

How to Crack the Information Cocoon Room under the Background of Intelligent Media

Lili Ji^{1, a}

¹School of literature and communication, Shandong University of Technology, Zibo 255049, China.

ajll2008j@163.com

Abstract

Under the background of intelligent media, algorithm recommendation technology is widely used in information distribution, which leads to the phenomenon of "information cocoon room". The solution to the information cocoon house can be carried out from five aspects. One is to strengthen the government's macro-control over the Internet information environment, the other is to promote the integration and integration of different media. The third is to promote the network interaction of different social groups, and the fourth is to strengthen the intelligent media. The fifth is to continuously improve algorithm recommendation techniques.

Keywords

Intelligence media; Information cocoon; Crack; Algorithmic literacy.

1. Introduction

The "Information Cocoon Room" was first proposed by the American scholar Sunstein in the book "Information Utopia" in 2008. At that time, the Internet was in the development period of Web2.0, and social media such as Facebook and Weibo were in the ascendant, and more and more individuals users access the Internet through social media. The Internet is like an information Utopia. Everyone can share other people's thoughts and ideas. In fact, due to the limitation of cognitive ability, human beings can't accept all the information that acts on themselves, Instead, they can selectively screen and filter. Over time, people will lose the ability to understand different things and exposure opportunities, and will be trapped in information cocoons like silkworm cocoons. Especially with the wide application of algorithmic recommendation technology in information push, the phenomenon of "information cocoon room" becomes more and more prominent. As the article "scream effect and information cocoon room" in the 18th Edition of people's daily on May 2, 2018 said, "algorithmic information recommendation technology is easy to automatically filter out the information of" not interested "and" not identified ", so as to realize" look I want to see, listen I want to listen ". As time goes by, the dimension of information receiving becomes narrower, the channel of information obtaining is single, and specific interest habits are formed in monotonous information interaction, which makes people fall into the shackles of "information cocoon room".[1]

"Information cocoon house" has certain social harm. For individuals, it makes the audience paralyzed by a large number of personalized information, loses the receiving channel of diversified information, and is not conducive to the comprehensive and healthy development of the audience. For the society, the information cocoon house causes the separation of different social groups. When it is necessary to discuss social public issues, it is easy to cause the disagreement of group opinions, which leads to the difficulty of reaching social agreement. How to break the information cocoon house has become a problem of the times.

2. How to Crack the Information Cocoon Room

2.1. Strengthen the Government's Macro-Control Over the Internet Information Environment

Under the background of intelligent media, a variety of latest artificial intelligence technologies are applied to the production and communication of information. The network information ecological environment has undergone profound changes. The government's supervision of technology is the fundamental guarantee for the healthy and orderly development of cyberspace. Countries all over the world adopt different ways to manage the Internet, such as the self-monitoring network management mode adopted by the United States, the "supervision rather than monitoring" network management mode adopted by the United Kingdom, and the strict rule of law and order first management mode adopted by Singapore.[2]The social media law enforcement improvement plan issued by the German government clearly stipulates that the technical personnel must delete or block the obvious illegal speech within 24 hours, and the general illegal speech must be deleted or blocked within 7 days, otherwise the relevant person in charge of the enterprise shall be fined up to 500 euros, and the relevant enterprise shall be fined up to 50 million euros. At the same time, the Russian Duma also issued relevant regulations. Internet users and enterprises who refuse to delete false information and insulting remarks from social networking sites will be severely punished with millions to tens of millions of rubles. For example, Virginia in the United States passed a law amendment in September 2019, which clearly stipulates that people who use deep fake technology to produce adult video will face imprisonment or fine. The U.S. House of Representatives listened to a program specifically aimed at deep forgery, requiring anyone who makes a synthetic video to add an indelible watermark or text to the video to show that the video is fake, or else it is a criminal act. China has formulated and implemented a series of laws and regulations on the media information dissemination of Internet squares. The Standing Committee of the National People's Congress issued on November 7, 2016, and the network security law of the people's Republic of China, which came into force on June 1, 2017, is the supreme law. Under the guidance of this law, the State Network Information Office of China has successively issued 《The regulations on the management of Internet news and information services》 And so on. All self media information service providers and Internet users will be included in the specification, and full-time professionals will be set up to be responsible for platform communication.

2.2. Promote the Integration of Different Media

American scholar Donald Shaw refers to traditional media such as radio, television and newspapers as vertical media and online media as horizontal media. The two media agendas are intertwined. "The problem is that the vertical media agenda and the horizontal media agenda are working together. Can the new society formed be as strong as papyrus? "[3] Traditional vertical media provides social public issues, and online horizontal media provides personal interest issues. The balance between the two determines whether a stable society can be established.

First, cooperation between traditional media and various online media (including platform media, portals, and social media) should be strengthened. The Penguin Think Tank survey shows that the growth rate of Chinese mobile phone users has moved from a high point of 20-29 years old to both ends. Mobile Internet penetration rate has reached 45,7% among people with junior high school education and below. The diversification and nationalization of the sources of mobile phone users put forward higher requirements for the production and promotion of information in the media.[4]Traditional mainstream media should use their own solidity, authority, and professionalism to become the benchmark for other information subject

content production, adhere to the correct value orientation, promote the main theme, promote positive energy, pay attention to reports on major topics related to the national economy and people's livelihood, set public issues, and guide audiences to establish Right worldview and values. With the immediacy, labeling, interactivity of its own content production, online media provides information that is interesting to the audience and meets individual needs.

The information produced by traditional media and network media should be pushed through the platform media such as Today's Headlines. In the push, we should adhere to the combination of personal recommendation and value guidance. Through the improvement of computing power, we should accurately match the user's personal needs, community needs and social needs, and provide users with information from multiple sources and perspectives. From September 18th to 20th, 2017, People's Daily Online launched three series of reviews around "algorithmic push" for three consecutive days, criticizing the algorithm recommendation platform for lack of mainstream value guidance, manufacturing information cocoons, and vulgar information from multiple perspectives.[5] In January 2018, Today's Headline disclosed the basic principles of the core algorithm, stating that algorithm distribution is not to hand over all decisions to the machine, but to continuously correct the error to design, supervise and manage the algorithm model. The public can also participate in the algorithm model. For the platform, implanting the correct values for the algorithm is the underlying guarantee. This requires "exploring the mechanisms and methods of how different subjects coordinate interests, reach consensus, and work together in the shaping and evolution of intelligent communication values." [6]

We should increase the combination of algorithm recommendation and manual editing. The current algorithm recommendation technology is also inseparable from the guidance of manual editors. In 2016, Facebook's news section "Trend" fired manual editors, and the algorithm was used to push news, and the event of fake news soon occurred. Since the large-scale application of algorithmic recommendation technology, Facebook has been plagued by allegations of false news, abuse of user data and manipulation of user information reception. In August 2019, Facebook announced that it would launch News Tab, a news tool, and set up a new manual editing team to select high-quality news from a number of authoritative news media and recommend it to users. Such an operation is considered to be very similar to that of traditional media. In the first half of 2017, Google partnered with more than 100 news organizations and fact-finding groups, including the Associated Press, the National Public Radio, and the BBC, to use the "fact-checking" label in its search results.[7]

2.3. Promoting Network Interaction Among Different Social Groups

According to the China Internet Development Report 2019, as of June 2019, the Internet penetration rate reached 61.2% and the number of websites was 5.18 million. [8] The popularity and application of the Internet broke the original social group structure. "Technology has the potential of liberation and equality, and the author and the audience are in a reversible position." [9] This has led to the continuous differentiation of the audience and the emergence of "small "Town youth", "Slash Youth", "Generation Z", etc. alleging different audience groups. In his book Cognitive Surplus, American scholar Clay Shirky said that audiences in the Internet age like to share and participate in information consumption, and people gather individual resources into public social resources through group cooperation and individual behavior in freely available time, so as to create rich civilization achievements, such as Wikipedia, Weibo, Zhihu, etc.[10] In the process of continuous learning, sharing and participation, the individual audience has been exposed to more abundant information, understood more diverse views, accumulated their own social capital, developed new social resources, and rich returns will make the audience pay more active attention to different fields. We should vigorously promote the development of network development platform, enhance

the enthusiasm of public participation, and open up more social communication channels, which can effectively break the constraints of information cocoon.

2.4. Strengthening Media Literacy Education in the Age of Intellectual Media

Some people refer to the crowd who passively accept algorithmic recommendation information as "information feeding people", but the audience is not completely passive. Some studies have found that obsessive-compulsive feelings and obstacles to perceived goals can hinder consumers' willingness to adopt personalized information push. [11] The user-oriented survey conclusion of Tencent Penguin Think Tank in October 2016 also confirms this. 32.6% of users think that personalized recommendation content is too little, 32.3% of users think that personality recommendation will narrow their horizons, and 30.7% of users think it is recommended. The content is inaccurate. 29.4% of users think that the recommended content is vulgar, so many users are in the tangle of uninstalling, installing, re-uninstalling, and re-installing some platforms.

Audiences in the age of intellectual media urgently need media literacy education, especially algorithmic literacy education. Mass media should guide the audience to rationally recognize the ethical risks of algorithm technology, use algorithms critically. On the one hand, the algorithm recommendation mechanism is used to improve the efficiency of receiving information, on the other hand, the negative effects of algorithm recommendation are recognized, and these negative effects are consciously eliminated. The implementation of algorithmic literacy education requires the coordination and cooperation of multiple forces such as government, school, family, society, and media.

2.5. Continuously Improve Algorithm Push Technology

The survey found that the audience was not satisfied with the personalized information pushed by the algorithm. In 2018, the Knight Foundation and Gallup jointly released a survey report on the status of news editors at major Internet companies. Of the 1203 Americans surveyed, 54% thought that Internet content managed by the company's algorithms was a bad idea (Including 16% think this is a "very bad" idea). [12] At the same time, there are irregularities in the use of the algorithm. For example, Facebook was accused of leaking user data and privacy in the 2016 US presidential election, which affected voters' intentions. Scientists have different perceptions of the risks that algorithms can pose. Some scholars have found that algorithm recommendation does not bring about an echo chamber effect. The factors that affect people's choices are multiple. These factors will continue to break algorithm boundaries, and there are many types of algorithms. Not all algorithms will bring the trend of information homogenization. For example, the common collaborative filtering algorithm now will effectively expand the audience's information receiving source and enhance the disagreement see acceptance efficiency.

To solve the problems in the application of the algorithm, it is necessary to continuously improve the technology and optimize the algorithm synchronously through the bidirectional feedback of the user and the algorithm. The generation of information cocoon rooms is largely due to the algorithm's use of traces of actions left by users on the network to build a recommendation object model and user interest model to push related information or items. Since the user data that can be collected are already behavioral data, they cannot effectively predict the future changes in users' hobbies. What they push is within the user's cognitive framework, and it is difficult to bring freshness and break through the original scope information. The user's internal psychological emotions and deep emotional needs are difficult to be grasped by the machine, so future algorithms should be able to identify and grasp the user's emotions and truly meet the user's personalized development needs. We should establish user emotional demand models, individual development factor models, social public

information models, high-quality news information models, etc. We push valuable and in-depth news information from the perspective of social development and individual satisfaction.

3. Summary

The purpose of technological development is to promote social progress. Technology needs to be constantly corrected in the application to cope with emerging new problems. Designers and operators of algorithmic technology should balance the relationship between technological development and social needs. The development of algorithm technology mainly comes from two aspects of motivation: the desire of scientific workers to improve the living conditions of human beings, and the relevant subjects' profit through technology. These two major motivations can be attributed to Weber's instrumental rationality and value rationality. Instrumental rationality focuses on the development of technology's maximum utility, so that technology can better serve human beings. Value rationality requires technological development while paying attention to its social utility and society value, whether technology can promote social harmony and progress, and whether it is in the interest of most people. The value of algorithm should reflect the rationality of the value of technology, break through the worship of technology-first algorithm, and highlight the social value of people. The main body of the algorithm should insist on the unification of economic benefits and social benefits. This needs to provide accurate information push services to the audience, and at the same time be alert to the adverse effects of the "information cocoon room".

References

- [1] Information on http://paper.people.com.cn/rmrb/html/2018-05/02/nw.D110000renmrb_20180502_2-18.htm.
- [2] Zhang Xiaoluo, On Government Regulation of Internet Media. Intellectual Property Publishing House, 2009, p.58-60.
- [3] Donald Shaw, Creates a Papyrus Society. Journal of International Communication, (2004) No.4,p.10-11.
- [4] Information on <http://www.199it.com/archives/855556.html>
- [5] ZHANG Xiang-ping, LI Jun, The Predicament, Way Out and Prospect of News Feed Algorithm. Editorial Friend,(2019)No. 4,p. 86-90.
- [6] CHEN Chang-feng, YU Xin, Information Values in Intelligent Era: Technical Attributes, Media Context and value category. Editorial Friend,(2019) NO.6,p. 5-12.
- [7] Xie Xiaoguo, Irrational Media.Yangcheng Evening Press, 2017, p.331-332.
- [8] Information on https://www.sohu.com/a/348492641_266055
- [9] Ma Zhonghong, Chen Lin, Another force that cannot be ignored. Tsinghua University Press, 2015, p.109.
- [10] Klesheki ,cognitive surplus. Beijing United Publishing company,2018,p.22-23.
- [11] Du Juan, You Jing, Research on Consumers' Willingness to Adopt Personalized Push under the "Information Cocoon" Effect: A Perspective of Psychological Resistance. Enterprise Economy.(2019) No(1),p.103-110.
- [12] Information on <https://new.qq.com/omn/20180912/20180912A1RSEB.html>