

Risk Challenges and Coping Strategies of Youth Value Guidance from the Perspective of Algorithm Recommendation

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Abstract: The deep integration of big data and artificial intelligence technology has given rise to the new information configuration paradigm of algorithm recommendation, which has not only profoundly changed the information-imparting model of the youth, but also exerted a far-reaching influence on the values of contemporary youth. At present, algorithm recommendation, with its intelligent information processing and precise information delivery mechanism, has expanded new space and provided new intermediaries for youth value guidance, but it has also aggravated the solidification of value cognition, eliminated the rationality of value judgment, eroded the subjectivity of value choice, and put forward unprecedented challenges to youth value guidance. Therefore, youth value guidance in the era of algorithm recommendation should be based on three aspects, namely, innovating guidance methods, improving media literacy, and activating value subjectivity, to give full play to the positive role of algorithm recommendation in positive value guidance, and effectively guide the youth to set up correct values.

Keywords: Algorithm recommendation; Youth values; Risk challenges; Coping strategies

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1. Introduction

With the continuous and in-depth development of digital technology, big data and artificial intelligence technology have been fully embedded in all fields of human social life, driving the development of the Internet and new media into the era of algorithm recommendation. As the early users of the Internet who have grown up together with the process of social networking and informatization, youth's way of thinking, lifestyle, and interpersonal communication have been profoundly influenced by the Internet phenomenon and Internet culture. At present, the wide application of algorithm recommendation in the digital network community has not only changed the mechanism of information screening, distribution, and recommendation but also shaped the youth's cognition, thinking, and action on the world in an invisible way. Therefore, it is of vital importance to optimize the algorithmic ecology,

improve the media literacy of the youth, and guide them to establish correct values.

2. Algorithm recommendation constitutes a new variable of youth value guidance

At present, digital technology led by algorithm recommendation is profoundly reshaping the life pattern of youth, which not only greatly changes the inherent paradigm of information transmission and reception of youth, but also constitutes a new variable in the guidance of youth values, and brings new opportunities for the shaping and leading of youth values.

2.1. Algorithm recommendation expands new space for youth value guidance

With the popularization of mobile terminals and the digitalization of social communication, digital network communities based on social media platforms have gradually formed and become an important field for young people to express their words and interact with each other. At the same time, the precise content push based on user big data and algorithm recommendation has gradually become a symbolic feature of social media platforms. This not only enriches the functions of social media platforms but also opens up new space for the shaping and leading of youth values. Driven by digital technology with algorithm recommendation as the core, youth values education has further expanded online and gradually developed into an important position for youth values guidance. In the digital network community, the youth value education adopts the issue-centered education method. Through the information filtering, issue setting, and ideology communication of the algorithm mechanism, it has successfully achieved the precise connection between the massive education elements and the youth's individual preferences, significantly improving the effectiveness and accuracy of youth values education. In short, this profound reform in the field of youth values education not only greatly enriched the supply of educational content and innovated the paradigm of ideology expression but also provided new possibilities for innovative development guided by youth values. Moreover, it has constructed a multi-dimensional education field, expanded the communication space of mainstream ideology, and created favorable conditions for the space expansion of youth value guidance.

2.2. Algorithm recommendation provides a new mediator for youth values guidance

In recent years, digital technology represented by algorithm recommendation has been deeply embedded in the learning and life of the young generation, profoundly shaping the social expression and social interaction of the youth, and gradually becoming a key factor influencing their thinking logic, ideology expression, and behavior. At the same time, algorithm recommendation, as a highly intelligent means of information processing, has successfully realized the precise matching between people and information through data and information collection, user demand analysis, and precise information pushing, which not only gradually develops into a key link connecting people and information, but also takes on the role of new intermediary for shaping the values of young people in the context of the era of algorithm recommendation. Specifically, algorithm recommendation as an important tool for information configuration can rely on selective attention and information filtering to complete the intelligent matching of people and information, realize the technical breakthrough of "information looking for people", and solve the real crisis of information overload. At the same time, it can also make use of the big model, big data, and arithmetic power to carry out data analysis and intelligent interpretation of the youth, to push mainstream ideological contents for youth in line with their cognitive ability, thinking logic, ideology expression, and interest preference, realizing effective

linkage between mainstream ideology and youth, and becoming a new intermediary in shaping the values of young people.

3. The practical challenges of youth values guidance from the perspective of algorithm recommendation

At present, the deep integration of algorithmic technology and intelligent media has provided new impetus and new ways for the guidance of youth values, but at the same time, the potential risks of algorithmic technology have also aggravated the solidification of value cognition, eliminated the rationality of value judgment, eroded the subjectivity of value choice, and thus posed a new challenge to the guidance of youth values.

3.1. Algorithm recommendation aggravates the solidification of youth's value cognition.

Algorithm recommendation, as a kind of personalized and precise information resource allocation paradigm, uses big data analysis technology to accurately capture users' preferences and potential needs and accordingly push a large amount of fragmented and decentralized information content. Under the role of algorithm recommendation, the pattern of modern information dissemination has changed drastically, and the interactive relationship between people and information is facing the potential risk of value disorder, which in turn affects the value cognition of youth. On the one hand, the intelligent change of information distribution mode aggravates the value differentiation of the network public sphere. In the field of algorithm recommendation, the information distribution mode has realized the intelligent change from "people looking for information" to "information looking for people", thus increasing the deviation of information dissemination, inducing the value differentiation in the online public sphere, and leading to the dissemination fault of mainstream consciousness ideology in cyberspace. On the other hand, the overstepping of instrumental rationality has intensified the solidification of youth's value cognition. Algorithm recommendation, which is mainly characterized by efficient aggregation and precise distribution, was initially created as a technical response to the information overload crisis and thus has an inherent instrumental attribute. Relying on algorithm recommendations, users have realized the filtering of heterogeneous information and accomplished accurate matching with information content. However, under the information barrier constructed by algorithmic technology, fragmented, homogenized, and one-sided information will prevent individuals from gaining a complete understanding of the whole picture of things, dissolve their cognitive ability and thinking ability, and cause them to indulge in "identity islands", thus aggravating the solidification of the value cognition of young people.

3.2. The information cocoon has eliminated the rationality of value judgment of the youth

The information cocoon is the inevitable path for the dynamic development of big data and artificial intelligence technologies, as well as "the inevitable result of the differentiated consumption of massive amounts of information" ^[1]. In the information cocoon constructed by intelligent technology, the structure and function of the subject and object of information dissemination will be affected by a "filter bubble", thus eliminating the rationality of youth's value judgment. The specific manifestations are as follows. Firstly, the hegemony of the ideology in the algorithmic field has diluted the appealing power of mainstream values. Through algorithmic screening, the information cocoon restricts the attention

of individuals to a certain range, thus intensifying the segregation between circles of interest and ultimately triggering the hegemony of the user's manipulative ideology. This "ideology hegemony" in the field of information dissemination in the digital era. On the one hand, it is very likely to cause radicalization and polarization of public opinion, leading to the "network division" phenomenon [2]. On the other hand, it is easy to make network public opinion fall into the clamor of individual will, thus blocking the dissemination of mainstream ideas and concepts and diluting the appeal of mainstream values. Secondly, the circle effect constructed by the information cocoon has eliminated the rationality of youth's value judgment. The communication and interaction in the information cocoon further confines the users' emotional belonging and identity to the algorithmic range, which generates strong aggregation and dissemination power, thus triggering the circle effect. Long-term immersion in the "cognitive comfort zone" constructed by the information cocoon, not only may the supply of homogenized content cause users' cognitive narrowing, and thus exacerbate the cognitive differences and antagonisms between different youth groups, but also users may gradually lose their original thinking ability and basic judgment in the process of technological dependence.

3.3. Algorithmic black boxes erode the subjectivity of youth's value choices

Algorithm recommendation, as a product of the new generation of information technology innovation, is not only hidden and unknowable in its technology itself and operation process but also constrained by multiple value biases in the process of algorithm formulation, algorithmic data, and communication interaction. Moreover, in the black box of algorithms derived from algorithmic technology, "human beings can be abstracted as symbols", becoming alienated objects manipulated by algorithms [3].

This process not only deprives the user's right to cognition and information but also seriously erodes the subjectivity of youth's value choice. Its specific impact is mainly reflected in the following two aspects. Firstly, it strengthens the confusion of inaccurate information and widens the scope of inaccurate information dissemination. If the algorithmic black box provides a "hiding place" for inaccurate information, then the algorithm recommendation is an "accelerator" for the dissemination of inaccurate information. Under the support of algorithmic black box and algorithm recommendation, false information spreads rapidly like fire, which has a negative impact on the public's right to know and the credibility of network value-led activities. Secondly, it promotes the expansion and spread of youth subculture. The algorithm mechanism has built accurate and efficient matching links between content producers and audiences with the technical advantage of "information looking for people", effectively aggregated youth with common interests and value demands, and formed a youth subculture mainly characterized by interest, spontaneity, exclusivity, and resistance in the continuous homogenization of circle members. Driven by the black box of algorithms, youth subculture continues to expand and spread widely, which not only blocks the effective dissemination of mainstream ideological ideology and dissolves the social integration and cohesion of mainstream consciousness, but also deprives the user's right to cognition and information, and dissolves the youth's information discrimination ability and value judgment ability, and finally evolves into the erosion of youth's subjectivity.

4. The guiding strategy of youth values from the perspective of algorithm recommendation

As a technical means for the efficient allocation of information, algorithm recommendation, relying on

big data, artificial intelligence, and other technologies, has had a subversive impact on the information dissemination mode, which not only profoundly influences the cognitive, thinking, and behavioral mode of young people, but also provides a possibility to innovate the way of guiding young people's values, improve their media literacy and activate their value subjectivity.

4.1. Revamp the algorithmic model and innovate the way in youth value guidance

Nowadays, algorithm technology, as the core force in the field of information dissemination, has largely reshaped the whole process mechanism of intelligent media and become an important factor influencing the ideological value guidance in cyberspace. Therefore, how to revolutionize the algorithm mode and innovate the way in youth value guidance has become a key issue that must be responded to in shaping and leading youth values in the era of algorithm recommendation. On the one hand, with the help of big data technology, we can accurately judge and predict the ideological dynamics and demand preferences of youth, to provide a navigation guide for optimizing the guidance of youth ideological values. Specifically, it is to use big data technology to analyze the youth's cognition and acceptance of the mainstream ideology of the network, grasp the rules and characteristics of the youth's ideology expression, and then deepen the ideology connotation, change the ideology mode and broaden the ideology path according to the data interpretation. On the other hand, by utilizing the advantages of algorithmic technology, we can accurately deliver the content and effectively enhance communication efficiency, to provide an accurate supply for the innovation of youth ideology and value guidance. Like other scientific and technological products in the development of human society, algorithmic technology inevitably has the effect of a "double-edged sword" of science and technology. In the face of the complex and changing network public opinion environment, how to make good use of algorithmic technology to empower the accurate supply of mainstream ideology has become the key to optimizing the ideological value guidance of young people. Therefore, it is necessary to take advantage of algorithmic technology to differentiate and accurately deliver mainstream ideological content on the Internet, and on this basis, effectively guide the youth to comprehensively and dialectically examine the social reality, to bridge the value differentiation in the online public sphere and enhance the communication efficiency of mainstream ideology.

4.2. Make good use of algorithm technology and improve the media literacy of youth

In the era of algorithm recommendation, the information dissemination mode oriented by algorithmic logic has become a general trend, therefore, while strengthening the leadership of mainstream ideology in cyberspace, it is also necessary to actively cultivate the media literacy of the youth and to improve their ability to discern information and make value judgments. Firstly, we should adhere to the principle of "Tech for Good" and improve the media cognitive literacy of young people. Algorithmic technology is essentially a "public demonstration of the essential power of human beings"^[4]. The wide application of intelligent media in the field of information communication centered on algorithms has continuously strengthened the instrumental attribute of algorithmic technology, and the relationship between human beings and technology has become the core concern of media literacy among young people. Based on this, improving the media cognitive literacy of young people is not only necessary to establish the subjectivity of human beings in network socialization and clarify the leading role of human beings in the process of media content production and consumption, but it is also necessary

to guide young people to understand the logic of algorithms and their working mechanism and to objectively recognize the impact of algorithmic technology on information dissemination in the context of the organic unity of instrumental rationality, value rationality, and subjective rationality. Secondly, we should strengthen rational criticism and enhance the media use literacy of young people. Different from the traditional logic of information dissemination, the “fragmented” and “decentralized” media field formed by algorithmic logic has exacerbated the negative impact of low credibility sources to a certain extent and eliminated the value judgment rationality of young people. In this sense, improving the media use literacy of young people is a practical requirement and inevitable choice for the wide application of algorithmic technology. On the one hand, it is necessary to guide young people to understand social phenomena rationally, objectively, and comprehensively, to avoid the phenomenon of self-cognition and group polarization. On the other hand, it is necessary to guide young people to independently outline their data interpretations, and take the initiative to establish reflection and criticism of algorithmic technology, to dissolve the negative impacts of information cocoon and algorithmic island.

4.3. Optimize the algorithm ecology and activate the value subjectivity of youth

With the advancement of digital technology and the continuous evolution of intelligent technology, the algorithm recommendation characterized by precision and personalization is intervening in the learning life of youth in an unprecedented manner, and profoundly affecting the ideology and behavior of youth. Therefore, optimizing the algorithm ecology and preventing the phenomenon of “algorithmic leviathan” constitute the key to leading the shaping of youth values in the era of algorithm recommendation. Specifically, the first is to standardize the design and operation of algorithms and lead the development of algorithms with mainstream values. As a technical paradigm for data calculation, analysis, and configuration, the design, operation, and results of algorithms “reflect the cognitive level and cognitive level of algorithm designers in the form of value judgment” [5]. Especially in the field of commercial operation of the algorithm, due to technological monopoly and algorithm manipulation, the algorithm itself presents interest orientation and value deviation, which leads to negative problems such as information cocoon, algorithm bias, and algorithm risk. Therefore, it is necessary to standardize the operation of algorithm design and lead the positive development of algorithms with mainstream values. On the one hand, we should strengthen the value guidance for algorithm developers to make them realize the importance of their value orientation to the algorithmic process, to ensure the efficient operation of data resources and accurate decision-making. On the other hand, in the process of algorithm operation, we should get rid of the interest orientation of “content is king”, strengthen the screening and auditing of the information content, and increase the weight of algorithms on mainstream values and public issues. Secondly, improving the transparency of algorithms and highlighting the value subjectivity of youth. Algorithm recommendation not only vigorously promotes the change of information distribution, and improves the effectiveness and precision of information circulation; but also effectively improves the user’s information experience, and becomes the mainstream of current information content distribution. However, this technological revolution in the field of information dissemination implies the countervailing power of inhibiting the subjectivity of human beings at the same time. In the algorithmic black box constructed by algorithmic technology, the screening criteria, distribution mechanism, and decision-making parameters of information have become more hidden, and algorithm recommendation has increasingly evolved

into a constraint on human beings, triggering the dissolution of youth's subjectivity and activeness. Therefore, social media platforms should endeavor to enhance the transparency of algorithms and actively provide functions to assist users in self-control, to guide youth to actively participate in the maintenance of the algorithmic ecosystem, and jointly build a healthy and positive digital network community.

Disclosure statement

The author declares no conflict of interest.

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