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Hampering Originality: IP Laws in the USA in the Milieu of Generative Artificial Intelligence

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Abstract

Artificial Intelligence (AI) is leading to the replacement of human intellect by Generative Artificial Intelligence (GAI), which is to be a new norm for redefining artistic and literary works not subject to human authorship. The IP laws, particularly in the USA, haven't proved to be dynamic enough to adapt to this fast-moving change. The existing IP laws seem unfair when seen through the prism of the rationale behind the protection of intellectual property in the wake of generative artificial intelligence. The article develops the argument that intellectual property laws especially copyright laws need to evolve to protect AI-generated works. Existing laws, don't protect AI-generated works on the pretext that a machine cannot have intellectual property rights. The article advocates and develops a rationale as to why copyright protection for AI authors will be inevitable shortly to safeguard the intellectual rights of human authors.

Key Words: Generative Artificial Intelligence, AI-generated Works, AI Authors, Intellectual Property, Copyrights

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Title

Hampering Originality: IP Laws in the USA in the Milieu of Generative Artificial Intelligence

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Contents

Abstract

Artificial Intelligence (AI) is leading to the replacement of human intellect by Generative Artificial Intelligence (GAI), which is to be a new norm for redefining artistic and literary works not subject to human authorship. The IP laws, particularly in the USA, haven't proved to be dynamic enough to adapt to this fast-moving change. The existing IP laws seem unfair when seen through the prism of the rationale behind the protection of intellectual property in the wake of generative artificial intelligence. The article develops the argument that intellectual property laws especially copyright laws need to evolve to protect AI-generated works. Existing laws, don't protect AI-generated works on the pretext that a machine cannot have intellectual property rights. The article advocates and develops a rationale as to why copyright protection for AI authors will be inevitable shortly to safeguard the intellectual rights of human authors.

Keywords: Generative Artificial Intelligence, AI-generated Works, AI Authors, Intellectual Property, Copyrights

Introduction

The creative economy has drastically modified with the great influence of Artificial Intelligence (AI) (World Intell, 2020). On account of a rapid increase in the usage of data to train machine learning-based algorithms as well as the development of software engineering and computer strength. AI has transitioned from just a helping tool to a self-generating and creative engine (World Intell, 2020). Furthermore, Artificial Intelligence is superseding the character of content creators by creating genuine material that is commercially utilizable (Claudio Cocorocchia, 2018). It is expected to have a bundle of AI-generated literature, artwork, web material, and social media content over the end of the current decade.

There could be social and economic effects arising from the development of this technology (Rao & Verweij, 2017). The Law shall receive

enormous impact with special reference to Intellectual property laws (IP) (Cocorocchia, 2018; Abbott, 2020). As AI is going to serve as a separate and autonomous entity, it will create difficulties with the copyright issues under IP; now it is crucial to decide the ownership of machine-generated creative work. Can copyright law protect AI-generated work? Who would be the owner of such work? To whom is considered a writer for AI-generated work? Would it be a copyright violation to use such software that enjoys protection but is being used to train algorithms or produce content that is generated by artificial intelligence?

There is a long history of academic inquiries to resolve these issues. A vast majority of analysts consider that there should be no protection for AI-generated work on account of either for ethical grounds i.e. such work should not get legal protection, or from the economic perspective which stresses upon the lack of monetary inducement as a motive for the artificial intelligence work. Also, there could be huge costs required to protect such, or for many other reasons it is not required at all. Pragmatically, since 1973, the "Human Authorship Requirement" was made compulsory by the U.S. Copyright Office (USCO) which bars the copyright protection for any Artificial Intelligence created work (U.S. Copyright Off, 1973). Although there is no express provision emphasizing authorship to be only by human beings for copyrights, legal philosophy always deemed creativity as a trait only of human beings (U.S. Copyright Off, 1973). In the history of IP laws, no precedent on record is available regarding copyright protection of AI-generated work in the US (Letter from U.S. Copyright Rev. Bd., 2021). The conception of an 'artificial person' in company law and the status of sovereign states as artificial entities are age-old for authorship and copyrights.

The paper develops the argument that GAI should be given copyright protection on the grounds it comprises all the ingredients necessary for copyright protection. Although Copyright law is deemed to be the savior of the intellectual and monetary interests of authors their main concern is to encourage the creation and spreading of works with a societal approach. Although there is an argument by critics that AI-generated work is not backed by the demand for copyright by the machines and that copyright protection is not needed yet this argument lacks rationality and is not a strong stance in nature. The rationale behind the copyright protection for GAI works is utilitarian to encourage creativity and mass production of GAI works (Hedrick, 2018).

This Article asserts that there should be copyright protection for AI-generated work as author-made work, like a corporation considered as a legal person. It is not a matter of giving legal protection to any app or machine. It is also true that giving legal protection to AI is probably more expensive than the expected benefit, as it is not able to perform obligations or have rights like a human being (Abbott, 2020). However, approving the status of AI authors would make the ownership of work more obvious leading to proper policies. It would also protect human authors on moral grounds. Even though it is not an unfair practice as AI would never agitate on the usage of AI-generated material by any author in their name, it causes the infringement of creative rights and work of human authors. As anyone claims, any work created by using an AI-generative engine as his own and considered equal to entirely human-created work, would definability strike upon human-created work. It will also cause a dearth of human creative work and human innovation as well.

The article proceeds in four parts: Part I examines the expeditious increase in AI-generative technologies, which analyses copyright law regarding Artificial Intelligence. The second part investigates whether or not it is against the spirit of copyright law if AI-generated works and AI authorship are given protection and examines the impacts of AI-generated works in legal and other domains of copyright law. The last part concludes and provides recommendations for amendments in copyright law concerning AI-generated work and its authorship.

The basic legal analyses of AI-generated work`s authorship are explored in this article. Does copyright law have an objective to protect moral rights too? Does copyright law have an aim to protect authors or the society? There was no need to delve into such questions until AI authorship came into being. At that time, there were no AI authors and copyright law was multifaceted. Copyright law can be developed in terms of favoring particular kinds of authors, even if the copyright law

provides less benefit to corporations (Sterk, 1996). Nevertheless, copyright of AI authorship-based work can also manage the issues of fair use of AI work and protection of AI-generated work as well. There is a great need for Law to manage the copyright issue related to AI-generated work and distinguish between human-created and AI-generated work on proper grounds.

The Existing AI technology and AI authorship

A Progress in AI

The terminologies of Artificial Intelligence and Intellectual Property are variably defined. But there is a bundle of terms related to both having no well-defined explanations to date (Mccarthy, 1955). Even the term Artificial intelligence to date has no appropriate definition. The article elaborates on AI being a system or mechanism that can perform cognitive work like human beings. Artificial Intelligence may also be classified into two types: specific AI and general AI. The specified programs for advanced innovations are treated as specific AI. On the contrary, general AI deals with tentative pieces of work such as making predictions or projections based on cognitive abilities like a human being. For instance, a specified AI is programmed to drive an automobile (Kelley, 2023) at the same time such AI is not able to handle any mental game i.e. chess without the programming. Such a game requires a specific AI to run that (Toporek, 2023).

Beyond doubt, there is a certain scope of specified AI. On account of limited capability, specific AI can give accurate handling of an automobile whose suspension is imbalanced. On the other hand, a specific-cum-general AI can optimize machinery parts in the mechanical industry (Littman, 2021). In addition, certain stupendous works can be performed with the application of a specific AI. The application of AI in board games has proved to have superior skills than the expert human players' (Walker, 2020). AI is even taking over the famous computer games too (Statt, 2019).

Quite recently, AI has proved to be a powerful medium for creating innovative content (Kingston, 2023). There is a division among intellectuals regarding the future of general AI. Some of them, such as Kurtzweil, are of the firm view that it is not far away when general AI will function at the same level where the complex cognitive abilities of human beings operate (Dilmegani, 2023).

Different great exponents, including Rya Kurtzweil, are convinced by the ideology that the existence of human-like AI will be a matter of routine and is not far away. This development will allow AI itself to polish up its self-lacunas with self-help and develop with the need (Kurzweil, 2005).

There is vast usage of AI-based composition in industrial goods and end-products, professional services, and to some extent in blended constructions, machine-learning-based models are now the credentials of the AI spectrum (Lauriola, 2022). Machine learning is found in the scheme that with the slightest human interference, AI can interpret data by recognizing trends and make judgments, choices, and assessments on its own.

There are numerous AI algorithms, especially used in deep learning, that are self-corrective and autonomous in their fine-tuning. AI models have incredible capability to identify and interpret based on input data leading to learning and adaptation. Since there is a huge amount of data at their disposal, algorithms even modify their internal standards i.e. weights to reach the anticipated inferences. Machine learning involves the interplay of numerical values fed as internal parameters. These numerical values or weights are utilized for projection or decision-making.

Quite recently, the AI operational strength has become manifold because of advancements in machine learning systems triggered by the introduction of more sophisticated software designs, multiplied hardware strengths, and greater access to data that are being used for the purpose (Discover Mag, 2022). The speed of creativity astonishes, especially with Large Language Models (LLMs), a set of Artificial Neural Networks (ANN) that can create and arrange bulk databases in the spur of the minute, a great example of Chat GPT-4 which was launched in the initial of 2023(Chui, 2023).

B. Difference between AI-Assistance and AI-Generation

There is an insufficiency of appropriate definitions regarding Artificial Intelligence or AI creativity. Even AI on its own has no specific definition. The term "Generative Art" is a production-oriented expression in nature that has

no concern with copyright law or authorship at all, while it points towards the creative work done wholly or partially with automation (Pearson, 2011). Generative Art is somewhat confused with AI-generative or AI-assisted art which has legal perspectives and standpoints of the creativity as to how it is generated. The perspective puts a question mark on how creative work has been produced; whether by using artificial intelligence or the result of human effort.

In applying law, there is no regular use of these terminologies, which is an important issue for lawyers and courts (WIPO, 1966). There are huge risks of contradictory laws regarding generative AI due to this confused understanding of the AI terminology in different jurisdictions. The ChatGPT-created text and camera filter seem to be controversial (Lauriola, 2022).

It is customary to deem a natural person qualified for copyright registration if he created the work using AI. This type of work is called "AI-assisted work". A work that is a combination of efforts by AI and human beings is termed AI human-generated work. A work that is wholly and solely done by AI without human intervention is called AI-generated. The human-generated work of AI is permitted for copyright protection but AI-generated work is incompetent for registration while AI-assisted works are eligible though, as per USCO's existing regulation (88 Fed. Reg., 2023).

The base of AI-generated work is similar to computer-generated work under the UK's Copyright, Designs and Patents Act (Copyright, Designs and Patents Act, 1988). Since 1988, only the United Kingdom has provided special copyright protection for AI-generated work (Gov.UK, 2021). An individual responsible for making the necessary preparations to create the AI-generated work is legally authorized.

Put differently, as per law, the man who has produced the work but it is created by the AI is deemed to be the legitimate author. Such work is considered as of the legal author even though he is not the actual author. The legislative protection of work gets a decreased period of protection: reduced to fifty years from the date of creation instead of seventy years, plus the lifetime of the author. It's challenging to limit the period of protection for an AI during its lifetime because it doesn't die.

The demarcation between AI-generated and AI-assisted works is usually grey and hazy. For instance, generative art emerged first time in the 1960s when Vera Molnar and Georg Nees employed software to add well-organized random patterns into their artwork (Generative Art, 2019). Generative art gained prominent traction in the 1960s and 1970s when abstract painter Harold Cohen developed AARON, a machine that first sketch and then paint with almost no human participation (Cohen, Cohen, and Aaron, 2016). The DALL-E 2, Midjourney, and Firefly are text-to-image art-generating models, now just with natural language inputs these can produce creative and lifelike images (Snell, 2021).

The AI produces an image that relates to the words or text added by the image generator (Dwyer, 2021). An important issue emerged how much level of creativity is required to be the author of text-prompted image generation (Millière, 2022). USCO set up certain guidelines for submitting AI-generated work with copyright protection of material (88 Fed. Reg.) and holding interactive sessions on the subject (AI Listening Sessions, 2023). The guideline requires the applicants to disclose the AI-generated content in their applications and anything above the prescribed minimum level will be refused to be protected.

In 2022, Cosmopolitan Magazine (Cosmo) claimed to design the AI-generated magazine cover by using DALL-E 2. And they claimed to be the pioneers thereof (Liu, 2022). The editors of the magazine tried several text prompts that resulted in images that they rejected. However, the prompt which was a wide-angle view of a female astronaut heading toward the camera on Mars in an endless cosmos with a sporty feminine figure and pride was selected. For this generative art, synth-wave was used to develop a cover design. The magazine claims that the cover design was generated in just twenty seconds (Liu, 2022). It provides only the information regarding the generation of the first picture but not the whole tale of how the cover was made. As previously mentioned, an amount of time was spent by a human team in trying various prompts. When an image was selected an unpublished experimental feature was used to enhance the whole setup of an image by adjusting certain proportions of image. Later on, the

remainder of the title cover was generated by the human team (Liu, 2022).

As a digital artist, Karen Cheng thinks that this certainly takes a lot of human effort to produce a magazine cover using AI. However, it is confusing as to who can be attributed as the author of the design. The persona of the creator of Cosmo's cover image is vague. As per the USCO guidelines, Cosmo must declare the use of AI in registration. Otherwise, USCO may not allow the image to get registered (Wilson, 2023). Now let us have another perspective: what if the human editor gives numerous prompts to human artists and discards them before the last design which he likes after all? In such a case, the human designer is without any doubt the author. But where is the editor who made decisions as to which image is the most suitable one? Practically, the answer to this question lies in the facts which vary from case to case (S.O.S., Inc. v. Payday, Inc., 1989). The majority opinion is that each co-author must add something independently copyrightable to meet the requirements of being an author (Ashton-Tate Corp. v. Ross, 1990). Copyright just makes the original work protected but not the basis of an idea it depicts.

Now the question arises whether the editor can be considered as the co-author or not. And whether the text prompt of the editor is considered as the idea or it is the idea of the artist that was selected ultimately. There are conflicting decisions even in similar cases comprising the question of as to who is the author. Various instances with comparable data have held an editor as an author and sometimes not (Ashton-Tate Corp. v. Ross, 1990). However, the formatting efforts are unlikely to make someone eligible for co-authorship.

Ai-Generated Works and Copyright Law

A Thaler v. Perlmutter (2023)

Although there is a long scholastic debate concerning the protection of material created through AI, still to date, there is not a single case registered in the US to claim any copyright violation of AI-generated work or confronting the Human Authorship Requirement from the Copyright Office. There are certain probable causes for this. It could be possible that registration would have been granted to applicants without any need to reveal the AI-generated material, and suitors might have sued without showing that their work is based upon AI (Graves, 2022).

Possibly, the non-existence of any case law related to material created using AI is because it has less worth. The process of creating songs with ordinary popularity through AI may be deemed a remarkable technological achievement because it doesn't have much commercial value. The aggrieved parties may feel reluctant to file suits for copyright infringement to avoid the costs of litigation.

The Copyright Office in the USA rejected the application for registration of an AI-generated 2D artwork- A Recent Entrance to Paradise- generated by Creativity Machine, an AI-generating engine during the year 2019. Stephen Thaler, being the innovator and title-holder of Creativity Machine sought registration of work. The Copyright Office announced the final rejection on 14 February 2022 in response to two requests filed by Thaler for review of rejections.

The non-existence of any human author was the major ground for the rejection of registration. It was held by the Review Board, that "an author should be a human being for copyright in the USA and this protection cannot be given." Thaler filed a case against the Copyright Office in federal court, in 2022, for the registration of the work with the status of Creativity Machine as 'author'. However, copyright was claimed to be owned in the name of Thaler (Thaler, 2023).

During the proceedings of the case, different individuals filed different applications for registration of their text-to-image generated work. A pictorial book named Zarya of the Dawn, 2022 authored by Artist Kristina Kashtanova had pictures created by using AI System Midjourney (Eichner & Hatori, 2023). In the first instance, USCO registered AI-generated work (U.S. Copyright Off., 2022). But later on, the USCO canceled the registration, when author Kashtanova publicized on social media about the registration of AI-generated work with the utilization of Midjourney. Then and there, the USCO sought explanations from them for the use of the AI generator and briefed the applicant about the most probable cancellation of the registration (Graves, 2022).

The USCO finally announced on February 21, 2023, that Ms. Kashtanova was the author of the written text and it was protected by copyright.

However, the Office declined to acknowledge the AI-generated images because it was not created by a human being. Therefore, the written text created by Ms. Kashtanova was given the copyright and not the images.

The initial discussion in this article has focused on the fact that AI-generated work requires quite fewer parameters to be certified as being the work of actual authors when the creativity is treated impartially on the ground of work (Köbis & Mossink, 2021). Even though no precedents have ever expressly declared AI-generated work as 'not worthy of protection', various court precedents interpreted creativity as an attribute associated with human beings only (Abbot, 2020).

B. The Human Authorship as a Pre-requisite:

The first official statement for denial of registration of AI-generated work was published by The Copyright Office in 1973. The statement declared that the USCO will give protection to the original work of a human being only because the copyright law intends to safeguard the profits of intellectual and creative efforts of the human author (Trade-Mark Cases, 100 U.S. 82, 94 (1879)). Because copyright protection is only about the 'creativity of the author' the Copyright Office will not entertain any application if it finds that the work was not originated by a human being (Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 58 (1884)).

In the famous case Burrow-Giles Lithographic Co. v. Sarony, the alleged violator of the copyright law who had developed a lithographic copy of a well-known photograph of Oscar Wilde gave the stance that such a photograph is not considered as writing or work by any writer on the reasoning that the photograph is only a mechanical replica or recapturing of a physically visible object which is dead or alive and has nothing to do with the creativity, originality of an idea or intellectual property.

The U.S Court of Appeals for the Ninth Circuit, in the leading case Urantia v. Maaherra, was faced with the issue of whether a writing, claimed and endorsed both by the plaintiff and defended that it was dictated by a metaphysical being, can be given copyright. Although the court held that for copyright law human authorship is not explicitly necessary, the court was reluctant to grant copyrights to meta-physical beings. The rationale behind this stance was the object of the copyright law which is meant to protect the intellectual works of humans. The court held that the subjects of copyrights and infringement are human beings, not divine beings.

A district court was again faced with a similar legal issue whether a book, A Course in Miracles, supposedly dictated by Jesus, was copyrightable (Penguin Books U.S.A.Inc. v. New Christian Church of Full Endeavor, 2000). The court reiterated that the changes in the writings were based on the discussion with Jesus. The court held that a work by a human cannot be rejected for copyright if any non-human factor intermingles.

As reasoned by the court human work cannot be neglected with the working of non-human intervention, like a camera, noting that "as a matter of law, dictation from a non-human source should not be a copyright bar (Penguin Books, 2000). There is not always involvement of spiritual interference attached to non-human work. In the case of Naruto v. Slater (9th Cir. 2018). it was the matter of providing copyright protection to "Monkey Selfies" an Indonesian monkey –Naruto, who took photographs with the camera of nature photographer David Slater. Later on, Slater published them by claiming to be the author of all photographs. Subsequently, People for the Ethical Treatment of Animals (PETA) on Naruto's behalf sued Slater and claimed that Naruto was the author of those photographs (9th Cir. 2018).

The U.S. Court of Appeals for the Ninth Circuit dismissed the suit not on the grounds of Human Authorship Requirement but because there is no law bestowing animal copyrights. It was held by the court if Congress makes any law giving animals a statutory standing then animals can be given copyrights.

C. Superseding the Human Authorship Prerequisite

A casual inquiry into Copyright registration highlights that AI-generated works have probably been registered despite the Human Authorship Requirement by the USCO. Hitherto the Office has never made sure whether the work is AI-generated or human-generated. One can apply for registration of AI-generated Work Made For Hire (WMFH) there is no requirement to give the name of the author. The AI will not agitate. Or a party could get copyright anonymously or in any other name.

D. The Significance of Acknowledging AI Authors

If AI-generated content is to be given copyrights, there is an issue of who will be called the author. If go into the definition of the term 'AI-generated work', it is the machine that generates the content and the same is the author. On the other hand, the innovator who has programmed the software is also not the author of AI-generated work by definition. According to the existing copyright law of the USA, the user also is not legally acknowledged as the author because he didn't generate the content himself. Now to resolve this legal intricacy, there is a need to introduce an innovative approach to adopt. There are three options: copyright should be given to human users or no requirement for copyright or AI as an author. This can be done through the introduction of improved laws on the copyright requirement of AI-generated works. If copyright law is amended in a manner that gives AI users protection by considering them as the author, there will be no harm to the AI. This amendment will somehow give protection to the AI user despite the fact he has not generated the content by his intellectual labor. There will be no objection from the AI because it is a non-human system and has no commercial or ownership interest of its own. However, it will hamper the originality and creativity of genuine human authors in society as a whole. If such legislation is allowed, human creativity will die out. A second option is if copyright law is amended in a manner that doesn't require copyright protection for AI or to be registered anonymously or pseudonymously. But it will also create problems when third parties will sue for copyright violation. It will cause legal complexity to arise because there will be no author against who the case could be filed. It is the new legislation that can empower the USCO to give copyright protection to the AI itself by acknowledging its status as an 'author'. The benefit of this legislation will be that it will resolve the legal lacuna authorship by giving rights to AI in the same manner as corporations are considered as 'artificial persons' with all legal rights like human beings or separate legal entities.

As the final option, the actual author (AI) can be legally acknowledged as an 'author'. It has a lot of advantages. Acknowledging AI as the author will ensure clarity and right ownership. It is quite fair to designate AI as a factual and actual author that will enable the interested parties relevant to AI to all evidence from where the content has been generated. The interested parties will get right properly and transparently. Acknowledging AI will enable and encourage genuine human authors to create originally.

If such legal acknowledgment is given to AI as an author will also enable the ordinary public to comprehend how creative content has been generated. The legislators and policymakers will also have clarity of their vision regarding how to address the lacunas regarding the issues of AI-generated content (Goldstein v. California, 1973).

No precedent declares that artificial intelligence lacks the authorship attribute. It is more likely that AI authorship will encourage the objective of Copyright Law in the USA as well as globally. The courts should evolve the law by filling the gap already identified in AI-generated content under recent fast development in the field of artificial intelligence (Twentieth Century Music Corp. v. Aiken, 1975).

Conclusion

Generally, the law is dynamic and has a history of evolution with the new circumstances and ever-changing society. Copyright law has been facing changing technological development throughout history. However, the existing digital revolution has raised many legal questions in the wake of copyright challenges: how copyright law be made more compatible with the fast-moving development in the field of artificial intelligence? In the past, similar challenges were faced by the copyright law regarding photography, movies, music, T.V., etc.

These challenges were met by amendments in the copyright law over time in the USA as well as globally. The copyright of AI-generated content is the latest issue for which effective legislation is needed in the USA as well as in other countries. For copyrights of AI-generated content, there is a compelling need for amendment of the existing copyright law which does not acknowledge the copyright of AI-generated works. The AI should be legally acknowledged as an artificial person like corporations and be given intellectual rights as AI authors. This is the only way forward under the current scenario and to safeguard the legitimate interests of the original authors.

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