Review Paper
https://doi.org/10.62598/9thICVA.015

ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY: DISCREPANCIES IN CURRENT COMPENSATION DISTRIBUTION PRACTICES

UMJETNA INTELIGENCIJA I INTELEKTUALNO VLASNIŠTVO: RASKORACI U TRENUTNOJ PRAKSI RASPODJELE NAKNADA

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Abstract: *The increasing frequency of copyright infringements through unethical handling of digital content is a significant concern, particularly with the advancement of AI technologies. These technologies often utilize training datasets comprising unauthorized works outside the public domain, including intellectual property primarily protected by copyright, especially in visual and written forms. This study conducts a thorough review of available literature to identify potential compensation models for authors whose works have been illicitly used for training generative AI models. Through this literature review, the study aims to establish arguments for implementing sustainable compensation models to protect and promote human creativity. The review focuses on balancing the benefits of AI advancements with the rights and interests of original content creators, ensuring ethical use and equitable remuneration in the AI landscape.*

Keywords*: data set remuneration, compensation liability, copyright infringement, AI and intellectual property, public domain*

Sažetak: *Učestalost povrede autorskih prava ne-etičkim pristupom i rukovanjem digitalnim sadržajem je u porastu slijedom razvoja tehnologija koordiniranih umjetnom inteligencijom čije se baze podataka posvećene njihovu treningu sastoje od neovlašteno preuzetih radova izvan javne domene, tj. djela intelektualnog vlasništva koja uglavnom podliježu autorskim pravima, pretežito u formama vizualnog i pisanog izričaja. Ovaj rad provodi reviziju dostupne literature sa svrhom utvrđenja nužnosti i izvodivosti potencijalnih kompenzacijskih modela za autore čija su dijela neovlašteno korištena za treninge generativnih modela umjetne inteligencije. Revizijom literature rad definira argumente za implementaciju održivih modela kompenzacije sa svrhom zaštite i poticanja ljudskog stvaralaštva.*

Ključne riječi*: naknade vlasnicima intelektualnog prava, intelektualno vlasništvo, AI i autorsko pravo, javna domena, povreda prava*

1. Introduction

Generative AI (GenAI) technologies have revolutionized various sectors by enabling the solutions and strategies that were previously unimaginable. Alongside their potential benefits, these technologies also pose significant ethical challenges. Examining these challenges through the lens of normative economics can offer crucial insights into how society should manage the complexities introduced by these advancements. Given the inevitable coexistence of human creativity and Generative Artificial Intelligence (GenAI) capabilities, regulating remuneration models prioritizing the human factor is the

initial step toward fostering harmonious collaboration between humans and AI-powered machines. This regulatory approach is essential to ensure that the contributions of human creators are adequately recognized and compensated in an era where AI systems are increasingly capable of producing content that rivals human outputs. Establishing fair compensation frameworks will encourage innovation and creativity while maintaining ethical standards and promoting the sustainable integration of AI technologies into various creative and professional domains.

Paper hypotheses:

I. The sustainability of generative AI (GenAI) models relies on implementing explicit consent mechanisms and equitable compensation frameworks that ensure fair remuneration for content creators whose intellectual property is used in training datasets.

II. The current absence of compensation models for content creators in the context of AI development is enabled by a prosecutorial approach in courts that fails to adequately address the nuances of intellectual property rights and the economic implications of generative AI technologies with an inadequate legal framing and prosecution strategy that leads to a judicial environment that does not fully recognize the relevance of enforcing the necessary compensatory mechanisms for content creators whose works are utilized in training AI models.

To test the hypotheses, a literature review will gather existing knowledge and identify gaps in current practices regarding AI, intellectual property (IP), and compensation models. The approach to this review includes a systematic review of scholarly articles, industry reports, legal texts, and case studies related to AI development. Scholarly articles will be sourced from academic databases, these articles will provide insights into the theoretical frameworks and empirical studies related to AI development, IP laws, and compensation practices. Keywords for the search will include terms like “generative AI,” “intellectual property,” “copyright law,” “compensation models,” and “ethical AI practices.” Industry reports from leading technology companies and market research firms will be reviewed. These reports will offer practical perspectives on how AI technologies are currently deployed and the economic implications of a simplified compensation model. Legal texts and case studies will be analyzed to understand the regulatory environment and precedents regarding IP rights and AI. This will involve reviewing relevant legislation, court rulings, and policy documents from governmental and international bodies such as the World Intellectual Property Organization (WIPO) and the European Union Intellectual Property Office (EUIPO). The literature review will follow a structured process, starting with the identification of relevant sources. Each source will be evaluated for its credibility, relevance, and contribution to the research question.

The findings will be categorized thematically to highlight key issues, trends, and gaps in the current practices. Special attention will be given to contrasting different viewpoints and identifying areas where further research is needed. Additionally, the review strategy will include the use of citation tracking to identify influential works and their impact on subsequent research. By analyzing the literature: the review will uncover foundational studies and emerging trends in the field. This mixed-method approach will ensure a comprehensive understanding of the topic and testing of the hypotheses. Overall, this systematic and multi-faceted review strategy will provide a solid foundation for evaluating the current state of AI, IP, and compensation models, and will inform recommendations for sustainable and equitable practices.

Paper objective:

The methodologies and strategies outlined will be employed to identify and analyze the existing discrepancies in the current compensation distribution practices. By conducting a thorough

examination, this study aims to uncover the gaps that may be present in these practices and to understand their potential impact on the broader social and economic dimensions of innovative development in the field of artistic expression. Through a comprehensive literature review and case studies, the paper will investigate how these gaps might affect the motivation of creative Industries and the sustainability of GenAI models. Furthermore, the research will delve into the implications for intellectual property rights and the equitable treatment of content creators. This multifaceted approach will provide a simplified framework for assessing the effectiveness of existing models and proposing enhancements that could foster a more balanced and fair environment for artistic innovation and expression. By doing so, the study aspires to contribute valuable insights that can inform policy-making and industry standards, ensuring that the rights and contributions of artists are duly recognized and compensated in the rapidly evolving digital landscape.

2. Normative economics perspective: Ethical framework

Establishing an ethical framework in the context of AI development is essential for providing clear guidance for positive economic analysis, which focuses on understanding and predicting economic phenomena based on empirical evidence. Ethical considerations play a crucial role in shaping policies and regulations that ensure AI technologies are developed and deployed in ways that maximize societal welfare while minimizing potential harm. A primary focus regarding AI-related ethical concerns is the safety of the human species regarding the danger posed by autonomous machines. This idea of danger does not seem viable as intelligence and willpower do not appear necessarily connected (Domingos, 2015). The far-reaching consequences and potential dangers may stem from currently latent issues; such as failure to respect and acknowledge intellectual property rights.

2.1. Intellectual property rights implications

One of the greatest ethical challenges associated with generative AI is the issue of intellectual property rights and copyright infringement. Generative AI systems rely on extensive datasets that include copyrighted material. These datasets are used to train the AI models, enabling them to generate new content. According to the Berne Convention, WIPO classifies this type of IP as Copyrighted material (WIPO, 2020) while ensuring economic and moral rights assigned to the author. The use of copyrighted material without proper authorization raises ethical and legal concerns. From a normative economics perspective, the protection of intellectual property rights is crucial for encouraging innovation and creativity. Intellectual property laws are designed to ensure that creators receive appropriate compensation for their work, incentivizing further contributions to the cultural and technological landscape. When generative AI systems use copyrighted material without permission, they undermine these incentives, potentially leading to a decrease in creative output and innovation. Normative economics would advocate for policies that balance the benefits of generative AI with the need to protect creators' rights, such as developing frameworks for fair compensation and attribution.

The problem with training current generative AI models lies in data use under the guise of "fair use" primarily intended for educational purposes. The named purpose is indisputable since GenAI models learn from these datasets; however, the results of this learning eventually become valuable commercially oriented assets. The fair use approach may seem acceptable for lab, test, and demo versions of GenAI models, but not for their commercially available iterations. Arguing against compensation by claiming that the commercial model's derived value is solely the result of IT professionals' work in developing the model is akin to denying the value of raw material input in any physical production.

Another con-compensation perspective often presented is the comparison of GenAI to that of a human researcher. Human beings learn and develop their work by observing, questioning, remodeling, and repurposing another author's work without any compensation provided to the original author. The key distinction between human creativity and generative AI lies in the weight of the outcomes rather than their inherent nature. The pursuit of human potential inherently fosters diversity, whereas the development of GenAI tends to efficiency, effectiveness, and scalability. This comparison does not seek to undermine the significance of GenAI models in contemporary settings but rather aims to clarify the differing outcomes. The resulting lack of diversity represents the gateway to "model poisoning."

Model poisoning refers to the degradation of AI model performance due to compromised or biased training data. Even in the absence of deliberate malicious data injection attacks, generative AI technologies might enter a recursive loop where they reference their own generated content for further training. This can lead to repetitive and uninspired variations, lacking innovative techniques while resulting in mere mimicry of authentic human expression. "If the concerns about model poisoning are correct, even the AI models themselves will continue to require human creativity to achieve further improvements" (Chesterman, 2024). This quote highlights the crucial role of human creativity in advancing AI technologies and underscores the need for robust intellectual property protections to safeguard the contributions of human creators. Without such measures, the potential of AI to innovate and produce diverse, high-quality outputs may be significantly obstructed.

A sustainable approach to training generative AI models must address these issues by incorporating fair use regulations for lab, test, and demo versions while commercial applications should not exist without ensuring fair compensation for content creators and recognizing the unique challenges posed by the AI learning processes. These steps are critical to fostering a balanced and ethical AI ecosystem that respects both technological advancement and the intellectual property rights of human creators. Circumventing the obvious solutions to these problems might result in GenAI technology being applicable within a given decade, built on morally corrupt funding, and condemned to fail in the long run.

2.2. Further ethical concerns

Certain authors argue that "... there is little need to teach machines ethics even if this could be done in the first place" (*Etzioni*, 2018). Therefore ethical concerns remain with human agents. Those include labor market disruption, bias and discrimination, privacy and surveillance, economic inequality and access to technology, and governance and regulation. There is a growing concern about job loss and economic inequality as AI systems become more capable of performing tasks traditionally done by humans. Normative economics emphasizes the relevance of achieving a just distribution of resources and opportunities in society. Economic models like the Productivity J-Curve suggest that while generative AI might initially reduce the number of available jobs, the long-term effects could include the need for new jobs and increased productivity across various sectors. However, the transitional period could be marked by significant social and economic upheaval (*Brynjolfsson*, 2024).

Due to their reliance on vast datasets, Generative AI systems often reflect the biases present in those datasets, which can lead to the reinforcement of stereotypes, marginalization of minority groups, and discriminatory outcomes. The extensive collection and processing of personal data by generative AI technologies raises significant ethical concerns about privacy and data security. Users may not be aware of how their data is used or may not have consented to its inclusion in training datasets, posing a risk of data breaches and unauthorized access. Policies should ensure that individuals have greater control over their personal information while compensated for its use. Additionally, generative AI's ability to produce both beneficial and harmful content, such as deepfake videos used

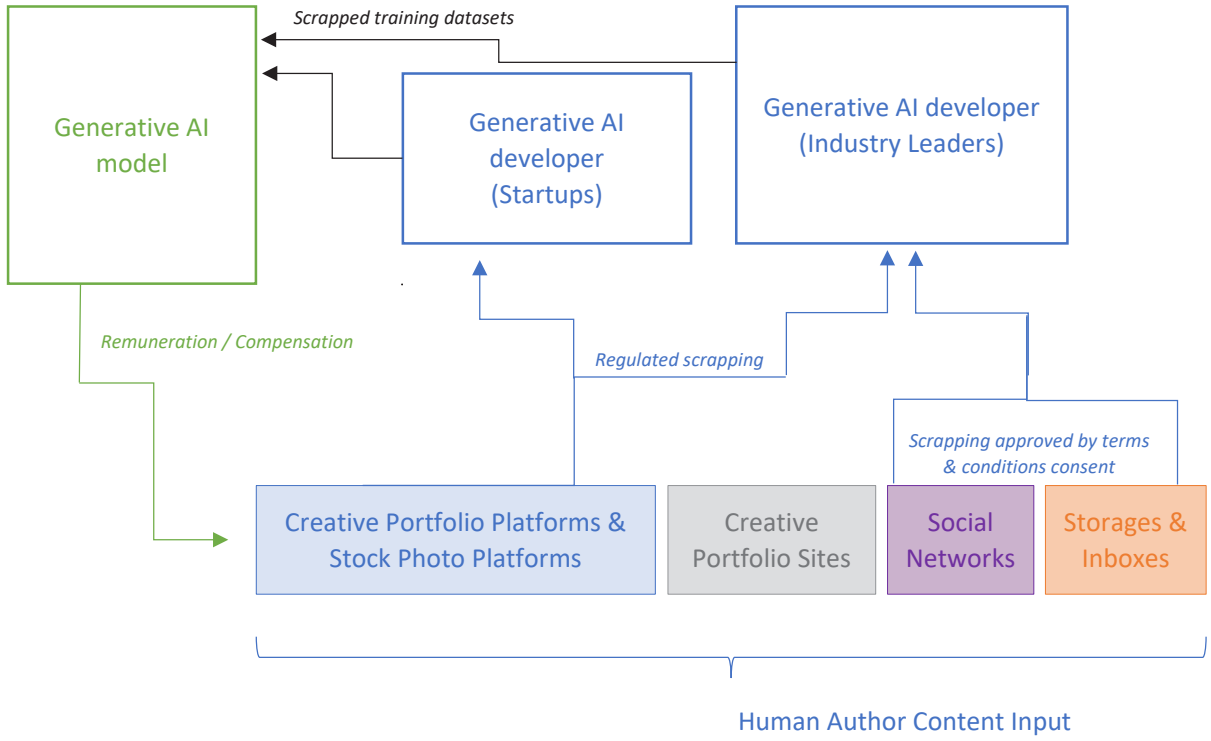
for misinformation or fraud, highlights the need for ethical guidelines governing AI-generated content. Furthermore, the unequal distribution of generative AI's benefits can exacerbate existing disparities, with those lacking access to advanced AI tools facing inequalities. By promoting equitable access to AI technologies, society can harness their full potential while minimizing the risk of widening inequalities.

The European Union is leading the regulatory effort and has recently reached a preliminary agreement on the world's first AI Act. This pioneering legislation aims to address the complex challenges and ethical considerations posed by artificial intelligence technologies, including Generative AI. (EUIPO, 2020). The government of South Korea is actively working on developing a Robot Ethics Charter aimed at establishing ethical guidelines to protect both humans and robots from potential abuse. This initiative seeks to address the growing concerns surrounding the interactions between humans and increasingly autonomous robotic systems. By setting ethical standards, the charter aims to ensure that robots operate within safe and responsible boundaries, thereby fostering a harmonious coexistence between humans and robots (*Yoon-mi, 2007*).

3. Compensation model framework

A robust business model incorporating licensing agreements, revenue sharing, and transparency mechanisms would ensure fair compensation for authors whose work is making training datasets of generative AI models. In the absence of a complex compensation-dedicated model, a simplified version focused on portfolio/stock platform regulation would provide a sufficient solution. As shown in the picture below, the model should be part of the sustainable GenAI training procedure established to regulate its commercial use.

Picture 3.1. The sustainable GenAI training procedure for commercial use



Source: Illustration by authors

A sustainable approach to training generative AI models relies on the technical and legal regulation of data acquisition (scrapping) from available databases. When considering works of visual expression, these databases include stock photography platforms and creative artistic portfolio platforms. These databases are primary candidates for technical and legal regulation, whose implementation would provide a framework for other visual content sources regulation while positioning themselves as pioneers of a comprehensive and equitable system. Such regulation would serve as a model for extending similar protections to other types of digital content, thereby promoting a balanced and sustainable ecosystem where technological advancement and intellectual property rights coexist harmoniously. This approach could also foster innovation by ensuring that content creators are incentivized and fairly rewarded, contributing to a more vibrant and diverse digital economy.

In a sustainable approach that ensures legally valid data acquisition procedures for generative AI model training, social media, and communication channels are databases over which the service provider claims rights through the terms agreed upon by users while subscribing to these systems. Consequently, from the human authors' perspective, social media turns into a destination dedicated to sharing materials in the public domain, specifically those they choose to publish under the CC0 license. The regulation of repositories and communication channels presents a significant challenge, where encrypted repositories and transfer systems gain value by providing users with data protection. Personal websites remain either unregulated or subject to multiple regulations within a sustainable model, depending on the terms of the CMS providers through which relative sites are built. Following the regulated data collection for training datasets, it is possible to establish a compensation model for human authors willing to contribute to GenAI models' commercial version development. The compensation model should incorporate the following:

Licensing Agreements - Authors and content creators should grant licenses through stock photo platforms and creative portfolio platforms – for their works to be used in AI training datasets. These licenses would be assigned to uphold "regulated scrapping" and enable the intended compensation model while outlining the specific terms and conditions, including the scope of use, duration, and compensation. A sustainable approach to training generative AI models should incorporate explicit consent from authors, specifying that their works can be included in AI training datasets. The agreements must detail the terms of compensation, whether through upfront payments, royalties, or a combination of both, to ensure authors are fairly remunerated. Furthermore, it is crucial to delineate clear usage rights, defining how the content can be used to ensure that AI models do not infringe upon the original use cases of the works. Platforms like Shutterstock and Getty Images already operate on licensing models where content creators are compensated for their provided works. This model can be adapted for text, music, and other forms of content used in AI training. Given a sense of the required training data scope – it becomes obvious that GenAI developing companies must innovatively approach their training dataset acquisition.

Revenue Sharing - A revenue-sharing model would allocate a percentage of the revenue from AI applications back to the original content creators. This ensures ongoing compensation tied to the commercial success of AI systems utilizing their work. To ensure fair compensation for authors whose works are used in AI training, a model must define a fair percentage of revenue from AI-generated content or services that will be shared with the original authors. This model should include regular and transparent reporting of the revenue generated and disbursed to authors, ensuring accountability and clarity. Additionally, it should integrate with AI service platforms to automate the calculation and distribution of revenue shares, facilitating an efficient and reliable compensation process. Streaming services like Spotify and YouTube use revenue-sharing models to compensate artists based on the number of plays and ad revenue generated. Similarly, AI platforms could implement systems to track the use of AI models and distribute earnings to the contributing authors. Transparency and Accountability - Ensuring transparency in the use of authors' works and the corresponding compensation mechanisms is crucial for trust and fairness. This can be achieved through robust tracking and reporting systems.

Transparency and Accountability – To ensure transparency and accountability in the compensation model for authors, it is natural to assume Blockchain technology might be capable of tracking works in use in AI training and how they contribute to AI outputs. However, it is beyond the scope of this paper to discuss the possibilities of Blockchain technology in the service of content source tracking with the purpose of just compensation distribution. In the simplified approach that does not require Blockchain-usage tracking, the most suitable compensation model would be perpetual remuneration-capped compensation at the industry average per visual item along an established authors' relevance. This model implies that high-rated authors would be prioritized in the compensation model entry procedure while the rating system remains to be established preferably through consultancy with acknowledged industry experts.

Establishing collectives or unions for authors can significantly enhance their negotiating power and ensure fair compensation practices. Engaged in collective bargaining, authors can negotiate licensing terms and compensation, thus ensuring fair treatment. Providing legal resources helps authors understand and protect their rights, while advocacy for policies and regulations safeguards authors' interests in the AI landscape. Organizations like these, which advocate for authors' rights, play a pivotal role in negotiating fair compensation for the use of works in AI training, thereby ensuring that the voices of individual authors are amplified and their contributions are justly rewarded. "AI laws are already impacting many practice areas including consumer privacy, consumer protection, criminal, government, labor and employment, insurance, healthcare, and education and may extend to additional areas as the law develops" (LexisNexis, 2024). This approach fosters a collaborative environment where human creativity and AI innovation coexist and thrive. By addressing the ethical and economic implications, such a model ensures sustainable and equitable growth in the AI industry.

4. Market reports

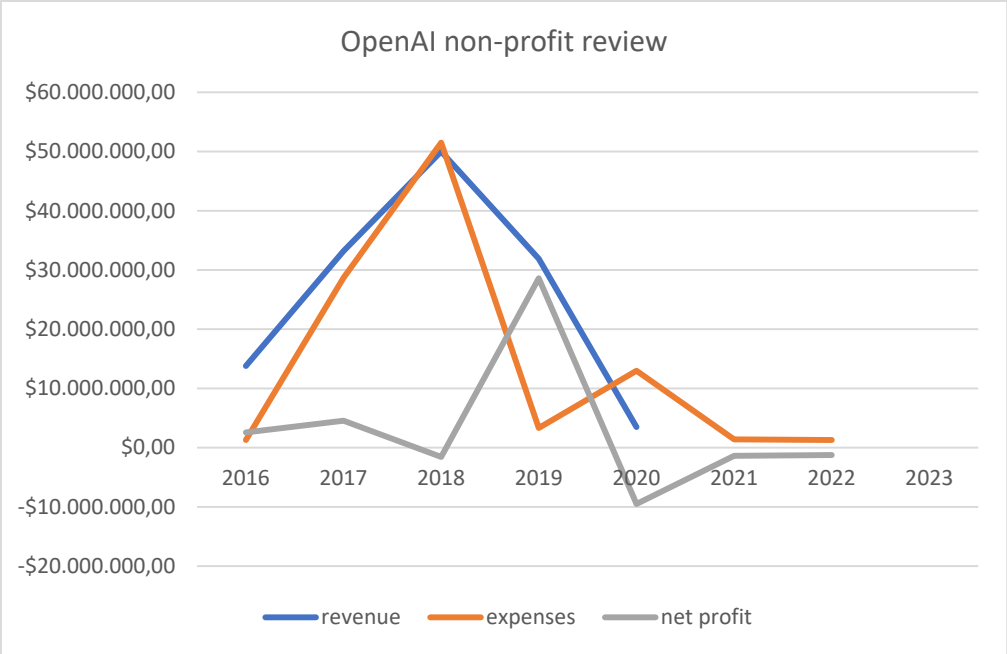
Generative AI development depends on the contributions of numerous pioneering companies - each dedicated to advancing the field. These companies range from tech giants to specialized startups, all pushing the boundaries of artificial intelligence and machine learning. According to public market reports, The Artificial Intelligence (AI) market is projected to undergo substantial growth and development through 2030. The expansion is driven by the increasing integration of AI technologies across various industries, continuous advancements, and significant investments in AI R&D. As AI becomes more embedded in business operations and consumer applications, the market is poised for ongoing innovation and expansion, making AI an essential component of modern technological ecosystems. "The market size is expected to show an annual growth rate of 28.46%, resulting in a market volume of US$826.70bn by 2030" (Statista, 2024).

4.1. OpenAI financial summary

Financial data analysis is focused on an AI research and deployment company: OpenAI Inc. based in San Francisco, California, United States. OpenAI's stakeholders include AI developers, GenAI services users, investors, and content creators. This analysis measures the cost implications for AI developers. Founded in 2016 as a non-profit, it operates as a hybrid organization with non-profit and for-profit wings (Sacra, 2024). In 2021 – 2023 as a for-profit, after $250M in losses in 2022, its revenue reached $2B in 2023 with 700.000,00 USD daily running costs (*Patel and Afzal, 2024*). OpenAI's large language model claims its revenue streams primarily consist of collaborations and partnerships with major tech companies and licensing for commercial use. Additionally, the financial statements highlight a growing focus on scaling AI infrastructure, which involves substantial capital allocation toward cloud computing and data storage capabilities (Cruchbase, 2024). According to Bloomberg, Microsoft invested $13B in OpenAI in its race with Google for GenAI development. Despite these

investments, OpenAI continues to face financial challenges, including the need to balance substantial operational costs with the pursuit of sustainable revenue models. Overall, OpenAI's financial health is characterized by a strategic emphasis on long-term technological advancements, underpinned by robust funding and partnership frameworks. Investments into OpenAI development are return-capped at 100x for its earliest investors (*Nylen and Ghaffary, 2024*).

Chart 4.1. OpenAI non-profit wing



Source: Illustration by authors, based on ProPublica report

4.2. Financial model feasibility

A single label in a visual generative AI model such as DALL·E by OpenAI typically requires between 10 to 1000 training data inputs, predominantly in the form of images (Google Cloud, 2024). The cost of creating the simplest digital illustration by a human artist, without the aid of generative AI models, ranges from $50 to $500, based on the standards observed on online portfolios and freelance platforms. Consequently, compensating an artist for each image used in training could accumulate substantial expenses. For instance, with each image priced at a few hundred dollars, the cost to generate a single label might soar into the hundreds of thousands of dollars. Given the significant financial losses reported by OpenAI's for-profit arm in 2022, implementing such a compensation model could pose a serious economic challenge. OpenAI's CEO has referred to the company as "the most capital-intensive startup in Silicon Valley history," highlighting the intense financial demands associated with its operations. This underscores the complexity and potential financial burden of fairly compensating artists for their contributions to AI training datasets. The estimation of the running costs of GPT-4 based on the provided information follows:

Background Information:

GPT-3 Running Cost: Approximately $700,000 per day.

GPT-3 Parameters: 175 billion parameters.

GPT-4 Parameters: 100 trillion parameters.

Assumptions regarding cost proportionality and linear scaling: The cost to run the model is proportional to the number of parameters. This is a reasonable assumption given that the computational load (and

cost) scales with model size. Although not perfectly accurate, we'll assume a linear scaling of costs for simplicity. This provides a straightforward estimation, acknowledging that real-world costs could be influenced by additional factors such as optimizations or hardware efficiency improvements.

1. Scaling Factor:

$$lingfactor = \frac{100trillionparameters}{175billionparameters} = \frac{100 \cdot 10^{12}}{175 \cdot 10^{9}} \approx 571.43$$

2. Estimated Daily Cost for GPT-4:

$$DailyCost(GPT-4)$$

$$DailyCost(GPT-3) \times ScalingFactor$$

$$700{,}000USD/day \times 571.43 \approx 400{,}000{,}000USD/day$$

Based on the scaling factor derived from the parameter increase from GPT-3 to GPT-4, the estimated running cost of GPT-4 would be approximately $400 million per day. This is a rough estimate and assumes linear scaling, which may not perfectly represent real-world costs due to potential efficiencies or additional overheads in scaling up the model. The actual cost could be lower if significant optimizations in hardware or software are made. The financial viability of such a model would likely depend on achieving substantial returns through its applications and monetization strategies. While the exact cost can vary based on several factors, the rough estimate indicates that the running cost of GPT-4 could be several orders of magnitude higher than that of GPT-3, emphasizing the significant financial resources required to operate such large-scale AI models.

Estimating the number of images used to train DALL-E involves considering both lower-bound and higher-bound estimates. On the lower end, a model like DALL-E might utilize approximately 100 million images. This estimate is based on typical large-scale datasets employed in generative AI research, which aim to provide sufficient variety and depth to train the model effectively. For instance, the Common Crawl dataset used for training large language models like GPT-3 includes billions of web pages, implying a similarly vast image dataset for visual models. On the higher end, the dataset could be as extensive as 1 billion images. This estimation considers the ambition and scale of OpenAI's projects, comparable to other advanced datasets such as Google's JFT-300M, which includes 300 million images, and LAION-5B, which consists of 5 billion image-text pairs.

These estimates highlight the significant scale and resources required for training advanced generative models like DALL-E, emphasizing the importance of both computational capacity and ethical considerations in data usage. Estimating the number of images used to train DALL-E involves considering both lower-bound and higher-bound estimates. On the lower end, assuming 100 million images are used for training if compensation per image is set at a few hundred dollars, the total cost could range significantly. At $100 per image, the expense would be substantial, but at the higher end of $500 per image, the cost would escalate dramatically. Similarly, for a higher-bound estimate of 1 billion images, the financial implications become even more pronounced. With compensation rates ranging from $100 to $500 per image, the total cost could span from tens of billions to hundreds of billions of dollars. These figures underscore the immense investment required for both data acquisition and model development, reflecting the substantial economic impact and the need for a sustainable compensation model for content creators.

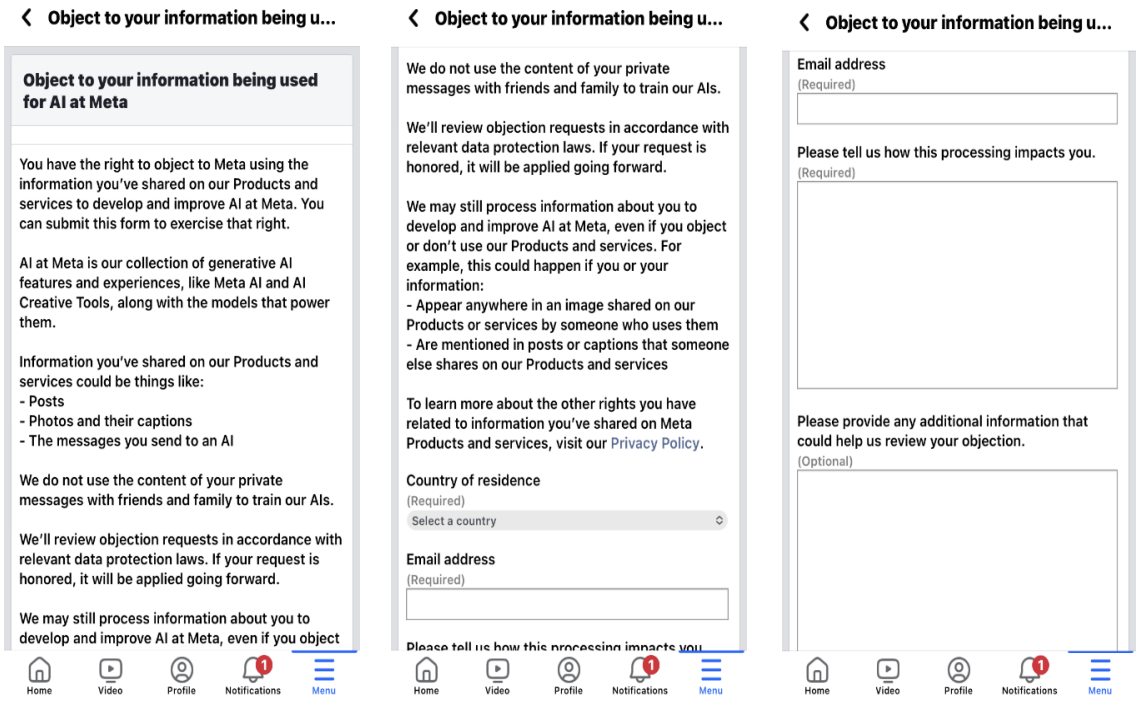
The financial requirements for compensating the images used to train DALL-E underscore a critical disparity when compared to major AI investments like Microsoft's funding of OpenAI. These costs, if set at a few hundred dollars per image, demonstrate a need for funds that surpass even

the most substantial technological investments, highlighting the extensive economic resources essential for ethical data acquisition. This comparison underscores the substantial value that human labor contributes to the development of advanced AI systems. While AI investments focus on technological infrastructure and innovation, the foundational input from human-created content is immense. Recognizing and compensating this input appropriately is crucial, not only for ethical reasons but also for sustaining the collaboration between human creativity and artificial intelligence. The significant financial implications reinforce the necessity for sustainable compensation models, ensuring that the human authors who contribute to these systems are adequately rewarded, thereby supporting the continuous advancement and ethical grounding of AI technologies.

4.3. Existing Models and Findings

Some GenAI model developers who anticipate their training data might not qualify as fair use are developing alternative tools based on public domain and licensed works. Adobe is a notable example, having created its Firefly tools using training sets composed exclusively of such works (Shankland, 2023). Adobe also supports the Content Authenticity Initiative, which uses metadata to verify content authenticity and allows creators to include a "do not train" label in their work's metadata to opt out of AI training sets (Hayes, 2023). Similarly, Shutterstock has been developing its own GenAI tools and has established a Contributor Fund to compensate artists. The company refers to its datasets as "data deals," emphasizing on its website that these datasets are intended solely for training machine learning and computer vision models. By establishing a Contributor Fund and restricting the commercial use of its datasets, Shutterstock seeks to address the ethical issues surrounding the use of copyrighted materials in GenAI models. This approach aims to ensure fair compensation for artists while mitigating the risk of unauthorized exploitation of their work in AI training processes (*Shutterstock*, 2023). As of April 2024, Meta is following up with the provided "opt-out" option available through the help contact form (Meta, 2024).

Picture 4.1. Meta opt-out option available to the selected user profiles



Source: Screenshots by authors

4.4. Approaches to Avoid IP Accountability

Social media platforms seek user consent to use posted content for research purposes, aiming to balance data utility with privacy concerns. This consent is typically obtained through acceptance of user agreements or privacy policies, which detail how data will be collected, used, and shared (*Moreau, Vogel, and Walsh, 2022*). This scenario undermines the principle of informed consent, as users may feel coerced into agreeing to terms without genuinely understanding or having control over how their data will be utilized. The effectiveness of consent is further compromised when the process lacks transparency, making it difficult for users to grasp the full extent of data collection and its implications. Consequently, users may inadvertently consent to uses they would otherwise oppose, leading to potential privacy violations and exploitation of personal information.

Meta maintains that they do not need to obtain explicit consent from users for this practice. The company argues that its interest in utilizing the content surpasses the users' interests and rights. This stance has led to numerous inquiries regarding its legality. The prevailing legal perspective suggests that this justification is highly questionable. "In our view, the most natural thing would have been to ask the users for their consent before their posts and images are used in this way." (DPA, 2024) European Center for Digital Rights, known as Noyb, proceeds with the following insight: "The processing of personal data cannot be justified by the wish to use a database system, a hard drive, or an analytics software. It must be justified by the need to achieve an aim, purpose, or interest. Meta is not even arguing an aim." (Noyb, 2024).

"Meta has taken every step to deter data subjects from exercising their right to choose by pretending that data subjects would only enjoy a right to object ("opt-out") instead of relying on consent ("opt-in") and by entertaining extensive dark patterns to deter users from objecting under Article 21 GDPR." (Noyb, 2024). Meta platforms are doing minimum to follow up with GenAI development legal requirements. Meta provides users with the objection form in a purposefully deceptive tactic where the procedure appears to lack any assurance of acceptance. All objections submitted to Meta platforms are accepted within a few dozen seconds; the impression their objection form implies is just another attempt to conduct deceptive practices. The practices employed by Meta are a notable example of deceptive tactics aimed at evading responsibility and failing to offer users a clear choice regarding their participation in AI training via their account materials. Specific instances include the absence of a clear call to action (CTA) within email subjects during privacy policy updates, which reduces user engagement and the likelihood of users exercising their rights. Additionally, the provision of overly complex tokenized objection links further complicates the process instead of simplifying it. Other examples refer to the refusal of the Data Protection Commission (DPC) to comply with the obligations reached by Decisions 3/2022 of the European Data Protection Board (EDPB) and Decision EDPB 4/2022, with a lawsuit against the EDPB before the General Court, case T-70/23.

5. Conclusion

The discrepancies in current compensation distribution practices related to generative AI models are multifaceted and stem from various underlying issues, including lack of explicit consent and licensing, ambiguity in fair use doctrine, inadequate or non-existent compensation models, transparency and accountability issues, and market imbalance and bargaining power. Many generative AI models, including those developed by major tech companies, often use large datasets that include copyrighted works without explicit consent from the creators. This practice bypasses traditional licensing agreements, leaving content creators uncompensated for the use of their intellectual property.

The lack of clear consent mechanisms means that artists and authors are not informed or asked for permission before their works are used in training datasets, leading to potential violations of intellectual property rights. The application of the fair use doctrine to AI training datasets remains contentious. While some companies argue that using copyrighted material for training AI falls under fair use, this interpretation is not universally accepted and can vary significantly by jurisdiction. This ambiguity creates legal uncertainties and makes it difficult for content creators to seek compensation or redress when their works are used without authorization.

Even when content creators are compensated, the models used are often inadequate. Traditional compensation models, such as one-time payments or minimal royalties, do not reflect the ongoing value generated by AI models that continue to benefit from the initial training data. These models fail to account for the continuous and potentially lucrative uses of AI-generated content derived from the original works. There is often a lack of transparency in how AI companies use and monetize the data they collect. Content creators typically have no visibility into whether and how their works are being used in training datasets, nor do they receive detailed reports or audits that could inform them of the extent of use. This opacity prevents fair negotiations and informed consent, perpetuating a system where creators are kept in the dark. The power dynamics between large tech companies and individual content creators are heavily skewed. Tech companies often possess significant financial and legal resources, giving them a considerable advantage in negotiations (if any occur at all). Individual creators, on the other hand, may lack the resources to challenge these companies or to advocate effectively for fair compensation.

The discrepancies in compensation practices have broader implications for innovation and the sustainability of creative industries. If content creators feel that their work can be freely appropriated without fair compensation, their incentive to produce and publish new content diminishes. This will inevitably lead to a decline in the diversity and quality of creative works, ultimately stifling innovation in the artistic and cultural sectors while poisoning and limiting GenAI models to their current sources. In the current legal landscape surrounding training datasets, prosecutors are often caught in a quagmire, attempting to establish infringement of rights rather than honing in on a more salient issue: the inability of AI development companies to adequately prove the licenses through which they not only acquired their training datasets but also proved they respect the economic and moral rights of the authors. While the focus may initially gravitate towards demonstrating violations of intellectual property or copyright laws, the crux of the matter lies in the transparency and verifiability of the procurement and remuneration process. By shifting the legal discourse to emphasize the burden of proof on AI developers to substantiate their rights to utilize specific datasets, prosecutors could potentially navigate more effectively through these legal battles. This approach not only streamlines the legal proceedings but also highlights the need for greater accountability and documentation within the AI industry, ultimately contributing to a more robust and equitable framework for data usage through the implementation of just compensation models.

In light of the challenges surrounding the verification of legal acquisition of training data for AI models, it becomes imperative to consider a pragmatic approach to their utilization. AI models that cannot substantiate their legal acquisition of training data should be regarded strictly as laboratory tools for demonstration and testing purposes, rather than commercial assets. This stance not only mitigates the risk of potential legal entanglements but also upholds ethical principles of transparency and accountability in the burgeoning field of artificial intelligence. By relegating such models to non-commercial use, stakeholders can navigate regulatory uncertainties more effectively while fostering a culture of responsible AI development. This approach not only protects the interests of creators and IP rights holders but also promotes a safer and more trustworthy environment for innovation in AI.

In conclusion, the notion of treating AI models unable to prove the legal acquisition of training data solely as lab tools for testing and demonstration warrants serious consideration, especially when factoring in the comprehensive cost analysis. While AI offers efficiency and scalability, the potential costs associated with compensating human authors, legal battles over data rights, and reputational damage from using stolen data may render AI models significantly more expensive than human labor alone. This raises critical questions about the true profitability of AI models that rely on illicitly obtained data. By embracing this perspective, we acknowledge the ethical imperative to safeguard intellectual property rights while also fostering a sustainable and equitable ecosystem for AI development. Ultimately, prioritizing transparency and legal compliance not only mitigates financial risks but also promotes long-term innovation and trust in AI technologies.

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