Limitations and Possibilities of Human-Computer Collaborative Writing Mode in the Field of News Communication in the Era of Intelligent Media

Feiman Liu

Pingdingshan University, Pingdingshan City, Henan Province, 467000, China

Email: lfmhahaha@163.com

Abstract: With the high integration of intelligent technology and media industry, the era of intelligent media emerges as the times require, which reconstructs the media environment ecology. The most representative phenomenon is the concept of human-computer collaborative writing mode. The human-computer collaborative writing mode is to let the human and the robot with writing ability write news releases together. In this process, the robot has certain intelligent logic, which can complete the writing like the manual in theory. It can effectively improve the efficiency and quality of writing, and promote the development of the media environment and the news media industry Use. However, the mode has not been implemented yet. The reason is that people find that the mode has certain limitations in news communication, which needs to be improved, and the mode has unlimited possibilities, which makes the existing limitations can be eliminated, which shows that the mode has application value. Therefore, in order to better implement the model, this paper will carry out relevant research, focusing on the mode in the field of news communication Limitations and possibilities in domain.

1. Introduction

Since the emergence of intelligent technology, people have been mining the application value of this technology, resulting in a lot of research, and the concept of human-computer collaborative writing mode has also been proposed. However, according to the relevant research results, it is generally believed that the current intelligent technology has a high application value in the activity of "writing". With the support of technology, robots can write smooth sentences and clear paragraphs according to intelligent logic. However, due to the robot writing, the sentences in the manuscripts will inevitably have "formulaic", "logic is not smooth", etc The problem is that there is a certain gap with artificial writing, which indicates that there are some defects in the "writing" activity under the intelligent technology, which also leads to the failure to implement the human-computer collaborative writing mode at present, which has certain limitations. From the perspective of technology development, because intelligent technology has good expansibility, we may break through the limitations and shape the possibility in the future. Therefore, the value of this

mode should not be ignored in the field of news communication. It is necessary to think about its limitations and possibilities, which has certain development significance.

2. The Current Situation and Principle of Human-Computer Collaborative Writing Mode

2.1 Status Quo

The human-computer collaborative writing mode is composed of artificial writing and intelligent robot writing activities. In the process, the artificial and intelligent robots should maintain a good cooperative relationship, jointly complete the purpose of writing and adjusting manuscripts, and ensure the quality of manuscripts. However, the mode is still in the "trial operation" stage, among which the artificial writing is needless to say, and the related fields are mainly aimed at the intelligent robot writing The problems are discussed. According to the results of the discussion, the current situation of the human-computer collaborative writing mode is general. Although the intelligent robot can complete the writing purpose, it can not guarantee the writing quality, so that most of the time, the manual still has to make a comprehensive revision of the writing manuscript, which is almost equivalent to rewriting, indicating that the mode needs to be improved and can not be directly applied in the field of news communication at present [1].

2.2 Principle

The principle of human-computer collaborative writing mode is mainly focused on the writing activities of intelligent robots. It is the main achievement of related research that intelligent robots have certain writing ability. According to the relevant research, the writing activity of intelligent robot can be roughly divided into three parts, namely template writing, secondary fine tuning and deep learning. The three purposes are arranged according to the principle of "from shallow to deep". The specific contents are as follows.

(1) Template writing

Template is the basis of intelligent robot writing, which is mainly stored in the knowledge base of intelligent technology system and used to constitute intelligent logic. In principle, first of all, because intelligent technology has the functions of in-depth information analysis and information recognition, as long as some keywords in the template are imported into the knowledge base, the intelligent technology system will master the writing method of the template, and then will write according to the template framework. If the template "XXX first, XXX second, XXX last, and XXX in addition" is imported into the knowledge base, then intelligent technology will The system will drive the robot to write in the first, second, last, and second order. Secondly, the template is designed and imported manually. Therefore, the number of templates mastered by the intelligent technology system and what template to master are completely determined by the manual. At this time, the manual should design the template according to the actual needs, so as to ensure that the writing activities of the intelligent robot can meet the actual needs. Figure 1 basic process of template writing.
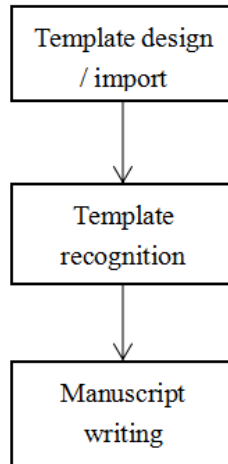
```
┌─────────────────┐
│ Template design │
│   / import      │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│   Template      │
│  recognition    │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│   Manuscript    │
│    writing      │
└─────────────────┘
```

Fig.1 Basic Process of Template Writing

(2) Secondary fine tuning

Secondary fine tuning is the core link of intelligent robot writing. It needs intelligent technology system to analyze the first draft of template writing, identify the text connotation, and adjust the draft according to human emotion and other internal quality, so as to generate natural language that conforms to human context and language sense and is easy for human to understand. It is worth noting that the biggest defect of modern intelligent robot writing lies in this. The current level of intelligent technology is not enough for intelligent robots to fully understand the so-called human emotions, which makes the secondary fine tuning not accurate, and there are obvious errors or "formulaic" traces in the generated language. Figure 2 the basic process of secondary fine adjustment.


```
┌─────────────────┐
│  Draft review   │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│   Emotional     │
│   context       │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ Fine tune of the│
│   manuscript    │
└─────────────────┘
```
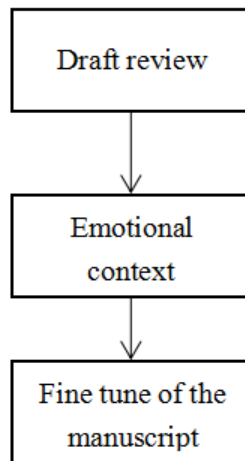
Fig.2 Basic Process of Secondary Fine Adjustment

(3) Deep learning

Deep learning is the embodiment of the possibility of intelligent robot writing, that is, in the application of intelligent technology writing, in addition to the manual introduction of templates for the first application, the intelligent technology will mine the defects in previous writing according to the constantly updated intelligent logic from the second time, and the successful mining will be automatically stored in the knowledge base, which means that the intelligent technology knows where the error is and then write later The same mistakes will not be made in the activity. Therefore,

under the continuous cycle, in theory, intelligent robot writing will one day fully understand human emotions. At this time, robot writing will become mature and can be directly put into use [2]. Figure 3 basic process of deep learning.
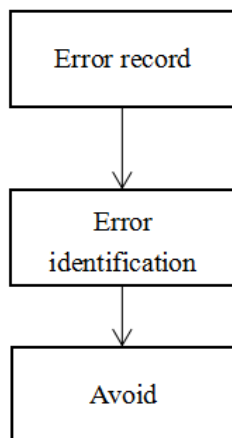

Fig.3 Basic Process of Deep Learning

3. Limitations of Human-Computer Collaborative Writing Mode in the Field of News Communication

3.1 Technical Limitations

In other fields, intelligent technology has shown a strong application value, which can almost completely replace the manual to complete a series of activities, such as data collection, data information analysis, etc., but these activities are objective non-creative activities, and news release writing in the field of news communication is a typical subjective creative activity, which is not in line with the current function of intelligent technology As a result, human-computer collaborative writing mode has technical limitations in the field of behavior. For example, in view of the recent epidemic situation, intelligent technology can list the number of deaths, the number of infections, the number of observation and other objective data, but it is difficult to write a sentence similar to "the current epidemic situation, we should work together to fight the epidemic together", so its writing results can not reflect human emotions, and the traces of formula are very obvious. For the field of news communication, if its manuscripts lose their emotional role, their communication activities will also lose their due effectiveness, and news communication will become worthless. Therefore, the current level of intelligent technology is not enough to enable robots to write manuscripts that meet the requirements of the field of news and communication, and the technical limitations are obvious.

4. 2Lack of Creativity

In the past, organizations or personnel in the field of Journalism and communication would pay attention to one key point in writing, that is, in addition to seeking truth from facts, it is also necessary to ensure that the manuscript has real-time nature and avoid homogeneity. If any situation occurs, it is easy to lead to disgust of the audience, and at the same time, it is unable to give full play to the due value of the field of news communication. However, in the human-computer collaborative writing mode, robot writing is prone to the above problems. For example, in some cases, the robot has successfully completed many times of writing according to the actual events, but the content of the manuscript only contains the information of the events that have occurred. At

the same time, multiple manuscripts can be seen as the products under the same template at a glance, which inevitably leads to the low value of news dissemination and no body The future imagination and prediction ability of the present person, the viewpoint of the manuscript is vague, and the viewer feels like chewing wax. In addition, if the writing event involves many aspects, then there may be inappropriate situations in the robot writing achievements. For example, assuming that an event involves politics and sports, in principle, the event writing style must be adjusted according to the part involved in the event. However, robot writing will only write in the same style, which will lead to the political nature of the manuscript not serious and the spirit of sports competition The lack of creativity in robot writing has limited the use of human-computer collaborative writing in the field of news communication.

5. The Possibility of Human-Computer Collaborative Writing Mode in the Field of News Communication

5.1 Artificial Leak Repair and Technology Development

Under the current level of intelligent technology, the technical limitations of robot writing can't be broken, so it can't reflect the human situation when writing essays. At this time, in the human-computer collaborative writing mode, we should give full play to the role of human beings. We can arrange a special person to review the robot's composition, and then polish it with emotion, so that the manuscript can reflect emotion and break through the technical limitations, This is a possible application method under the current level of intelligent technology. It is worth noting that there may be a large number of similar errors in robot writing, which will lead to a large number of manual modifications. Judging from the workload alone, manual modification is almost equivalent to rewriting. However, in terms of the possibility of technological development, under the follow-up technological development, we may let intelligent technology understand the human situation, and information recognition will no longer focus on the objective, but will It is also possible to judge the emotional connotation of the combination of different words and sentences, so that the amount of errors can be gradually reduced or even avoided in subsequent writing.

5.2 Development Possibility of Scenario Logic

In view of the limitation that intelligent technology does not have subjective creativity, the concept of "Scene logic" is proposed in the field of modern research. That is, in the human-computer collaborative writing mode, a scene logic that can represent the event is constructed first. The logic contains not only the event development information, but also the emotional changes of different people in different stages of the event, so that the intelligent robot can base on these emotions They should make subjective creation, know what kind of words and sentences should be used to express the correct emotions under what kind of circumstances, and rely on their own logical judgment to describe the future development of events, and output manuscript views. For example, taking "epidemic situation" as an example, assuming that the current intelligent technology has realized the "Scene logic", the emotion of homesickness of medical staff during anti epidemic can be set up in the logic. According to this emotion, the robot can write the emotional light that "medical staff have no time to communicate with their families on the front line of anti epidemic, but they do not want to say that they are homesick because of the epidemic situation Therefore, "Scene logic" as the development direction of intelligent technology, its theoretical realizability shows that the human-computer cooperation mode may break through the current limitations. Figure 4 "scenario logic" topology.
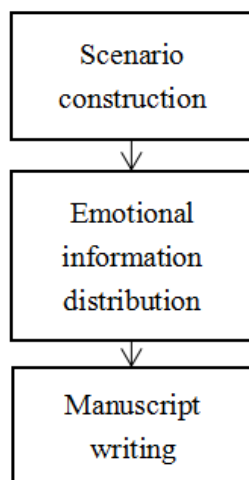
Fig.4 "Scenario Logic" Topology

6. Conclusion

To sum up, this paper analyzes the limitations and possibilities of the human-computer collaborative writing mode in the field of news communication in the era of intelligent media, expounds the status quo and principles of the mode, focuses on the performance of its limitations in technology and application defects, and discusses the possibility of this mode from the perspective of technology development and mode reform. Through the analysis, it is undeniable that this mode has a certain application value in the field of news communication. However, under the current technical level, the mode can not replace the manual work in the field, and there are limitations in all aspects. According to the possibility discussion in this paper, we can see that these limitations are temporary, at least in theory, the human-computer collaborative writing mode may be developed To provide strong support for manuscript writing.

References

[1] Lecusay R.Building Zones of Proximal Development with Computer Games in a UC Links After-school Program[J].IJREE-International Journal for Research on,Extended Education,2015,2(2):13-26.
[2] Bagley E A,Shaffer D W.Stop talking and type:comparing virtual and face-to-face mentoring in an epistemic game[J].Journal of Computer Assisted Learning,2015,31(6):606-622.