

Regulation of Intellectual Property Rights (IPR) in Artworks by Robots and Algorithms

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ABSTRACT

The regulation of Intellectual Property Rights (IPR) in works of art by robots and algorithms is a controversial subject due to the ability of Artificial Intelligence (AI) to produce works of art that closely resemble human intelligence independently. In situations of commercial use, legal and ethical problems arise when digital works are created without the permission of the original copyright owner. The aim of this research is to determine the identification of copyright owners in the context of works of art created by robots and algorithms, as well as explain the protection of moral and commercial rights for creators of works of art that involve the use of robotic technology and algorithms. This research uses normative juridical methods and analytical descriptive approaches to analyze documents, regulations, and other reference sources related to the issue under study. The results of this research show that artificial intelligence has the ability to work independently, produce products, and make creative judgments alone. In most cases, programmers consist of individuals who enter data and algorithms. The main task of artificial intelligence is to understand and develop real results based on commands. With this, we can create an environment that supports creativity and innovation while respecting individual rights and encouraging fair and ethical use of digital works.

Keywords: Artificial Intelligence; Artwork; IPR; Robot.

A. INTRODUCTION

Intellectual Property Rights (IPR) are property rights that individuals own, especially intangible rights such as patents, copyrights, trademarks, and industrial designs, which legally protect their creative and innovative efforts. To conform to the term commonly used in other countries, the term "Intellectual Property Rights (IPR)" is now replaced with "Intellectual Property (IP)" (Muhammad, 2018). In the case of the Ministry of Law and Human Rights, Presidential Regulation of the Republic of Indonesia No. 44 of 2015, section 25, part seven stipulates that the directorate should be referred to as the "Directorate General of Intellectual Property" rather than the "Directorate General of Intellectual Property Rights". The purpose of this change in nomenclature is to make it clearer who is responsible for the management of intellectual property created by individuals and groups. In order to maintain consistent terminology and make this research easier to understand, the abbreviation "KI" will be used consistently to refer to the "Directorate General of Intellectual Property Rights." It is hoped that this will increase public awareness of the importance of defending intellectual property and encourage continued innovation and creativity in Indonesia (Amiruddin et al., 2024).

In the modern era, advanced robots with Artificial Intelligence (AI) have become part of human life, used in various fields such as business, autonomous vehicles, and household applications. AI is now capable of performing tasks that previously could only be done by specialized professionals, such as managing investment portfolios, performing complex

medical procedures, and drafting legal documents (Rahardjo, 2020). These developments are transforming industries and raising moral questions, as humans are increasingly being replaced by technology (Fonna, 2019).

AI is a branch of computer science that creates computer systems that can mimic human behavior. AI techniques such as machine learning, natural language processing, pattern recognition, and robotics allow AI systems to analyze data, recognize patterns, and make decisions. AI can increase efficiency, reduce human error, and enable automation of complex tasks in sectors such as healthcare, finance, transportation, and manufacturing (A. Fauzi, 2019). However, the use of AI also raises ethical and social concerns, such as data privacy and its impact on employment (Afandi & Kurnia, 2023).

Since its development in 1956, AI has undergone many changes and brought significant impacts in various fields. While it increases efficiency, it also raises questions about privacy, cybersecurity, and the impact on human employment (Mehan, 2022). To ensure the responsible use of AI, stakeholders must work together to develop appropriate policies (Hartono, 2024).

AI is also being used in the arts, such as in The Next Rembrandt project which generates new paintings based on Rembrandt's style. AI is capable of analyzing and replicating classic works of art, opening up discussions about art and creativity, and aiding art education and preservation (Azmi, 2024). However, AI's ability to create art raises debates about copyright and originality (Fadillah, 2024). There needs to be clear rules on rights and responsibilities regarding AI-generated works, given the potential economic and commercial use of such works (Rahmahafida & Sinaga, 2022). It is important for society to understand and respect copyright, both for human and AI works, to encourage fair and ethical innovation (Bonadio & McDonagh, 2020).

This research addresses first, how copyright owners can be identified in the context of artworks created by robots and algorithms, and whether there are regulations that can accommodate the dynamic relationship between technology and human creativity? Secondly, what is the protection of moral and commercial rights for creators of artworks involving the use of robotic and algorithmic technologies, and how can regulations ensure fairness and sustainability in the art industry in this digital era?

B. METHOD

This research applies the normative juridical method, which focuses on analyzing documents, regulations, and other reference sources related to the issues studied. The approach used is descriptive-analytical, with the aim of providing a complete and comprehensive picture of the problem that is the object of research.

C. RESULTS AND DISCUSSION

The regulation of intellectual property rights (IPR) began with artwork by robots and algorithms in the modern era. The concept of IPRs encouraging creativity and innovation has roots dating back to ancient times. However, it systematically began in Europe in the 17th century, especially in England, in response to the piracy of written works. The "Statute of Anne" of 1710 became the first law to recognize moral and material rights to intellectual works, encouraging creativity by providing financial incentives (Fromer, 2012).

Technological advances, particularly in the 20th century, have influenced artworks with mass reproduction and the development of computers. The internet and social media opened up wider access to artworks. The use of robotics and artificial intelligence in art raises questions about creativity, the role of artists, and intellectual property rights (Bonadio & McDonagh, 2020).

National legislation must be updated to protect the rights of creators in the digital age. Some jurisdictions have amended copyright laws to cover automated works by computer systems. However, there are still challenges in establishing copyright owners and definitions of originality. Effective protection in the digital age requires international cooperation to ensure fair access to works of art (Wibowo, 2023).

1. Identification of the Copyright Owner and the Context of the Artwork

Artworks produced by artificial intelligence (AI) and robotic technology are challenging the conventional paradigm of creation and copyright ownership previously established by humans. In prevalent copyright law, only human individuals are recognized as creators of a work, as copyright is formally granted to those who create the original work. Humans have the consciousness, intent, and legal identity that allows them to own and exercise those rights, while robots and algorithms do not have similar consciousness or legal identity, so they cannot be considered copyright owners (Raharjo, 2023).

However, in the context of the creation of artworks by robots and algorithms, various parties may acquire claims to copyright, depending on their role in the creative process. The programmers who develop the algorithms or robotic systems that produce the artwork can be considered copyright owners, as they provide the instructions and build the tools used in the creation. In this case, albeit indirectly, the programmers are recognized as the ones who directed the creative process. Users who operate robots or algorithms can also be considered copyright owners, especially if they provide specific instructions and oversee the creative process. For example, if an artist uses a robot to paint based on the instructions they give, then the artist can be recognized as the copyright owner due to their creative contribution. Sometimes, copyright can be shared between the programmer and the user, especially if both played a significant role in the process of creating the work, reflecting the collaborative nature of many modern technology projects (Rahmahafida & Sinaga, 2022).

On the other hand, some jurisdictions may conclude that works produced entirely by AI do not qualify for copyright protection, due to the lack of significant human contribution. This may result in the work becoming part of the public domain, where no individual or entity has exclusive rights to it. Currently, copyright regulations have generally not been designed to address situations where works are created by non-humans, but some countries are beginning to consider changes to the law to address this challenge. For example, several legal proposals in the European Union and the United States have been put forward to grant copyright to the programmer or user of the AI system that created the work (Gede Ari Rama et al., 2023).

Cases such as “Edmond de Belamy,” a painting generated by AI and auctioned at Christie’s, highlight the urgency of defining a clear legal framework regarding the copyright ownership of works generated by AI. In this case, copyright was granted to the group of humans who developed the algorithm, demonstrating that the role of humans remains important in the context of modern, increasingly sophisticated technology (R. Fauzi et al., 2022).

2. Regulatory Challenges to the Dynamic Relationship Between Technology and Human Creativity

Current regulations in many jurisdictions have not been able to fully accommodate the dynamic relationship between technology and human creativity. This is in line with research that highlights the gap between technological development and copyright law. To begin with, copyright law is generally designed to protect works produced by humans, focusing on aspects of creativity and originality. However, with technological advancements such as artificial intelligence (AI) and algorithms, works that are increasingly generated by machines or computer programs present new challenges.

One of the main challenges is the identification of copyright owners in works automatically generated by technology. Current regulations are not clear enough to determine who owns the exclusive rights to works generated by artificial intelligence or algorithms, whether it is the programmer, the user, or any other entity involved in the creation process. In addition, considerations about sharing benefits and responsibilities between humans and technology also need to be addressed in regulation. Some jurisdictions have begun to respond to these challenges by considering legal amendments that are more inclusive of artificial intelligence and technology. However, such processes are often complex and take a long time to pass and implement (Fadavi & La' Alizadeh, 2024).

In this regard, there is an urgent need for broader legal reforms to accommodate the new dynamic between technology and human creativity. More flexible and adaptive regulations are needed to ensure that innovations in technology do not stifle progress in the arts and creativity, while still protecting the rights of creators and fostering sustainable development in the creative ecosystem. However, legal changes cannot be rushed and require extensive consultation with stakeholders, including artist communities, programmers, legal experts, and environmental organizations. With the right collaboration, new regulations that better suit the dynamic relationship between technology and human creativity can be formulated to create a more inclusive and sustainable environment for future innovation.

3. Moral and Commercial Rights Protection and Regulation to Ensure Fairness in the Digital Era

The protection of moral and commercial rights for creators of artworks involving robotic and algorithmic technologies has become increasingly complex in this digital age as rapid technological developments have changed the landscape of creativity and art production (Raharjo, 2023). Traditionally, intellectual property regulation provides protection to copyrights and patents to incentivize creators, recognize the distinctiveness of their works, and provide control over the use and distribution of those works. However, in the context of technology-generated artworks, new challenges arise, particularly in relation to the moral and commercial rights of creators.

Moral rights, which include the right to be recognized as the creator and the right to prevent damaging changes to the work, become more difficult to identify and protect when artworks are produced by algorithms or robots. Identifying the creator and determining who owns the rights to the work becomes complex in the case of automatically generated works. Meanwhile, commercial rights, such as the right to control the commercial use of the work, can also be questioned in the case of artworks automatically generated by technology (Manullang et al., 2023).

Regulation should therefore seek to adapt to these new dynamics and ensure that creators, both human and machine, can be afforded fair and balanced protection. This could include refining the legal definitions of copyright and patents to cover automatically generated artworks, as well as the establishment of specialized regulatory bodies to deal with intellectual property rights issues in the context of new technologies. In addition, regulation should also address fairness and sustainability in the arts industry as a whole, by promoting equitable access to works of art and ensuring that creators, regardless of the source of their creativity, can be properly rewarded for their work.

D. CONCLUSION

Works of art created by artificial intelligence (AI) and robotics challenge traditional concepts of creation and copyright ownership, which are usually recognized only by humans due to their consciousness and legal personality. In this context, programmers or users who contribute to the creation process can be claimed as copyright owners. However, some jurisdictions may not fully recognize AI works as objects of copyright protection, so they may fall into the public domain. Legal developments in some countries, such as proposals in the European Union and the United States, are considering changes to accommodate AI works. The “Edmond de Belamy” case emphasizes the need for legal clarity, with copyright being granted to algorithm developers, demonstrating the importance of human contributions in works involving advanced technology.

The protection of moral and commercial rights for creators of artworks involving robotic technology and algorithms has become increasingly complex as rapid technological developments have changed the landscape of creativity and art production. Traditional intellectual property rights regulations provide protection for copyrights and patents to create incentives for creators and give them control over their works. However, new challenges arise in determining moral rights, such as the right to be recognized as the creator and prevent destructive changes, as well as commercial rights in the context of works generated by technology. The identification of creators and rights owners becomes complicated when works are produced automatically by algorithms or robots. Therefore, regulation must adapt to these dynamics through the refinement of legal definitions of copyright and patents, as well as the establishment of specialized regulatory bodies to address intellectual property rights issues in the context of new technologies, while ensuring fairness and sustainability in the arts industry by rewarding creators appropriately.

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