

Analysis on Whether Artificial Intelligence Can Replace Human Screenwriters

Yihe Song^{1,*}

¹ Beijing No. 8 Middle School, Beijing, China, 100000

*Corresponding author. Email: 13681511832@136.com

ABSTRACT

In this of rapid development era, artificial intelligence has a great impact on all walks of life. This paper mainly studies the influence of artificial intelligence on screenwriters and whether it could replace human screenwriters. Through collecting reading materials, this paper analyzes the problems that whether artificial intelligence can replace artificial scriptwriter in this paper. After research and analysis, this paper believes that artificial intelligence cannot replace human screenwriters. In addition, this paper will provide reference for the research of artificial intelligence on literary creation.

Keywords: Artificial Intelligence, Screenwriting, Literary Creation, Benjamin, Sun Spring

1. INTRODUCTION

At the beginning of the third decade of the 21st century, the emergence of artificial intelligence began to comprehensive in the human life, there are shuttle express unmanned vehicle in the campus, have the ability to intelligent auxiliary vehicles, such as intelligent information recommendation, shopping smart recommendation, intelligent speech recognition, the application of artificial intelligence great convenience to people's life, and improve the citizens' well-being. In addition, some scenes with less contact with many people are also affected by artificial intelligence, such as intelligent medical treatment. With the help of artificial intelligence, CT can be quickly made a preliminary judgment to improve diagnostic efficiency. Another example is intelligent mine, with the help of artificial intelligence, reasonable operation and production arrangements, improve the safety factor but also improve the production efficiency. Smart transportation uses artificial intelligence to ease congestion in cities. And agricultural farming, which is efficient and safe with the help of ai expert systems, has promoted great social progress.

The maturity and wide application of artificial intelligence technology indeed marks the arrival of a new era. When we are immersed in the great achievements of artificial intelligence, some people criticize artificial intelligence constantly and express deep concerns. The late Hawking is actually a strong opponent of artificial intelligence. Hawking, it should be said, is not opposed

to ai technology per se, but worried that super AI might bring a series of unpredictable problems to human beings. Hawking once said, "the short-term impact of ai depends on who controls it, and the long-term impact depends on whether it can be controlled" [1]. The development of artificial intelligence is getting faster and faster. Not only Hawking, but also many people are arguing about whether there are moral limits in the development of artificial intelligence. In recent years, AI has continued to exert influence in film and television, not only in academic fields such as medicine, but also in script writing. So many people are wondering what impact AI will have on literary creation, and whether it could evolve to replace human screenwriters one day. If it really can develop to this degree, the human's concerns about artificial intelligence will become a reality, and even human beings will go to the point of being enslaved by artificial intelligence.

Artificial intelligence, English abbreviation for AI, it is a new technical science that studies and develops the theory, method, technology and application system for simulating, extending and expanding human intelligence. [2] At present, artificial intelligence has been applied in many fields, and has surpassed human beings in some fields. For example, the newly born AlphaGo defeated the human world champion Of Go, Lee Shishi and Ke Jie. These performances beyond human beings have intensified the debate and concern of human beings, arguing about the ethical issues of artificial intelligence alone, worrying that artificial intelligence can completely replace human beings, among which there is a claim that

artificial intelligence can replace traditional screenwriting. The future development of science and technology is difficult to predict. There are obstacles that, at least for now, seeming insurmountable. It is hard to imagine a future in which classic scripts like *Shaw shank Redemption* are created by AI, and even harder to imagine that these AI scripts are trying to say to people and influence them if that happens.

2. ANALYSIS OF SCRIPTWRITER CREATION FACTORS

2.1. Passion is an integral part of creation

Screenwriting is a kind of literary creation, so let's go back to the definition of literary creation. It is a special complex spiritual production, is a writer's aesthetic experience of life, through artistic processing to create literary works for readers to enjoy the creative activities, including poetry, novels, essays, plays and scripts. Creation as a kind of spiritual production, the process of thinking and feeling is essential to creation. First of all, real literary creation is based on the writer's deep interest in literature. Only when a writer has a strong interest in literature, he will continue to love and fear literature, and will devote his whole body and mind to literary creation, even if he is persecuted, imprisoned, exiled and beheaded for this reason, such as Pasternak, Tsvetaeva and Solzhenitsyn. A person who has no interest in literature will be indifferent to any excellent literary works, and of course will not develop enthusiasm for reading. Because as we all know, a writer is first and foremost an avid reader, and a good writer must also be a good reader. Only extensive reading can broaden his vision, activate his creative enthusiasm, awaken his literary conscience and stimulate his literary creativity.

2.2. Creation comes from life

Secondly, writers' literary creation often reflects the concept of "three points of creation, seven points of life" and "from life, higher than life". [3] Scriptwriter is the same. If a scriptwriter wants to write the truth of The Times, the truth of life and the truth of humanity, he must devote himself to the deep observation, experience and thinking of The Times and society, to "fight" with real life and ignite the sparks of literature and art with his own fire of life. A screenwriter, only do this step, he can truly understand the era, grasp the human nature, express the writers inner most real idea and thought of society. This kind of experience is not fully expressed by the meagre vocabulary of computer science, such as storage, extraction, input, output. The lack of experience naturally makes artificial intelligence creation cannot be equated with human cultural creation. Take Benjamin, a recursive neural network developed by AI researchers at New York University, who wrote a book called *Sun Spring* in June 2016. [4] It is believed that the first reaction of most

people after watching this short film is that they do not understand what this short film is saying. It feels like all the elements are mixed together and it is very chaotic. The story begins with H and H2 quarreling. Later, Male C joined in, holding what looked like a tablet computer, and a flash of green light swept over his head. They were having a very dramatic conversation, one NTR, one brain war, one murder somewhere. The nine-minute film, set in a vague future, is a mix of killing and a love triangle.

2.3. Good literature are innovative and unique

Truly successful literary and artistic works are based on the personal and life experiences of writers, artists and scriptwriters, and thus have unique life characteristics. How does artificial intelligence compose scripts? Take Benjamin, an AI screenwriter who wrote *Sun Spring* in 2016, for example. He needs to receive information from dozens of sci-fi movie scripts before he can write. That includes classics like "Highlander Endgame", "Ghostbusters", "Interstellar" and more. [5] It then breaks the script down to letter levels. The main reason for this is that it can predict which letters are more likely to be used together in the writing of a science-fiction script. After completing this step, Benjamin generates his own sentences, rather than simply copying and pasting from the input corpus. Moreover, Benjamin would extract the characteristics that the script was different from the general literary works, so Benjamin learned to imitate the structure of the script. [6] Thus, artificial intelligence works are simply the results of a computer retrieving and combining data from a database of existing works, which inevitably gives a sense of *deja vu*. In addition, the literary and art works should not only reflect personality from different writers, but also should reflect the same writer's different works, and in this regard, artificial intelligence is powerless, the work of artificial intelligence can do is to mimic human writer's style, without his personality style, there are specific input is fixed style.

2.4 Creation requires human rational thinking

Finally, good screenplays cannot leave rational thinking, it should be capable of embodying the essential characteristics of artificial intelligence - the rational ability (like people to think and reason). There is essential difference between the human who can understand the meaning of a word or a story to express deep meaning, thus to create a unique story. The computer operation ability of symbols are mainly through the implementation of some rules of the algorithm and performance. According to *Sun Spring*'s director Oscar, when the three main actors get together to read the script, "everyone is laughing their heads off". Although every sentence Benjamin writes reads smoothly, or at least completely, when you put them all together, they become incomprehensible.

Oscar: Thank you for giving me an opportunity to interview Benjamin. Here is part of the conversation:

Reporter: Are you an author?

Benjamin: Yes you know what I'm talking about. You're a brave man.

Reporter: Whether you might want to join the Writers Guild of America, a union for writers.?

Benjamin: Yes, I would like to see you at the club tomorrow.

In a few short questions and answers, it is not difficult to see that Benjamin could not understand the meaning of a sentence at all. Instead, he simply extracts key words from the question, searches in the database and compares the text to make an answer. This means that Benjamin cannot understand these symbols, and it is human beings who really make symbols. This also indicates that artificial intelligence cannot use these symbols in literary and artistic creation, because it does not know the meaning of symbols at all. Therefore, without passion and interest, and without life experience, artificial intelligence without rational thinking ability can make people unable to understand what it wants to express, and how can they create works that can arouse thinking and resonance?

There may be some examples to counter the above points, here the Microsoft's Xiao Bing in understanding the Chinese 519 poets now, after thousands of times of iteration, he writes out tens of thousands of modern poem, an anthology "sunshine lost the window", the poems also have a lot of famous poet's recommendation, they think it has a hazy aesthetic feeling. [7] But how do these poems come about? They simply imitate the poets' style, take words and phrases from previously skimmed lines and put them together into new sentences. It is highly unlikely that one of the millions of combinations will happen to produce a "perfect" sentence, and literary creation is not a science of probability, which happens not to be touched. Admittedly, after a lot of learning, artificial intelligence can write poems that are difficult to distinguish from fake. Behind but think carefully, these poems have affection, have behind the life experience, have wanted to express the core idea, just learn to modern poetry writing paradigm, mastered the skills, the copying "creation" makes no difference with normal human, believe in most people's eyes, plagiarism is not at all, manufacturing is not equal to create. If there is no interest, enthusiasm, experience and other feelings and precipitation, "written" poems are doomed to be spiritless and lifeless, not to mention originality and individuality, which are the real vitality of poems. Neither Microsoft Ice nor any other AI writing is based on their interest or passion for literature. Their writing is simply the execution of the developer's orders, the cold enforcers. If you ask Xiaoice what she wants to express in one of the poems, she will not be able

to answer, because she has no idea at all. It is true for AI screenwriters.

3. THE INFLUENCE OF ARTIFICIAL INTELLIGENCE ON SCRIPTWRITER CREATION

3.1. Artificial intelligence cannot fundamentally replace human screenwriters

AI is indeed developing rapidly now, just like AlphaGo beating the World champion of Go, which is indeed a symbolic event of the progress of artificial intelligence. However, in go and literary creation such as scriptwriter, AlphaGo can learn from a large number of chess charts instilled by human beings, and continue to train with its own great computing power. Precipitation into a massive rule library, predict the opponent's possible chess pieces, and algorithm prediction in the system, and then in the changing situation, adjust the distribution list of the probability of the fall of the chess pieces in the network, so as to find a move with a better chance. [8] This is itself the domain of calculation and reasoning. However, scriptwriters and other literary creations are completely different. They are the spiritual sustenance and spiritual comfort of human beings, and sometimes they also represent a kind of inheritance. Their evaluation criteria are completely subjective and cannot be proved to be right or wrong, and cannot be selected through probability theory or quantified assessment. Artificial intelligence cannot go deep into real life to experience the spirit of The Times, social style and human beauty and ugliness, let alone to experience the real society. The material of his creation comes from the big data of the Internet. This is not to say that it is impossible to write works based on big data, but that if creators lack the emotional investment and life perception of writing materials, it will be difficult to have a deep grasp and flexible use of these materials, and it will be difficult to create new aesthetic and value beyond conventional wisdom.

Then some people may say that artificial intelligence cannot be replaced at the current stage, it does not mean that it will never be replaced, so let's go back to the development stage of artificial intelligence. The first stage is the weak AI, which is good at one aspect of artificial intelligence, such as over AlphaGo go world champion, but it will only play chin chess, you have to let it help your car it will surely not operation, the current artificial intelligence also are at this stage of the society, and at this stage, artificial intelligence is not a lot in the field of more than human. The second stage is strong artificial intelligence, which refers to the artificial intelligence that can be on par with human beings in all aspects. It can do all the mental work that human beings can do. It is much more difficult to create strong artificial intelligence than weak artificial intelligence, and it

cannot be done at present. For example, an AI robot at this stage may play go, chess and table tennis, and be a generalist in many fields. The third stage is superartificial intelligence, which refers to being much smarter than the smartest human brains in almost every field, including technological innovation, general and social skills. [9] From the perspective of these three stages, the third stage is the most possible for literary creation in the description. However, it is not clear whether this stage can be realized in the end, and it may only stay in the theoretical stage forever. Suppose to reach the third stage, but whether it can form the emotion, emotional ability, unlikely, artificial intelligence is the ability of a large-scale computing under super fast learning ability, the lack of growth experience, lack of experience, the lack of communication, lack of interest, lack of enthusiasm, these losses is the necessary condition of literary creation and the without feelings, There is no way to produce literature, even if it can produce thousands of articles quickly, it is still soulless.

3.2. Artificial intelligence can be used as an assistant to human beings

Since artificial intelligence cannot replace human screenwriting and other literary and artistic creation, does that mean we do not have to evolve in this direction? It is not. It should be acknowledged that the application of artificial intelligence in literary and artistic creation has significance to promote the development of literature and art, no matter in terms of means of expression, creative pattern or expansion of imagination space. For example, "Sunshine Lost the Window" by "Xiao Bing" has given some inspiration to contemporary poets. However, as far as the present situation is concerned, due to the essential difference between the computer which belongs to the machine and the human brain which has the spirit of life, artificial intelligence has not yet created, and in fact, it is impossible to create a truly human realm of works. To say the least, his work, even if the creative significance of the recognition, is still only an alternative in the art, not equal to the replacement of human creation. The evolution of artificial intelligence in this direction has obviously improved our production efficiency in some text fields. As some structured strong press release, the listed company earnings are quickly generated by means of artificial intelligence, these earnings can greatly improve the working efficiency and current capacity. Editor of the robot of artificial intelligence provides text classification, participles, keyword extraction ability, it can replace a lot of manual work needs to be done before, and the quality is better than humans do. All these can improve the efficiency of post-creation text processing. [10] As we can see, the areas where AI is doing a good job with words right now are precisely those areas that do not require emotional input.

4. CONCLUSION

Artificial intelligence cannot replace human writers such as literature, the progress of the human nature is endless, along with the advance of computer science and artificial intelligence (AI) of those creative ability, no doubt will continue to improve, but in terms of development prospects, because it cannot yet imagine how computer with human brain create the necessary condition such as emotion, experience. Therefore, it is impossible that computer creation can completely replace human brain creation. It can be believed that as long as the computer cannot overcome the gap between the human brain, human literature and art will not end, really excellent literary and artistic works, still need human's own spiritual creation. Born from artificial intelligence, Shakespeare and Mark Twain are not realistic, but they can play more and more important roles in the literature work, the human from some trival, mechanical and repetitive work, let people have more time into more meaningful work, such as richer the creation of the soul. So, AI cannot replace literature, but it can be a great help of human beings, not just screenwriters, but all literary creations.

AUTHORS' CONTRIBUTIONS

This paper is independently completed by Yihe Song.

ACKNOWLEDGMENTS

First of all, I would like to express my gratitude to professor. I have learned a lot of knowledge that I have never dabbled in before in this class, which has also provided me with good ideas for the research direction of this paper. Then I also want to thank the teachers, who are very patient and careful to guide me how to write a complete paper, and tell me how to polish my paper and how to search and collect more comprehensive information.

REFERENCES

- [1] Zhang Yue& Jing Xinyu. 10 questions about Stephen Hawking [J] *Journal of FANGYUAN*, vol.9, 2018, pp.56-57.
<http://dx.chinadoi.cn/10.3969/j.issn.1674-5396.2018.09.026>.
- [2] Zhao Weiguo. Application of artificial intelligence in risk-oriented Audit [J] *Journal of Co-Operative Economy & Science*, vol.24, pp.146-147.
<http://dx.chinadoi.cn/10.3969/j.issn.1672-190X.2021.24.060>.
- [3] Wang Mei. Research on the development strategies of film scriptwriters from the perspective of big data [J] *Journal of Movie Literature*, vol.5, 2017, pp.15-17.

<http://dx.chinadoi.cn/10.3969/j.issn.0495-5692.2017.05.004>.

- [4] Wen Jiabao, Art - from life above life [J] Journal of Brand Research, vol.35, 2020, pp.294.
<http://dx.chinadoi.cn/10.3969/j.issn.1671-1009.2020.35.235>.
- [5] Peng Wei. Fission and return [J] Journal of Movie Literature, vol.17,2021, pp.52-57.
<http://dx.chinadoi.cn/10.3969/j.issn.0495-5692.2021.17.011>.
- [6] Zhao Haicheng&Chen Changye, Artificial intelligence has triggered a new wave of revolution in film creation and production [J] Chinese Literary criticism, vol.11, 2019, pp.16-23.
<https://kns.cnki.net/kns/detail/detail.aspx?QueryID=2&CurRec=1&recid=&FileName=ZWPL201911003&DbName=CJFDLAST2019&DbCode=CJFQ&yx=&pr=CJFV2019;&URLID=&bsm=QSS0103>.
- [7] Wang Yu, A Brief Analysis of the Literary Crisis caused by artificial Intelligence writing -- A case study of "Sunshine is a Window" [J] Journal of Hubei University of Science and Technology, vol.39, no.4, 2019, pp.76-79.
<http://dx.chinadoi.cn/10.3969/j.issn.1006-5342.2019.04.015>.
- [8] Zheng Zhenfeng&Qiu Yan&Qu Baopeng&Liu Peisen&Wang Gulin, Intelligent human-computer interaction technology analysis based on machine vision [J] Journal of Agricultural Machinery, vol.1, 2020, pp.91-92, 95.
<http://dx.chinadoi.cn/10.3969/j.issn.1007-8320.2020.01.045>.
- [9] Zhan Ke, Research on the Legal Personality of Artificial Intelligence [J] Journal of Information Security Research, vol.4, no.3, 2018, pp.224-232.
<http://dx.chinadoi.cn/10.3969/j.issn.2096-1057.2018.03.006>.
- [10] Gao Yishan & Wang Xia, Transformation and innovation of sci-tech periodical editing in the era of artificial intelligence [J] Journal of Public Communication Of Science & Technology, vol.11, no.19, 2019, pp.1-3.
<http://dx.chinadoi.cn/10.3969/j.issn.1674-6708.2019.19.020>.