-form last accessed 9 December 2024.

13 Canva. *Free Online AI Image Generator*, available at https://www.canva.com/ai-image-generator/, last accessed 9 December 2024.

14 See, for instance, the pricing plan for Canva which include both free and premium tiers, available at https://www.canva.com/pricing/, last accessed 9 December 2024.

complementary products and services.[15] It is therefore reasonable to expect that the output of many, if not most, generative AI models will be embedded into a range of diverse, profitable products and services, representing different use cases and made available on different platforms. Indeed, it is this expectation that has likely exponentially increased the stock valuation of AI developers and investment in this sector. The size of the global generative AI market is estimated to be USD 37.89 billion in 2025, and is forecasted to reach approximately USD 1 trillion by 2034, accelerating at a CAGR of 44.20% from 2025 to 2034. [16]

3.4 End consumers use these products, applications and services only to the extent they provide value to them.[17] Their value to consumers will depend on, among other factors, the predictive power of the generative AI models on which they rely and, in turn, on the quality of the content used to train them in the first place. At the extreme, in the absence of high-quality content to train generative AI models effectively, these models may not be able to produce any valuable output, even if they feature the best architecture, implement the best training processes, and display the best operational configurations.[18]

3.5 The value of generative AI models, and thus their developers' ability to monetise them, is the direct result of exposing these models to a large corpus of data from which they can learn how to make valuable predictions in response to user prompts. Scholars have concluded that data is a critical input for the training of generative AI models. For example, Hunt, Jian, Mawar and Tablante (2023), "*find that for GPT-3 the formula implies data size is roughly 3.4 times more important than the model size. Similarly, for the Bloomberg GPT model, the ratio is approximately 2.1. If model performance was determined exclusively by these inputs (and it largely is), data size matters far more. Assuming that value is proportional to model performance (and, for economists, applying shadow pricing methods), we find that data accounts for 68-77percent of model value for Bloomberg GPT and GPT-3*".[19] The Organisation for Economic Co-operation and Development ("OECD") has also estimated that "*70-75% of the model value is from the data*".[20] Some generative AI models may be trained without recourse to copyright protected content, but access to high-quality content, much of which is copyrighted content, is likely to add significant value to the final products and services end-consumers use.

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15 For example, Apple Intelligence, at least during the time of writing this report, is provided to those users whose Apple devices support it without an extra charge, see https://www.apple.com/newsroom/2024/06/introducing-apple-intelligence-for-iphone-ipad-and-mac/, last accessed 9 December 2024.

16 See, for instance, Precedence Research. (2025, January 29). *Generative AI market size to hit USD 1005.07 billion by 2034*. https://www.precedenceresearch.com/generative-ai-market. Moreover, global venture capital investment in generative AI is expected to reach USD 45 billion in 2024, up from USD 24 billion in 2023, see Ernst & Young. (2024, December 20). *Venture capital investment in generative AI almost doubles globally in 2024 as momentum accelerates in transformative sector*. https://www.ey.com/en_ie/newsroom/2024/12/venture-capital-investment-in-generative-ai-almost-doubles-globally-in-2024-as-momentum-accelerates-in-transformative-sector.

17 U.S. Copyright Office (2025) in op. cit. footnote 9, page 43: "*model outputs are valuable only insofar as they improve productivity for downstream users*"

18 Defined.ai (2023, September 27). *AI Training Data: The Ultimate Guide*, available at https://defined.ai/blog/ai-training-data, last accessed 9 December 2024.

19 See Hunt, S., Jian, W., Mawar, A., & Tablante, B. (2023). *You are what you eat: Nurturing data markets to sustain healthy generative AI innovation*. Competition Policy International. https://www.keystone.ai/news-publications/you-are-what-you-eat-nurturing-data-markets/ (emphasis added). See also Organisation for Economic Co-operation and Development. (2024). *Artificial intelligence, data and competition - Background note*. https://one.oecd.org/document/DAF/COMP(2024)2/en/pdf.

20 OECD. (2024). *Artificial intelligence, data and competition - Background note*, available at https://one.oecd.org/document/DAF/COMP(2024)2/en/pdf (emphasis added).

3.6 Economic efficiency requires that such value be shared between content creators, generative AI developers, application developers, and end consumers. A failure to appropriately remunerate content creators in accordance with their incremental contribution, e.g. by implementing exceptions to right holders' exclusive copyright or otherwise limiting their ability to obtain a fair price for their rights, will result in underinvestment in content. This is because if content creators are not appropriately remunerated, they will not have the same incentives to produce high-quality content.

3.7 Content creators, like any other rational investor, will only invest up to a point where the private return from their investments covers their costs and provides a reasonable return on investment. Instead, the optimal level of investment is that for which the social value and cost of investment are made equal. The social cost of investment in content need not differ from the private one. Therefore, content creators will underinvest from a social viewpoint if their private returns from investment are decoupled from the social value such investments generate. The quantity of content created will fall and content quality will degrade if generative AI developers are allowed to 'free ride' on the investments of content creators.

3.8 Of course, this would be to the detriment to future creativity in the sector. But also to the detriment of the wider network economy related to music, in particular the studios, engineers, and managers. Lack of investment in content creation will also harm AI developers and the end-customers of products and services embedding such models. In the absence of high-quality content to train the models, AI developers will produce models with lower predictive power. They may have to train their models on their own synthetic content, which is bound to result in less predictive models, exhibiting greater bias, and producing more hallucinations. Research in computer science demonstrates that using model-generated content in training may cause irreversible defects in the resulting models, a phenomenon known as 'model collapse'.[21] Lack of remuneration or a level of remuneration that is not reflective of the added value provided by content creators is therefore harmful for the development of AI.

3.9 These conclusions are supported by the emerging economic literature on the subject. For example, Gans (2024) presents a theoretical model of a negotiation between a copyright holder and an AI developer over the use of the copyright protected material in model training.[22] He compares a scenario where the copyright holder and AI developer engage in a licensing agreement by virtue of which the latter remunerates the former, and an alternative scenario where the copyrighted content is free to use. He finds that in many instances bilateral licensing negotiations between model developers and existing copyright holders with the right to control the use of their works in training leads to socially desirable outcomes. Copyright protection, and therefore the remuneration of the copyright holder, is socially beneficial because the original content provider is investing prior to any negotiations on price and, therefore, the remuneration obtained maintains the incentives to

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21 de Rassenfosse, G., Jaffe, A. B., & Waldfogel, J. (2024). *Intellectual property and creative machines*. National Bureau of Economic Research, available at https://doi.org/10.3386/w32698 and Shumailov, I., Shumaylov, Z., Zhao, Y. et al. *AI models collapse when trained on recursively generated data*. Nature 631, 755–759 (2024), available at https://doi.org/10.1038/s41586-024-07566-y.

22 Gans, J. S. (2024). *Copyright policy options for generative artificial intelligence*. National Bureau of Economic Research, available at https://doi.org/10.3386/w32106.

innovate.[23] Moreover, copyright protection creates incentives for the improvement of content quality, which may additionally lower AI training costs. This is the case when copyright owners hold no active or passive positions or interests in the AI models training on their content.

Investments in the music industry are more sensitive to under-remuneration

3.10 The specific features of copyright protected music content make the arguments above even more relevant. Most of the investment into creating the content is *upfront*, and its value is only realised later. In particular, before the music can be monetised, content creators need to spend time and effort to (i) compose the music; (ii) record it (involving studio time, mixing and mastering services and hiring additional musicians and performers); and (iii) market and promote the music (involving, amongst other things, the production of music videos and engaging in digital marketing). In addition, the terms of individual artist contracts may provide tour support and funding for other promotions.

3.11 The investments needed to create content are also risky and sunk. Record labels do not know whether a given piece of content will perform well. In fact, a substantial majority of music albums do not attain commercial success. This was noted by the UK CMA in its market study into music streaming: "*Labels take on a degree of risk in A&R, particularly with newer, less proven artists. [30-40]% of major labels' active UK artists are currently profitable on a global basis, with expectations that a further [5-10]% of this group will become profitable over the next five years*." The CMA noted these figures are likely to be an over-estimate, since the active roster will tend to include many successful artists who are more likely to have been retained on the roster, with contractual relationships with unsuccessful artists more likely to be discontinued after the expiry of their initial contracts.[24] Finally, the above figures only refer to artist profitability, but project or investment profitability could be even lower, since an artist could have several flops, and still be profitable overall with a major success.

3.12 IFPI's 2024 Global Music Report finds that, in 2021, investment in marketing amounted to USD 3.2 billion, while investment in artists and repertoire costs ("A&R"), which includes recording costs, amounted to USD 3.9 billion. Combined, that represents 29.7% of total global revenue in 2021 (USD

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[23] In his model, regardless of the regime, result in pricing outcomes for both the original content and the AI that are not impacted beyond the different quality investments. Thus, the copyright regime does not change the overall consumption of original content. Gans (2024) finds that the copyright scenario is unambiguously superior from a social standpoint, when the AI models are 'bounded', i.e., when they rely on a relatively small corpus of content. In the case of 'unbounded' AI models, which are trained on such a large volume of data that it is difficult and costly to establish provenance ahead of time, the conclusions are ambiguous. Copyright protection is welfare increasing when the contribution of that content to the AI model is relatively limited or, alternatively, if the harm that applications built on those models can cause to content creators' businesses is relatively large. This is likely to be the case with licensing of copyright protected music, since models trained on very large volumes of data tend to be general purpose models with limited, if any, music related applications.

[24] An artist is deemed profitable if the direct artist income is greater than direct artist expenditure, however, a label will still need to cover overhead costs on top of the direct expenses. The CMA states these figures are likely to overstate the number of artists newly signed to a recording company who go on to be profitable as the active roster will tend to include many successful artists who are more likely to have been retained on the roster, with unsuccessful artists more likely to be dropped after the expiry of their initial contracts. See Final Report of the CMA Market Study into Music and Streaming, available at https://assets.publishing.service.gov.uk/media/6384f43ee90e077898ccb48e/Music_and_streaming_final_report.pdf, last accessed 26 November 2024, para 2.20 and footnote 240. The CMA notes that "*A&R expenditure has increased since 2012 both in absolute terms and (to a much lesser extent) as a percentage of industry revenue. In addition, BPI data shows that this has been accompanied by increasing roster sizes (for example, with the number of new signings by majors having increased 38% since 2010 to 153 in 2019).*"

24 billion). It also found that artists' share of revenue (comprising advances and royalty payments) was 34.9% of global revenue in 2021. Some payments to artists are upfront; royalties are not typically upfront, as they are only paid out if an artist is recouped. The remainder also remunerates up-front costs. Profit margins are therefore low.[25]

3.13 Under-remuneration in this industry will therefore be particularly harmful as it limits the incentives for labels to invest, and therefore the future creativity in the sector, risking a reduction in the supply of high quality, human created recorded music to both consumers and AI model developers, placing at risk the AI models and applications that rely on such content.

3.14 This is particularly important since music and human creativity is of immense economic value. The United Nations has estimated that the creative economy contributes between 0.5% and 7.3% of GDP across various countries, employing 0.5% to 12.5% of the workforce.[26] In the UK, the creative industries contributed GBP 124.6 billion to the UK's Gross Value Added ("GVA") in 2022, representing 5.7% of the national economy, and between 2010 and 2022, this sector's growth outpaced the overall economy, with a 50.3% increase in real terms compared to 21.5% across all UK sectors.[27] In the US, the arts and related creative industries accounted for 4.4% of the U.S. GDP over the past decade, a figure greater than the individual percentage contributions of construction, transportation, mining and agriculture.[28] Moreover, human creativity has immense social value, particularly in maintaining social cohesion and well-being.[29] Under-remuneration in this industry therefore may be particularly harmful for consumer welfare.

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25 https://ifpi-website-cms.s3.eu-west-2.amazonaws.com/IFPI_GMR_2024_State_of_the_Industry_db92a1c9c1.pdf, page 17.

26 UN Trade and Development (UNCTAD). (2024). *Creative Economy Outlook*. available at https://unctad.org/publication/creative-economy-outlook-2024.

27 Lyons, S., and Connoly, K.(2022). *Improving Economic Statistics in the Creative Industries*. Creative Industries Policy and Evidence Center, available at https://pec.ac.uk/wp-content/uploads/2024/04/Improving-economic-statistics-in-the-creative-industries-Creative-PEC-Research-Report-April-2024.pdf.

28 Noonan, D. (2024). *Arts and Creativity Drive Economies and Build Resilience*, available at https://nasaa-arts.org/wp-content/uploads/2024/03/2024-Key-Findings-Arts-Creativity-Drive-Economies.pdf.

29 In particular, a systematic evaluation of the economic impact of arts and creativity interventions for older adults suggested that the social return on investment ("SROI") was significant (£1.20 to £8 per £1 spent). See Crealey, G., McQuade, L., O'Sullivan, R., & O'Neill, C. (2023). Arts and creativity interventions for improving health and wellbeing in older adults: A systematic literature review of economic evaluation studies. *BMC Public Health, 23*, 2496. https://doi.org/10.1186/s12889-023-17369-x.

4 Copyright holders should be allowed to deny the use of their protected content for the training of generative AI models

Introduction

4.1 The simplest way to ensure that content creators obtain an appropriate remuneration for their investment in content when that content is used to train generative AI models, is to grant them exclusive rights and allow them to engage in voluntary bilateral licensing with generative AI developers. Voluntary licensing has proved efficient in the past, having been shown to provide a workable, effective and efficient way of licensing copyright protected content in transformative business models, like music streaming, involving both new products and technologies, different applications of the copyright protected content, and different monetisation strategies.

4.2 Compulsory licensing is only justified in a limited number of scenarios where there is the demonstrable possibility of market failure. These scenarios do not apply to licensing of copyright protected content. This is because generative AI developers do not need to train their models on every single piece of copyright protected content, let alone all sound recordings. To the best of our understanding, there are no copyright holders with content that is indispensable to train generative AI models, and so generative AI developers can substitute content from one copyright holder with content from another copyright holder. There is, therefore, no justification for compulsory licensing or for placing limits on the content creators' ability to freely negotiate the commercial terms of licences. The vast and increasing volume of content and the large number of content creators, and the existence of fierce competition among content creators, will ensure that the remuneration agreed on a voluntary basis is linked to the incremental value of their content.

4.3 On the other hand, the imposition of compulsory licensing, is bound to unjustifiably tilt bargaining power in favour of generative AI developers, reducing creators' remuneration below that which would be agreed in good faith, level playing field negotiations, down to a point where the remuneration for content creators may not sustain their incentive to invest and innovate, to the ultimate detriment of all stakeholders involved, including AI developers and end-consumers.

Efficiency rationale for exclusive rights

4.4 As a matter of economics, any production activity that requires *ex-ante* investment, and then is subject to *ex-post* competition requires some type of a supporting rights structure for such activity to be viable.[30] This reflects the simple fact that developing content is hard, risky and expensive, but using content that someone has already developed is relatively easy, cheap and difficult to prevent.

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30 Posner, R. A. (2005). *Intellectual property: The law and economics approach*. Journal of Economic Perspectives, 19(2), 57-73.

4.5 More specifically, content creators, technology and pharmaceutical innovators, and other producers typically are required to make investments on an *ex-ante* basis, i.e., prior to the time when they face competition for the sale of those products. To make these investments, they must have a reasonable expectation that they will be able to sell them at sufficient margin in order to cover the costs of investments. However, once the investments are made and the products are developed, they may face competition on the market. If it is possible for other suppliers to copy their products and sell them at a lower price, then they will be forced to offer the products at that lower price in order to compete. This will mean that much (or all) of their margins may be competed away, and there is a risk that they will not cover the costs of making the upfront investment in the first place. Anticipating their margins being competed away, creators may not engage in upfront investment in the first place. Rights structures, such as copyright protection or patents, protect creators from *ex-post* competition and ensure that their investments are rewarded appropriately.

4.6 This is a well-known and well-established concept in economics. For example, Massimo Motta, former Chief Competition Economist of the European Commission from 2013 - 2016 states in his seminal economics textbook "*If one firm adopts the technology, all other firms are able to produce at the same cost as well, perhaps because of policies which oblige firms to give away their technology to rivals (compulsory licensing). In this case, no firm has an incentive to innovate: diffusion of the technology prevents an innovator from benefiting from it, since after an innovation all firms would charge p = c and make zero profit. The fixed cost F of the innovation could never be recovered, and no innovation will arise under competition.*"[31] He also states that "*The spillover effects from R&D limits firms' ability to appropriate their R&D efforts and reduces their incentives in investing in R&D. IP protection removes the negative externality of R&D spillovers on R&D investment incentives".*[32] and "*IP protection ensures that firms are not expropriated from their innovation ex-post".*[33]

4.7 In addition, Jean Tirole, winner of the Nobel Prize in Economics in 2014, in his economics textbook makes the case for market power and R&D investment being intimately linked, with innovation often requiring some degree of monopoly power: *"if one wants to induce firms to undertake R&D one must accept the creation of monopolies as a necessary evil" and "firms will only engage in R&D if they can appropriate the benefits, meaning temporary monopoly power is a necessary incentive".*[34]

4.8 This has also been noted by the U.S. Copyright Office (2025): "*Because copiers incur lower total production costs (fixed costs plus marginal costs) than do original creators, and because copiers can freely enter the market, the market price for creative work will be driven to the copiers' marginal cost of production (absent legal intervention), which in the case of digital publication, is effectively zero. Depending on the speed with which this happens, original creators may be prevented from ever recouping their fixed production costs. This combination of factors may deprive creators of both the incentives and the means by which to produce the creative works, leading to market failure*."[35]

4.9 Rightsholders' ability to negotiate the terms of use for their rights, and to agree or deny licences, are therefore core to ensuring a fair return on their investment. Terms agreed between willing buyers and willing sellers during arms-length negotiations are likely to reflect the market value of the underlying rights. If right holders cannot deny licences, this would reduce their bargaining power

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31 M. Motta (2003), *'Competition Policy: Theory and Practice'*, Cambridge University Press ("Motta (2003)"), pp. 78, 84-85.

32 Motta (2003) in op. cit. note 31, pp. 84.

33 Motta (2003) in op. cit. note 31, pp. 85.

34 J. Tirole, (1988), *'The Theory of Industrial Organization'*, The MIT Press, pp. 390.

35 U.S. Copyright Office (2025) in op. cit. footnote 9, page 2.

vis-à-vis prospective licensees, and the terms finally agreed may not reflect the underlying economic value, and will not justify making upfront investments. Indeed the U.S. Copyright Office (2025) has noted the very same fact: "*Rigid forms of intermediation, such as statutory licensing, will likely diminish the viability of indirect appropriation, given that statutory licensing constrains the bargaining power of rightsholders.*"[36]

4.10 The granting and exercise of exclusive rights does not cause a competition problem, except under very specific limited circumstances which, as explained later, are not present in the music industry. Rather, it ensures that content is licensed at a fair market value, as both the licensor and the licensee are constrained by the knowledge that the other can walk away and agree a licence with someone else.

Benefits of voluntary licensing for use of copyright protected content for training AI models

4.11 Voluntary licensing allows the two sides to the negotiation, in this case content creators and generative AI developers, to find mutually acceptable terms. Both parties have the incentive to come to an agreement, because they will not earn anything (or not as much) without forming an agreement. Content creators will not be able to earn revenue from licensing their rights to AI developers, and, without access to the rich copyright protected content (together with the associated authoritative metadata), AI developers will not be able to train high-quality generative AI models, which could be monetised subsequently. Letting the parties negotiate with each other allows for a market-based solution, one that does not require regulatory oversight and is, to a large extent, efficient.

4.12 In the music industry, voluntary licensing has proved to be efficient and has been the norm for a long time.[37] Over the last 20 years, the music industry has undergone a number of, partly simultaneous, transformations from analogue to digital and from ownership-based consumption to access based consumption models. At the same time, the threshold for entry to market – the cost of producing and distributing music – has become lower than ever. This has had a major impact on the music industry as a whole. And yet, despite these major changes, voluntary bilateral licensing has remained the primary means of monetising music.[38]

4.13 Voluntary licensing has shown to provide a workable, effective and efficient way of licensing copyright protected content in new industries, like music streaming, involving both new products or services and technologies, different applications of the copyright protected content, and different monetisation strategies. The UK CMA, in its recent review of music streaming, noted that these voluntary agreements have facilitated the widespread availability of music on streaming services and given rise to other efficiency benefits.[39]

4.14 Music companies have, voluntarily, reached agreements with:

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36 U.S. Copyright Office (2025) in op. cit. footnote 9, page 22.

37 In particular, we understand voluntary bilateral licensing has been used for physical distribution and online distribution via downloads or streaming, including on social media. Public performance and broadcasting are sometimes subject to compulsory licensing.

38 CMA Market Study (2022) in op. cit. footnote 24, para 2.114(d).

39 CMA Market Study (2022) in op. cit. footnote 24, para 3.4.

a. music streaming platforms, such as e.g. Spotify and Apple Music;[40]

b. video sharing and social media platforms, such as e.g. YouTube, TikTok or Meta, including allowing for other content creators to use copyright protected songs or audio in their own videos;[41] and

c. other DSPs including personal fitness app developers, such as e.g. Equinox and Peloton, which provide functionality using copyright protected music.[42]

4.15 Voluntary licensing should also be the preferred option for the licensing of copyright protected content for training generative AI models, because it ensures that both content creators and generative AI developers are able to license the content on terms that reflect the value of the content *for them*. It is particularly beneficial for an industry such as the music industry, and the AI development industry, given the significant heterogeneity in the nature of content, models, technical specifications, intended applications and monetisation strategies. With such heterogeneity, voluntary licensing allows for bespoke contracts reflecting the differences amongst content creators and generative AI developers. It ensures that negotiations take place between those best placed to reach a price that truly reflects market value (the content creator on the one hand and the AI developer on the other). It is, therefore, unsurprising that copyright protected content in most creative industries, including the music industry, has been, and still is, typically licensed on a voluntary bilateral basis.

Compulsory licensing is only justified in exceptional circumstances, which do not apply to music

4.16 The alternative to voluntary licensing, i.e., compulsory licensing, is only justified as a matter of economics where there is the demonstrable possibility of market failure. This is a possibility in very specific and limited circumstances:

a. In the case of SEPs, the technology being licensed is 'must have' once the standard is set, since every implementer requires a licence to every single SEP in order to produce a standard

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40 See, for instance, Aswad, J. (2020, March 13). *Apple Music Signs New Licensing Deals With Majors (Report)*. Variety, available at https://variety.com/2020/digital/news/apple-music-new-licensing-deals-sony-universal-warner-music-1203533507/, last accessed 28 November 2024; Universal Music Group (2024, March 28). *Universal Music Group and Spotify Expand Strategic Relationship*, available at https://www.universalmusic.com/universal-music-group-and-spotify-expand-strategic-relationship/, last accessed 28 November 2024; and Warner Music Group. (2020, April 1). *Joint Media Statement from Warner Music Group & Spotify*, available at https://www.wmg.com/news/joint-media-statement-warner-music-group-spotify-34731, last accessed 28 November 2024.

41 See, for instance, Universal Music Group (2024, August 12). *Meta and Universal Music Group Announce Expanded Global Agreement*, available at https://www.universalmusic.com/meta-and-universal-music-group-announce-expanded-global-agreement/, last accessed 15 January 2025; Universal Music Group (2024, May 1). *Universal Music Group and TikTok Announce New Licensing Agreement*, available at https://www.universalmusic.com/universal-music-group-and-tiktok-announce-new-licensing-agreement/, last accessed 15 January 2025; and The Hollywood Reporter (2017, December 19). *Universal, Sony Renew Licensing Deals With Youtube*, available at https://www.hollywoodreporter.com/news/general-news/universal-sony-renew-licensing-deals-youtube-1069252/, last accessed 15 January 2025.

42 Hale, K. (2021, February 4). *Universal Music Group Steps Into The $23 Billion Work-Out-From-Home Trend With Equinox Deal*. Forbes, available at https://www.forbes.com/sites/korihale/2021/01/28/universal-music-group-steps-into-the-23-billion-work-out-from-home-trend-with-equinox-deal/, last accessed 15 January 2025.

compliant product.[43] This means that standardisation confers some market power on the licensor, which could result in excessively high royalties and suboptimal diffusion of technology.[44]

b. Compulsory licensing is also enforced on dominant firms engaging in anti-competitive refusals to license. The legal test in the European Union and the United Kingdom is the so-called 'exceptional circumstances test'.[45] According to this test, a licensor holding a dominant position infringes the competition laws by refusing to licensing its intellectual property – e.g., its copyright protected content – if access to that property is indispensable to compete, the refusal to license eliminates all effective competition, and the licensee is seeking to commercialise a new product for which there is considerable demand.[46]

4.17 In these exceptional cases – where market power and/or the presence of externalities give rise to a market failure – voluntary licensing may result in royalties that are too high – i.e., above the (incremental) value of the licensed property. The solution implemented by standards organisations and competition authorities has been to require licensors to offer licences on fair, reasonable and non-discriminatory FRAND terms.[47,48]

4.18 However, to the best of our understanding, there is no market failure in the access to copyright protected content for the training of generative AI models. This is because, again to the best of our understanding, no particular copyright protected content is technically essential or indispensable for the training of generative AI models. General use generative AI models can be trained on a variety of content, some of which would be free to use either because it is made available under licence for free or because it has fallen in public domain. Even if some copyright protected content may be richer, and hence more desirable, there is a variety of copyright protected content that AI developers can rely on: text, audio, music and images. They do not need access to *all* types of copyright protected content, and certainly not to all copyright protected sound recordings.[49] Since AI developers do not necessarily need to rely on content from every single content creator, no single content creator possesses 'must have' content from the AI developer's viewpoint, and hence there

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43 This is because every implementer needs to have a licence to *all* SEPs in order to produce a standard compliant product.

44 Such hold up power is not necessarily the result of a superior technology, but instead follows from the selection of a technology for the standard, and the concomitant exclusion of all others. Once the standard is set and implementers have made their upfront investments, every SEP may be a 'must have' – i.e., it may be indispensable to compete with a standardised product. If so, a strong patent holder could 'get away' with charging excessive royalties and squeeze out implementers' margins. See Group of Experts on Licensing and Valuation of Standard Essential Patents ("SEPs Expert Group"). (2021, January). *Contribution to the Debate on SEPs*. European Commission, available at https://ec.europa.eu/docsroom/documents/45217, last accessed 15 January 2025, pages 12 and 28.

45 Magill TV Guide/ITP, BBC and RTE, OJ 1989 L 78/43 and Joined Cases C-241/91 P and C-242/91 P, Radio Telefís Éireann and Independent TelevisionPublications Ltd (RTE & ITP) v Commission [1995] ECR I-743<<

46 O'Donoghue KC, R., & Padilla, J. (2020). *Refusal to Deal*. The law and economics of Article 102 TFEU: Chapter 12. Bloomsbury Publishing, page 533. See also Ahlborn, C., Evans, D. S., & Padilla, A. J. (2004). The logic and limits of the "exceptional circumstances test" in *Magill* and *IMS Health*. *Fordham International Law Journal, 28*(4), 1109–1154. Available at https://ir.lawnet.fordham.edu/ilj/vol28/iss4/9.

47 SEPs Expert Group (2021) in op. cit. 44, page 96.

48 Case AT.39939, Samsung - Enforcement of UMTS standard essential patents; Case AT.39985, Motorola - Enforcement of GPRS standard essential patents; Case C-170/13, Huawei Technologies Co. Ltd v ZTE Corp., ZTE Deutschland GmbH, EU:C:2015:477.

49 We understand from IFPI that, for example, the stable audio music model already demonstrates that it is possible to develop models using content that is free to use. See https://huggingface.co/stabilityai/stable-audio-open-1.0.

is no danger that voluntary licensing may result in excessive remuneration for content creators.[50] Therefore, there is no economic justification for weakening right holders' powers; for example, by introducing copyright exceptions which allow AI developers to train their models for free, even if mitigated by opt-out mechanisms. In fact, such exceptions can worsen the problems of under-remuneration because – while in the case of compulsory licensing content creators face a risk that the tribunal's determined rates are too low – in the case of exceptions content creators will not be paid at all, particularly given there is likely uncertainty about whether the complex opt-out requirements have been met.

4.19 Moreover, even in the case of specific generative AI models that are focussed on music related output, for which training on sound recordings may be highly desirable in order to produce high quality output, the AI developer does not need access to *all* music content from *all* music creators. Meaning it can substitute content, if the same quality content is available cheaper. This is in stark contrast to SEP licensing, where implementers need access to every single patent on the standard. Here if an individual generative AI developer claimed certain (music) content is essential for the training of its models, then it would be conceding that it intends to develop an algorithm to 'clone' the content in question or produce content that is sufficiently similar to be able to substitute demand for the original. The content produced by the AI model would then be in direct competition with the original, rather than constitute a new product. To the extent the future competition from music generative AI models cannibalises some of the sales of the content creators, that must be taken into account when the remuneration is agreed. Voluntary licensing allows the content creator to appropriately account for this in its negotiations.[51]

4.20 Finally, given the current market structure of the recording industry, no single firm can be said to be dominant, and so there is no risk of any market failure resulting from that.[52] There is also no risk of a refusal to supply, and no history of such concerns in the music industry.

4.21 There is, therefore, no justification for compulsory licensing or for placing other limits on content creators' ability to license their rights freely. The vast and increasing volume of content, the large number of content producers and the strength of competition among content creators will ensure that the remuneration agreed on a voluntary basis is linked to the incremental value of their content.

Compulsory licensing may lead to too low remuneration and underinvestment

4.22 There is a danger that enforcing compulsory licensing, or weakening the right holders' powers even further by introducing copyright exceptions, even if mitigated by 'opt-out' mechanisms, would reduce the remuneration for content creators to a level that would not sustain their incentive to innovate, resulting in an impoverished ecosystem of content.

4.23 As a matter of economics, compulsory licensing tends to reduce the bargaining power of copyright owners. The bargaining power of a negotiating party depends on the revenue that party would earn

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50 The 'must have' nature of the content is specific to the user group being considered. Therefore, even if some content is deemed 'must have' from the point of view of a DSP, *quod non*, it does not imply it is 'must have' for the AI developers.

51 The right price would be given by the efficient component pricing rule ("ECPR"), which is in any event FRAND without having to regulate. See Swanson, D. G., & Baumol, W. J. (2005). *Reasonable and non-discriminatory (RAND) royalties, standards selection, and control of market power*. Antitrust Law Journal, *73*(1), 1–58, available at http://www.jstor.org/stable/40843669.

52 In particular, there are three major music companies, none of which may be said to hold significant market power over the other.

if the negotiations broke down (in economic terms, its 'outside option').[53] If licensing is voluntary, the licensee will not earn any revenue (and of course not pay any royalties to artist or other contributors) if negotiations break down. However, if licensing is compulsory, the licensee will be able to use and monetise the IP and the royalty amount will be decided by a dispute resolution body. If licensors cannot deny a licence, the only options available to them are to either accept the remuneration that is offered, regardless of how low it is, or engage in costly, lengthy and uncertain tariff proceedings. Exceptions or compulsory licensing improves the outside option of the licensee vis-à-vis the licensor and results to royalties lower than what the market would sustain with voluntary licensing. It would allow every AI developer to exploit the lower bargaining power of content creators to depress royalty payments, analogously to the well-known 'hold-out' problem encountered in SEP licensing.[54]

4.24 This is a proven concern in parts of the music industry which are subject to compulsory licensing, for example the licensing of sound recording broadcast rights for which rightsholders in most jurisdictions cannot set their own prices and cannot choose to whom and under what terms they license these rights. The rates are set by courts, regulators or legislatures, and broadcasters are allowed to play these protected recordings provided they pay a standard rate. Industry commentators have noted that this leads to an imbalance of bargaining power, and the under-remuneration of the applicable rights, ultimately stifling the ability of record companies to invest in artists and repertoire.[55] They have estimated that the royalties would be significantly higher if the content creators were allowed to negotiate freely.[56]

4.25 This is particularly problematic in the AI industry given the growing consolidation of AI around a small number of players with large market capitalisations and access to unprecedented funding. That is, around companies with considerable bargaining power and in the absence of regulatory intervention. The US Federal Trade Commission ("FTC"), UK CMA and the European Commission ("EC") have all identified concerns with these markets, ranging from high market power to vertical integration into downstream markets. The FTC has expressed concerns about (i) incumbents controlling key inputs or adjacent markets (for example data or computing resources), (ii) incumbents using exclusive partnerships and M&A activities to consolidate their positions and foreclosing rival competitors, (iii) network effects that can supercharge harms from unfair conduct as these markets may gravitate towards natural monopolies. It is also already investigating three separate multi-billion dollar investments: Microsoft and Open AI, Amazon and Anthropic, and

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53 See, for instance, Gilbert, R. J. (2010). Deal or no deal-licensing negotiations in standard-setting organizations. *Antitrust Law Journal*, 77, 855; and Nash, J. (1953). Two-person cooperative games. *Econometrica: Journal of the Econometric Society*, 128-140

54 See, for example, Llobet, G., & Padilla, J. (2023). *A theory of socially inefficient patent holdout*. Journal of Economics & Management Strategy, 32(2), 424-449.

55 See Geneva Network (2019). *Unshackling the future of music: How outdated legal rules are holding back the music business*, available at https://geneva-network.com/research/compulsory-licensing-music/, last accessed 29 November 2024, Priest, E. (2021). *The Future of Music Copyright Collectives in the Digital Streaming Age*. Columbia Journal of Law & the Arts, *45*, 1; and Reidel, I. (2010). *The Taylor Swift Paradox: Superstardom, Excessive Advertising and Blanket Licenses*. New York University Journal of Law & Business, 7, 731.

56 According to IFPI, the global average rate paid by commercial radios for their sound recording rights is less than 2% of the relevant radio industry revenues, whereas publicly available information suggests that the freely negotiated rates for the use of sound recordings for streaming services are between 50 and 55 percent. See JPriceOfMusic. (n.d.). *The definitive guide to Spotify royalties*. Medium, available at: https://medium.com/@JPriceOfMusic/the-definitive-guide-to-spotify-royalties-dc5960862c00.

Google and Anthropic.[57] The CMA has in turn expressed concerns about (i) AI firms controlling critical inputs for developing foundation models may restrict access to shield themselves from competition, (ii) powerful incumbents which could exploit their positions in consumer or business facing markets to distort choice in foundation model services and restrict competition in deployment, and (iii) partnerships involving key players which could exacerbate existing positions of market power through the value chain.[58] Finally the EC has expressed concerns about (i) key inputs such as data, AI accelerator chips, computing infrastructure, cloud capacity and technical expertise under the control of a few companies, and (ii) the concentrated deployment and distribution of the technologies.[59] Faced with such powerful licensees, regulations or legislative initiatives that further undermine content creators' bargaining power would be detrimental from a social standpoint.

4.26 In conclusion, we consider that voluntary licensing is strikes the right balance between the need to guarantee appropriate remuneration to content creators, while maintaining the incentives to innovate for generative AI developers.

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57 See https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2023/06/generative-ai-raises-competition-concerns and https://www.ftc.gov/news-events/news/press-releases/2024/01/ftc-launches-inquiry-generative-ai-investments-partnerships.

58 See https://www.gov.uk/government/news/cma-outlines-growing-concerns-in-markets-for-ai-foundation-models.

59 See https://digital-strategy.ec.europa.eu/en/news/commission-publishes-policy-brief-competition-generative-ai-and-virtual-worlds.

5 Terms of use for copyright protected content for the training of generative AI models should be left to bilateral negotiations

Introduction

5.1 The terms of use for copyright protected content for training AI models should be decided through bilateral negotiations. Bilateral negotiations are commonly used in many industries, primarily because they allow for greater flexibility in setting terms and conditions. In the case of the use of copyright protected content for training generative AI models, flexibility is particularly valuable because, on the one hand, copyright holders are very different from each other (both in terms of the value and size of their copyright portfolios) while, on the other hand, generative AI developers are likely to differ from each other (both in terms of their business model and in the AI products and services that they hope to deliver based on the trained models). Different content creators have different value to offer, and different generative AI developers have different requirements. Thus, bilateral licensing allows them to negotiate terms that best reflect their specific exchange of value. Flexibility is particularly invaluable here because the market for generative AI tools is still nascent, meaning that business models are likely to evolve.

5.2 Compulsory collective licensing is unnecessary since, to the best of our understanding, there are no market failures. The licensing market is not heavily concentrated and transaction costs are not so high that the market would be left unlicensed. Generative AI developers do not need to train their models on every single piece of copyright protected work, let alone all sound recordings, and no content provider controls a content portfolio without which the models could not be trained. Compulsory collective licensing is also problematic since it either generates competition risks (if content creators are forced to license collectively) or risks under-remuneration (if content creators are unable to apportion collective remuneration efficiently).

Bilateral licensing is ubiquitous and flexible

5.3 The simplest and most ubiquitous form of voluntary licensing is bilateral licensing, where each content creator is allowed to negotiate separately with each separate generative AI model developer – i.e., the licence agreement is between a single licensor and a single licensee. This is the form of licensing most likely to yield the appropriate remuneration for content creators.

5.4 Bilateral licensing is commonly used in many industries, including music, film, pharmaceuticals and technology. The key reason why bilateral negotiations are preferred is that they offer both licensor and licensee the flexibility to set the terms and conditions that are most suitable to their unique relationship, without having to compromise to accommodate the preferences of other right holders or licensees included in collective negotiations. In commercial negotiations, both parties focus on those terms and conditions that are critical to their businesses and put less weight on those factors that are trivial to them. Licensees and licensors can subsequently engage with other licensors and licensees at terms that may be different and more tailored to the use of the product, the way it is

monetised, the business model of the licensee, etc. As a result, the licence agreements that stem from bilateral negotiations are often bespoke, with varying contractual terms and conditions, reflecting the parties' specific interests and priorities.[60] In practice, recreating this flexibility with fixed rules would likely be difficult.

Flexibility is particularly valuable in licensing copyright protected content for training

5.5 In this case, flexibility is particularly valuable because, on the one hand, copyright holders are very different from each other, and, on the other hand, generative AI developers are likely to differ from each other too. Different content creators have different value to offer, and different generative AI developers have different requirements. The U.S. Copyright Office (2025) has noted these differences in its assessment of optimal policies: "*Three key contingencies are particularly significant: (1) heterogeneities in the quantity, diversity, and access regimes for training data; (2) heterogeneities in developer type (e.g., corporate versus startup or closed source versus open source); and (3) heterogeneities in user needs and content types.*" [61]

5.6 There are at least four sources of heterogeneity that would need to be reflected in the licensing agreements between copyright holders and AI developers, which would be difficult to take into account in collective licensing.

5.7 First, copyright holders differ from each other. Music companies differ in the size of their recording portfolios and the type of content, e.g. in addition to the three major companies, there are many independent record labels with smaller catalogues of songs.[62,63] These smaller labels also differ from the major labels in the type of music they offer.[64]

5.8 Second, the AI products that are offered based on the trained generative AI models differ. For instance, Google and Meta have introduced their AI models, MusicLM and MusicGen respectively, for generating music samples using text prompts. While in principle these models provide similar functionality to the user, they are different, which results in differences in performance against a set benchmark.[65] Furthermore, AI models may be tailored to different specific tasks – for instance, Kits Voice Conversion is an AI model aimed at professional music producers that is specifically designed for voice-to-voice conversion.[66] Overall, generative AI developers will have different training data requirements as well as different planned applications, all of which are factors that impact value.

5.9 Third, AI developers can differ in terms of the business models they pursue. For example, OpenAI offers an API to enterprise customers, that allows other software developers to build apps that utilise

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60 CMA Market Study (2022) in op. cit. footnote 24 above, para 3.2, for example in licensing to music streaming.

61 U.S. Copyright Office (2025) in op. cit. footnote 9, page 41.

62 CMA Market Study (2022) in op. cit. footnote 24, para 1.51.

63 In particular, according to recent studies, independent labels now control 43.1% of the global recorded music market, surpassing major labels. See Billboard. (2024, February 16). *Indie labels now own nearly half of the recorded music market, according to MIDiA report*. https://www.billboard.com/pro/indie-labels-own-half-recorded-music-market-midia-report/

64 CMA Market Study (2022) in op. cit. footnote 24, para 5.28.

65 For MusicLM, see Agostinelli, A., Denk, T. I., Borsos, Z., Engel, J., Verzetti, M., Caillon, A., ... & Frank, C. (2023). *Musiclm: Generating music from text*. arXiv preprint arXiv:2301.1132. For MusicGen and performance against MusicLM, see Copet, J., Kreuk, F., Gat, I., Remez, T., Kant, D., Synnaeve, G., ... & Défossez, A. (2024). *Simple and controllable music generation*. Advances in Neural Information Processing Systems, 36. Both accessed on arXiv on 28 November 2024.

66 https://www.kits.ai/research/kits-voice-conversion-kvc

OpenAI's models, with pricing based on usage.[67] Meta's pre-trained Llama language model can be downloaded and run locally,[68] for commercial use by third parties.[69] Meanwhile Apple Intelligence can only be used in Apple's devices.[70] As the market for generative AI tools is still nascent, we expect these various business models will likely evolve.

5.10 Fourth, many of these differences have implications for the optimal remuneration of copyright protected content. In particular, it may affect how royalties are structured: lump sum, *ad valorem*, per unit, or even in the form of equity stakes. These various remuneration structures have different implications for the incentives to innovate, risk sharing, and the competitive interactions between content creators and generative AI developers.[71]

5.11 The examples above demonstrate how there are multiple different ways the AI models could be monetised – an AI developer could, for instance, produce AI tools directly for end-users, ingrain enhanced AI features in its existing products, or license its services to third-party developers. It is then crucial that the content creators and AI developers have the flexibility to negotiate terms and conditions that accurately reflect the circumstances the parties' different business models.

Compulsory collective licensing is unnecessary and problematic

5.12 Some commentators have argued that bilateral licensing in the context of training generative AI is likely to be a prohibitive exercise because it would involve significant number of agreements and thus material transaction costs.[72] They argue that each AI developer would need to go out and seek licences from all content creators, which would be in the millions, and that this would be difficult, time consuming and costly for even large AI developers, and impossible for smaller AI developers. They therefore advocate for measures, such as mandatory collective licensing, to facilitate access to copyright content. Collective licensing may come in different flavours (i) several content creators may collectively negotiate with an AI developer, or (ii) several AI developers may collectively negotiate with a content creator, or (iii) several content creators may collectively negotiate with a collective of AI developers. Collective licensing may be agreed on an extended basis, where collective management organisations can grant licences on behalf of both members and non-members; or be formulated as levies, where fees are imposed on the licensees' products and then redistributed to licensors.

5.13 We find this proposition misconceived in general and, in particular, unjustified and counterproductive regarding music content. First, insofar as generative AI developers want third party copyright content, they do so for commercial reasons, not for overriding reasons of public interest. That being the case, the starting point should be that generative AI developers conduct a commercial cost / benefit analysis factoring in potential IP costs, as any other commercial operator.

5.14 Second, while collective licensing may save some negotiations costs, collective management organisations typically charge large administrative fees. Therefore, collective licensing is unlikely to materially reduce, let alone eliminate, all transaction costs.

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67 https://openai.com/api/pricing/, accessed on 28 November 2024.

68 https://www.llama.com/, accessed on 28 November 2024.

69 https://www.llama.com/llama3/license/, accessed on 28 November 2024.

70 https://www.apple.com/newsroom/2024/10/apple-intelligence-is-available-today-on-iphone-ipad-and-mac/, accessed on 28 November 2024.

71 Llobet, G., & Padilla, J. (2016). The optimal scope of the royalty base in patent licensing. *The Journal of Law and Economics, 59*(1), 45–73. https://doi.org/10.1086/686306.

72 Lemley and Casey (2021) and Martens (2024) in op. cit. footnote 111 above.

5.15 Third, even if collective licensing saves negotiations costs, *mandating* it can be problematic from a competition law perspective. As a matter of economics, if licensors' intellectual property portfolios include substitutes – i.e., if licensees do not need to deal with all of them to train their models – negotiating royalties collectively likely will lead to excessive royalties. Collective licensing means licensors do not have as much of an incentive to reduce their royalties in order to win the licensees' business, compared to a scenario where they would be licensing bilaterally. This has been noted by the EC in its Guidelines on applicability of Article 101 TFEU to technology transfer agreements: "*When technologies in a pool are substitutes, royalties are likely to be higher than they would otherwise be, because licensees do not benefit from rivalry between the technologies in question*."[73] There is also a longstanding history of competition cases, outlined later in this section, where authorities across the globe have been concerned about the elimination of such rivalries.

5.16 If made mandatory, collective licensing could allow licensors to charge higher than socially optimal royalties, ultimately reducing consumer welfare. To account for this, collective licensing is often under supervision by administrative authorities and/or competition and rate tribunals. In practice, however, the terms of use in collective licences are not set in free negotiations and the measures aimed at curbing the market power of collective licensing bodies tilt the balance in favour the users. As a result, there is a risk of under-remuneration that could depress creators' incentives to create.

5.17 Note, in addition, that mandatory collective licensing is not needed given that voluntary arrangements are likely to emerge when it is optimal. This is indeed the case in the music industry, where *voluntary* collective negotiations are prevalent. For example, many smaller independent labels engage in a form of collective negotiation through the Merlin Network, which negotiates premium licensing deals with major DSPs, such as Spotify, Apple Music, YouTube, and others. Merlin allows independent labels to benefit from broad distribution opportunities that might be challenging to secure individually. The essential point is that right holders can be left be free to decide whether and when to subject their rights to collective licensing where such agreements are procompetitive.

5.18 This is noted by the U.S. Copyright Office (2025) too: "*As a preliminary matter, one should not conflate the advantages of compulsory licensing with the advantages of collective intermediation more generally. The primary advantage of collective intermediation is that it reduces transaction costs by centralizing negotiations. Compulsory licensing shares this advantage because it is one form of collective intermediation (other forms, as previously discussed, are collective rights organizations like those that exist in the music industry). However, that advantage arises from the centralized nature of negotiations, not from the compulsory nature of the regime. Therefore, the reduction of transaction costs is not, on its own, a sufficient justification for compulsory licensing, since the same effect can be achieved through other, less intrusive forms of collective intermediation.*"[74]

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[73] The Commission has noted this in its Guidelines on the applicability of A101 TFEU to technology Transfer Agreements, para 253, available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0328(01).

[74] U.S. Copyright Office (2025) in op. cit. footnote 9, page 49

Compulsory collective licensing is only appropriate where there is market failure, which is not the case in music

5.19 There are a limited number of scenarios where *compulsory* collective licensing could be justified, and they all involve some form of market failure.[75] This could be the case, for example:

a. If the market on one or both sides of the negotiations is highly fragmented, leading to multiple bilateral negotiations involving prohibitively high transaction costs, part of the market may be left unlicensed. In such, a case a smaller number of collective agreements with more than two parties involved can be more efficient. This is more likely if transaction costs are very high and there is a history of negotiation failure.

b. If the intellectual property used by the developers is perfectly complementary in nature. Each licensor negotiating individually may demand a royalty rate that is too high, which, when combined across all, results in a 'royalty stack', i.e., an inefficiently high aggregate royalty burden from the licensors', licensees' or licensees' customers' points of view. This is an example of the 'Cournot effect', well-known in economics, where the lack of coordination between producers of complementary (intellectual) property rights leads to a socially inefficient outcome.[76] In this case, it would be optimal to mandate licensors to negotiate jointly through intellectual property pools (e.g., patent pools).[77]

c. If one or more content creators possess 'must have' portfolios, their bargaining power relative to licensees is disproportionately high. In this case, it may be optimal from a society's viewpoint, to balance the bargaining power of licensors and licensees by mandating the latter to create licensee bargaining pools or unions.[78] These institutions would countervail the bargaining power of the licensors leading to royalty and non-royalty terms that better reflect the value of the licensed content.

5.20 None of these conditions is met in the case of licensing copyright protected music content for training AI models.

5.21 First, in the case of licensing of copyright protected music content for generative AI training, to the best of our understanding, practice demonstrates that transaction costs are not so high that they would result in a scenario where part of the market is not licensed. As such, there is no market failure that would warrant the imposition of compulsory collective licensing:

a. Music companies have successfully engaged in bilateral licensing with a multitude of streaming and social media platforms, in part through representative groups like the Merlin Network.[79]

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75 European Commission: Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements, 28 March 2014, paras 245 and 252, Gilbert, R., Collective Rights Organizations: A Guide to Benefits, Costs and Antitrust Safeguards, *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents*, Cambridge Law Handbooks.

76 Llobet, G., & Padilla, J. (2023). *Royalty Stacking and Validity Challenges: The Inverse Cournot Effect*. The Journal of Industrial Economics, 71(3), 593-625.

77 Gilbert (2017) in op. cit. 75 above.

78 Contreras, J. L. (2017). *Aggregated royalties for top-down FRAND determinations: revisiting "joint negotiation*" The Antitrust Bulletin, 62(4), 690-709.

79 Priest, E. (2021). *The Future of Music Copyright Collectives in the Digital Streaming Age*. Columbia Journal of Law & the Arts, *45*, 1; and Reidel, I. (2010). *The Taylor Swift Paradox: Superstardom, Excessive Advertising and Blanket Licenses*. New York University Journal of Law & Business, 7, 731. The Pro-Music directory provides a searchable list of licensed music services and apps around the world, from major streaming services and download stores to fitness apps and shortform video platforms, see https://www.ifpi.org/pro-music/.

b. While negotiations can take time and effort, this may only reflect the complexities of the business models and of assessing the value of the content in particular use cases. There is no evidence of market failure: the fact that thousands of online services have been licensed worldwide, with well over 100 million recordings, demonstrate that voluntary bilateral licensing has been effective.

c. A large share of recordings on DSPs is never listened to, or listened to only a few of times. For example, industry commentators have stated that of the nearly 158.6 million recordings on streaming platforms in 2023, 86.2% had less than 1000 plays and 24.8% had no plays at all.[80].

d. Because copyright holders, such as record companies, depend on licensing to recover their initial investment in content (repertoire), they are incentivised to make the process as easy as possible. As explained above, a number of small music companies have voluntarily chosen to license their rights via representative groups, such as the Merlin Network. Furthermore, independent rights aggregators or distributors, such as Tunecore, CDBaby and Distrokid, also provide access to significant catalogues of music from independent artists. So the voluntary collective representations of rights aggregators can, and already have, simplified the process for licensees of acquiring rights from many smaller rightsholders.[81]

5.22 Second, content from various copyright holders is not perfectly complementary, rather it is typically substitutable for the AI developers.

5.23 Generative AI models can be trained on different types of content. While they require a rich dataset in order to make accurate predictions, AI developers do not need to rely on every single piece of copyright protected content, let alone every single sound recording. On the contrary, they will likely prefer not to duplicate and would rather substitute content from one copyright holder with content from another, especially if they can access it at better terms. Thus, content creators do not offer perfectly complementary content. There is, therefore, not even a theoretical risk that the aggregate royalty burden faced by AI developers will be 'too high' compared to the socially optimal level. On the contrary, as explained earlier, the experience of the industry suggests that the rates agreed through collective licensing tend to be lower than what would be achieved by bilateral licensing, giving rise to under-remuneration.

5.24 Third, as described above, in the case of use of copyright protected content for training generative AI models, no copyright protected content is 'must have', certainly no music content is 'must have' for AI developers, unless the AI model specifically aims to produce music content in which case any output is likely anyway to cannibalise some of the content creators' businesses. The cannibalisation is likely to be different for different content creators, and so the flexibility offered by bilateral licensing would in fact be a better way to tackle the effects of the cannibalisation of their businesses.

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80 Luminate's end of year report, 2023, available at: https://loudwire.com/percentage-music-streaming-services-never-played-2023-staggering/, last accessed 28 November 2024.

81 See House of Lords Communications and Digital Committee. (2024). *Large language models and generative AI* (1st Report of Session 2023–24, HL Paper 54). UK Parliament. https://publications.parliament.uk/pa/ld5804/ldselect/ldcomm/54/54.pdf: "*The Copyright Licensing Agency said that there were already collective licensing mechanisms providing a "practical" system for developers to access data responsibly. Work is underway to develop further licensing options specifically for generative AI.".*

Compulsory collective licensing creates competition risks on one end and under-remuneration risks on the other

5.25 There are obvious risks of under-remuneration and risks to competition that would arise from compulsory collective licensing.

5.26 On the one hand, compulsory collective licensing of copyright protected content poses an additional risk of **under-remuneration**. Compelling licensors to license their products jointly may be particularly inefficient when the quality of their intellectual property portfolios is very different. In such a case, it may be difficult for them to agree on a way to apportion the aggregate royalty among themselves in a way that is efficient – i.e., in a way that allocates the incentives to invest in an efficient manner. There may be free-riding and underinvestment in collective societies and patent pools if the aggregate royalty is shared in an egalitarian fashion, for example by counting members or counting intellectual property rights. This problem may be resolved if the aggregate royalty is divided in proportion to the incremental value of each of the intellectual property portfolios, but that is of course complex, since it requires that licensors agree on the relative merits of their copyright protected content.

5.27 On the other hand, compulsory collective licensing of copyright protected content poses a **risk to competition**. From the point of view of the AI developers, copyright holders have a rivalrous offering – if negotiations with one copyright holder fail, the AI developer has the ability to negotiate access to training data from another copyright holder. Compulsory collective licensing could *eliminate* this competitive pressure between rival copyright holders. Compulsory collective licensing could also facilitate coordination on royalties or other parameters of competition. In the absence of any clear benefits, mandating collective licensing could therefore represent a type of anti-competitive infringement.[82] That is the reason why collective licensing bodies are as a rule subject special supervision and their ability to set rates is limited by outside rate setting bodies.

5.28 There is a large and longstanding body of global precedent which treats compulsory collective licensing as a risk to competition. Authorities in the US, UK and EU have been concerned, for decades, about the elimination of competitive pressure associated with compulsory collective licensing, sometimes entering into consent decrees or imposing remedies that ensure licensees can also take bilateral licences.

US precedent

5.29 There is US precedent from as early as the 40s when the Antitrust Division entered into consent decrees with the American Society of Composers, Authors and Publishers ("ASCAP") and Broadcast Music, Inc. ("BMI"), the two largest performance rights organizations ("PROs"), collectively accounted for more than 90% of the music licensing market.[83,84] ASCAP and BMI pooled the copyrights held by their composer, songwriter, and publisher members or affiliates and collectively license public performance rights to music users, including radio and television stations,

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82 European Commission. (2014, March 28). *Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements*, para 253

83 Sisario, B. (2014). *Pandora suit may upend century-old royalty plan*. The New York Times. See link: http://www.nytimes.com/2014/02/14/business/media/pandora-suit-may-upend-century-oldroyalty-plan.html.

84 US Department of Justice (2019), Department of Justice Opens Review of ASCAP and BMI Consent Decrees. Press Release. See link: Office of Public Affairs | Department of Justice Opens Review of ASCAP and BMI Consent Decrees | United States Department of Justice.

streaming services etc.[85] in 1941, there were competitive concerns arising from "*the market power each organization acquired through the aggregation of public performance rights held by their member songwriters and music publishers*".[86] The US entered into consent decrees[87] with ASCAP and BMI stating they "*charged that the blanket license, which was then the only license offered by ASCAP and BMI, was an illegal restraint of trade, and that arbitrary prices were being charged as the result of an illegal copyright pool*".[88],[89]

5.30 Later, in *Broad. Music, Inc. v. Columbia Broad. Sys., Inc.* (1979), the Supreme Court acknowledged that to the Court of Appeals, ASCAP and BMI were price-fixing enterprises: "*the blanket license involves "price-fixing" in the literal sense: the composers and publishing houses have joined together into an organization that sets its price for the blanket license it sells*".[90] The decree included: (i) requiring that the PROs right to issue performance licenses to its members' music be non-exclusive, (ii) granting licenses to any applicant on terms equal to similarly situated licensees, and (iii) establishing a rate court to set reasonable fees for performance licenses when the PRO and the licensee cannot agree.[91]

5.31 In addition, the Society of European Stage Authors and Composers ("SESAC"), a PRO which was not subject to consent decrees and held at least 5% on the performance rights market,[92] faced antitrust litigation by local television stations brought in early 2009 and Radio Music Licensing Committee ("RMLC") brought in 2012. The allegations claimed that in order to ensure that the blanket license remained the only viable option for users, SESAC significantly and unjustifiably increased the cost of the per-program license and penalized publishers who pursued direct licensing.[93] The case with the local television stations was settled in 2014 with SESAC paying $58.5 million to the television stations and agreeing to provide a per-program license in addition to a blanket license, and the case with RMLC was settled in 2015 with SESAC agreeing to negotiate

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85 US Department of Justice (2019), Department of Justice Opens Review of ASCAP and BMI Consent Decrees. Press Release. See link: Office of Public Affairs | Department of Justice Opens Review of ASCAP and BMI Consent Decrees | United States Department of Justice.

86 US Department of Justice (2019), ANTITRUST CONSENT DECREE REVIEW - ASCAP and BMI 2019. See link: https://www.justice.gov/atr/antitrust-consent-decree-review-ascap-and-bmi-2019

87 A consent decree means a negotiated agreement that is entered as a court order and is enforceable through a motion for contempt. See US Department of Justice (2018), Principles and Procedures for Civil Consent Decrees and Settlement Agreements with State and Local Governmental Entities. Memorandum. See link: https://www.justice.gov/archives/opa/press-release/file/1109681/dl?inline=.

88 Broadcast Music, Inc. v. Columbia Broadcasting System, Inc., 441 U.S. 10 (1979). See link: https://supreme.justia.com/cases/federal/us/441/1/.

89 US Department of Justice (2019), Department of Justice Opens Review of ASCAP and BMI Consent Decrees. Press Release. See link: Office of Public Affairs | Department of Justice Opens Review of ASCAP and BMI Consent Decrees | United States Department of Justice.

90 Broadcast Music, Inc. v. Columbia Broadcasting System, Inc., 441 U.S. 1,8,9 (1979) (although BMI's actions were not per se violations of the Sherman Act, it was still "literally 'price-fixing'"). See link: https://supreme.justia.com/cases/federal/us/441/1/.

91 Congressional Research Service (2020), Music Licensing: The ASCAP and BMI Consent Decrees, p. 2. See link: https://www.everycrsreport.com/files/2020-03-17_IF11463_b58be0f83fec2113008eaae60a5f9caa0862ee01.pdf.

92 U.S. Copyright Office (2015), Copyright and the Music Marketplace: A Report of the Register of Copyrights, p. 20. See link: https://media.justice.gov/vod/atr/ascapbmi2019/pc-233.pdf.

93 U.S. Copyright Office (2015), Copyright and the Music Marketplace: A Report of the Register of Copyrights, p. 40. See link: https://media.justice.gov/vod/atr/ascapbmi2019/pc-233.pdf.

royalties with RMLC on an industry-wide basis and in case of disputes, the royalty rate would be set by an arbitrator.[94,95]

UK precedent

5.32 In the UK, the seminal cases relate to the Performing Right Society Limited ("PRS") which represented songwriters and publishers. In 1994, U2 launched legal action alleging that the fees PRS were charging were excessive and was inefficient in processing royalty payments.[96] In 1996, the UK's Monopolies and Mergers Commission ("MMC") conducted an investigation into the PRS, finding "*a monopoly situation exists in favour of the PRS*" alongside "*a number of [other] adverse findings*".[97] The MMC found that "*exclusivity as practised by the PRS is, in effect, a bundling arrangement, where one service can be obtained only if one or more other services are also taken"*.[98] The MMC established bundling in this context as members are required to provide PRS with "*the right to administer all types of rights, for all of his works in all countries*".[99,100] The MMC's concern with bundling was to ensure that it didn't serve as a method of binding the consumer to the supplier.[101] It considered that exclusivity prevented members from benefiting from managing their own rights, and maintained a lack of competitive pressure on the PRS, leading to inefficiency.[102]

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94 U.S. Copyright Office (2015), Copyright and the Music Marketplace: A Report of the Register of Copyrights, p. 40. See link: https://media.justice.gov/vod/atr/ascapbmi2019/pc-233.pdf.

95 Broadcast Law Blog (2015), Radio Music License Committee Settles Antitrust Suit Against SESAC – What Does it Mean for the Radio Industry?. See link: https://www.broadcastlawblog.com/2015/07/articles/radio-music-license-committee-settles-antitrust-suit-against-sesac-what-does-it-mean-for-the-radio-industry/.

96 The Guardian (2024). Jesus and Mary Chain, Robert Fripp and more sue PRS for Music over concert royalties. See link: https://www.theguardian.com/music/article/2024/jun/25/jesus-and-mary-chain-robert-fripp-and-more-sue-prs-for-music-over-concert-royalties.

97 Monopolies and Mergers Commission (1996). A report on the supply in the UK of the services of administering performing rights and film synchronization rights, Part 1, paragraph 1.4. See link: https://webarchive.nationalarchives.gov.uk/ukgwa/20111202205554mp_/http://www.competition-commission.org.uk/rep_pub/reports/1996/fulltext/378c1.pdf.

98 Monopolies and Mergers Commission (1996). A report on the supply in the UK of the services of administering performing rights and film synchronization rights, Part 2, paragraph 2.43. See link: https://webarchive.nationalarchives.gov.uk/ukgwa/20111202205530mp_/http://www.competition-commission.org.uk/rep_pub/reports/1996/fulltext/378c2.pdf.

99 Monopolies and Mergers Commission (1996). A report on the supply in the UK of the services of administering performing rights and film synchronization rights, Part 2, paragraph 2.43. See link: https://webarchive.nationalarchives.gov.uk/ukgwa/20111202205530mp_/http://www.competition-commission.org.uk/rep_pub/reports/1996/fulltext/378c2.pdf.

100 While there were exceptions allowing members to separately administer rights under certain specific circumstances, most of the members that MMC interviewed did not have awareness of this, and the PRS's policy in this matter was unclear. Monopolies and Mergers Commission (1996). A report on the supply in the UK of the services of administering performing rights and film synchronization rights, Part 2, paragraph 2.40. See link: https://webarchive.nationalarchives.gov.uk/ukgwa/20111202205530mp_/http://www.competition-commission.org.uk/rep_pub/reports/1996/fulltext/378c2.pdf.

101 Monopolies and Mergers Commission (1996). A report on the supply in the UK of the services of administering performing rights and film synchronization rights, Part 2, paragraph 2.43. See link: https://webarchive.nationalarchives.gov.uk/ukgwa/20111202205530mp_/http://www.competition-commission.org.uk/rep_pub/reports/1996/fulltext/378c2.pdf.

102 Monopolies and Mergers Commission (1996). A report on the supply in the UK of the services of administering performing rights and film synchronization rights, paragraph 2.107. See link: https://webarchive.nationalarchives.gov.uk/ukgwa/20111202205530mp_/http://www.competition-commission.org.uk/rep_pub/reports/1996/fulltext/378c2.pdf.

Subsequently, in 1997, PRS made changes to allow artists to administer their own performing rights.[103]

5.33 PRS is also currently facing two competition related cases, which show the difficulty of allocating royalties to heterogeneous members:

a. Dave Rowntree's Class Action Lawsuit (2024): In February 2024, Dave Rowntree, drummer of Blur, initiated a class action lawsuit with the UK's Competition Appeal Tribunal against the PRS for "*alleged infringement by way of abuse of a dominant position of Chapter II of the 1998 Act as well as Article 102 of the Treaty on the Functioning of the European Union*".[104] The lawsuit alleges that PRS misallocates 'Black Box' royalties - unmatched royalties due to incomplete data - favouring publishers over songwriters.[105]

b. Legal Action by Songwriters (2024): In 2024, a group of songwriters, including members of The Jesus and Mary Chain and Robert Fripp, filed a lawsuit against PRS for Music. The suit contends that PRS offers preferential deals to major songwriters, subsidized by smaller writers, and imposes barriers for songwriters attempting to withdraw their rights for direct licensing. The claimants argue that PRS's practices are anti-competitive and detrimental to the majority of its members.[106]

EU precedent

5.34 In the EU, Tournier, a music distributor, contended that Société des Auteurs, Compositeurs et Éditeurs de Musique ("SACEM"), a French music collective rights management society's approach to fee determination, rights enforcement, and its refusal to issue licenses on individual terms conflicted with Articles 85 and 86 of the Treaty of Rome, which prohibit anti-competitive agreements and the abuse of a dominant position.[107] Tournier alleged that the (i) "*rate of royalties demanded by SACEM was arbitrary and unfair and therefore constituted an abuse of the dominant position held by that society*" and (ii) "*the discotheque operators had to pay those very high royalties to obtain access to the whole of SACEM's repertoire even though only part of it was of any interest to*

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103 The Guardian (2024). Jesus and Mary Chain, Robert Fripp and more sue PRS for Music over concert royalties. See link: https://www.theguardian.com/music/article/2024/jun/25/jesus-and-mary-chain-robert-fripp-and-more-sue-prs-for-music-over-concert-royalties.

104 Rowntree v The Performing Right Society Ltd & PRS for Music Ltd (Ruling - Cross-Examination) [2025] CAT 8, 31 January 2025, paragraph 1. See link: https://www.catribunal.org.uk/sites/cat/files/2025-02/16347724%20Mr%20David%20Alexander%20de%20Horne%20Rowntree%20v%20%281%29%20the%20Performing%20Right%20Society%20Limited%20and%20%282%29%20PRS%20For%20Music%20Limited%20-%20Judgement%206%20Feb%202025.pdf.

105 Rowntree v The Performing Right Society Ltd & PRS for Music Ltd (Summary of Collective Proceedings Claim Form) [2024] CAT 8, 2 April 2024, p. 2. See link: https://www.catribunal.org.uk/sites/cat/files/2024-04/16347724%20Mr%20David%20Alexander%20de%20Horne%20Rowntree%20v%20%281%29%20the%20Performing%20Right%20Society%20Limited%20and%20%282%29%20PRS%20For%20Music%20Limited%20-%20Summary%20of%20Collective%20Proceedings%20Claim%20Form%20%202%20Apr%202024.pdf.

106 The Guardian (2024), Jesus and Mary Chain, Robert Fripp and more sue PRS for Music over concert royalties. See link: https://www.theguardian.com/music/article/2024/jun/25/jesus-and-mary-chain-robert-fripp-and-more-sue-prs-for-music-over-concert-royalties.

107 Concurrences (1989), The EU Court of Justice holds that excessive and disproportionate costs should not be taken into account when determining the reasonableness of prices in a case of abuse of dominance (Ministère Public / Tournier), p. 1. See link: https://www.concurrences.com/en/bulletin/news-issues/july-1989/the-eu-court-of-justice-holds-that-excessive-and-disproportionate-costs-should.

them; SACEM had always refused to grant them access to just part of the repertoire".[108] The European Court of Justice ("ECJ") found that SACEM's practices, such as imposing non-negotiable tariffs, refusing individual licenses, and enforcing uniform conditions, could raise anti-competitive concerns. [109]

5.35 The longstanding historical precedent suggests that authorities across the globe have been well aware of, and have intervened in to prevent, the dangers of compulsory collective licensing for competition. Given the other risks of under-remuneration, and the lack of any market failure in licensing of music content to AI developers, the terms for the use of copyright protected content for training AI models should be left to be decided through bilateral negotiations.

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108 EU Court of Justice, *Ministère Public / Tournier*, Case No. 395/87, 13 July 1989, paragraphs 4-5. See link: resource.html.

109 Concurrences (1989), The EU Court of Justice holds that excessive and disproportionate costs should not be taken into account when determining the reasonableness of prices in a case of abuse of dominance (Ministère Public / Tournier), p. 3. See link: https://www.concurrences.com/en/bulletin/news-issues/july-1989/the-eu-court-of-justice-holds-that-excessive-and-disproportionate-costs-should.

6 Arguments in favour of free use are flawed and unconvincing

Introduction

6.1 Those that argue for the free use of copyright protected content to train AI models have generally made legal or factual claims which are outside our scope of expertise. These are (i) training generative AI models is covered by existing exceptions (such as the 'TDM exception' in the EU[110]); or (ii) covered by already available defences (notably 'fair use')[111,112]; or (iii) use of copyright protected content in training is 'non-expressive', as copyright protected content is only used to make AI models better at recognising patterns, rather than to express or distribute the original content, and therefore should not count as a copyright restricted act to begin with.[113]

6.2 Some ad-hoc economic arguments, which we are able to comment about, have been made in favour of free use, including (i) whether remuneration provided *ex-post* can in fact improve content creators incentives ex-ante; (ii) whether practical problems will deter licensing; (iii) whether remuneration is more efficient further down the supply chain, i.e., at the output level; and (iv) whether remuneration, even if appropriate, could reduce competition amongst AI developers. All these arguments are unconvincing, as we explain in what follows.

Remuneration does not amount to windfall profits

6.3 The main economic argument made in favour of free use is that any remuneration extracted from AI developers amounts to windfall profits and therefore does not stimulate their investment.[114] Allegedly, the use of content for training does not interfere with the content creators' existing revenue streams. Payment for content used for training purposes would, therefore, represent an additional stream of income on top of existing revenue streams. As such, it would not increase content creators' incentives to develop content, because their investments have already been made

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110 Articles 3 and 4 of the Directive 2019/790.

111 Lemley, M. A., & Casey, B. (2021). *Fair learning*. Texas Law Review, 99, 743 ("Lemley and Casey (2021)"), Martens, B. (2024). *Economic arguments in favour of reducing copyright protection for generative AI inputs and outputs* (Working Paper No. 09/2024). Bruegel. https://www.bruegel.org/working-paper/economic-arguments-favour-reducing-copyright-protection-generative-ai-inputs-and-outputs ("Martens (2024)") and Lancieri, F. and Edelson, L. and Bechtold, S. (2024). *AI Regulation: Competition, Arbitrage & Regulatory Capture,* available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5049259 ("Lancieri et. al. (2024)").

112 Klosek, K. (2024). *Training generative AI models on copyrighted works is fair use*. The Association of Research Libraries, available at https://www.arl.org/blog/training-generative-ai-models-on-copyrighted-works-is-fair-use/, last accessed 26 November 2024.

113 Vincent, J. (2022). *The scary truth about AI copyright is nobody knows what will happen next*. The Verge, available at https://www.theverge.com/23444685/generative-ai-copyright-infringement-legal-fair-use-training-data, last accessed 26 November 2024.

114 Martens, B. (2024). *Economic arguments in favour of reducing copyright protection for generative AI inputs and outputs* (Working Paper No. 09/2024). Bruegel, available at https://www.bruegel.org/working-paper/economic-arguments-favour-reducing-copyright-protection-generative-ai-inputs-and-outputs.

upfront funded through the existing revenue streams. The copyright royalties paid by AI developers would amount to a mere transfer of rents from AI developers to content creators, with no consequence on consumer welfare.[115] Proponents of this view suggest that, since there is no impact on investment incentives, usage of copyright protected content for AI model training purposes should be free.

6.4 This argument is flawed for two reasons.

6.5 First, while the training of AI models itself may not impact any of the content creators' existing revenue streams directly, their applications may well have a significant detrimental impact on them. While it is unlikely that an application in healthcare or defence might impact the sales of sound recordings, an application that is capable of generating music or lyric output is likely to cannibalise creators' core business lines.[116]

6.6 In the case of music content, specialised AI developers may produce music content that strongly resembles that of the content creators. This concern has also been noted by the U.S. Copyright Office (2025): "*For example, recording artists often buy or commission musical works from songwriters. While songs are certainly not a fungible commodity, if a model can produce songs of sufficiently high quality for substantially cheaper than a human songwriter, the AI generated materials may function as substitutes. In this scenario, it would be rational for some recording artists to opt for the AI option, thus diminishing the demand for and revenue of human songwriters. In this way, AI may reduce the production of human-generated musical work*."[117]

6.7 This is not a theoretical concern – AI music generator services have already become popular and there is evidence of actual cannibalisation.[118] For example, the French music streaming service Deezer has identified approximately 10,000 fully AI-generated tracks being uploaded on its service every day, constituting about 10% of its new content.[119]

6.8 A recent study on the likely economic impact of generative AI in the music and audiovisual industries highlights the negative consequences of unfettered use of copyright protected content by developers of generative AI models. It claims that over the next five years, content creators will suffer losses on two fronts – first due to the loss of revenue due to unauthorised use of their works by generative AI developers without remuneration, and second due to the replacement of their traditional revenue streams due to the substitution of human-made works by AI-generated outputs.[120] The study estimates these losses to be 24% of revenue in music and 21% in audiovisual, amounting to a cumulative loss of €22 billion over the 5-year period (€10 billion in music; €12 billion

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115 Martens, B. (2024). *Economic arguments in favour of reducing copyright protection for generative AI inputs and outputs* (Working Paper No. 09/2024). Bruegel. https://www.bruegel.org/working-paper/economic-arguments-favour-reducing-copyright-protection-generative-ai-inputs-and-outputs.

116 See Martens, B. (2024). *Economic arguments in favour of reducing copyright protection for generative AI inputs and outputs* (Working Paper No. 09/2024). Bruegel. https://www.bruegel.org/working-paper/economic-arguments-favour-reducing-copyright-protection-generative-ai-inputs-and-outputs and de Rassenfosse et all (2024) in op. cit. footnote 21 above.

117 U.S. Copyright Office (2025) in op. cit. footnote 9, page 10.

118 For example Suno (launched in 2023) and Udio (launched in 2024) are two AI-powered music generation platforms that create songs based on user-provided text prompts.

119 Music Business Worldwide. (2024, February 16). *10,000 AI tracks are uploaded daily to Deezer, platform reveals, as it files two patents for new AI detection tool*. https://www.musicbusinessworldwide.com/10000-ai-tracks-are-uploaded-daily-to-deezer-platform-reveals-as-it-files-two-patents-for-new-ai-detection-tool/

120 *Study on the Economic Impact of Generative AI in the Music and Audiovisual Industries*, November 2024, PMP Strategy, available at https://www.cisac.org/Newsroom/news-releases/global-economic-study-shows-human-creators-future-risk-generative-ai, last accessed 4 December 2024.

in audiovisual). It argues that the music library markets will be particularly affected. By 2028, it projects that generative AI music will account for approximately 20% of traditional music streaming platforms' revenue, and around 60% of music libraries' revenue.

6.9 There are many examples in the music industry that bring the potential for cannibalisation from AI to light. 'Heart on My Sleeve', is a song with AI-generated vocals made to sound like singers Drake and The Weeknd, written by TikTok user ghostwriter977 which garnered 15 million views on TikTok before its removal. While the song may have been sufficiently different from other songs, its release must have cannibalised the human creative works, since there is a finite demand for Drake and The Weeknd songs.[121] Generative AI will make the generation of such low-cost tracks cheaper over time with unprecedented scale.

6.10 The cannibalisation of existing human creative works will likely reduce content creators' income, and in turn limit their ability and incentive to invest. There is a large body of finance and macroeconomics literature that analyses the relationship between investment, on the one hand, and income, on the other.[122] These studies confirm the existence of a positive and statistically significant effect of income on investment: controlling for investment opportunities, firms with more cash tend to invest more. This is because capital markets are imperfect, due to both information asymmetries and agency problems. In essence, decision-makers within borrowing firms have better information on the quality and riskiness of the investment projects for which they require funding than third-party providers of capital do. Accordingly, when seeking external financing, investors may fear that managers could overstate the value of their investment prospects, or use the funds provided in a way that does not maximise the return on investment. Given this problem, investors may be reluctant to provide funds for fear that the funded projects may prove to be a poor investment and/or that the funds may be expropriated by opportunistic or incompetent managers. If investors cannot fully distinguish between good and bad companies, between honest and dishonest managers, they will demand a risk premium when lending to those companies and/or when buying their equity.[123]

6.11 Second, the economic argument under discussion ignores the fact that training is not a 'one-off' activity. While some industry commentators have argued that the 'fossil fuel' of training is used up already,[124] others have explained that the 'time value of content' is high, in that more recent content

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121 De Rassenfosse et al (2024) in op.cit. footnote 21 above.

122 See, for example, Gilchrist, S. & Himmelberg, C. P. (1995). *Evidence on the role of cash flow for investment*. Journal of Monetary Economics, 36(3), 541-572; Worthington, P. R. (1995). *Investment, cash flow and sunk costs*. Journal of Industrial Economics, 43(1), 49-61; and Fazzari, S. M., Hubbard, R. G. & Petersen, B. C. (1988). *Financing constraints and corporate investment*. Brooking Papers on Economic Activity, 1. Other studies that confirm the relationship between cash flow and investment include Hoshi, T., Kashyap, A. & Scharfstein, D. (1991). *Corporate structure, liquidity and investment: Evidence from Japanese industrial groups*. Quarterly Journal of Business and Economics, 106(1), 33-60 and Bloom, N., Bond, S. & Van Reenen, J. (2007). *Uncertainty and investment dynamics*. Review of Economic Studies 74(2), 391-415.

123 See, for example, Hubbard, R. G. (1998). *Capital-market imperfections and investment*. Journal of Economic Literature, 36 and See Stiglitz, J. E. & Weiss, A. (1983). *Incentive effects of terminations: applications to the credit and labour markets*. American Economic Review, 73(5), 912-927; and Jaffee, D. M. & Russell, T. (1976). *Imperfect information, uncertainty, and credit rationing.* Quarterly Journal of Economics, 90(4), 651-666. For further literature on inefficiencies in capital markets, refer to Asquith, P. & Mullins, D. (1986). *Equity issues and offering dilution*. Journal of Financial Economics, 15, 51-83; Stein, J. C. (2003). *Agency, information and corporate investment*. Handbook of the Economics of Finance, 1, 111-165.

124 For example, Sam Altman, CEO of OpenAI, suggesting that the race towards giant models was over. See Meyer, D. (2023, April). *OpenAI's Sam Altman says giant A.I. models are over—but going small won't appease regulators*. Fortune, available at https://fortune.com/2023/04/18/openai-sam-altman-llm-size-elon-musk-truthgpt-eu/, last accessed 15 January 2025.

is likely to be much more informative and, therefore, valuable, for model predictions than older content.[125,126]

6.12 This means models need to be augmented and retrained with new content periodically, which gives rise to a dynamic investment incentive problem that policymakers need to be sensitive to. Since good quality, recent content is of additional value to AI developers and end consumers, content creators need to be given additional incentives to continue producing good quality content over time, so that future models relying on it can also be of good quality. Without these additional incentives, even if investment remains at current levels, that may be suboptimal, because additional benefits produced by the content in training AI mean the socially optimal level is actually greater than the current level.

Practical arguments in favour of free use are also flawed

6.13 Some commentators have made a range of practical arguments in favour of free use. The first relates to the magnitude of transaction costs involved in licensing. These commentators argue that because of these costs, enforcing copyright protection may mean that copyright protected content will not be used, resulting in worse models. Alternatively, AI developers could engage in 'jurisdiction shopping', moving their training to regions that do not have strong copyright protection, ultimately resulting in regional bias and model forking.[127]

6.14 This reasoning is also flawed. First, even if transaction costs were high, that does not imply that AI developers should be allowed to use valuable content for free. At best, this concern should lead to the adoption of certain mechanisms or licensing structures aimed at minimising licensing costs, negotiation costs and transaction costs, as discussed in Sections 4 and 5.

6.15 Second, as explained above, there is no reason to believe that the transaction costs involved in these licensing negotiations will be greater than those faced at the moment by many other current users of copyright protected content, such as streaming service providers. Moreover, copyright owners have the incentive, and have demonstrated the ability, to find ways of ensuring that their

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125 See de Rassenfosse et al (2024) in op. cit. footnote 21 above and Hunt, S., Jian, W., Mawar, A., & Tablante, B. (2023). *You are what you eat: Nurturing data markets to sustain healthy generative AI innovation*. Competition Policy International. https://www.keystone.ai/news-publications/you-are-what-you-eat-nurturing-data-markets/: "*high-quality data is scarce and looks set to get scarcer – there is a great need to increase the supply of high-quality data*". See also Porter, J. (2024, August 30). *OpenAI signs publisher deals to train AI models with web search content*. The Verge. https://www.theverge.com/2024/8/30/24230975/openai-publisher-deals-web-search: "*OpenAI has been offering as little as $1 million to $5 million a year to publishers (…) The deals give OpenAI access to publications in order to, for instance, "enrich users' experience with ChatGPT by adding recent and authoritative content on a wide variety of topics," according to the press release announcing the Axel Springer deal. The "recent content" part is clutch. Scraping the web means there's a date beyond which ChatGPT can't retrieve information. The closer OpenAI is to real-time access, the closer its products are to real-time results*".

126 See Martens, B. (2024). *Economic arguments in favour of reducing copyright protection for generative AI inputs and outputs* (Working Paper No. 09/2024). Bruegel. https://www.bruegel.org/working-paper/economic-arguments-favour-reducing-copyright-protection-generative-ai-inputs-and-outputs: "*There is no sign yet that GenAI models have run into diminishing returns on the size of the training datasets. On the contrary, some research claims that the largest models will soon be running short of data (Villalobos et al, 2022). This suggests that GenAI foundation models are still benefitting from positive marginal returns to economies of scale and scope in data aggregation (Bajari et al, 2018; Calzolari et al, 2023; Caballa et al, 2023): more insights can be extracted from larger and more aggregated datasets. Only large data pools can reap these data-driven externalities*"

127 Lemley and Casey (2021), Martens (2024) and Lancieri et. al. (2024) in op. cit. footnote 111

content can be effectively licensed at scale at a reasonable cost, so that their investments can be adequately monetised. This includes the role of major record labels and music publishers and distribution companies in aggregating rights and distributing content to DSPs and streaming services; of many independent labels engaging in a voluntary form of collective negotiation through the Merlin Network; and of independent rights aggregators or distributors, such as Tunecore, CDBaby and Distrokid.

6.16 Others have argued that any remuneration exercise is fraught with difficulty. Even if remuneration was appropriate, they argue, there is limited clarity or guidance on how that should be calculated, or what the right benchmarks are.[128] While we do not disagree regarding the complexity of the task, we note that such complexity has not stopped the market from determining appropriate royalty and non-royalty terms in all sorts of new industries, for example in streaming, or even in other areas of IP, like cellular SEPs, where licensors and implementers quite routinely have to determine the incremental value of new and improved technologies. Moreover, there are already some proposals on the table, which should be assessed rigorously. For instance, GEMA, the German music rights organization, has proposed a licensing framework for generative AI systems.[129] Copyright holders and AI developers, therefore, are likely to be best placed to determine the appropriate level of remuneration, provided they can negotiate at arm's length as willing buyers and willing sellers.

Level of licensing arguments are also flawed

6.17 Some commentators have argued that while the remuneration for the use of copyright protected content may be required, fees should not be imposed at the training level. They opine that, while training generative AI models is fair use, those deploying the models might be infringing.[130] Others have argued there is no need to remunerate copyright holders even at the deployment level.[131]

6.18 From a legal perspective, we understand the use of copyright protected content for training purposes, and the use of copyright protected content for producing an output, may be considered two separate and distinguishable forms of uses of rights, [132] and so there may be reason to remunerate at both the level of training and the level of output.

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128 Martens, B. (2024). *Economic arguments in favour of reducing copyright protection for generative AI inputs and outputs* (Working Paper No. 09/2024). Bruegel. https://www.bruegel.org/working-paper/economic-arguments-favour-reducing-copyright-protection-generative-ai-inputs-and-outputs.

129 This includes a 30% share of all net income generated by AI models trained on copyright protected music. See Smith, D. (2024, October 25). *GEMA Elaborates on Its Generative AI Licensing Framework — Including Calls for 'A 30% Share of All Net Income' from Developers*. Digital Music News, available at https://www.digitalmusicnews.com/2024/10/25/gema-ai-licensing-model-details/, last accessed 15 January 2025.

130 See "The scary truth about AI copyright is nobody knows what will happen next", The Verge, James Vincent, available at https://www.theverge.com/23444685/generative-ai-copyright-infringement-legal-fair-use-training-data, last accessed 26 November 2024: "*Considering the onus placed on these factors, Gervais says "it is much more likely than not" that training systems on copyrighted data will be covered by fair use. But the same cannot necessarily be said for generating content. In other words: you can train an AI model using other people's data, but what you do with that model might be infringing. Think of it as the difference between making fake money for a movie and trying to buy a car with it."* See also Senftleben, M. (2024). *Win-win: How to remove copyright obstacles to AI training while ensuring author remuneration (and why the European AI Act fails to do the magic)*. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4964460

131 Martens (2024) in op. cit. footnote 111.

132 For example, when a public venue plays the radio, the broadcasting licence of the radio station does not extend to the public performance by the venue operator, as these are different acts.

6.19 From an economic point of view, what matters for end-consumer welfare is that content creators are appropriately rewarded for their value-increasing investments, irrespective of which level or levels of the value chain benefiting from those investments are asked to contribute. The remuneration received by copyright holders should be independent of the level of licensing – it could be at the training level, or the deployment level, or indeed even split across the two levels. Instead, the choice of licensing level should aim to achieve the minimisation of transaction costs. These are invariably specific to the technical, legal and market conditions at hand, and therefore the appropriate level would have to be determined on a case-by-case basis.[133]

Remuneration will not decrease competition amongst generative AI developers

6.20 Finally, some commentators have argued that even if remunerating copyright holders for the training of AI models were justified, strong copyright protection will reduce competition amongst AI developers, because only large AI developers with deep pockets will be able to afford licensing good quality content. In their opinion, smaller AI developers will necessarily be marginalised, either because they will be unable to invest as much into paying for copyright protected content, or because larger developers will incentivise content creators to sign exclusive licences.[134]

6.21 This is a particularly significant problem given that some AI developers are designated gatekeepers in core platform services.[135] These large tech companies, like Google, Meta, Amazon, Apple and Microsoft, have privileged access to massive amounts of data from their users. They can create what has been called a 'data trap' to reinforce their dominant market positions at the expense of users and smaller competitors.[136] This has been noted by the French competition authority: "*These companies, considered gatekeepers under the Digital Markets Act (DMA), pose a risk of creating a data trap with their data collection practices: better access to data allows companies to improve their products, attracting more users and thus generating even more data, reinforcing their dominant market positions*". It further added: "*They also enjoy preferential access to large volumes of data (as an example, YouTube provides Alphabet with a major source of training data for AI models). They can also access data associated with the use of their internal services, as well as use their financial power to enter into agreements with the owners of third-party data, as demonstrated by Google's agreement to pay $60 million (around €55 million) a year for access to data from Reddit, a US social news aggregation and forum social network".* The French competition authority also found that *"major digital companies are starting to integrate generative AI tools into their product and service ecosystems. For example, Microsoft deploys its own models and those of its partner OpenAI in the "Copilot" function to enhance Microsoft Bing's search functionality and offers an AI assistant designed to work with the Microsoft 365 offering. In addition, major digital companies' marketplaces (Model-as-a-Service [MaaS]) provide access to proprietary and third-party generative*

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133 Heiden, B., Padilla, J., & Peters, R. (2021). The value of standard essential patents and the level of licensing. *AIPLA Quarterly Journal*, 49, 1; Padilla, J., & Sääskilahti, P. (2021). Revisiting the bizarre SEP level of licensing antitrust controversy. *Journal of European Competition Law & Practice*, 12(9), 680-687.

134 The FTC is already investigating three separate multi-billion dollar investments: Microsoft and Open AI, Amazon and Anthropic, and Google and Anthropic, see: https://www.ftc.gov/news-events/news/press-releases/2024/01/ftc-launches-inquiry-generative-ai-investments-partnerships. The CMA has also expressed concerns: https://www.gov.uk/government/news/cma-outlines-growing-concerns-in-markets-for-ai-foundation-models.

135 de Rassenfosse et al (2024) in op. cit. footnote 21 above, Martens (2024) and Lemley and Casey (2021) in op. cit. footnote 111 above and France Digitale. (2024). *Gen AI and copyright: What role should European protected data play in the AI era?,* available at https://francedigitale.org/en/posts/gen-ai-and-copyright, last accessed 15 January 2024.

136 France Digitale (2024) in op. cit. footnote135.

AI models designed to run in their ecosystems." Finally the French competition authority noted that "*Innovative companies in the sector may be confronted with practices of refusal of (or discriminatory) access to data across the entire value chain*" and warned that *"agreements under which major digital companies impose exclusive access to content creators' data, or pay them substantial remuneration that is difficult for their competitors to replicate, could constitute anticompetitive practices (cartels or abuse)"*[137]

6.22 Copyright protection is not going to make this problem worse. In fact, it can help level the playing field. Most importantly, there is limited, or no, risk of foreclosure, particularly for music content, since content creators have neither the ability nor the incentive to foreclose smaller AI developers:

a. First, none of the copyright holders have indispensable content without which generative AI models cannot be trained, and so no content creator is a 'gatekeeper' for the development of such models. Content creators will compete amongst themselves to offer licences at competitive terms. Furthermore, given that music content is not always necessary, particularly for general use AI models, music content creators will be competing not just with each other, but also with non-music content creators.

b. Second, as regards general purpose AI models, content creators, who only produce limited categories of content (such as music), may not compete with the output of AI models, since their applications may be in all sorts of sectors. Content creators are not 'vertically integrated' players who might face conflicting incentives in licensing since they need to balance the cannibalisation of their business with the additional licensing revenue. So, for these wider applications, the non-vertically integrated content creators have the incentive to offer their content on competitive terms and adjust their remuneration to ensure a level playing field for their licensees.

c. Third, even for the more specialised AI models, where there is more likely to be direct competition between content creators and the output of specific AI models, remuneration will be linked to the economic value of the content because, generally, no one piece of content is indispensable. The only instances where a particular piece of content may be indispensable, is when the AI model is designed to clone the content. In this case, the clone will be in direct competition with the original content and will certainly cannibalise the content creator's business. But in such cases the remuneration of copyright holders is wholly justified and the appropriate remuneration should account for that cannibalisation effect.[138]

6.23 Finally, at least when it comes to the music industry, exclusive deals have historically not been the norm.[139] In the absence of such deals, there is limited risk of foreclosure of smaller AI developers since the content creators will prefer to ensure a level playing field between the large and small AI developers.

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137 Autorité de la Concurrence. (2024). *Generative artificial intelligence: The Autorité issues its opinion on competitive dynamics and challenges*. Autorité de la Concurrence, available at https://www.autoritedelaconcurrence.fr/en/press-release/generative-artificial-intelligence-autorite-issues-its-opinion-competitive.

138 As discussed in paragraph 4.19, if an AI developer intends to clone the content creator's intellectual property, then that content would be in direct competition with the original. However, even in that scenario, voluntary bilateral licensing is likely to produce an ECPR compliant price.

139 We understand that all music DSPs largely have the same repertoire is available on their platforms. This is contrary to some other industries, for example audio-visual OTT platforms, where different content is available on different platforms.

7 Concluding remarks

7.1 In this report we have shown that:

a. Generative AI companies should be required to remunerate copyright holders when they train on their protected content (as opposed to using it for free, or paying for training at a later stage). Proper remuneration maintains the incentives of content creators to invest in the creation of new works. This is particularly relevant in the music industry, where investments are largely upfront, sunk and risky. By protecting and promoting human creativity, such remuneration will also benefit AI developers, who will be able to continue training their models on high-quality content, and consumers who rely on applications of these models.

b. Copyright holders should be allowed to authorise or deny the use of their protected content (as opposed to being compelled to authorise it). Voluntary licensing ensures the appropriate remuneration of content in accordance with its incremental value; it has also proved as a workable, effective and efficient way of licensing copyright protected content for use in transformative business models, such as the music streaming media.

c. The terms of use of copyright protected content should be decided through bilateral negotiations (as opposed to being mandated to be negotiated collectively). This allows for greater flexibility in setting terms and conditions. This is particularly valuable in the generative AI industry, since there are considerable differences amongst copyright holders and amongst AI developers, and also because the market for generative AI tools is still nascent, so business models are likely to evolve.

7.2 In a nutshell, our analysis supports the view that the voluntary, bilateral licensing, off the back of exclusive rights, is the best way to remunerate content creators with copyright protected content and, at the same time, develop socially beneficial generative AI solutions. We find no support for interventions aimed at reducing the copyright protection for music content. Rather, any restrictions on the rights of copyright owners would amount to asking them to subsidise AI developers, which is both unnecessary and inefficient.

Locations

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