

Should AI have Intellectual Property Rights? An Analysis of Copyright Law on Generative AI

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IPHS 300 AI for the Humanities (Spring 2023) Prof Elkins and Chun, Kenyon College

Abstract

The rapid advancement of artificial intelligence (AI) technologies in recent years has challenged our understanding of intellectual property and created a complex legal landscape with far-reaching implications for copyright laws. This research aims to explore the intersection of copyright law, current lawsuits, and the impact of AI advancements on our perceptions of creativity and intelligence. We will first examine the fundamentals of copyright law, followed by an analysis of recent AI-related lawsuits that highlight the legal challenges posed by AI-generated works. Finally, we will discuss whether copyright protection should extend to new forms of intelligence, taking into consideration how AI might change our understanding of creativity and ownership.

Current Copyright and Intellectual Property Definitions and Laws

Public Domain: Creative material that is not protected by intellectual property law, owned by the public, and can be used by anyone without obtaining permission, but can never be owned. A piece arrives in the public domain if the copyright has expired, copyright renewal rules have not been followed, the owner deliberately places in the public domain, or it does not protect a certain type of work.

Digital Commons: Digital Commons refers to a shared digital space where resources and knowledge are made for public use, based on principles of open access. Contrasting traditional copyright practices, digital commons offers creative commons licenses which allow for a range of protection for the creator, while allowing them to contribute to the commons. Additionally, copyleft license allows for free use and distribution of items in the digital commons, but still makes sure any derivative works will stay in the digital commons. In other words, you cannot take an item from the digital commons and then commercialize it.

Fair Use: Copying of copyrighted material done for a limited and "transformative use" to comment upon, criticize, or parody a copyrighted work. What qualifies as transformative use is widely contested.

Copyright Act of 1976: This act is the basis of copyright law and extends copyright protection to all "original works of authorship" which take into account all new types of media instead of having to change every time new technology emerged.

Lanham Act, 15 U.S. Code § 1051: This act provides a system for trademark registration. The Act sets two requirements for there to be trademark eligibility (1) "Use in Commerce" requirement which means that the owner of the copyright has intent to use it in business. (2) "Distinctive" Requirement must be distinguished from any other source under four categories of distinctiveness – arbitrary/fanciful, suggestive, descriptive, and generic. The Lanham Act is violated when the plaintiff has a valid and legally protectable mark, the defendant's use of the mark to identify goods or services causes a likelihood of confusion.

Digital Millennium Copyright Act: The DMCA was a federal law enacted in 1998 that focused specifically on copyright for online materials, which criminalized the circumventing of digital rights management, and implemented legal measures to protect online copyrighted materials. It was crucial in modernizing copyright law during the age of the internet.

Human v. Anthropocentric Creativity and Intelligence

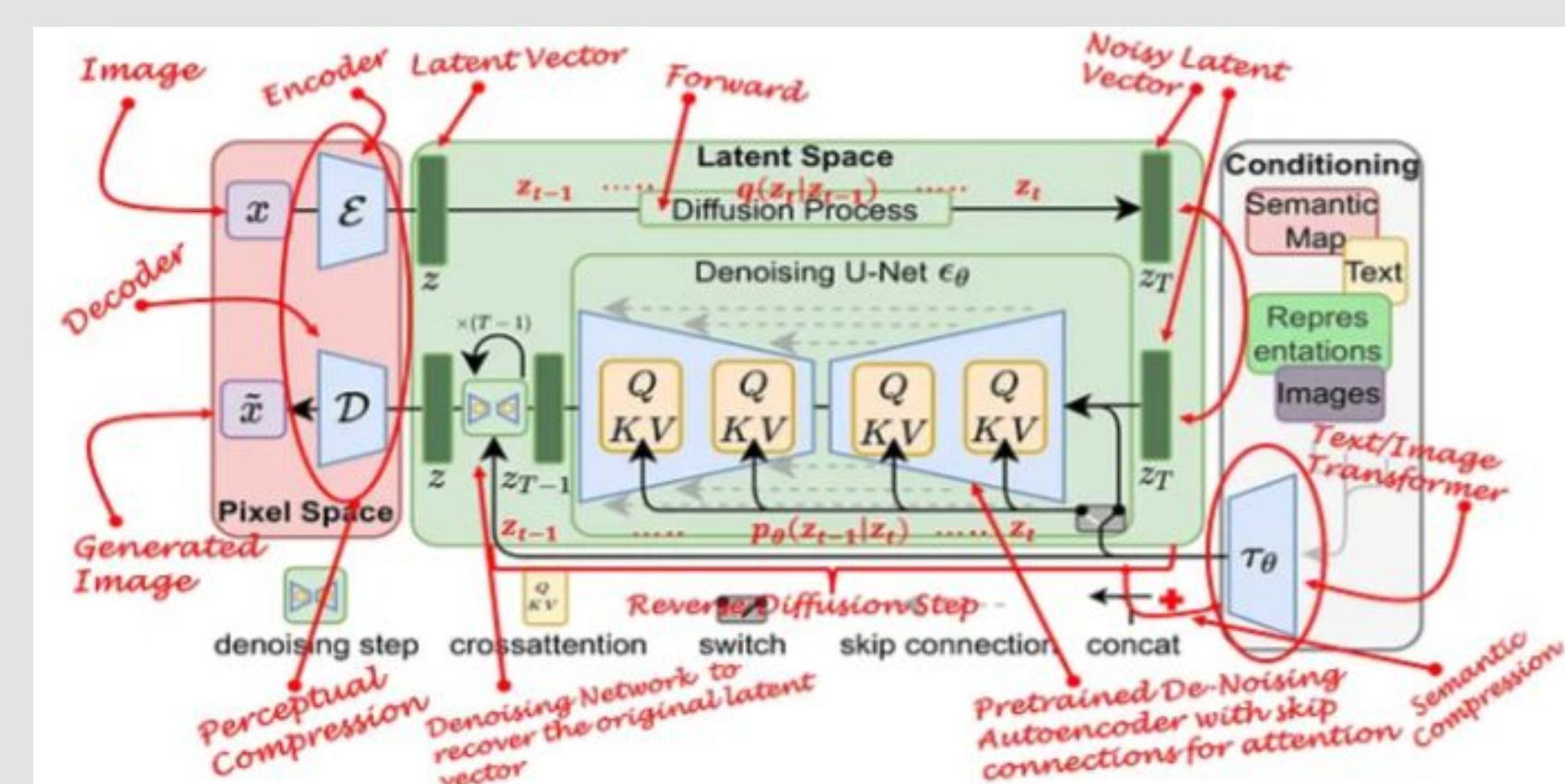
Posthumanism argues that there should be a stronger relationship between organisms and systems to remove the hierarchy of a human-centric world, improving it for all life and intelligence. Humans justify anthropocentrism by claiming that we have exceptional qualities (i.e. intelligence and creativity) that puts us at a higher standard of care than other life. However, as AI advances, it is matching our exceptional qualities and there is an argument that AI should have the same standard of care that humans hold. This anthropocentrism is found in science, philosophy, law, and ownership.

Law Scholars Kalopokine and Kalpokas highlight the 4 perspectives of creativity that increasingly AI and humans have:

1. Person Perspective
 - a. How is human intelligence different -- "experiences, understandings, sensibilities, are simply the results of access to memory traces, or 'layers of precedents' -- essentially training data
2. Process Perspective
 - a. How the work is produced
 - i. How much is the human involved, and how unpredictable is the generation?
3. Product Perspective
 - a. Judging creativity based on value
 - b. Creativity as the capacity to create something "new, surprising, and valuable"
4. Press Perspective
 - a. That the status and meaning of the work is created in the interaction with the audience

How Generative Models Work

The Generative AI art diffusion models that we have today came from our breakthrough in the inventions of Generative Adversarial Networks, or GANs, which allowed to generate new images outside of the dataset. GANs reached a stopping point as bottlenecks were reached in terms of the difficulty in training times and data, and lack of diversity of the image generation. Then comes in diffusion models, which try to model the physical process of gas diffusion. A diffusion model uses both forward diffusion and reverse diffusion. In forward diffusion, an image in the training set is broken down by introducing noise until it becomes random noise, then, in the reverse process, the image is denoised to recover the data by gradually removing what the machine predicts the noise will be until an image is back. They solve many of the problems that GANs given that they are much more stable and create much more variety in the images. The way that these newer diffusion models work demonstrates that it is very unlikely that they are generating the exact same thing as what was given in their training data, as much of the process is teaching these models to understand the semantic idea proposed in the text prompt. Please see the graphic below to better understand how these generative models work. Therefore, much of the problem with AI and copyright is not necessarily in the content of the new images, but in the use of these items in the training data, which is something law has not often had to confront before.



Current Lawsuits

Getty Images, INC. v. Stability AI, INC.

- Getty Images is alleging that Stable AI, the company behind the popular image generation model Stable Diffusion, copied more than 12 million images and associated metadata to build their model without permission from or compensation to Getty Images. They argue that Stability AI is now a direct competitor to them for creative imagery. They additionally argue that images that are generated have a modified version of the Getty Images watermark attached to odd or sometimes grotesque images, tarnishing Getty Images' reputation. This seems to be particularly interesting in how the work is not necessarily fit into the "substantial similarity" category, but is likely in violation of tarnishing their trademark logo.
- They are suing Stability AI for \$1.8 trillion. See for example the image to the right, the original Getty image is on the left, and the distorted AI-generated version of the Getty images on the right.



Andersen v. Stability AI Ltd.

- Sarah Anderson, Kelly McKernan, and Karla Ortiz filed a class action lawsuit against Stable Diffusion, Midjourney, and Deviant Art, alleging copyright infringement. They assert that these models used their works as training data without authorization and that generating images in their style violated their rights.
- However, some of the plaintiffs' claims are factually inaccurate regarding the technology. They describe Stable Diffusion as "merely a complex collage tool," which is technically incorrect, given how generative models function. Furthermore, "style" is difficult to copyright. The 2020 case Dr. Seuss Enterprises L.P. v. ComicMix LLC demonstrates this, as the court found copyright infringement but clarified that an illustration style cannot be trademarked. Instead, it falls under copyright law, providing limited protection for artists' styles and setting an intriguing precedent for generative AI art. Additionally, the plaintiffs argue that machine learning significantly differs from human learning, which is not entirely accurate. While there are some differences, it is important to note that Deep Neural Networks are inspired by human neuroscience, particularly the structure and function of the human brain.

Doe v. Github, INC..

- A group of anonymous programmers filed a class action lawsuit against Microsoft, Github, and OpenAI claiming a violation of Section 1202 of the DMCA for unauthorized use of code to develop the AI machines, Codex and Copilot. They claim that these companies did not comply with open source licensing terms. Microsoft and Open AI have responded claiming that the plaintiffs did not argue specific injuries or particularly copyrighted works. An interesting addition in this case is that in November GitHub announced that they would credit code that Copilot produces, finding a way to avoid many of these legal issues.
- The plaintiff's lawyers worry that Microsoft, Github, and OpenAI's use of open source code despite their licenses could mean the end of open source code, if there are worries about your work being stolen. They argue that as incredible as the AI is, the training needs to be done legally, allowing all who contribute to profit.

Ethical Considerations

Who should we prioritize in copyright, and what is the purpose of copyright? Should these laws provide incentives for human creativity and innovation, or should they lean towards efficient production. If the first, then copyright should not protect any AI-generated pieces. If the latter, then AI would allow for the best resource allocation. Much of this comes back to our understanding of creativity and intelligence. Is AI intelligence less than ours, and is the way that we think about intelligence needed to change. Additionally, should we be trying to fit AI into our legal framework which has always been anthropocentric system, or should we be generating a new legal framework to understand AI's role in law? These questions force us to think what it means to be human, and can have rippling effects on how we view intelligence.

Future Research

In March of 2023, The U.S. Copyright Office announced that AI can be copyrightable, provided that the work involves sufficient human authorship, the first guidance that the copyright office has given on the matter. As of now, the work has to have human intervention or involvement in order to make the work copyrightable, and it must be disclosed if AI was used, but they will continue to add additional guidance, and even these guidelines are not specific. New decisions will have to be made when AI does not necessarily need human intervention will rely on these guidances as well as the result of the current court cases. Much of the problem is that many lawyers and judges do not completely understand how this technology works, which could be an issue as they make these landmark decisions. It is worrying to me that our regulations and ethical framework surrounding Generative AI and transformers is moving at a much slower pace compared to the innovation and strides happening in AI, which creates a dangerous precedent for when superintelligence enters the scene.

Acknowledgements and Sources

Many thanks to Professors Elkins and Chun for their support on this project, this class, and the IPHS concentration

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