

# Study on Deconstruction and Governance of Intellectual Property Rights Caused by Machine Writing Ethics Anomie in The Era of Artificial Intelligence

Chuanji Zuo

School of Literature and Journalism, Chongqing Technology and Business University, Chongqing, 400067, China

---

**Abstract:** When machine writing enters the field of knowledge production, it causes a series of intelligent ethical risks, and the existing intellectual property system is deconstructed. The innovation of science and technology will break the balance mechanism of the existing intellectual property, and machine writing will become a new force of knowledge production. The intelligent ethical risk brought by machine writing is undoubtedly a "revolution" for the existing intellectual property system. From the ethical perspective of artificial intelligence, this paper from the ethical relations, ethics, ethical behavior and ethics profiling machine writing anomie of intellectual property rights subject status, object attribute, the legislative idea, the impact on the level of the judicial practice, and then from the legal environment, algorithm design, governance mechanism, platform regulation puts forward four human coexistence pattern of knowledge production, The reinvention of intellectual property rights.

**Keywords:** Wireless sensor networks, Intelligent workshop products, Moving target tracking, Untraced Kalman filter.

---

## 1. Introduction

As a "general purpose technology" under the fourth scientific and technological revolution, artificial intelligence has brought unprecedented changes to social development because of its characteristics of high technology, intelligence and autonomy[1]. In the field of production and creation, machine writing, as a representative technology of artificial intelligence, is widely used in the process of knowledge production. For example, the novel continuation software "Caiyun Xiaomeng" can independently create novels based on AI algorithms. The poetry collection "Sunshine Lost its Window" created by Microsoft Xiaoice, a robot author of Microsoft Corporation, has attracted wide attention from all walks of life. At the same time, machine writing is pushing intellectual property into an era of great changes, which is highlighted by the fact that machine writing is reducing the control of natural persons over the creative process and deconstructing the original moral, ethical and legal norm pattern of intellectual property. For example, Tencent sued Shanghai Yingxun Technology for violating the copyright of its robot writer Dreamwriter and was judged to be successful by the court. In a word, machine writing has shown a strong creative ability in the field of knowledge production, which liberates part of human brain, while its ethical irregularities make intellectual property rights face multiple problems such as legal subject and object qualification, right attribution, judicial accountability and interest conversion. Therefore, this paper intends to take machine writing as an independent research object, discuss the intelligent ethical risks generated by machine writing in the process of knowledge production and the challenges it brings to the subject status and object standards of intellectual property, and put forward the path of improvement and reshaping.

## 2. The Intellectual Property Structure Driven by Machine Writing

The English term "intellectual property" refers to the rights

of intellectual workers to their intellectual achievements according to law, including copyright, patent right and trademark right [1]. Technology is closely related to intellectual property. Technology gives birth to intellectual property and continuously enriches its connotation. The progress of technology is the material and driving premise of the birth of intellectual property.

As Professor Ginsberg said, "every innovation of technology will break the original balance mechanism of intellectual copyright". The intervention of machine writing technology in the field of creation completely breaks the previous pattern of knowledge production with "natural person" as the core, which is undoubtedly a "revolution" for the existing intellectual property system. Whether to give its legal subject status has become the core issue to solve the conflict between machine writing and "natural person" in the field of intellectual property. At present, the academic community has different attitudes on whether writing robots and their products can possess intellectual property rights. Scholars who hold the "objection" view believe that writing robots are the products created by human beings without independent personality, and their products are the results of applied algorithms, rules and templates. Therefore, writing robots should not be given the subject status, nor should their products be judged as works [2]. The proponents argue that the law is constantly improving, just as the division of civil subjects is gradually refined and perfected, and legal persons have achieved independent status, with the progress of machine writing technology, perhaps it should also be granted the qualification of civil subjects and provide institutional protection for its products [3] [4] [5]. However, proponents also have different opinions on the ownership of the intellectual property rights of the products produced by machine writing. The focus of the dispute is whether the intellectual property rights of the products belong to the writing robot or the operator of the writing robot. Different scholars have discussed the ownership of the intellectual property rights of the works from different perspectives such as works, management and law. But regardless of the opinion,

one thing can not be ignored, that the development of machine writing technology has had a significant impact on intellectual property rights.

However, from the current development situation, most of the content of machine writing is "the result of applying algorithms, rules and templates", and it has no independent subject consciousness, let alone the material and spiritual benefits brought by creation. At the same time, contrary to the laziness of human beings in creative activities, machine writing has spontaneity. If the exclusive right of machine writing is granted at the legal level, the internal logical correlation between "incentive" and technological development will be inevitably eliminated, which is contrary to the original intention of intellectual property to encourage creation and promote the progress of science and technology culture. Therefore, Chinese law has not yet made a clear definition of the legal subject status of writing robot and the Copyrights of its products.

But more importantly, we need to pay attention to the possibility created by a technology and the changes it brings to society. Machine writing breaks the unitary pattern of knowledge production since the birth of intellectual property, subverted the previous mode of knowledge production, and provided another possibility for the subject of intellectual property. A series of ethical problems in machine writing have also become important factors to promote intellectual property reform in the era of intelligence.

### **3. Deconstruction of Intellectual Property by Machine Writing from The Perspective of Artificial Intelligence Ethics**

#### **3.1. Intelligent ethical risks of machine writing**

German philosopher Martin Heidegger pointed out that while technology promotes social development, it also blinds human cognition of society [6]. In the era of intelligence, one of the core problems brought by technology is to cause "moral materialization" and bring about the controversy of science and technology ethics. The "New Generation of Artificial Intelligence Development Plan" also points out that artificial intelligence technology is full of uncertainty, and this characteristic will bring certain impacts on personal privacy, social civilization and legal system [7]. In the field of intellectual property, machine writing is pushing content production and intellectual property protection into an intelligent era, which brings convenience, interactivity and automation to human society at the same time, the hidden intelligent ethical risks are also beginning to emerge.

##### **3.1.1. Cyborg subject dissimilates the natural person's agency**

Marx pointed out that subject is generally regarded as an existence with independent consciousness, and human subjectivity is formed in the process of continuous development and evolution of human society [8]. In this sense, the natural person is the "human subject", while the writing robot belongs to the "digital quasi-subject". Western philosopher Kant also pointed out that in the relationship between people and things, things are only means, and talent is the end. Therefore, artificial intelligence "things" represented by writing robots should only be regarded as human objects and tools [9]. However, in reality, the continuous development of artificial intelligence technology

gives the writing robot stronger autonomy and higher production efficiency. In contrast, the human as the subject is prone to show low efficiency and low accuracy in social activities, thus losing the status of the subject as the "manipulator". They are gradually domesticated into technology-dependent species by artificial intelligence products such as writing robots. In this process, the thinking mode of human beings gradually turns to "stylized" and "data-oriented", the subjective initiative is greatly limited, and the objectified tendency is increasingly obvious. Thoughtful individuals are gradually disciplined as "one-dimensional people". They fall into the state of "losing critical consciousness" manipulated by machine intelligence, lose their rationality and self-consciousness, spontaneously become the objects controlled by technology, give birth to "technical consciousness", and become the slaves of machines to a certain extent. The ethical relationship between the natural person as the subject and the writing robot as the object is distorted, and even faces the risk of transformation.

##### **3.1.2. Technical black boxes widen the content gap**

The so-called "black box" is a metaphor for an unknown system whose internal structure and state cannot be opened or directly observed from the outside [10]. In the process of intelligent operation of machine writing, there are many invisible "hidden layers" designed between the input data and the output results of the machine algorithm, and these "hidden layers" imply many correlation relationships that are difficult to judge and reason, which directly leads to the "black box" in the production process of machine writing. And this "black box" is invisibly expanding the technological gap between production activities and natural persons [11]. On the one hand, the "black box" of machine writing reconstructs the creation mode, which intensifies the technical barriers. "Ordinary technical personnel" in the field of non-artificial intelligence need to master more advanced professional knowledge and ability such as algorithm design and data processing [12], which unconsciously raises the technical threshold and "creativity" standard, and may trigger the "creativity" gap. On the other hand, a small number of people artificially create technical black boxes through algorithms in order to master more creative means and rights, such as intelligent data extraction and analysis means of machine writing, a large number of analysis and reference to other works, giving birth to hidden creative privileges. As a result, ethical standards are separated by technical barriers, unable to produce a unified normative role for artificial intelligence technology masters and "ordinary technical personnel", and eventually evolve into solidifying the ethical divide of social classes.

##### **3.1.3. Unsupervised machine learning jeopardizes digital copyright**

Machine learning is divided into supervised machine learning and unsupervised machine learning, and unsupervised machine learning is easy to form an unknown "black hole" in the process of data intake and analysis. At present, unsupervised machine learning is the main development direction of writing robot machine learning [13]. In the era of artificial intelligence, writing robots use machine learning technology to decode data and deep learn works samples, master the creation mode or writing rules of works, form a creation model and template, and carry out content production according to the template. Currently, "zombie literature" in social media platforms adopts this creation mode. However, this undoubtedly brings a series of problems to

digital copyright protection. From a technical point of view, intelligent robots analyze the creation mode of existing works through big data algorithms and create them. Unsupervised machine learning process may capture, store and analyze a large number of copyrighted works of others, resulting in illegal use of others' works. Secondly, the creation contains the writing ideas, content elements and even spiritual implications of the original work template. In the process of creation, the use of copyrighted works without permission may also constitute plagiarism; From the perspective of the market, machine writing has the characteristics of digitalization and virtualization, which makes the copy and spread of digital copyright works fast and wide, and prone to large-scale infringement incidents, while copyright owners are difficult to find infringement acts or define the causal relationship of infringement acts, resulting in Internet copyright infringement disputes.

## **4. Reshaping Intellectual Property in The Context of Machine Writing**

The deconstruction of intellectual property rights by machine writing is mainly caused by the "man-machine" ethical problems brought by machine writing as an artificial intelligence product into the field of knowledge production. Therefore, the creation mode of "human-machine collaboration" should be constructed from the aspects of constructing intelligent intellectual property governance system, optimizing media environment, upgrading intelligent algorithm design, and improving platform regulation means, and the intellectual property system suitable for "human-machine coexistence" should be built[14].

### **4.1. Improve the mechanism and build a new intellectual property intelligent governance system**

The construction of intellectual property governance mechanism in China started late, and the dualistic subject coping mechanism aiming at "human-machine coexistence" is not perfect at present. The deconstruction of intellectual property by machine writing is the negative impact of the application of artificial intelligence technology to the field of knowledge production, but artificial intelligence can also improve the governance mechanism of intellectual property with technical empowerment and maintain the security of intellectual property.

First, build a cloud database of machine writing works. With the help of crawler software and information collection technology, a large number of news, poetry, prose and even non-fiction writing works created by writing robots are collected and stored, and a complete database of machine writing works is established. Secondly, establish a high-precision machine writing infringement detection mechanism. Organize and analyze the data of the database of machine writing works, summarize the characteristics of various machine writing works, establish a rich and specific set of machine writing infringement features, and use big data and cloud computing technology to establish an automated and high-precision detection mechanism, and conduct full-time automatic identification and detection of knowledge products in cyberspace according to the feature set. Precise research and judgment whether there is plagiarism, manuscript washing and other infringement of machine writing works. However, the establishment of a high-precision machine

writing infringement detection mechanism needs to constantly update the database, and the research on the underlying technology of writing robots continues to advance. Under the premise of continuous deepening of machine learning, the linguistic expression ability and depth of machine writing works continue to improve, and their digital infringement characteristics will also change accordingly. Therefore, its database should constantly collect and store the latest machine writing works. Extract the latest machine writing infringement feature set. Finally, an intelligent and automated disposal mechanism is constructed. In the Internet era, information is copied and disseminated at a fast speed and in a wide range, and infringing works written by machines will spread on a large scale with the rapid speed of the network, and the information in cyberspace is very complex, and the validity of manual governance is always limited. Resources should be appropriately tilted towards the establishment of an intelligent disposal mechanism, and technologies such as blockchain should be used to track and record the information of all account content production and transactions in real time. Establish a complete and clear intellectual property protection chain. When machine written works that infringe intellectual property rights are found, they will automatically block their transmission path and be uploaded to the system of relevant departments to deal with them in a timely manner, so as to realize intelligent intellectual property governance and further improve governance efficiency.

### **4.2. We will strengthen supervision and establish a top-down and all-round supervision system**

The "algorithm black box" empowers the secrecy of the machine writing algorithm and process, and provides shelter for the possible infringement of machine writing while protecting the security of the algorithm technology. To control the "algorithm black box", it is necessary to open the black box, enhance the transparency of the algorithm, and establish a comprehensive supervision system.

First of all, the government is a regulator outside the commercial system. On the premise of not disclosing the algorithm source code, the government's intervention in the supervision of machine writing algorithms will not cause the leakage of technology and harm its commercial interests. Therefore, the government should, on the premise of making clear the degree of openness of machine writing algorithms, effectively implement the review of machine writing algorithms, organize algorithm technical experts, jurists and other relevant disciplines to set up a professional machine writing algorithm review team, review the algorithm information, supervise the algorithm process, and make authoritative professional decisions. Secondly, technology companies should strengthen self-discipline, implement intellectual property laws into the design and use of machine writing technology, actively undertake the obligation of algorithm transparency, provide the government with sufficient information about algorithm design, and publicly disclose the operation description or principle of the algorithm, so as to facilitate the government to review the algorithm information, supervise the algorithm process, and govern the algorithm problems, so as to ensure that the algorithm is legitimate and fair. In addition, at the beginning of machine writing algorithm design, technology companies should clearly implement the principle of algorithm

transparency into the algorithm design process to ensure the legitimacy of the algorithm. Finally, due to the existence of the technology gap in algorithms, it is difficult for the general public to realize the comprehensibility and supervision of machine writing algorithms in a general sense. The government and technology companies should make clear explanations for the causality between the input data and the output results of algorithms on the premise of ensuring the safety of algorithms. The black box of algorithm operation should be transparent and visualized [15] to maintain the public's right to know and facilitate its right to implement supervision. Through the trinity of government review, technology company self-discipline, and social supervision, a comprehensive machine writing algorithm monitoring system is constructed to ensure the legitimacy of machine writing algorithms and processes, and strengthen the trust of all walks of life for technology companies and machine writing algorithm technology. However, in the process of algorithm transparency, we should be alert to equating algorithm transparency with full disclosure of algorithm, and grasp the "degree" of algorithm transparency, otherwise it may cause technology leakage, damage the commercial interests of technology companies, and cause technical security risks.

### 4.3. Innovate algorithms and strive to optimize the technical support of machine writing

Intelligent algorithm design is the technical standard support of machine writing. In the eyes of scholars advocating computationism, human creative thinking and creative ability are quantifiable formulas. Intelligent ethical problems caused by robots in the creative process are only limited by the level of algorithms. Therefore, properly dealing with the problems in the design of intelligent algorithms can prevent and break the deconstruction of intellectual property by machine writing from the source [16].

There are two main problems in the current design of machine writing algorithm that lead to its deconstruction of intellectual property rights. One is the value of technical load, that is, people attach their own interest bias to technology in the process of designing and using technology, so that machine writing follows the principle of "interests first". The second is that the machine writing algorithm lacks "emotional computing", resulting in a lack of "originality" in its products. [17] To avoid the challenges brought by algorithm defects to intellectual property rights, technical engineers should first innovate algorithm coding, digitally encode the ethics and morals of human society and intellectual property laws, transform them into algorithmic languages that can be read by machine writing, embed them into the "mind" of writing robots, and artificially give writing robots decision-making ability in terms of ethics and law. In the process of machine learning, the writing robot can independently avoid imitation of intellectual property infringement language and behavior, and create in accordance with intellectual property law, put legal shackles on the "creation" of machine writing, and seek the legality of machine writing behavior with "algorithm legality", so that it can become a conscious abuser of intellectual property law. Secondly, strengthen the research intensity and depth of "emotional computing", integrate its phased research results into the machine writing algorithm, strengthen its emotional algorithm attributes, and achieve the gradual integration of "logical computing" and "emotional computing", so that the writing robot gradually derives the "machine heart". It can create "original" works based on

"mind" like a "natural person" subject, and gradually make up for the deficiencies of machine writing in the three levels of language expression, semantic understanding and "metalinguistic", and truly become a creative subject comparable to human beings.

## 5. Conclusion

At present, machine writing carries out "digital machine creation" under the support of "big data + neural network algorithm" technology, gradually developing from the virtual object in the traditional intellectual property system to the "digital subject" in the "cyber" world, and becoming a new production factor in the field of knowledge production, which brings subversive changes to the traditional knowledge production pattern and intellectual property protection. At the same time, intellectual property is increasingly becoming a strategic resource and incentive factor for innovation and development, promoting the deep integration and development of artificial intelligence and various industries, but it also means that the conflict and contradiction between artificial intelligence and intellectual property are expanding, the imbalance crisis of intellectual property is intensifying, and the right subject status, object nature and legal standards of intellectual property are facing the risk of being deconstructed.

In the future, "strong artificial intelligence" may give writing robots the "heart of a machine" and become "quasi-subjects" or even "super-subjects" with the same status as natural persons, and machine production activities will be transformed from algorithm-based information combination games into mental creation activities with emotional value, when the contradiction and conflict between machine writing and intellectual property rights will be more prominent. Therefore, how to avoid the impact of machine writing on intellectual property and improve the intellectual property system in the era of intelligence, it is urgent to become the focus of the academic world and the industry.

## References

- [1] Zhang Jianshen. History of Intellectual Property law system [J]. Journal of Northwest University (Natural Science Edition), 1989 (04): 113-120.
- [2] Wang Qian. On the characterization of artificial Intelligence-generated content in Copyright Law [J]. Legal Science (Journal of Northwest University of Political Science and Law), 2017, 35(05): 148-155.
- [3] Xiong Qi. Copyright Recognition of artificial Intelligence-generated Content [J]. Intellectual Property Rights, 2017(03):3-8
- [4] Yi Jiming. Are artificial intelligence creations works? [J]. Legal Science (Journal of Northwest University of Political Science and Law), 2017, 35(05):137-147.
- [5] Li Weimin. Correct Characterization of artificial Intelligence Achievements in Copyright Law: Discussion with Professor Wang Qian [J]. Social Science Abstracts, 2018,(07):34-36.
- [6] Martin Heidegger. Philosophical Treatise: From the original (Translation collection of Original Phenomenology) [M]. Commercial Press, 2012.5.
- [7] Xiong Wenyuan. Hawking says artificial intelligence could be the worst event in history: Need to be controlled [EB/OL]. Among whom, HTTP // news. China. Con/international / 31645621.2018/1000/20171109-08-23

- [8] Marx, Engels. Collected Works of Marx and Engels: Volume 1 [M]. Compilation and Translation Bureau of Marx and Engels, Lenin and Stalin of the CPC Central Committee, compiled. Beijing: People's Publishing House, 2009:571.
- [9] Li Yang, Li Xiaoyu. Discussion on the copyright of artificial intelligence products from the perspective of Kantian philosophy [J]. Journal of Law,2018,39(09):43-54.
- [10] Xu Feng. Legal regulation of artificial intelligence algorithm black box [J]. Oriental Law,2019, 12(6):78
- [11] Deng Peng, Li Fang, Li Mingjing. Practical Challenges and Countermeasures of patent system in the era of Artificial intelligence [J/OL]. Scientific and Technological Progress and Countermeasures :1-9[2022-03-30].
- [12] Wu Handong. Questions on Patent Law of artificial Intelligence-generated inventions [J]. Contemporary Law, 2019, 33(04): 24-38.
- [13] Rong Ting. Research on Evolution, Problems and Governance of Robot water Army [J]. China Publishing,2021(13):72-75. (in Chinese)
- [14] Li Hengwei, Huang Huaxin. Cognitive view of "second generation Cognitive Science" [J]. Philosophical Research, 2006, (06): 92-99.
- [15] Wu Jiaojun, Guo Waner. Artificial intelligence algorithm of black box under the rule of law governance [J]. Science and technology and the law (both in English and Chinese), 2021 (01) : 19-28. DOI: 10.19685 / j.carol carroll nki cn11-2922 / n. 2021.01.003.
- [16] Zhu He. Emotional writing under the compensation mechanism of machine ethics problem [J]. Journal of youth press, 2021 (10) : 119-120.10.15997 / j.carol carroll nki QNJZ. 2021.10.058.
- [17] Cao Xinming, Xian Chenxu. Artificial intelligence as the main body of intellectual property rights ethics study [J]. Journal of northwest university (philosophy and social sciences edition), 2020, 50 (01) : 94-106. The DOI: 10.16152 / j.carol carroll nki XDXBSK. The 2020-01-01 0.