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The Dilemma and Countermeasures of Young Students' Value Shaping under the Phenomenon of "Filter Bubble"

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Abstract

The phenomenon of "filtering bubbles" has arisen as emerging information technologies, such as big data and intelligent algorithms, have improved the efficiency of information dissemination. The "filter bubble" is constructed by the synergistic control of data and algorithms, the development of attention economy and individual unconscious reliance, which not only facilitates young students' access to personalized information, but also creates serious challenges to their value shaping due to the homogenization of information, the platform operation proposition of "traffic supremacy" and the lack of critical thinking. At the same time, the homogenization of information, "traffic-oriented" platforms, and the lack of critical thinking pose serious challenges to young students' value shaping. Therefore, it is important to optimize the algorithmic recommendation mechanism, regulate the value orientation of the media, and improve the media literacy of young people in order to deal with the above negative impacts.

Keywords

Filter bubble, Young students, Value shaping.

1. Introduction

Youth is a critical period for the formation of values, and its value orientation has an important impact on the development of individuals, society and the country. "The value orientation of youth determines the value orientation of the whole society in the future." As an important part of the youth group, young students are active in their thinking and fast in accepting new things, but they are also very vulnerable to the influence of wrong information from the outside world when they recognize and understand the real world, so they should be guided correctly. Nowadays, the dissemination of information mainly relies on Internet technology, young students are active in the Internet platform at the same time technology empowerment is quietly creating the "reef" of value shaping, with algorithmic recommendation as the core of the "filter bubble" phenomenon on the shaping of their values to produce a negative impact. The phenomenon of "filtering bubbles" centered on algorithmic recommendations has a negative impact on the shaping of values.

2. Generation Mechanism of the "Filter Bubble" Phenomenon in The Age of Smart Media

The term "filter bubble" was first proposed by Parize in the United States, who believed that Internet platforms can filter out personalized content through algorithms, and ultimately intelligently isolate users in an information environment that conforms only to their own preferences and opinions. With the advent of the smart media era, the number of studies on the phenomenon of "filter bubble" has increased in recent years. According to the comprehensive research, the phenomenon of "filter bubble" in the era of smart media is a personalized information deletion phenomenon formed by algorithms, big data technology, attention economy, and endogenous behavior of the audience.

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2.1. Synergistic control of data and algorithms

The network platform in the era of smart media can find the information needed by individuals from the overloaded information through intelligent algorithms and actively match them, and such efficient distribution and dissemination of information will inevitably "filter" some apparently unneeded or uninterested content. In this process, big data technology is mainly used for data collection, processing and analysis, and the results are used for user profiling. By analyzing the collected individual behavioral data, such as the length of time spent on the page, likes, comments, and shares, the smart media platform can build a personalized user profile that accurately captures their interests, values, and stances. Based on the individual profile, the algorithm will extract valuable information, filter out useless content, and prioritize content similar to the user's historical behavior, such as "content liked by similar users" or "content with similar tags", thus ultimately realizing a more accurate feedback mechanism the more users use the content. The more you use it, the more accurate the feedback mechanism becomes. Just as Negroponte put forward "my daily newspaper"[1], the era of smart media has realized "my network platform", open all kinds of platform software on the cell phone, the home page of the precise recommendation is the information they want to get. The synergistic effect of big data and algorithms controls what individuals see and hear, and precise information delivery has become one of the triggers for the emergence of the phenomenon of "filter bubbles".

2.2. The inevitable product of the attention economy

The emergence of personalized recommendation technology is ostensibly a human-centered approach to further improve the experience of Internet users. However, "science acquires the mission: to become a means of producing wealth, a means of getting rich"[2], the nature of capital seeking profit still makes the technology a tool for wealth accumulation. "With the development of information, what is valuable is not information, but attention." In this era of information explosion, the limited time and energy of users make individual attention a scarce resource. Therefore, in order to compete for users' attention and gain users' viewing, platforms, on the one hand, use relevance data to continuously produce homogeneous content to increase click-through rates; on the other hand, in order to maximize the "traffic cash", the output of the content is far more important to attract "eyeballs" than the authenticity of the content. On the other hand, in order to maximize "traffic cash", the attractiveness of the content is much more important than the authenticity of the content. Thus, some positive energy, real and worthy of people's attention to social events will be "filtered out" by the platform. After obtaining a solid traffic base, the platform will be pushed more frequently and accurately, at which time the insertion of advertisements can bring another kind of commercial interests. Therefore, the personalized recommendation technology benefits, ostensibly to meet the differentiated needs of individuals, but in essence is a tool to facilitate the creation of the phenomenon of "filtering bubbles", so that capital can maximize profits.

2.3. Individuals' unconscious reliance on the right to choose

In addition to the influence of technology and platform capital, the individual's reliance on information recommendation technology also indirectly promotes the generation of the "filter bubble" phenomenon. On the one hand, it is the active dependence under information overload. In the face of massive information, individuals gradually rely on the convenience brought by personalized recommendation technology, and gradually lose the impulse to actively explore diversified content, forming a closed loop of "active reliance - algorithmic enhancement". Although they do not take the initiative to "filter" the diversified information, the passive acceptance of the information recommended by the capital utilizing the technology also indirectly puts them into the "bubble" environment. On the other hand, the individual unconsciously relies on it. The algorithmic technology within the platform will actively recommend content of interest to users based on their search records and viewing history, and

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even casual conversations will be “stolen”. In this case, individuals may not even realize that the algorithm is making choices for them and filtering out the information they need, thus forming a closed loop of “algorithmic enhancement - loss of choice”. In the cycle of “individual active dependence - algorithmic enhancement - loss of choice”, the phenomenon of “filter bubble” will continue to develop.

3. The Dilemma of Shaping the Values of Young Students Under the Phenomenon of “Filtering Bubbles”

The development of information technology has made it more convenient for individuals to obtain information, but science and technology is always a “double-edged sword”, and the algorithmic recommendation technology has led to the generation of the phenomenon of “bubble filtration” because of capital and individuals in the process of practical application. The phenomenon of “bubble filtering” has brought about the problems of information homogenization, traffic supremacy, and weakening of individual critical thinking, which have seriously affected the positive shaping of young students' values.

3.1. The homogenization of information access results in the polarization of value groups

Algorithmic recommendation technology constructs “filter bubbles” through user profiles, making it difficult for users to access information outside the profile. The personalized and targeted push makes the information obtained by individuals on the platform tend to be homogeneous, which will lead to the value shaping of young students to go through the process of narrowing to solidification and then to group polarization.

First of all, the essence of the “filter bubble” phenomenon is that algorithmic technology delivers homogenized information to cater to individual preferences, which will objectively narrow the scope of young students' concerns, and is not conducive to the collision of multiple values. Homogeneous information conveys a single point of view, which is easy to cause narrowing of value shaping. Secondly, individuals are driven by their hearts, and they will originally prioritize the content that is similar to their own values, and the intelligent algorithm recommendation technology further strengthens this “habit”: it directly limits individuals to the information environment that is similar to their existing views. If young students receive information that matches their personal values over a long period of time, it will undoubtedly deepen their affirmation of self-worth and lead to the solidification of their values. Moreover, if the values of young students are already off-track, the risk of solidification is even greater. Finally, if the solidified values continue to be reinforced by homogeneous information, group polarization may occur. Under the “filter bubble” effect, individuals holding similar views will form a group, and homogeneous information will be repeatedly disseminated, further consolidating existing views. On the one hand, group interactions can lead to extreme views, i.e., “the initial value-identification bias of interacting group members becomes more extreme as the discussion process within the group progresses”. On the other hand, group members will gain a sense of belonging by agreeing with the group's viewpoints, further promoting viewpoint polarization. Young students who are energetic and have high self-esteem are highly susceptible to the infection of group emotions, leading to extreme views[3]. In addition, young students are also in the critical stage of identity, and need to join the group to get a sense of belonging, so in order to better integrate into the group, they are more likely to accept and strengthen the extreme views of the group. In short, the narrowing of values, the solidification of values and the polarization of value groups brought about by the homogenization of information are all unfavorable to young students at the critical stage of value shaping.

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3.2. "Traffic supremacy" leads to the generalized entertainmentization of value choices.

The formation of the "filter bubble" phenomenon, in addition to the role of intelligent algorithm technology, is also inseparable from the manipulation of capital. "Capital is afraid of no profit or too little profit, just like nature is afraid of vacuum. As soon as there is a proper profit, capital is emboldened". Therefore, under the manipulation of capital, "intelligent recommendation" becomes "capital calculation". In the Internet economy, "traffic" can be transformed into "capital", and all kinds of online voices will vigorously promote heavily entertaining contents to attract the attention of young students for the sake of the so-called "traffic", thus leading to their value choices. In order to maximize the "traffic", all kinds of network voice subjects will vigorously promote entertainment-oriented content to attract the attention of young students, which will lead to the deviation of their value choice.

In order to maximize "traffic", on the one hand, platforms will use algorithms to analyze users' preferences and push only the content that users are interested in, and some content that conforms to the mainstream ideology will be "filtered out" by this kind of profit-oriented behavior. On the other hand, in order to win the user's stay time, the platform tends to push entertainment content such as funny videos, celebrity gossip and live games. This kind of entertainment content is easier to attract the attention of individuals due to its easy and consumable nature, thus maximizing the benefits. Young students are immersed in such entertaining content, which can bring many negative effects. First, they reject mainstream thinking. Young students will increasingly think that serious news and popular science are boring, so they are not interested in learning, and only think of indulging in cell phones to kill time; secondly, they will choose the wrong value role models. Entertainment content is full of images of easy success of celebrities and Internet celebrities, and young students can easily regard them as role models and try to succeed through shortcuts, while neglecting the cultivation of inner cultivation and the importance of their own hard work; third, the value of utilitarianism. Under the influence of entertaining content, young students may regard "traffic" as a criterion for success, neglecting their personal contribution to society.

3.3. Lack of critical thinking leads to weakened value judgment

"Critical thinking is not only an ability, but also a value orientation."[4] Critical thinking can lead individuals to go beyond the surface of things, explore their essence, and make correct value judgments when facing complex problems. However, in today's information explosion era, the "filter bubble" effect has a significant negative impact on young students' critical thinking, which leads to the weakening of their value judgment.

By analyzing the generation mechanism of "filter bubbles", we can know that once the user's portrait is finished, intelligent algorithm technology will filter and push according to the characteristics of the user's portrait, so as to wrap him/her in a specific information room. Obviously, such an information environment will deprive young students of the opportunity to come into contact with diversified information and viewpoints, thus forming stereotypes in their thinking; at the same time, they will not be able to exercise their judgmental thinking through debates and reflections. In the long run, the comprehensive cognitive ability and critical cognitive ability of young students will certainly be weakened, and thus their value judgment of things will also be reduced. In addition, young students have been accustomed to accepting the convenience of information recommendation without knowing how to turn off the intelligent recommendation technology. This dependence mentality makes them lack the ability and motivation to think independently when facing complex problems, which in turn leads to the weakening of value judgment ability.

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4. Response Strategies for Young Students' Value Shaping under the "Filter Bubble" Phenomenon

The "filter bubble" effect seriously jeopardizes the positive value shaping of young students. Therefore, based on the generation mechanism of the "filter bubble" and its specific manifestations that jeopardize the value shaping of young students, we seek to solve the problem from the perspective of technology, media platform and young students themselves. The way to solve the problem.

4.1. Optimize the algorithmic recommendation mechanism and enhance the diversified supply of information content

Although the algorithmic recommendation technology solves the problem of information overload, it also creates the problem of narrowing the information received by young students and making it difficult for them to have access to diversified and rich information content. Starting from the operation mechanism of this technology, it can be optimized and upgraded from the main aspects of data management, filtering mechanism and user participation.

First, strengthen the management of user privacy data. Algorithmic recommendation technology relies on the collection and analysis of user behavioral data to achieve accurate push. If the excessive collection of data is restricted, the reinforcement of single content by the recommender system can be reduced from the source. On the one hand, sensitive user information such as geographic location, social relationships, private conversations, etc. can be protected to weaken the algorithm's ability to portray an image with ultra-precision. On the other hand, the push duration of homogenized content can be reduced by shortening the data retention period. Regular cleaning of historical behavioral records can prevent the algorithm from relying on the user's past preferences for a long time, and force the system to dynamically update the user's "interest profile". Second, improve the multi-dimensional evaluation capability of the filtering mechanism. Relying only on user profiles, keyword push is likely to cause errors in judging the quality of content. Combining text, images and videos to comprehensively judge the core content of information can avoid the widespread push of low-quality and non-mainstream cultural ideas. Third, enhance the user's own control over the algorithmic recommendation technology. Users can independently choose the switch of the personalized recommendation function or the management of their own interest labels to realize the mode of automatically choosing to broaden their horizons. In this way, young students can independently explore diversified content.

4.2. Regulating the value orientation of the media and increasing the dissemination of mainstream values

As an important carrier of information dissemination, the media platform bears the responsibility of guiding the public to correct cognition. In recent years, with the popularization of networking, all kinds of new media platforms have emerged. However, driven by the interests of traffic realization, some platforms have chaotic images including the spread of false information, the proliferation of vulgar content, and biased views, which are not conducive to the dissemination of positive concepts. Therefore, in order to better utilize the power of media platforms to shape the concepts and values of young students, it is necessary to regulate the value orientation of media across the Internet and guide them to vigorously promote mainstream ideas.[5]

Regulating the value orientation of media platforms requires the power of many aspects. First, the regulation of media platforms should be strengthened at the legal level. A special regulatory body should be established to impose legal constraints on meritocratic behaviors such as false news and malicious speculation, so that penalties can be taken in a timely manner against

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violating media platforms or accounts; for media platforms abusing algorithmic technology, they can be required to undergo a review and shut down their platforms for rectification. Second, the public should be encouraged to monitor media platforms. Users, as providers of traffic, also bear the responsibility of regulating media platforms. Users who believe that the media's algorithmic technology violates their privacy rights can file a complaint with the relevant authorities to shut down the recommendation function. In addition, users who find media platforms spreading inaccurate and low-quality content should report it instead of blindly trusting the provision of distribution traffic. Finally, media platforms themselves should be guided to prioritize social responsibility. In the operation of media platforms, it is important not to pursue click-through rates and advertising revenue. On the one hand, it is encouraged to attract users' attention through high-quality original content and reduce the output of low-quality repetitive content; on the other hand, media platforms are guided to output more content that is in line with mainstream ideas and values. By regularly exposing typical cases of utilitarian communication that have been punished, and at the same time recognizing media with a sense of social responsibility and setting up industry benchmarks, media platforms are warned that only by focusing on the overall value of society can they build public trust and achieve long-term development.

4.3. Enhancing young students' media literacy and fostering rational and tolerant value judgments

The development of technology and the operation of various media are beyond the control of young students, but in the process of accepting and spontaneously disseminating information, young students are able to exert their subjective initiative to reduce the negative influence of the “filter bubble” effect. Therefore, from the perspective of young students themselves, improving their media literacy can effectively reduce the harm of the Internet environment on their value shaping.

First, improve young students' ability to identify network information. At present, the threshold of network information release is low, and false information, one-sided viewpoints and extreme remarks are filled in the huge amount of information. Under the influence of the “filter bubble” phenomenon, low-quality information spreads more because of the traffic. If students lack the ability to recognize information, they may regard wrong information as true, leading to the perception of the real social situation deviating from the objective facts. Cultivating young students' ability to discriminate information is essentially to help them establish a fact-based value judgment benchmark, which is the cognitive foundation for the formation of correct values. Secondly, young students are encouraged to actively explore diversified information. Under the “filter bubble” effect of algorithmic compilation, only passively accepting information recommended by algorithms means ceding the right to know the world to data models. Only by actively exploring information other than personalized recommendations can young students test the correctness of their own views in the collision of viewpoints and break through the so-called fixed thinking in the fusion of viewpoints. In addition, exploring more information in line with the mainstream ideology is also conducive to young students' establishment of correct values. Thirdly, to improve the ability of young students to participate in the media. As the main group of network media users, young students show a strong desire for self-expression. They are not only highly concerned about major hot events, but also eager to express their own views. As representatives with knowledge and ideals, young students can use their knowledge to actively criticize and block wrong information and output more positive views. Through the correct use of their right to like, comment and forward, personalized recommendation technology can naturally be used for their own use, and push more positive energy content.

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5. Conclusion

The phenomenon of “filter bubbles”, as a product of intelligent algorithms and capital profit-seeking, is gradually eroding the pluralism and rationality of young students' value shaping. The homogenization of information narrows the cognitive field of vision, and the lack of critical thinking weakens the ability to judge, which makes young students fall into the predicament of solidified values and group polarization. Only by building a multi-dimensional synergistic mechanism that combines technology for good, platforms for responsibility, and education for empowerment, can we help young students maintain a clear mind in the complicated online environment and grow into independent-minded and socially responsible builders of the new era.

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