

Analysis of the Core Advantages of Human Journalists under the Background of Automated News Production

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Abstract

With the support of artificial intelligence technology, automated news production has become an inevitable trend of the development of the times. Under this background, the core advantages of human reporters are manifested in: the individualization, creativity and emotion of news production. Human reporters should stick to their unique advantages and give full play to the unique value of human beings.

Keywords

Automation news; Human reporter; Core advantage.

1. Introduction

Since the 1980s and 1990s, artificial intelligence technology has made major breakthroughs in key technologies such as speech recognition, semantic understanding, and computer vision, especially the application of deep learning technology, which allows machines to perform automatic inferences based on large amounts of data. And self-learning, which makes the wide application of "robot reporters" possible. Automated news production is a combination of artificial intelligence technology, news production and market economy. With the increasing demand of society for information reporting, and the application of automation technology in journalism has become more and more deep, then, under the threat of human journalists being replaced by machines, what core advantages do human journalists have that machines do not have in the short term?

2. The Inevitable Trend of Automated News Production

The artificial intelligence technology based on big data mining is called "adaptive machine learning". Its success is attributed to the following three points: "Having a large amount of data for analysis and processing, mastering powerful computing technologies that can process these data, High-speed computer"[1] These conditions were not available before. With the rise of emerging technologies such as the Internet of Things and cloud computing, society has entered a stage called "social physics", and big data has become a new form of social energy. Robot reporters can use new "social physics" [2] concepts to automatically extract new knowledge from huge data islands without human intervention, and can automatically convert these knowledge and insights into readable news stories. It can be seen that the vigorous application of automated news production technology is based on the following two necessary conditions. One is that artificial intelligence technology has experienced more than half a century of development, and many technical elements have become increasingly complete and mature, and have entered the market application stage from the laboratory; Under the new media environment, the news media is facing fierce market pressure and actively introduces and develops new technologies in order to improve production capacity.

3. Brief Development History of Automated News Production

3.1. Human Assistance Stage

As early as the 1990s, Hammond, known as the "father of robotic journalists," invented a software that can track users' reading habits and recommend corresponding documents accordingly. During his tenure as the director of the Intelligent Information Laboratory at Northwestern University in 2009, he created a software prototype called "stats monkey". In less than 12 seconds, he made a short game review supplemented by the most Excellent picture and best title. However, computers in this period were still inseparable from the assistance of people, and could not complete the reporting tasks independently.

3.2. Automation Application Stage

With the maturity of technology, Hammond founded the "Narrative Science Company" in 2010 and began to provide professional robotic writing services for news magazines such as Fortune and Big Ten Network. Computers at this time began to be called "robot reporters." They relied on deep learning capabilities to automatically produce news reports based on data mastered in accordance with preset templates.

3.3. Wide Application Stage

On March 17, 2014, a magnitude 4.4 earthquake occurred in Los Angeles, USA. The Los Angeles Times was the first media to report on this event. This news was automatically generated by a robot named "Quakebot" in less than 3 minutes. Robot reporters are gradually becoming widely used in the global media circle. More and more mainstream media are beginning to hire robot reporters. The more well-known ones are Wordsmith of the Associated Press, Cyborg of Bloomberg, Heliograf of The Washington Post, blossom of the New York Times, and Forbes "Narrative Science, etc. on the website. Domestically, there are Tencent's Dreamwriter, Xinhua News Agency's "Kaibi Xiaoxin", CBN's writing robot "DT Draft King", Toutiao's "Zhang Xiaoming", Southern Metropolis Daily's "Xiaonan" and so on.

4. The Core Advantages of Human Journalists in the Context of Automation

Robots that can write press releases do not make reporters feel threatened. What really worries reporters is that robots are getting smarter and more difficult to control. With the support of the Internet of Things technology, the computer seems to become "invisible", and the operation of the computer is completed in a "black box". It is difficult for reporters with limited knowledge of artificial intelligence technology to fully grasp the working principles and procedures of robot reporters. Freud believes that people's fear stems from ignorance of things. The "algorithm black box" is known knowledge for developers and designers, but it is incomprehensible for users and recipients, such as journalists. Know how. At the same time, business elites to high-level national leaders are paying close attention to the development of artificial intelligence technology, and the media has provided a venue for heated discussions on artificial intelligence technology. They are actively reporting related technologies and discussing various social issues caused by artificial intelligence. Journalists are on the front line of news reporting and have a more empathetic understanding of technology. In the process of understanding technology, reporting technology, and working with technology, they should recognize their own advantages and adhere to the unique human spirit home under the impact of the wave of automated production.

4.1. Personalization of Journalists' News Production

News is essentially the product of human thinking activities and belongs to the category of spiritual products. To create news, reporters need to conceive an overall text frame, and through multiple interpretations of events, they can form highly readable textual expressions. Journalists writing news are usually affected by social context and context, and even every detail and every word must be carefully considered. In the language expression of news, we can fully feel human values and aesthetics. At the same time, in the process of news writing, journalists can use their own knowledge and cultural accumulation in combination with their own knowledge and analysis perspectives to complete the personalized creation of news works. The personalization of news is mainly manifested in three aspects: topic selection, conception and language style. Language style is the external expression of the reporter's personality and a sign of the reporter's maturity.

Robot writing news has changed the focus of journalists' work. Journalists have shifted from focusing on the objective presentation of facts to improving their subjective expression skills. "In the face of automated news, journalists will attach great importance to analytical skills, personalization, creativity, and complex writing. The ability of sentences instead of authenticity, objectivity, succinctness and timeliness"[3], machine writing is based on pre-input templates, through the analysis of a large sample corpus for news writing, similar to the homogeneous product of the factory assembly line produce. The news structure is easy to be the same, the language expression is fixed and patterned, and it lacks the variability and complexity of human language. The robot's template writing is subject to the limitations of the content, and the form of language expression tends to lack novelty and be the same.

4.2. The Creativity of Journalists' News Production

Creativity is the highest point of human wisdom. Humans produce novel and valuable ideas through creative thinking. These ideas play an important role in promoting human invention and creating new things. For reporters, their creativity is manifested in the following aspects: First, the capture of news clues. Reporters are good at discovering the inner essence of newsworthiness from ordinary and ordinary cases, so as to conduct in-depth investigation and comprehensive analysis of facts. , To draw general conclusions and in-depth suggestions; second, a new perspective of news reporting, facing the same news material, different reporters can report from different angles; third, the significance of news facts, not only reports Facts must also reveal the problems behind the facts, explore the connections between things, and reveal the development trends and laws of things. News is a product of social spiritual culture. Its important function is not limited to publishing facts and reports, but adding certain social values through the reporting of news facts, so as to realize the supervision of social public opinion and the guidance of public opinion. This part of the work can only be done by human reporters.

Machine writing is based on mastering big data, and news produced by robots is generally more objective but not subjective. Creativity is indispensable for the realization of strong artificial intelligence. Scientists still lack clear and definite expositions on how humans exert their creativity. It takes a long time for machines to achieve the same level of creative writing as humans.

4.3. The emotion of Journalists' News Writing

Human beings live in the world with emotions. Human emotions have different levels and categories, corresponding to different scenes of social life. Maslow's hierarchy of needs theory believes that human needs can be divided into five levels from low to high: physiological needs, safety needs, social needs, respect needs and self-realization needs. From Marx's theory that social existence determines social consciousness, demand, as one of the important social

consciousness of mankind, is influenced and defined by the existence of social members. For journalists, like any profession, they not only exist as individual members of society, but also play the social function of professional groups as part of the overall social organization. Physiological needs and safety needs are the needs of journalists as individual members of society, while social needs, respect needs and self-realization needs are the goals that journalists pursue as a social professional group. The needs of journalists at different levels give rise to different emotions. The process of journalists' news reporting is also a process in which social needs are continuously met and realized. The emotions of journalists run through the entire work process. The outstanding social qualities of journalists, such as social responsibility, love, compassion, etc., will permeate between the lines of news reports, in order to satisfy the public's professional expectations for journalists, and in this process, journalists can realize their professional ideals and society value.

Writing is the expression of human emotions. "Emotions change by things, words are sent by emotions." The production process of articles is also the process of human emotions brewing, triggering and expressing. Reporters writing press releases are not simply a matter of recording, but need emotional recognition and infiltration in order to write highly readable and socially concerned reports. In 2015, NPR (National Public Radio) reporter Scott Horsley and WordSmith, a writing machine developed by Automated Insights, jointly wrote a short report on Denny's catering company's financial report. As a result, robots outperformed human reporters in terms of speed, but they were not as good as news articles. In terms of the number of read votes, Scott won by more than ten times. Comparing the two manuscripts, we can see that robot writing is mainly about data explanation and comparison, while human reporter writing has many descriptive or analytical terms in terms of wording, such as "grand slam" and "better than expected", "Comprehensive Service", "Consumers Open Wallet", "Raw Material Prices Decrease", etc., briefly analyzed the income growth of Denny's Catering Company from different aspects. In the process of reading the report, readers can feel such reports are more readable when they generate internal psychological identification and emotional resonance for the emotional factors or subjective analysis expressed by the reporter in the text.

"Robot reporter" is a technological product created by humans. "From the current artificial intelligence, intelligent machines have no personality at all." [4] It only has basic survival and safety requirements, and there is no more advanced requirements. In terms of basic survival and safety requirements, the content and form of robot needs are also very different from humans. Without demand, there will be no corresponding behavioral motivation, and no emotion corresponding to the demand. With the current level of artificial intelligence technology, robot journalists are still unable to carry out emotional news reports.

5. Conclusion

Compared with human reporters, the lack of personalization, originality, and emotionality in automated journalism limits the application of technology to a limited range. Because they do not possess the core humanistic qualities of human reporters, "robot reporters" are currently mainly used in reporting fields that rely on data analysis and real-time dynamic reports, such as sports, financial news, etc. It is still difficult to make achieve in important fields such as news reviews and in-depth reports. Human journalists should give full play to their unique advantages, and in the context of increasingly strong technology, they should stick to the human position and embody human values.

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