# A Philosophical Analysis of AI-generated Works and the Copyright Law of China

Renjie Li

City University of Hong Kong, 83 Tat Chee Avenue, Kowloon Tong, Kowloon, Hong Kong, China

## Abstract

**AI-generated works through deep learning have achieved the aesthetics of human and even surpassing some low-quality artistic creations of natural persons in the market. If AI-generated works cannot be signed or protected by copyright law, it will result in a disordered market. This paper argues that, first, through the combination of Understanding, Reason, and Judgment in Kant's philosophical perspective, the subjectivity of man as a legislator is fully established, constructing man's absolute identity in human-machine relations. Second, AI is distinguished from traditional machinery in that it processes information through a recursive feedback model, and the output under this non-linear causality model can be regarded as work. Third, the Copyright Law of the People's Republic of China has the possibility of forming a dual structure ("Author" - "Copyright Owner") to protect AI-generated works.**

## Keywords

**AI-generated works; Creativity; Copyright Law; Subjectivity; Cybernetics.**

## 1. Introduction

Artificial Intelligence is a wide-ranging concept that generally refers to technologies that can render human intelligence through ordinary computer programs. AI-generated works through deep learning have achieved the aesthetics of human and even surpassing some low-quality artistic creations of natural persons in the market. Consequently, the question of whether AI-generated works could be protected by copyright law is particularly pertinent in this context. Whether AI-generated works fall within the scope of copyright protection is interpreted differently in different parts of the world. The attitude of the US regarding intelligent machine-generated works is that the involvement and contribution of a natural person are required; otherwise, the works will not be registered; the EU is proposing to grant the most advanced automated robots the status of 'cyborgs', with specific legal rights and legal obligations, such as paying taxes (Handong, 2020). The Copyright Law of China (CLC), on the other hand, in essence, was a fusion of the features of the civil law and common law systems, emphasizing first and foremost that the subject of copyright ownership must be a natural person, while at the same time providing for the possibility of treating inanimate legal persons or organizations as "authors" under particular circumstances.

## 2. Methodologies for AI-generted Works

Machine learning as an essential technical path in AI creation can be divided into two approaches based on the maturity of the technology and the application patterns in current society: first, code-based mode (Handong, 2020). A methodology based on expertise in the manual design of model features, i.e., formulating code, combined with small-scale data, using statistical-pattern recognition, and learning statistical relationships between databases (Server Art, 2021). The second methodology is the Big Data model based on neural networks. It combines the capabilities of algorithm, big data, and computing to form a superb computing

power that involves statistical analysis of massive amounts of data through algorithms and mathematical modelling. The first technology path is frequently applied to help humans solve specific problems such as face recognition in China. Most high-quality AI-generated works are now based on the second technological path, and the core structure is "input-learning-output" (Handong, 2020). The structure of "input-learning-output" corresponds to the three issues that this paper intends to explore: firstly, "input", the question of the subject of creation. Secondly, "learning", the question of whether the AI-generated work is a work or not. Third, "output", the question of AI-generated works and copyright protection. The arguments in this essay are, firstly, that the human being remains subject in the creative relationship with the AI, but there is no impediment to considering the AI as another "machine author", in the sense that the "machine author" is not a subject in the legal sense and not conflicting with the human beings are subjects. Secondly, AI is distinguished from traditional machinery in that it processes information through a recursive feedback model, and the output under this non-linear causality model can be regarded as work. Thirdly, the Copyright Law of the People's Republic of China has the possibility of forming a dual structure ("Author" - "Copyright Owner"), which recognizes the subjectivity of human beings and the fruits of the labor of "machine authors" while protecting the copyright of works.

## 3. Human Subjectivity

Yang & Xiaoyu (2018) emphasized the status of "human subjectivity" and that AI, regardless of its type, could only be regarded as a tool or an aid. In the subject-object duality between human as the subject and machine as the object, the critical factor in determining whether an AI-generated object is a work is whether it has creativity. By analyzing Kant's Critique of Pure Reason, the authors used "man legislates for nature" as an entry point to establish the principle of human "subjectivity" and to ensure the subjectivity of human beings in the process of artistic creation with AI. At the same time, Kant's theory of personhood also constituted the spiritual foundation of the 1900 German Civil Code (Yang & Xiaoyu, 2018). Fengwei (2007) argued that Kant did specify the concept of "human subjectivity", although Kant never used the term "subjektivität" (subjectivity). While in Three Critiques, Kant stipulated man's status as a lawgiver. The question of how subjectivity is constructed could be traced back to Descartes' argument of "I think (ego cogito) therefore I am". Descartes, through the method of "universal incredulity", gave absolute certainty to "I think" (ego cogito), i.e., gave priority to "I" (ego) as the subject. Ego held the priority of the subject, and thus the existence of "I am" (ego sum) is the representation in relation to ego, establishing for the first time the subject-object way of thinking (Zhouxing, 2004). Kant, on the other hand, completed the process of "human subjectification". And the construction of effective subjectivity relies on the unification of the framework of the Critique of Pure Reason and that of the Critique of Practical Reason by the aesthetic judgment in Kant's Critique of Judgment. In his Critique of Pure Reason, Kant asserted that man legislates for nature through the capability of Understanding; similarly, in his Critique of Practical Reason, he elaborated that man legislates for himself through Reason, extracting the assertion of autonomy, i.e., morality.

The first two critiques address science and morality, respectively, that is, the question of Understanding and Reason. One has Understanding but without Reason, or Reason but without Understanding is incomplete, so how are these two aspects to be combined? In his Critique of Judgment, Kant introduced aesthetic judgment, a reflexive judgment that rises from the particular to the universal. The transition from science to morality requires the intervention of aesthetic activity, and through the "reflective" capacity of aesthetic judgment, man can recognize his moral qualities. Thus, aesthetic judgement as a reflexive judgement becomes the bridge between science and morality. Through the combination of Understanding, Reason, and

Judgment, the subjectivity of man as a legislator is fully established, constructing man's absolute identity in human-machine relations.

Similarly, in 2018, in the first AI-generated content copyright case in China, Beijing Filin Law Firm (plaintiff) sued Beijing Baidu.com Technology Co Ltd (defendant) for infringement of their right to attribution and protection of the integrity of their works (Junwu, 2019). The article involved consists of textual work and graphical work: the graphs of the article are derived from a data report generated by the legal statistics analysis software (WKLI), and the text is an analysis (made by the plaintiff) based on that report. Firstly, the Court held that such AI-generated reports, although the process of selecting keywords, filtering, and analyzing the data, was to a certain extent creative. However, under current law, a written work should be created by a natural person (i.e., a reaffirmation of the subjectivity of the human being). Therefore, the data report does not constitute a work; secondly, the analytical article created by (Filin) based on the intelligent report could constitute a work (Junwu, 2019). Under the condition that the content satisfies creativity, the AI-generated content can be recognized as work through the participation and intervention of a human being. Both arbitraments are based on the perspective that the human being must be the subject.

## 4. Cybernetics

This paper asserts that, unlike traditional mechanical linear causality (i.e., a predictable and immutable linear causal structure from input to output), modern intelligent machines are based on the formulation of cybernetics (Norbert Wiener, 1948). Cybernetics reveals the common laws of communication and control functions in machines with humans' neurological and sensory functions, signifying that machines can process the input of information at different stages of operation and generate optimal options through recurrent feedback paths. Recurrent causality as a core concept of cybernetics signifies the ability of machines to tackle random factors; in AI's neural networks, each neuron is given a random weight coefficient (Hui Yuk, 2019), and it is this recurrent causality ensures the ability of intelligent machines to process this contingency, absorb contingency and enrich machines' computational power. In the technical system, contingency is a paradox that contains possibilities. Wiener (1948) observed an isomorphic relationship between self-regulating technological objects and living beings. This ability to process contingency marks the similarity between the creation of AI and human creative activity and thus can establish the legitimacy of AI-generated objects belonging to works. The Next Rembrandt (ING Group, 2016) is an excellent example of AI processing contingency to generate a work, where the AI generates a Rembrandt-style work by deeply learning the characteristics of a Rembrandt painting, including shape, color, brushwork and, most importantly, the contrast of light and dark. Light and shade are the most characteristic parts of Rembrandt's paintings, with effects like theatre lighting to create strong contrasts between light and dark; however, contrast is a human concept, and computers do not recognize light and dark. They could only identify variations in quantitative values within the color gamut (RGB); for example, red is (255, 0, 0). It is a black box as to how a universal pattern can be identified from enormous quantitative values and generate light and shade in Rembrandt's sense, but one could also argue that this is where creativity occurs in the machine. Haijun (2019) demonstrated a crucial point: creativity should be a matter of "with or without", not a matter of "high or low"; in other words, it is a matter of "0 or 1" rather than "0, 1, 2, 3…". The creativity of the machine, combined with the previous reflexive judgment (Kant, 1987) of human subjectivity, justifies the view that the machine has established a collaborative relationship with the human creative subject as another non-living "author" and that the identification of the "machine author" does not represent a reversal of the concept of the human subject, but rather a limited affirmation of machines' contribution.

## 5. The Copyright Law of China

Handong (2020) suggested that on the level of "algorithmic authorship", there is a possibility of classifying machines and humans as co-authors, marking a mode of reflective thinking towards "the post-human era". This new paradigm of reshaping the "author-copyright holder" structure is based on the unpredictability of "algorithmic creation" in AI and the embodiment of collaborative human creativity. In a legal sense, the dual structure of "Author-Right Holder" already exists in China's current copyright protection law, according to the provisions of Article 18(1) of the latest CLC (3rd Amendment 2020), as well as Articles 2 and 3 of the Regulation on the Implementation of Copyright in the People's Republic of China. These provide for the case of commissioned works, office works, and particular works. For example, according to article 18 (1): under the condition of "drawings of engineering designs and product designs and maps, computer software and other works created in the course of employment mainly with the material and technical resource of the legal entity or other organization and under its responsibility (Shanghai Shenyu Law Firm), the author of a work created in the course of employment shall enjoy the right of authorship, while the legal entity or other organization shall enjoy the other rights included in the copyright and may reward the author" (Shanghai Shenyu Law Firm). This dualistic structure system admits the creativity of AI machines; though AI cannot assume the rest of the legal responsibilities and obligations, we should not deny the protectability of its works. Such existing negotiable legal provisions can protect the copyright of AI-generated works while incentivizing the development of the AI industry and promoting the establishment of a healthy market.

For example, in the Shenzhen "Dreamwriter computer software" case, on the same day that the computer generated an article autonomously, the defendant Shanghai Yingmou Technology Co., Ltd. published an article on its website with the same title and content as the report in question (Justice Bureau of Shenzhen Municipality, 2020). In December 2019, the Shenzhen Nanshan District People's Court ruled that the specific form of expression of the plaintiff's article in question and its creation process, which originated from the individual choice and arrangement of the creator and was technically "generated" by the Dreamwriter software, met the conditions for the protection of written works under copyright law. The article belongs to the written works protected by CLC and is also a corporate work created by the plaintiff.

## 6. Conclusion

In a practical sense, man's status as the subject of the human-machine relationship is unchangeable; however, AI is also approaching human capacity in terms of creative activity, and the alienation between man and machine could be mitigated by granting it a limited "authorship" and recognizing the work-ness of the AI-generated object. If we consistently see the machine as a tool, then in the future, humans as users could easily be unable to apply their knowledge to participate in this human-machine relationship due to their incapability to understand the working path of strong AI. The current CLC can protect the viability of the AI industry through the creation of a dual structure because it covers both civil law and common law systems.

## References

[1] H. J. Li: Works" in the Sense of Copyright Law——Take AI Products as a Starting Point. Seeker, 06 (2019), p.74-81. doi:10.16059/j.cnki.cn43-1008/c.2019.06.009.

[2] H. D. Wang: Rethinking the Copyright of Works Generated by Artificial Intelligence. Peking University Law Journal, 03 (2020), p.653-673.

[3] Y. Li and X. Y. Li: Discussion on the Copyright of Artificial Intelligence Products under the Perspective of Kant's Philosophy. Law Science Magazine, 09 (2018), p.43-54. doi:10.16092/j.cnki.1001-618x.2018.09.005.

[4] Z. X, Sun: Essentia and Existentia :The Evolution of Existentia in the Western Metaphysics. Social Sciences in China, 06 (2004), p.71-81.

[5] J. L. Jian: Re-discussing the copyright law attributes of AI-generated works. Tribune of Social Sciences, 03 (2020), p.109-115. doi:10.14185/j.cnki.issn1008-2026.2020.03.013.

[6] H. Yuk: Recursivity and contingency. (Rowman & Littlefield International, United States 2020).

[7] K. Immanuel: Critique of judgment. (Hackett Publishing, United States 1987).

[8] Information on https://zhuanlan.zhihu.com/p/65197082

[9] Information on https://www.bilibili.com/video/BV16K4y1J7aG?from=search&seid=11248527122541247555

[10] Information on https://zhuanlan.zhihu.com/p/65197082