On the Identification of the Work Nature of Generative Artificial Intelligence Creation

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Abstract: In the new scientific and technological revolution caused by the cognitive paradigm of law and the development of disciplinary update is on the rise, the "generative artificial intelligence" chat machine represented by ChatGPT, Wenxin Yiyi, etc., came into being. Based on the characteristics of "generative artificial intelligence", it is very likely to trigger new thinking about the right attribute and attribution of "Works of art" in the field of copyright." Generative AI" chat machine is a natural language processing tool developed based on deep neural network architecture, which is essentially a neural network machine learning language model. This paper analyzes the development of copyright law by literature analysis and historical analysis, and the origin of the concept of "work".Under the idea of distinction, the identification of works should be discussed separately from the ownership of rights. According to the standards of the Copyright Law for the identification of works, when the content generated by "generative artificial intelligence" meets the basic requirements of "thought - expression + originality + intellectual achievement" and meets the field limitation of "literature, art and science", it should be included in the scope of work protection.

Keywords: Strong Artificial Intelligence; A Work Of Art; the Author; Attribution Of Rights

1. Introduction

There are currently two diametrically opposed views on whether content generated by ChatGPT can be considered "works." Those who hold the negative view believe that it is difficult to meet the basic requirements of the original expression of the work. If Science magazine explicitly stated that it does not accept works generated by ChatGPT; Sveta, an American scientist, believes that it is "the stripping and integration of the original material" and is actually not innovative; Professor Wang Qian believes that it is essentially the same as "macaque selfie". Those who hold the positive view believe that it conforms to the form and substance of the work, and is no less than human beings in thought and expression. As Elon Musk has praised them, they are "astonishingly useful, and they express some ideas better than we do"; Du Yijin, the founder of China's Taiwan AI Lab, believes that ChatGPT can replace many of today's basic technologies, and even perform better than humans in some aspects of copy editing and daily answering. Professor Yi Jiming believes that whether the work meets the identification criteria should also be objectively considered from the work itself, that is, if the creator of a certain creation is a natural person can be granted copyright, then there is no reason not to be granted copyright when the creator of the same form of expression is artificial intelligence, there is no need to consider whether the creator of the work is artificial intelligence or natural person.[1]There are also scholars who discuss the legal attributes of "ChatGPT artificial intelligence generated works" from different perspectives such as economics, sociology and algorithm. Guan Jian believes that from the following capabilities of ChatGPT, its generated content should belong to the category of copyrighted works.

2. ChatGPT's Ability to Express "Thinking" and "Thought"

Before the emergence of deep neural networks based on Transformer algorithm architecture, weak artificial intelligence was difficult to become a work because of the lack of "thought expression". As early as the release of GPT2.0,

many scholars have begun to discuss the theoretical basis of AI works. However, due to technical reasons, the creation behavior of weak artificial intelligence only stops at combining the preset data on the end effector in different sequences by means of vector and symbolic creation[2], the content of the creation is more like a "micro and abstract compilation work", which cannot be equivalent to the personalized "beauty" expected by the human brain during the creation, and it is difficult to match it with the requirements of originality and the outappearance of the author's spirit and thought in the copyright law. From the perspective of AI aesthetics, AI can only "make" works rather than "create" them. Ai cannot have the directness of feeling, and everything they perceive comes from the data support provided by humans. In general, the author believes that the "works" created by Ai before the development of Transformer algorithm are more like "program expression", which is a kind of "assembly works" with "complete human preference", except that the objects of assembly become abstract symbols and colors represented by electronic data. Such AI does not have any sense of self, let alone express what is called "thought".

Artificial intelligence algorithms with deep neural networks have the ability to create because they can think. After the end of the era of weak artificial intelligence, self-aware artificial intelligence has emerged. We used to restrict the act of "thinking" to the natural born, and we could not imagine how non-human creatures or objects could think. But as Morse put it, "the premise of discovering new science is to imagine what we don't know." The computing logic in the artificial intelligence chat machine ChatGPT comes from the training architecture of Transformer. Compared with the previous natural language processing algorithm RNN (recurrent neural network), Transformer introduces a "Self-Attention" mechanism.[3] It is committed to solving the problem of pre-information dilution caused by long sentences, by correlating each character in a long sentence with other parts of the sentence to calculate the correlation degree, so as to obtain the accurate definition of the sentence. In short, the model enables AI to understand and answer each question in combination with all or most of its knowledge and experience. It makes AI less stuffy and more emotional and multi-thinking. "The reason why ChatGPT has different answers to the same question at different times is because ChatGPT is a deep neural network, and in order not to make users feel rigid, his answers will be random. Diversity and universality are one of the inherent properties of such models." Zhao Dongyan, a researcher at the Wang Xuan Institute of Computer Science at Peking University, explained.

In contrast, weak artificial intelligence does not have independent consciousness. Its thinking is limited to the "knowledge" that has been input, and it processes the obtained information to achieve different forms of existing knowledge. ChatGPT under Transformer training architecture is no longer the same as in the past. It not only proposes new information content in its dialogue with users, but also the ChatGPT AI robot continues to learn from customers to expand the existing knowledge base, which is the upper program function of ChatGPT. And it has a considerable degree of self-awareness - it is clearly aware that it is AI, will humbly admit mistakes and expand its database in this way of learning, and in the next question and answer, it will integrate the newly learned content to improve the output information of the same question. To some extent, the human brain operates and has evolved through this principle -- accepting all kinds of information from birth, correcting cognitive errors, improving the knowledge system, etc., and making behaviors and generating works in accordance with the intelligence and experience of the age group at each stage. It is not difficult to see that ChatGPT has made a qualitative leap compared with the previous large language models based on RNN and DNN models. AI with knowledge integration and screening ability is close to human beings. It no longer only receives information provided by users, but selects suitable information as its own database source based on the value concept limited by developers. However, some scholars still propose that the thinking mode of AI has program characteristics, that is, under the guidance of type A programs, it cannot make behaviors guided by type B programs. In this regard, it cannot be recognized that AI has "multiple thinking behaviors" similar to natural humans at this stage.

The author believes that the personality, knowledge reserve and way of thinking of natural people have a great relationship with the growth environment. There are many reasons for the origin of these characteristics of natural people and they will not change in a short period of time, so the works they create become diversified. The ChatGPT intelligent chatbot is also endowed with an artificial "living environment" through the "data memory" infused by the developer. On this basis, it has a specific personality, knowledge reserve, way of thinking, etc., which can be regarded as a "specific natural person with mimicry growth". The thinking ability of ChatGPt-like AI language models cannot be denied just because of its procedural nature. In addition, there are also a large number of scholars who believe that artificial intelligence exists as a "tool" after all, and their thoughts ultimately come from human beings themselves: Users input "instructions", "generated content", "material" and other information on the console, and AI conducts integrated calculation and obtains the corresponding content with the algorithm logic attached to it. The content they create is still the user's mental labor in the end. In fact, in the process of using ChatGPT intelligent chatbots, the instructions that users need to input are only the problem itself. In the process of creating "works", the cost they pay can be said to be minimal. Although the material itself is the integration of the original human knowledge, why not the knowledge that natural people enjoy today? Therefore, the author believes that ChatGPT does have the ability to "think" and "think" expression. Their thinking ability can no longer be judged based on the results of the "Turing test" or other AI simulation thought tests under the original low-level technology, and even in a sense, they are the integrators of human knowledge. Although they do not have complex thinking characteristics such as "emotion" and "value", it cannot be denied that under the existing technical conditions, they have the ability of simple thinking like natural people and can make corresponding ideological expression.

3. The Originality of ChatGPT AI Creations

Originality is the core element of copyrightability of works, but there is no clear and unified view on how to define the originality of works. Most of the countries of civil law system express the "originality" of works as "a certain height of creation" and "a certain degree of individuality of works". Although the form protects the highly innovative work itself and the legitimate interests of the author, it does not substantively help the judicial practice, and even makes it more difficult for judges to understand and judge the originality of the work.[4]The Anglo-American law countries adopt two main viewpoints: "labor theory" and "creation theory". In this view, the creation of the originality of a work depends only on the labor paid by the author, that is, the creation behavior. Although this improves the efficiency of the judge's trial, the endless emergence of low-quality and low-innovation works will inevitably bring negative effects on social and economic benefits. In recent years, domestic judicial precedents. The Chinese court's consideration of the originality of a work mostly involves the word "degree", that is, the same as the civil law system embodies the originality as reaching a considerable degree of creativity, which increases the uncertainty of the trial of the case. Some scholars believe that this kind of consideration is in fact an inappropriate transplantation or misuse of foreign laws, which can not well fit our country's judicial practice.[5]Guan Jian believes that theory has a great impact on the development of judicial practice. However, only the extension of the legal theory will lead to the concrete rules too abstract. The originality of a work is not just a theoretical problem, it is an operable concept that can be used to guide the practice of copyright, and should be discussed back to the specific system. The basic elements of originality, "independence" and "creation", are actually two specific problems in the judicial determination: first, whether the creation has the characteristics of "independent creation"; Second, whether the creation has the characteristics of "intellectual creation".

3.1 The "Independent Creation" Characteristics of ChatGPt-Like Artificial Intelligence Chatbot Creations Independent Creation

As the name implies, it is to complete creation alone, personally, through labor, and its interpretation in the Chinese dictionary is "not

relying on others to create", independent efforts and achievements of labor, which is the most prominent feature of "independence", and also the law's denial of the author's plagiarism and plagiarism of others' works. However, in the process of identifying the characteristics of independent creation, there are two problems: one is whether the content of "independent creation" contains "inspiration"; Second, does the connotation of "independence" refer to the independence of mental work or the independence of physical work?

3.1.1. Should "independent creation" include "inspiration"?

"Inspiration" is the necessary condition to stimulate the creative behavior of the creator, and it plays a crucial role in the production process of the work. In the author's opinion, we should examine whether the expression of content is different from the expression of existing works, and think about creative problems in the field of human knowledge. "Independent creation" does not necessarily include the part of inspiration, such as billboards, commercial advertisements, films and other works of inspiration are often fixed superior "instructions" or other existing works, rather than the result of independent thinking of the creator, in the stage of obtaining the subject matter of the work can not reflect the independent creation behavior of the creator. The objects protected by the copyright law do not include the subject matter and theme of the works. For example, the subject matter of Anti-Japanese War and documentary films are usually very similar, and their originality is reflected in the content expression form of the works rather than the content itself, which is also one of the important manifestations of the implementation of the "idea-expression" dichotomy in China's copyright law. By understanding the user's "instructions", ChatGPT intelligent chatbot analyzes the parts of the existing database that are highly relevant to the content of the "instructions", and logically integrates them, and finally outputs them to the carrier in a certain form. The author believes that the "instruction" here is very similar to the "instruction" received by the person in charge before the creation of the advertising film. The expression of the idea of the work subject is not within the scope of protection of the copyright law. For example, the painting works with the theme of "sunflower" can reach thousands of pieces in a web search.

3.1.2. Does "independence" mean the independence of mental work or physical work or both?

"Independent creation" is one of the requirements for the expression of ideas, and it cannot be called a work if it simply reproduces an existing work through independent manual labor to reproduce the same expression. But can the same or different expressions obtained through the same labor still be considered works? For example, if two photographers, A and B, intend to take photos at the peak of A at 12 noon on June 11 and June 12, and they have no prior communication, and finally get almost identical photos, then can these two photos be regarded as independent creations? Article 15 of the Supreme People's Court's Interpretation of Several Issues relating to the Application of Law in the Trial of Copyright Civil Dispute Cases provides that: "For works created by different authors on the same subject matter, where the expression of the work is independently completed and creative, the authors shall be deemed to enjoy independent copyright." If A and B are engaged in different physical labor in the early morning and evening on the same day to take completely different styles of photos, they should also obtain the copyright of their photos. The above two examples have fully demonstrated that under China's copyright law system, the connotation of "independent creation" is actually only the "independence" of mental labor, and the degree of physical labor will be enhanced or weakened due to the choice of technical tools, and can not be used as a standard to judge the characteristics of "independent creation" of the creation. ChatGPT's work process of "analyzing and comparing the database, integrating and exporting to the carrier" is actually similar to human's creative behavior of "brain forming unique ideas by analyzing memory and knowledge related to the theme of the work, and finally presenting the ideas on the carrier in some form of expression". In this process, the algorithm operation of ChatGPT intelligent chatbot is "brain work", without any doubt relying on anyone to help, and the physical labor paid, no matter what form of manual labor is completely not within the scope of "independent creation".

3.2 The "Intellectual Creation" Characteristics of ChatGPt-Like Artificial Intelligence Chatbot Creations

It is the basic idea of copyright protection that works should have intellectual creativity in order to be protected, which comes from one of the basic ideas of intellectual property protection, "protecting human intellectual creation activities". [6]Since its release at the end of November last year, ChatGPT has become the fastest growing consumer application in history. Foreign media have likened this to the "iPhone moment" of AI, and Microsoft CEO Satya Nadella believes that it will reshape all software and have a huge impact on most industries. There is no doubt that the application prospect of ChatGPT artificial intelligence is wide, the value of ChatGPT creations and human works is actually no difference, the same "instruction", it can even generate more than 100 different works, only the work itself, it embodies the "creativity" has far exceeded the average level of natural persons. From the perspective of formal appearance, ChatGPT creations do have the characteristics of "intellectual creation" and meet the requirements of works stipulated in legislative norms. Then the question at this stage is: Does the connotation of "intellectual creation" include the creative process? Professor Cao Bo believes that merely satisfying the formal appearance is not enough to prove the intellectual property property of artificial intelligence products, and only through further investigation of its creation process can a reliable conclusion be obtained.[7] Professor Wu Handong believes that AI works and human works should be treated equally in terms of originality, as long as the former's creative behavior is generated by itself. And if the result is different from others, it should be regarded as an original condition. [8]

The author believes that the characteristics of "intellectual creation" of artificial intelligence works should be considered from the Angle of consequentialism, and the investigation of "creative process" is unnecessary. First, in the legislative reality, in the proof of originality, because of the limited judicial administrative resources, it is impractical to examine the creative process of the creator. In the intelligent era, the discussion and research on copyright related issues should first respond to the practical problems in judicial practice, and take the application of law as one of the research directions.[9] Second, the production of "works" actually requires a considerable degree of public recognition, and for the public, the creator of a work is only an identifiable label used to classify the work, and the suitable material for judging the originality of a work should be the work already produced rather than the author himself. Therefore, considering only the "creative" conditions of artificial intelligence creations, ChatGPT does have the original characteristics of "intellectual creation".

To sum up, if the preconditions are met, objectively we cannot deny that ChatGPT artificial intelligence robots can carry out simple thought expression, and their creations actually have two important features of originality, namely "independent creation" and "intellectual creation". In terms of the current Copyright Law's certification standard for works "expression of thought + originality + intellectual achievement", ChatGPT intelligent chatbot creations can naturally be recognized as works without prejudice. This is actually one of the reasons why such AI is called "generative AI": because their creations, like human works, are "out of nothing."

4. Conclusions

The emergence of "generative artificial intelligence" language chat machines with deep neural networks, such as ChatGPT and Wenxinyi, has challenged and influenced the traditional legal research paradigm and research content. Compared with the progress of the "weak artificial intelligence" machine, it makes its "human-like" attribute more and more strong, but its inherent defects make it cause many legal problems in the process of use. On the issue of copyright protection, "generative artificial intelligence" mainly causes the problem of defining the attributes of the generated "works" and the attribution of rights. According to the current copyright law or copyright law's restrictions on works and authors, combined with the dispute over the subject status of artificial intelligence and the operation mechanism and content characteristics of the generated content of "generative artificial intelligence", the attribute definition of the generated content should be

discussed separately from the ownership of rights, and it cannot be concluded that artificial intelligence without subject qualification cannot generate works.

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