

The copyright protection of AI-generated works under Chinese law

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Abstract

Who is the author of a work generated by AI? Can AI-generated works be protected by copyright law? This issue has attracted global attention. The vast majority of countries in the world have given a negative response to this question, but one Chinese court has given an affirmative answer; instead. Does this Chinese decision represent future thinking for the world in this area? It is necessary to investigate the reasons behind this decision, which are related to China's special interpretation of "human participation" and the criteria for judging originality. This judicial result was also related to China's current lack of a distinction between computer-assisted and AI-generated results. In the future, China may continue to uphold the existing determination; however, since China does not operate under case law, Chinese courts may still change their opinion. Moreover, China's choice may not have an impact on countries that are deeply influenced by natural law, but it may still impact some countries that are strongly influenced by utilitarianism.

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1. A new copyright problem

In 1956, John McCarthy first proposed the concept of artificial intelligence (AI) at a summer conference held in Dartmouth, USA. Since then, with the continuous development of computing technology, humanity has gradually entered the era of AI. In the 21st century, humans have also begun to use AI to engage in creative activities. Some AI-generated results have received widespread attention. In 2016, a group of big data scientists, software engineers and artists used AI to create a portrait entitled "The Next Rembrandt". Some of them have been published or sold at high prices. For example, in May 2017, the poetry collection "The Sunlight that Lost the Glass Window" created by Microsoft's "Xiaoice" software was officially published in China. To complete this book, "Xiaoice" studied the modern poems of 519 poets. In fact, the program wrote more than 10,000 poems, of which only a very small fraction were ultimately selected for this book³. Notably, this book is very popular among the Chinese public, and its paper version is currently sold out⁴. Another example is an AI-generated art piece produced at the end of 2018, "Portrait

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³ See Jiang Jie, Bianji, *First AI-authored collection of poems published in China*, available at <http://en.people.cn/n3/2017/0531/c90000-9222463.html>, last visited 4 March 2023.

⁴ For example, Dangdang, one of China's largest book sellers in the internet, has sold over 700 copies, and it no longer sells the paper version of the book.

of Edmond Bellamy”, which was sold for US\$432,500. This was the first piece of AI-generated art to come to auction⁵.

In this context, intellectual property law has also faced new challenges, which are particularly acute in the area of copyright law. In the beginning, the initial question was whether a computer-assisted created object could constitute a work. For these objects, the computer is just a tool used by human beings in completing intellectual achievements. They are still believed to be human creation. Therefore, these objects are generally considered subject to legal protection. For example, a UK court recognized the copyrightability of a computer-assisted object in 1985⁶. In addition, the Judicial Court of Paris judged in 2000 that “the computer-assisted musical composition, when it involves human intervention, a choice of the author, leads to the creation of original works”⁷.

However, with the advance of computer technology, this problem has become increasingly complicated. In the 1990s, early varieties of computer-generated objects began to emerge. Unlike computer-assisted works, these objects are directly generated by the computer through the combination of algorithmic operation and pre-existing data. Moreover, the older, computer-assisted works are generated under the full control of humans, and the results can be predicted by computer operators. In contrast, the formation of computer-generated results can only be guided and not predicted by humans⁸. This distinction between computer-assisted and computer-generated objects was first established by the Supreme Court of South Africa in 1995⁹, and it has gradually been accepted by other countries since then. With the rapid development of AI, scholars are increasingly using the title of AI-generated objects to replace the concept of computer-generated results. Thus, the original distinction is transformed into a new distinction between computer-assisted results and AI-generated ones. For example, in 2021, the UK Intellectual Property Office made a clear distinction between the two in its consultation on AI issues¹⁰. In the recent case regarding “Zarya of the Dawn”, the U.S. Copyright Office also re-emphasized this distinction¹¹.

⁵ See “Is artificial intelligence set to become art’s next medium?” available at <https://www.christies.com/features/A-collaboration-between-two-artists-one-human-one-a-machine-9332-1.aspx>, last visited 4 March 2023.

⁶ The judge John Whitford decided that “the computer was no more than the tool by which the varying grids of five-letter sequences were produced to the instructions, via the computer programmes, of Mr. Ertel”, *Express Newspapers v Liverpool Daily Post* [1985] 1 WLR 1089.

⁷ TGI Paris, 1e ch. 5 juillet 2000.

⁸ See Tshimanga Kongolo, *Global legal intellectual property issues generated by artificial intelligence*, *European Intellectual Property Review*, 2023, Vol.45, No.4, p.200.

⁹ See *Payer Components South Africa Ltd v Bovic Gaskins*, [1995] 33 IPR 407, cited in Paul Lambert, *Computer Generated Works and Copyright: Selfies, Traps, Robots, AI and Machine Learning*, *European Intellectual Property Review*, 2017, Vol. 39, No. 1, p. 13.

¹⁰ See UK Intellectual Property Office, Government response to call for views on artificial intelligence and intellectual property, available at <https://www.gov.uk/government/consultations/artificial-intelligence-and-intellectual-property-call-for-views/government-response-to-call-for-views-on-artificial-intelligence-and-intellectual-property>, last visited 20 March 2023.

¹¹ See United States Copyright Office, Re: Zarya of the Dawn (Registration # VAu001480196), p. 9, available at <https://copyright.gov/docs/zarya-of-the-dawn.pdf>, last visited 5 March 2023.

After this distinction has been established, a new question is thus raised: Can those objects generated automatically by AI be protected as works? To date, the courts of various countries have given a relatively consistent view that such an object cannot be identified as a work. The rationale behind this position is that copyright law only protects intellectual creations realized by humans. However, different countries defend this negation in different ways.

On the one hand, the vast majority of countries have not responded to this issue at the legislative level, while their courts have clearly expressed a negative opinion. South Africa was the first to respond to this question in a case judged in 1995, in which the Supreme Court held that computer-aided works can be protected, while computer-generated objects would not, unless the Copyright Act was amended¹². Secondly, also in 1995, the Australian Copyright Law Review Committee (the CLRC) also made a distinction between works created with the assistance of computers and computer-generated works in a published report. The CLRC believed that it was difficult to recognize computer-generated works as work protected by copyright law¹³. Later, in 2010, following this view, the Federal Court refused copyright protection to computer-generated telephone directories¹⁴. Thirdly, another example can be found in Japan, where the “Intellectual Property Strategic Plan 2016” published by the Intellectual Property Strategy Headquarters¹⁵ indicated that products created automatically by AI do not constitute works protected by copyright law¹⁶. Because they do not derive from the creative expression of thoughts or sentiments and do not meet the requirements of Article 2 of the Japanese Copyright Law for work¹⁷. Fourthly, in the United States, the U.S. Copyright Office rejected Steven Thaler’s application to register an AI-generated art piece in August 2019. The explanation reasoned that it “lacks the human authorship necessary to support a copyright claim”¹⁸. Later, in the case of “Zarya of the Dawn”, the U.S.

¹² Ibid.

¹³ See Copyright Law Review Committee, *Computer Software Protection*, Canberra: Office of Legal Information and Publishing, 1995, para.13.07, cited in Paul Lambert, *Computer Generated Works and Copyright: Selfies, Traps, Robots, AI and Machine Learning*, European Intellectual Property Review, 2017, Vol.39, No.1, p.19.

¹⁴ The Federal Court of Australia has decided that “although humans were certainly involved in the collection phase [...] their control was over a process of automation and they did not shape or direct the material form themselves (that process being performed by the software). The directories did not, therefore, have an author and copyright cannot subsist in them”, *Telstra Corporation Limited v Phone Directories Company Pty Ltd* [2010] FCAFC 149.

¹⁵ The Intellectual Property Strategy Headquarters is an organization in the Cabinet of Japan, established in 2003 and chaired by the Prime Minister.

¹⁶ See Intellectual Property Strategy Headquarters, *Intellectual Property Strategic Plan 2016*, p. 8. available at <https://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku20160509.pdf>, last visited 6 March 2023.

¹⁷ Article 2 of the Japanese Copyright Law rules that “work means a production in which thoughts or sentiments are expressed in a creative way and which falls within the literary, academic, artistic or musical domain”.

¹⁸ United States Copyright Office, *Re: Second Request for Reconsideration for Refusal to Register A Recent Entrance to Paradise* (Correspondence ID 1-3ZPC6C3, available at <https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf>, last visited 5 March 2023.

Copyright Office reiterated this point, arguing that AI-generated objects are not “the product of human authorship”¹⁹. Currently, some countries have yet to make a clear response to this issue, but we can also deduce their objections from relevant judgements. France is a clear example: Although the French courts believe that results completed by humans with the help of computers can constitute works, they clearly deny that computers can replace humans in completing work independently²⁰.

On the other hand, while other countries have established a special category of “computer-generated works” in legislation, they still responded negatively to this issue. The most representative country in this selection is the UK, which set up “computer-generated works” as a new type of work in 1988²¹. It involves a special definition of work produced “in circumstances such that there is no human author”²². This definition of special work was later followed by Ireland, India, New Zealand and Hong Kong. According to these provisions, it seems that the objects generated by AI without a human author may be identified as works. However, since the establishment of this clause, the UK’s courts have only applied it once in a judgment²³ that involved only computer-aided works and not AI-generated ones²⁴.

¹⁹ This decision involves images developed by an AI software called “Midjourney”. It is worth noting that the images involved were originally registered for copyright because the applicant initially did not disclose the fact that they were produced by artificial intelligence. After the U.S. Copyright Office discovered this fact, the copyright registration was revoked. United States Copyright Office, Re: Zarya of the Dawn (Registration # VAu001480196), available at <https://copyright.gov/docs/zarya-of-the-dawn.pdf>, last visited 5 March 2023.

²⁰ For example, the Paris Court of Appeal pointed out in a 2006 case that “in any case, the computer, no matter how sophisticated it may be, cannot replace creative musical thought, providing logistical support for the work of spirit, of which only the composer, the performing musician and the artistic director retain control throughout the sound production”. La Cour d’Appel de Paris, 3 May 2006, No. 05/01400.

²¹ This rule can be most representatively found in article 9(3) of the UK’s Copyright, Designs and Patents Act 1988 (CDPA), which rules: “In the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken”.

²² According to Section 178 of UK’s CDPA, “computer-generated, in relation to a work, means that the work is generated by computer in circumstances such that there is no human author of the work”.

²³ In the case of *Nova Productions v. Mazooma Games*, the plaintiff, as the programmer of a game, sued the player for copying the game screen. In Judge Jacob’s view, although the programmer only participated in the initial game programming, and the subsequent game images were not preset by the programmer, the programmer made “necessary arrangements” for the completion of the work and thus obtained the copyright. *Nova Productions Ltd v. Mazooma Games Ltd & Ors* [2007] EWCA Civ 219.

²⁴ The nova case involves the determination of nature of game images in copyright law. In this case, computer software generates the specific game images based on elements that have been stored in the software by the developer. The judge pointed out: “In so far as each composite frame is a computer-generated work then the arrangements necessary for the creation of the work were undertaken by [the games designer] because he devised the appearance of the various elements of the game and the rules and logic by which each frame is generated and he wrote the relevant computer program. In these circumstances I am satisfied that [the games designer] is the person by whom the arrangements necessary for the creation of the works were undertaken and therefore is deemed to be the author by virtue of s.9(3)”. From the judge’s statement, it can be seen that all image generation processes are under the control of the software developer and the results are predictable by the latter. In contrast, today’s AI-generated objects are no longer based on limited elements stored

Some British scholars believe that the computer-generated works mentioned in this clause cannot cover AI-generated works²⁵. In addition, this provision has also been criticized in the UK, and many scholars believe that its existence will have a negative impact on the internal logic of the copyright system²⁶. Faced with this controversy, the UK Intellectual Property Office responded in 2021 by pointing out that “the current approach to computer-generated works is unclear”²⁷. Furthermore, the Intellectual Property Office expressed a negative view on whether AI-generated objects constitute works. In its view, these objects should be accorded only limited protection or no protection at all²⁸. Therefore, even if the UK has established a type of computer-generated work, it does not mean that AI-generated works can be defined directly as works in the UK.

However, in recent years, Chinese courts have given an entirely different answer to this issue, affirming that AI-generated objects can constitute works. Therefore, why did China become the first country in the world to make this choice? Would this choice affect future choices elsewhere in the world? A study of the reasons behind this decision may provide a reference for other countries’ future rulings. However, such reasons are not well known to scholars outside of China. In this paper, we introduce China’s current judgements in this field and analyse the reasons the legal justification used. Finally, we analyse the potential future outcomes of China’s current choice, especially its potential impact on countries around the world.

in the software, but on vast data resources. Therefore, this generated result constitutes a typical computer-assisted work, not an AI-generated result. See Jyh-an Lee, Reto M. Hilty, Kung-Chung Liu, *Artificial Intelligence and Intellectual Property*, Oxford University Press, 2021, p.179.

²⁵ See Julia Dickenson, Alex Morgan, Birgit Clark, *Creative machines: ownership of copyright in content created by artificial intelligence applications*, *European Intellectual Property Review*, 2017, Vol. 39, No. 8, p. 459.

²⁶ See Lionel Bently, Brad Sherman, *Intellectual Property Law*, Oxford University Press, 2014, p.116-117. See Lionel Bently, *The UK’s Provisions on Computer-Generated Works: A Solution for AI Creations?*, p. 7, available at <https://europeancopyrightsocietydotorg.files.wordpress.com/2018/06/lionel-the-uk-provisions-on-computer-generated-works.pdf>, last visited 10 March 2023.

²⁷ UK Intellectual Property Office, *Government response to call for views on artificial intelligence and intellectual property*, available at <https://www.gov.uk/government/consultations/artificial-intelligence-and-intellectual-property-call-for-views/government-response-to-call-for-views-on-artificial-intelligence-and-intellectual-property>, last visited 10 March 2023.

²⁸ UK Intellectual Property Office stated: “We agree that ordinary copyright appears to offer adequate protection where a creator uses AI as a tool and the work, they create expresses human creativity. But where a work is created by a computer without human creative input, the threshold for originality is unclear and the rationale for its protection – in particular the incentive effect – is not the same as that for human-authored works. In view of this, there may be a case for more limited protection, or no protection at all”. *Ibid.*

2. The shift from a negative to a positive response in China

The Chinese Copyright Law is silent on issues involving AI. Although it defines the concept of work²⁹, this article and other copyright-related regulations do not clearly define whether an object generated by AI constitutes work. This question is therefore left for the courts to consider. The attitude of Chinese courts to this issue has undergone major changes. At the beginning, the Chinese court followed the international approach by giving a negative answer, evidence of which can be found in the trial guidelines issued by the Beijing High Court (A) and the judgement of the Beijing Internet Court in the Feilin case (B). However, the Nanshan District Court in Shenzhen gave a positive answer in the subsequent Tencent case (C).

A. Negative response from the Beijing High Court. In April 2018, the Beijing High People's Court issued the "Guideline for the Trial of Copyright Infringement Cases", which clearly defined "creation by natural persons" as a condition for the identification of works subject to copyright law³⁰. Later, the judges of the Beijing High Court interpreted the provisions of the guidelines, which also involved the nature of the results generated by AI. According to Judge Qi Lei, who participated in drafting the Guideline, content generated by AI cannot constitute a work protected by the Copyright Law. As she explained, there are two reasons for this conclusion. Creation is the activity of giving form to thoughts and emotions, involving a very complex psychological and practical level of behaviour. Thus, things that are not created by humans do not belong to the category of works in the sense intended by copyright law nor do they fall within the scope of its protection. Additionally, the legislative purpose of copyright law is to encourage the creation of works. This means that only humans can be encouraged. Neither animals nor machines are likely to be encouraged by copyright law protection³¹.

Although this conclusion is not derived from a formal judgement of the Beijing High Court, it has extremely important value in China's judicial field. According to past Chinese practice, such guidelines issued by the Beijing High Court often play an important role in guiding the judgements of lower courts. In addition, the guidelines of the Beijing High Court are not only adopted by courts in the Beijing area but are often followed by courts in different provinces across the country. It is worth noting that shortly after the release of this guideline, the court in the Beijing area quickly made the first judgement involving the nature of AI-generated objects, which was consistent with the guideline.

²⁹ Article 3 of the Chinese Copyright Law rules that "The works mentioned in this Law refer to intellectual achievements that are original and can be expressed in a certain form in the fields of literature, art and science".

³⁰ Article 2.1 of the Guideline for the Trial of Copyright Infringement Cases rules: "To examine whether the object of copyright claimed by the plaintiff constitutes a work, the following factors are generally considered: (1) Whether it is a creation by natural persons within the scope of literature, art and science; (2) Whether it is original; (3) Whether it has a certain form of expression; (4) Whether it can be copied".

³¹ Qi Lei, *Interpretation Series of "Guideline for the Trial of Copyright Infringement Cases"*, available at <https://www.zhichanli.com/p/560259034>, last visited 4 March 2023.

B. Negative response in the Feilin case. In April 2019, the Beijing Internet Court made the first judgement in China on this issue. This case involves an analysis of judicial cases in the film industry, which was automatically generated by the plaintiff using Wolters Kluwer's database. The plaintiff in this case is the Feilin Law Firm, while the defendant is China's internet giant, Baidu, Inc. The plaintiff first published this report on its website on September 9, 2018. Just one day later, on September 10, 2018, an article similar to this report was published on a platform operated by Baidu. As a result, a dispute arose between the Feilin and the Baidu. In the final judgment, the Beijing Internet Court determined the nature of the computer-generated graphics and text content.

On the one hand, the Beijing Internet Court held that graphics in the report did not constitute graphic works protected by Chinese copyright law. They were produced by relevant software and data from Wolters Kluwer's database. If the data in the database change, the graph will take on a different shape. Therefore, the generation of graphic shapes is governed by data rather than a creative agent.

On the other hand, the Beijing Internet Court also held that the textual content generated by Wolters Kluwer's software and database did not constitute a literary work. The court found that such content was automatically generated based on the input of keywords selected by the plaintiff. However, the report does not convey the original expression of the thoughts and feelings of software developers or users, so the analysis should not be considered their creation. The court further held that the report was truly "created" by Wolters Kluwer, not by a natural person, so the report cannot be regarded as work in the sense of copyright law.

However, although the Beijing Internet Court determined that the report involved did not constitute a work, the court did not deny the need for protection of such achievement. According to the court, that the fact that the report does not constitute a work does not mean that the achievement has entered the public domain and can be freely used by the public. The court pointed out that the generation of the analysis report requires the input of both the software developer and the software user. If the interests of these investors are not protected, it will be detrimental to the dissemination of the final results. However, the Beijing Internet Court did not further explain what kind of protection should be granted to them³². This contradictory attitude was later supported by the Beijing Intellectual Property Court in the second instance³³. Such view may have laid the groundwork for the subsequent change in the attitude of the Chinese courts.

³² See *Beijing Internet Court, Feilin Law Firm v. Baidu Technology Company*, Judgement No. 239, 2018.

³³ Afterwards, Feilin Law Firm filed an appeal. But the Beijing Intellectual Property Court made a second-instance judgment on May 18, 2020, which supported the decision of the Beijing Internet Court.

C. Positive response in the Tencent case. From 2018 to the first half of 2019, Chinese courts formed a relatively unified view on the nature of AI-generated objects. However, since the end of 2019, the attitude of Chinese courts on this issue has undergone major changes. The Nanshan District Court in Shenzhen made a judgement on December 24, 2019, affirming that AI-generated objects can constitute works. The plaintiff in this case is the Chinese internet giant Tencent, which developed a writing robot called “Dreamwriter” in 2015. Since its inception, the software “Dreamwriter” has generated approximately 300,000 articles per year. On August 20, 2018, Tencent published a financial report completed by “Dreamwriter” on its website. On the same day, the Yingxun company copied and published the whole article on its website. Thus, a copyright dispute between Tencent and Yingxun arose.

In the Nanshan District Court's view, when judging whether the result involved in the case constitute a work, it is necessary to consider “whether it reflects the creator's individual choice, judgement and skills and other factors”³⁴. This view is no different from that of courts in other countries. However, the court held that the automatic generation of the article by the “Dreamwriter” should not be regarded as the entire process of creation because the software cannot operate completely unconsciously. It held that the generation of the article required four steps: data service, triggering and writing, intelligent verification, and intelligent distribution.

The court held further that Tencent made arrangements and choices in terms of data input, themes expressed in articles, writing styles, etc. This means that during the formation of the article, the expression actually comes from a human creator's personalized choice and arrangement. Therefore, the court concluded that the generation process used by “Dreamwriter” software met the conditions for the protection of literary works under copyright law, and the article, as the final output, constituted a literary work.

Moreover, in terms of ownership, the Nanshan District Court held that the article involved in the case was completed by multiple teams under the organization of Tencent. The production of the article reflects the needs and intentions of Tencent. Based on this point of view, the court finally determined that the article constituted a work of legal person³⁵ created by Tencent. Therefore, its copyright belonged to Tencent.

Notably, after the Nanshan District Court made the judgement of first instance, neither party appealed. This decision has thus become final. However, this

³⁴ See Nanshan District Court in Shenzhen, *Tencent Computer Company v. Yingxun Technology Company*, Judgement No. 14010, 2019.

³⁵ The work of a legal person is a special type of work regulated by Chinese copyright law. Article 11 of the Chinese copyright law rules: “Where a work is created according to the intention and under the supervision and responsibility of a legal entity or another organization, such legal entity or organization shall be the author of the work”. This work is similar to “works made for hire”, as specified in US copyright law, of which Article 201 rules: “(b) Works Made for Hire. —In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright”.

case has received widespread attention in China and sparked a huge discussion among scholars, who have still not yet reached a consensus view today.

3. The reasons for China's current choice

Why did China become the first country in the world to recognize AI-generated objects as works? According to the Tencent case, there may be several reasons why the Chinese ruling differs from judgements in other countries. First, Chinese courts have adopted a far broader standard than other countries to interpret the elements of “human participation” in the creation of works (A). Second, China currently does not hold a distinction between computer-aided and AI-generated works (B). Third, China currently uses an objective, rather than a subjective, standard when determining originality (C). Finally, if we further dig into the root causes of the abovementioned factors, we can find that the most essential reason for the differences between China and other countries on this issue lies in the special theory of copyright in China (D).

A. Adoption of a broader interpretation of “human participation”. “Human participation” has always been considered an essential element when determining whether an object constitutes a work. For example, the US Court of Appeals for the Ninth Circuit has pointed out that “it is not creations of divine beings that the copyright laws were intended to protect [...] some element of human creativity must have occurred in order for the book to be copyrightable”³⁶. Later, the Ninth Circuit denied copyright protection to an animal-made object on the grounds that animals are not human beings³⁷. The countries outside China did not recognize AI-generated objects as a work mainly due to this requirement of “human participation”. However, in the Tencent case, the Nanshan District Court did not deny the importance of “human participation” in the qualification of works. Why then is there a difference between China and other countries? The reason lies in the interpretation of this human element.

On the one hand, the countries outside China have generally adopted a narrow standard of interpretation, which is especially visible in the views of the U.S. Copyright Office. In the case of “Zarya of the Dawn”, before the AI software starts to run, software users need to input a series of instructions to guide the subsequent generation process. However, the U.S. Copyright Office held that the AI-generated results cannot be predicted by software users. In other words, users can only guide but not truly control the entire generation process. Regardless of how many instructions are given by the user before AI takes over, the final result is not formed or even “authored” by the user³⁸. Therefore, in the view of the US Copyright Office,

³⁶ *Urantia Found. v. Kristen Maaherra*, 114 F.3d 955, 958 (9th Cir. 1997).

³⁷ The court has concluded that “this monkey—and all animals, since they are not human — lacks statutory standing under the Copyright Act”, *Naruto v. Slater*, No. 16-15469 (9th Cir. 2018).

³⁸ U.S. Copyright Office stated: “the process is not controlled by the user because it is not possible to predict what Midjourney will create ahead of time”. United States Copyright Office, Re: *Zarya of the Dawn* (Registration # VAu001480196), p.8-9, available at <https://copyright.gov/docs/zarya-of-the-dawn.pdf>, last visited 5 March 2023.

the conditions for constituting a work can only be satisfied if there is “human participation” throughout the entire process of AI software operation. Only in this case do humans truly control the outcome, and the resulting object can be regarded as a human creation.

On the other hand, the Chinese Court adopted a broader standard of interpretation. According to the Nanshan District Court in the Tencent case, even if there is “human participation” in only a preparatory stage before AI operations, the requirements for constituting a work are satisfied. The essential disparity between these two methods is reflected in the different requirements for the degree of “human participation”. The U.S. Copyright Office places more emphasis on human control over creation, while China emphasizes the human influence on creative activities. The U.S. Copyright Office has much higher requirements on this point than Nanshan District Court.

Therefore, different interpretations will have a huge impact on the nature of AI-generated objects in copyright law. Notably, Chinese courts have actually made a substantial change. Chinese courts initially adopted the narrower standard of interpretation, which can be seen in the decision in the Feilin case by the Beijing Internet Court³⁹. When it came to the Tencent case, the court switched to this broad interpretation.

This shift also represents a new trend among Chinese courts. From approximately 2019 to 2020, in addition to the Tencent case, Chinese courts generally shifted from the narrow standard to this broad interpretation. For example, in a case involving automated video recording on a hot air balloon, the court of first instance refused to recognize the automated recording as a work in 2016. The court held that when the balloon was lifted into the sky, there was no human control over the recording. However, in the second instance of the case held in 2020, the Beijing Intellectual Property Court recognized the result as a work. In the view of the court, although the recording is automatic, there are still elements of human selection in the shooting process, such as the selection of the position of the video recorder and the setting of shooting parameters in advance⁴⁰. Later, in 2021, the Beijing High Court made a final judgement that supported the second ruling. This case has aroused widespread concern in China, especially on the interpretation of “human participation”. Arguably, the appeals court significantly weakened the requirement for this element.

Why are there different ways of interpreting “human participation”? Or why has China adopted such a broad standard of interpretation? This is probably related

³⁹ In the Feilin case, the Beijing Internet Court regarded the creative process as beginning with AI operation and proceeding to the output of results. Since the AI user only input specific information and instructions before its operation, the court held that there was no human participation in the creative process. See Beijing Internet Court, *Feilin Law Firm v. Baidu Technology Company*, Judgement No. 239, 2018. However, the Nanshan District Court expanded the scope of the creative process in the Tencent case by specifically emphasizing that the setting of AI software parameters and the input of instructions should be included as part of creative activities.

⁴⁰ See Beijing High Court, *Gao Yang v. Youku Company, Momo Technology Company, Tudou Company and Golden Vision (Beijing) Film and Television Culture Company*, Judgement No. 3326, 2020.

to China's current lack of distinction between computer-assisted and AI-generated works, which we will continue to discuss below.

B. Lack of distinction between computer-assisted and AI-generated results. Before Chinese courts debated the nature of AI-generated objects in copyright law, Chinese scholars had already started to discuss the issue. Although different scholars have different opinions, they have formed a consensus that currently, AI cannot generate a result independently and can only serve as a tool in creation⁴¹. In other words, Chinese scholars have not truly distinguished between computer-assisted objects and AI-generated objects. In their view, the AI issues currently discussed by scholars in copyright law still involve only computer-assisted works. This point of view makes it easier for Chinese scholars and courts to regard AI as a tool used by humans and its generated objects as works. Moreover, in all computer-assisted works, even if humans do not control the entire creative process, as long as the operation of the computer comes from human instructions, the final results can be deemed to meet the requirements for “human participation”.

For example, in the Tencent case, although the article involved clearly stated at the end that “this article was automatically written by the Tencent robot Dreamwriter”, Tencent, as the plaintiff, defined the article as an object produced by its staff with the assistance of “Dreamwriter”⁴². In other words, “Dreamwriter” is defined by Tencent as a tool to assist humans in generating articles. Such claims obviously affected the court's final ruling, as the Nanshan District Court directly defined “Dreamwriter” as a tool used by Tencent. Under the influence of this perspective on computer-assisted objects, the judgement of the Nanshan District Court is no longer surprising. The court will naturally recognize this result as a work completed by human beings using a tool. The only special characteristic about this case is that the tool is relatively complicated.

After the Tencent case, many Chinese judges and scholars also expressed support for the judgment of the case. It is mainly because China lacks a distinction between computer-assisted and AI-generated objects that they expressed such support. For example, According to Judge Zhou Bo from the Supreme Court of China, “the work identified by the Court in the Tencent case was not completely detached from human intellectual activities. The textual content was not created autonomously by an AI, but merely the result of a human intellectual activity assisted by an AI. In this sense, products formed with the participation of AI are of course

⁴¹ For example, in the view of Professor Wang Qian, a representative scholar in China who opposes identifying AI-generated objects as works, this result is only derived from an algorithmic operation set by humans. In this generation process, AI has no independent creative space at all. In other words, in his view, artificial intelligence itself does not have the ability to make special choices. See Wang Qian, *The Qualification of Content Generated by Artificial Intelligence in Copyright Law*, „Science of Law”, 2017, No. 5, p. 151-152.

⁴² See Nanshan District Court in Shenzhen, *Tencent Computer Company v. Yingxun Technology Company*, Judgement No. 14010, 2019.

protected by the Copyright Law”⁴³. The scholars generally believe that the article in the case constitute in fact the result completed by ordinary human with the assistance of AI technology. Moreover, they believe that the AI element in this case should not be overemphasized⁴⁴.

Different from China, courts and scholars in other countries have generally distinguished AI-generated objects from computer-assisted objects, as has been introduced earlier. On the basis of this distinction, the courts of these countries outside China have made different qualifications on the nature of these two objects. Computer-assisted objects are recognized as works, while AI-generated ones are not. Under this distinction, objects that rely on AI for automatic generation can no longer be classified as computer-aided works. For example, in the case of “Zarya of the Dawn”, the copyright applicant repeatedly stated to the U.S. Copyright Office that the AI software she uses is similar to Adobe Photoshop. In other words, she actually intended to classify her AI-generated results as computer-aided works that can be protected under US copyright law. However, the U.S. Copyright Office quickly recognized her intent and rejected her claim. It rejects the idea that AI software is merely a tool because the user cannot control the software throughout its whole running time⁴⁵.

We can therefore reasonably assume that if other countries outside China have not introduced this distinction today, it is very likely that they will directly classify an object automatically generated by AI as computer-assisted work before recognizing it as a work. Therefore, in a sense, rather than saying that China has made innovations in the definition of AI-generated products, it is better to say that China is too outdated or conservative to introduce new concepts in the field of AI.

⁴³ Zhou Bo, Artificial Intelligence and Copyright Protection - Judicial Practice in Chinese Courts, available at https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/conversation_ip_ai/pdf/ms_china_1_en.pdf, last visited 25 March 2023.

⁴⁴ See Guo He, *The Legal Nature of Artificial Intelligence Creations: Comments on the Copyright Infringement and Unfair Competition Disputes between Shenzhen Tencent Company and Shanghai Yingxun Company*, in Jiang Bixin, *Report on the Implementation of the Rule of Law in China* (2021), People's Court Press, 2021, p. 635.

⁴⁵ U.S. Copyright Office stated: “Rather than a tool that Ms. Kashtanova controlled and guided to reach her desired image, Midjourney (AI software) generates images in an unpredictable way”, United States Copyright Office, Re: Zarya of the Dawn (Registration # VAu001480196), p. 9, available at <https://copyright.gov/docs/zarya-of-the-dawn.pdf>, last visited 5 March 2023.

C. Adoption of an objective standard of originality. Originality has long been regarded as the core element of copyright protection. For a long time, various countries have generally adhered to a subjective standard in defining originality, that is, to evaluate originality by emphasizing the connection between the author and the work. On the one hand, as the countries of continental law have long been influenced by personality theory, originality is traditionally defined as the imprint of the author's personality on the work. Therefore, a subjective conception of originality dominates. On the other hand, countries of copyright laws under the Anglo-American legal system also hold a subjective standard of originality⁴⁶. These countries are influenced by labour theory, which also emphasizes the connection between author and work. For example, the Australia High Court has pointed out that “originality for this purpose requires that the literary work in question originated with the author”⁴⁷.

For a long time, China also adopted a subjective standard of originality. However, in recent years, Chinese courts have begun to adopt an objective standard of originality. For example, in the Feilin case, although the Beijing Internet Court denied that the AI-generated objects were copyrightable works on the grounds that there was no “human participation” in its generation, the court held that the result was original. In the view of the court, this AI-generated content involves judicial analysis of the film and entertainment industry, which reflects the selection, judgement, and analysis of relevant data. In other words, the requirement of originality can be satisfied even in the absence of “human participation”. This makes it easier for the court to ignore the connection between the author and the work, which in turn weakens the court's requirement for “human participation”. Therefore, when it came to the Tencent case, the ruling made by the Nanshan District Court was a natural result.

In contrast, countries other than China still strictly follow the subjective standard of originality when determining the copyrightability of AI-generated objects. As such, they naturally place greater emphasis on the element of “human participation” because this element is precisely the key to meeting the subjective standard of originality. If the achievement does not reflect the author's intellectual choice, the protection requirements cannot be met. For example, in the case of “Zarya of the Dawn”, the U.S. Copyright Office has repeatedly emphasized the importance of human control. In their view, although users of AI software can influence the style of the results, they cannot determine the final content of the results⁴⁸. Therefore, the link between software users and the AI-generated result cannot be established, which naturally leads to the conclusion that the result cannot be protected.

⁴⁶ See Lionel Bently, Brad Sherman, *Intellectual Property Law*, Oxford University Press, 2014, p.117.

⁴⁷ *IceTV Pty Ltd v. Nine Network Australia Pty Ltd*. [2009] HCA 14; 239 CLR 458.

⁴⁸ U.S. Copyright Office stated: “A person who provides text prompts to Midjourney does not ‘actually form’ the generated images and is not the ‘master mind’ behind them”. United States Copyright Office, Re: Zarya of the Dawn (Registration # VAu001480196), p. 9, available at <https://copyright.gov/docs/zarya-of-the-dawn.pdf>, last visited 5 March 2023.

D. The most fundamental reason: strong principles of utilitarianism without natural law in China. Above, we have analysed the three direct reasons that prompted Chinese courts to take the lead in treating AI-generated objects as works. Therefore, why does China have such a substantial difference from other countries in these three aspects? The root cause of this result is related to China's special theory of copyright law.

In the field of copyright, it has long been recognized that there are two distinct systems: the author's right system and the copyright system. The former originated in France and is adopted by countries of civil law, while the latter originated in the UK and is adopted by countries of common law. The system of author's right is often seen as heavily influenced by natural law, which places more emphasis on the protection of authors. Copyright law, on the other hand, is perceived as influenced by utilitarianism, which places greater emphasis on the public interest⁴⁹. However, this theoretical distinction is not entirely accurate. Copyright law countries have also been influenced by natural law. For example, as the birthplace of Locke's labour theory, the UK introduced labour theory into copyright law very early on. The establishment of the Queen Anne Act of 1710 was already influenced by labour theory⁵⁰. To this day, natural law theory is still embedded in UK copyright law⁵¹. The United States is also influenced by labor theory, and the U.S. Supreme Court pointed out that "the rights conferred by copyright are designed to assure contributors to the store of knowledge a fair return for their labors"⁵². Under the influence of natural law, both the author's right and the copyright emphasize the value of human beings in the creation of works.

Returning to the perspective of Chinese law, China is neither a country of copyright law nor an author's right country. In addition to these two systems, there is actually a third system, namely, the work right system⁵³. This system originated in Japan and was successively adopted by South Korea, North Korea, mainland China and Taiwan. The legislators of work right created a new system by simultaneously transplanting the rules of author's right and copyright. However, different from countries using either of the previous rights systems, these countries with work right are located in East Asia, where there is no natural law tradition, so they are generally based on utilitarianism as the theory of protection of works. Therefore, in these areas, the question of whether an object will be protected as a work depends on whether such protection can promote the public interest. The value of "human participation" is placed in only a less important position.

⁴⁹ See André Lucas, Henri-Jacques Lucas, Agnès Lucas-Schloëtter, *Traité de la propriété littéraire et artistique*, LexisNexis, 2017, p. 43.

⁵⁰ The establishment of the Queen Anne Act in 1710 was derived from a proposal submitted by Edward Wortley on January 11, 1710, which mentioned that "without the Consent of the Authors thereof, in whom the undoubted property of such books and writings as the product of their learning and labour remains".

⁵¹ See Lionel Bently, Brad Sherman, *Intellectual Property Law*, Oxford University Press, 2014, p. 36.

⁵² *Harper & Row v. Nation Enterprises*, 471 U.S. 539, 546 (1985).

⁵³ However, due to the relatively limited number of countries adopting this system, it has been often ignored.

The reason why Chinese courts regard AI-generated objects as works is essentially due to the influence of this strong tradition of utilitarianism. In an interview with Zhou Lingjun, one of the judges who participated in the Tencent trial, he claimed that the qualification of AI-generated results as works is in line with the legislative purpose of China's copyright law, which aims to stimulate creation. Specifically, the incentive function of such a qualification is reflected in two aspects: it can motivate people to use AI to carry out creative activities, and it can promote the development of the AI industry⁵⁴. Therefore, Chinese judges have recognized that such a qualification will definitely promote the creation and even the development of industries.

4. Potential future of China's choice

China made a special decision on the issue of AI-generated objects mainly on account of its special theory and rules in copyright law. Therefore, will the current judgement of the Chinese court be temporary or relatively continuous in the future? In other words, will China change its rulings in the future? (A) Moreover, what kind of impact will China's decision have on the world? Does this Chinese decision represent the future of global jurisprudence on this issue? (B) This chapter will respond to these questions.

A. Will China continue to treat AI-generated objects as works? Although the verdict in the Tencent case has been handed down, the issue surrounding the nature of AI-generated objects is not over. Since China does not follow the tradition of case law, the direction of Chinese courts may still change in the future. Therefore, China's future rulings on this issue remain uncertain, but we can try to predict them in advance with the existing information.

Most likely, Chinese courts may continue to treat AI-generated objects as works. After the Tencent case, China's Supreme Court has expressed a positive attitude towards the verdict. In April 2021, the Supreme Court selected the Tencent case as one of the 50 model intellectual property cases in Chinese courts in 2020. Although this statement of the Supreme Court does not involve a judicial judgement, it will play an important guiding role in trials in the Chinese courts in the future. Here, we need to provide a necessary explanation of China's model or "typical" case system. Unlike most civil law countries, China has set up a "case guidance" system that aims to promote consistency in the application of the law by different courts across the nation. This system includes a special provision for "typical cases", which the Supreme Court recommends as guidance for lower courts⁵⁵. According to Article 9 of the "Guiding opinions of the Supreme Court on unifying the application of law and strengthening the search of similar cases", lower courts can use the typical cases

⁵⁴ Tian Yuzhuang, "The first case to identify articles generated by AI as a work was ranked among the top ten cases of people's courts in China in 2020", available at <https://www.dutenews.com/p/1194777.html?isRecommendHref=1>, last visited 16 March 2023.

⁵⁵ See Zhouqiang, promotion of uniform implementation of laws by playing the role of case guidance, available at <https://www.court.gov.cn/zixun-xiangqing-13007.html>, last visited 19 March 2023.

released by the Supreme People's Court as a reference for judgements⁵⁶. This means that the Supreme Court does not require lower courts to make judgements by directly emulating typical cases but only requires these typical cases to be used as a reference. However, based on past experience in judicial practice, almost all Chinese courts follow the rulings in typical cases. Therefore, after the Supreme Court included the Tencent case as a typical case, there is a high probability that Chinese courts will continue to follow the rulings from the Tencent case in the future.

However, China may no longer recognize AI-generated objects as works in the future. Although China has set up a system around the "typical case", it is ultimately not a country of case law. Chinese courts may still change their interpretation of certain provisions of the Copyright Law in the future. Here, we cannot ignore the influence of Chinese scholars on court decisions. Even after the Tencent case, there is still a large diversity of opinions among Chinese scholars on the nature of AI-generated objects. Many scholars still express opposition to the verdict in the Tencent case. Some of them have begun to explore the reasons why China has such a substantial difference from other countries in identifying the nature of AI-generated objects. As mentioned above, among these reasons, one directly lies in the lack of distinction between computer-assisted and AI-generated results, which was largely related to the limited understanding of the issue by Chinese scholars at the time. However, the research of Chinese scholars on this issue is also constantly improving. Moreover, research in other countries on this issue has also been continuously introduced into China. Once Chinese scholars introduce this distinction in the future, it is likely that Chinese courts will no longer use the concept of computer-assisted objects to evaluate the nature of AI-generated objects. In this regard, the attitude of Chinese courts on this issue is likely to change.

B. Will other countries follow China's choice? Above, we briefly analysed the impact of the Tencent case in China in the future. Here, we try to analyse the potential impact of China's current choice on the world. In fact, over the past three years since the Tencent case was announced, Chinese scholars have actively introduced the judgements in the Feilin case and Tencent case to other countries⁵⁷. These decisions have already been noticed by some researchers outside China and mentioned in the reports of the administrative agencies in some countries other than China. However, this does not mean that China's choices will definitely have an impact abroad. Since there are differences in copyright laws among various countries, we should also distinguish between countries when evaluating China's potential impact.

⁵⁶ The guiding opinions can be found at <https://www.court.gov.cn/zixun-xiangqing-243981.html>, last visited 19 March 2023.

⁵⁷ For example, the Professor Wan Yong from Renmin University of China has given a brief introduction, See Wan Yong, Lu Hongxuyang, *Copyright protection for AI-generated outputs: The experience from China*, „Computer Law & Security Review”, 2021, No. 3, available at <https://www.sciencedirect.com/science/article/pii/S0267364921000546>, last visited 20 March 2023. There are also some Hong Kong scholars who introduce these cases to countries outside China, see

On the one hand, it is unlikely that China's definition will have a substantial impact on countries within the traditional systems of copyright or author's right. These traditional countries are generally influenced by natural law. The countries in the copyright system are more influenced by labour theory, while the countries with author's right are more influenced by personality theory. Therefore, they all generally emphasize the connection between the authors and the works. In particular, these countries are far stricter than China in the interpretation of the element of "human participation" in the creation of works. Since the entire process of AI generation cannot be completely controlled by humans and the results it produces cannot be accurately predicted by humans, it is difficult to think that there is a connection between the author and the work that results. Therefore, without drastic changes in the theory of copyright law, it is unlikely that these countries will consider AI-generated objects as works.

On the other hand, China's interpretation may have a potential impact on East Asian countries or some developing countries. These countries do not have a tradition of natural law and are generally influenced by utilitarianism. As mentioned above, the fundamental reason why the Chinese court determined that AI-generated objects constitute works stems from the influence of strong principles of utilitarianism, which emphasizes that copyright law is intended to promote innovation. Therefore, if the protection of AI-generated objects can promote the development of the industry, the court tends to recognize such objects as works. It should be noted that it is difficult to justify this assumption, and much empirical data are needed to prove its rationality. However, the judge of the Nanshan District Court in the Tencent case directly upheld that this assumption was well established without providing sufficient explanation. However, in the future, China's industrial practice can provide a reference for other countries in the future. If China's AI industry achieves good results based on the qualification of AI-generated objects as works, then strong utilitarianism is likely to prompt other countries to make similar determinations. At that time, since there is no interference from natural law in these countries, there will be no great obstacles from legislators or courts on such definitions.

However, it should be noted that the above are just our predictions, and the direction of various countries in the future may also move in unexpected directions. Those countries affected by the law of nature may also accept China's existing views. For example, at the AIPPI⁵⁸ 2019 annual meeting held in London, the final report pointed out that "the AI generated work should be eligible for Copyright protection where there are human data selection criteria for the input into the AI"⁵⁹. In other

Kenneth-Southworth Ernest, Li Yahong, *AI's future impact on copyright for AI-generated works: insights from Chinese case law*, „European Intellectual Property Review”, 2022, Vol. 44, No. 7, p. 418-427.

⁵⁸ The International Association for the Protection of Intellectual Property (AIPPI, Association Internationale pour la Protection de la Propriété Intellectuelle), is a very important non-governmental organization in the field of international protection of intellectual property.

⁵⁹ AIPPI, Resolution on Copyright in artificially generated works, p. 3, available at <https://aippi.soutron.net/Portal/Default/en-GB/DownloadImageFile.ashx?objectId=6660&ownerType=0&ownerId=35>, last visited 22 March 2023.

words, even if humans cannot exercise full control over the AI generation process, as long as they set selection criteria for the input data, the result can be recognized as a work. This conclusion has completely overturned the point of view of those traditional countries affected by natural law, such as the opinion of the U.S. Copyright Office in the case of “Zarya of the Dawn”.

Furthermore, in France, a new report published in 2020 by the Superior Council of Literary and Artistic Property also recognized the possibility of future protection of AI-generated objects. It stated that “if we accept a certain reinterpretation of the criteria for access to protection, it becomes possible to accommodate products generated by AI within copyright”⁶⁰. Since France is one of the countries most influenced by personality theory, this conclusion is quite astonishing. It is particularly noteworthy that this report specifically mentions the Tencent case in China⁶¹. We cannot confirm that this conclusion in the French report comes from the impact of the Chinese case, but it can be seen that China's special choice is likely to provide a reference for other countries. This may also indicate that a more inclusive and open attitude may be adopted in evaluating whether AI-generated objects can be protected in the future.

5. Conclusion

Chinese courts have defined AI-generated objects as original works protected by copyright. With China's affirmation, this issue has become increasingly controversial worldwide. Therefore, the European Commission pointed out in its report that “the protection of AI-generated works seems to be problematic”⁶². However, China has not reached a complete consensus on this issue. Especially in the academic field, many scholars in China question this decision.

Additionally, it is puzzling that in the past 4 years in China, no courts have made new decisions on AI-generated objects in the copyright field. Chinese courts may still change their views on this issue in the future. We will also continue to track the new viewpoints of Chinese courts and scholars in this field. It should be noted, however, that the Chinese legislator remains, for the time being, silent on this issue.

⁶⁰ Conseil supérieur de la propriété littéraire et artistique, Mission intelligence artificielle et culture, Rapport final p. 35, available at <https://www.culture.gouv.fr/content/download/263327/file/Synth%C3%A8se%20Rapport%20CSPLA%20Intelligence%20artificielle.pdf?inLanguage=fr-e-FR>, last visited 22 March 2023.

⁶¹ Ibid, p. 48.

⁶² Joint Research Centre of the European Commission's science and knowledge service, Artificial Intelligence: A European Perspective, Publications Office of the European Union, Luxembourg, available at <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC113826/ai-flagship-report-online.pdf>, last visited 22 March 2023, p. 66.

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