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## Analysis of Wikipedia Users' Participatory Culture (Postprint)

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### Abstract

With the accelerated integration of mobile clients and social media, and against the backdrop of deep media convergence, the user demands and role transformations of Wikipedia are becoming increasingly diverse. Netizens' degree of participation in public culture, along with their agency and proactivity, continues to increase; the circles of convergence culture are gradually expanding; and the nodalization and regularity of knowledge production are becoming increasingly pronounced. Wikipedia demonstrates characteristics such as collective collaboration in content, the communalization of users, and the breaking of cultural circles. In this context, this article takes Wikipedia, as a representative of collective intelligence communities, as a case study to examine Wikipedia's content production and editing mechanisms, user relationships, and participation characteristics, observe the formation of circle-based participation culture and the collective intelligence of mass participation. This process may give rise to issues such as group polarization and also lead to the reconstruction of community user relationships. Through the analysis of Wikipedia's participation culture, it can serve as a reference for better improving the media interaction paradigms of online users and the construction methods of participation culture in collective communities.

### Full Text

## An Analysis of Participatory Culture Among Wikipedia Users

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## Abstract

As mobile clients and social media accelerate their integration, Wikipedia users' needs and roles are becoming increasingly diverse against the backdrop of deep media convergence. Netizens' participation in public culture, along with their subjectivity and enthusiasm, continues to grow; the circles of convergence culture are gradually expanding, and the nodalization and regularity of knowledge production are becoming increasingly evident. Wikipedia demonstrates characteristics such as collective collaboration in content, community formation among users, and the breaking down of cultural barriers between circles.

In this context, this article takes Wikipedia, as a representative case of a collective intelligence community, as its research subject. It examines Wikipedia's content production and editing mechanisms, user relationships, and participation characteristics, observing the formation of circle-based participatory culture and the collective wisdom of mass participation. The process may give rise to issues such as group polarization and may also lead to the reconstruction of community user relationships. Through an analysis of Wikipedia's participatory culture, this study aims to provide reference points for improving online users' media communication paradigms and the construction methods of participatory culture in collective communities.

**Keywords:** participatory culture; Wikipedia; collective intelligence

## Introduction

On April 25, 2022, the State Information Center released the "2021 China Online Media Development Report." As mobile clients and social media accelerate their integration, the public's sense of participation and enthusiasm in public management decision-making processes continues to grow [1]. Since Wikipedia's inception, its model of fragmented information production and editing, along with the dissemination and correction of inherited content, has broken away from traditional authoritative knowledge production methods, establishing community knowledge production rules based on neutrality, freedom, and equal collaboration. This study analyzes Wikipedia's information production mechanisms, the user characteristics involved in community construction, and the features of its participatory culture. The aim is to improve users' media communication paradigms and the construction methods of participatory culture in collective communities by exploring the mechanisms of Wikipedia's user participation culture.

## 1. Characteristics of Wikipedia

In terms of nature, Wikipedia differs from Baidu Baike in that the former is operated by a non-profit foundation, while the latter is commercial. According to scholar Zhuang Ziyun, Wikipedia's collective intelligence attribute constitutes tacit wisdom, allowing users to participate in content contribution, storage, and

management. It is a collective knowledge repository composed of unstructured textual data indirectly provided by users [2]. As a typical representative of collective intelligence communities, Wikipedia possesses the characteristic features of collective intelligence. Zhuang Ziyun summarizes the characteristics of online collective intelligence, including the decentralization of knowledge and skills, its automatic emergence from group collaboration and competition, its nature as more than simple aggregation of individual wisdom, its goal orientation and focus on solving practical problems, its capacity for real-time perception, control, and correction, and the generation of new ethical norms and behavioral standards during its realization process [2].

### 1.1 Content Production and Editing

Wikipedia's production and editing functions are unique and user-friendly, including a sandbox testing feature that allows first-time editors to avoid operational errors; an update description function that promptly notifies users of page changes; a version comparison feature that records page updates, with a system capable of automatically identifying differences; as well as content locking, preservation of deletion and modification records, and restoration of historical versions [3].

First, Wikipedia's content is open and shared. Registered users can read most pages, delete or modify content, create new entries, and download, cite, bookmark, and share without any charges. Second, Wikipedia's content is interactive and collaborative. Registered users communicate about specific content through Wikipedia, editing, revising, and improving it collectively. Third, Wikipedia's content is more comprehensively cited and more accurate after multiple revisions. Compiled through collaborative effort by many, the information derives from various aspects and fields. Because it is edited by users from diverse professional backgrounds, the content possesses a certain degree of accuracy.

### 1.2 User Relationships and Characteristics

Numerous motivational factors drive users to contribute knowledge and maintain their collective communities. The four dimensions of passion, monetary reward, honor, and career development constitute the driving forces for users to construct collective meaning [2]. User characteristics affect content quality. Community scale, such as the number of registered users, the professionalism of knowledge levels, and the diversity of educational backgrounds, all positively influence the quality of collective intelligence construction [2]. The relationship between these influencing factors and the quality of collective intelligence outcomes is also affected by coordination technologies and methods [4].

From the perspective of user relationships, Wikipedia users are equal and neutral. Registered users possess equal freedom, with no privileged registered users. Scholar Chen Yaohua classified users based on contribution values and found that collaborative patterns in the community mainly fall into two categories: col-

laboration with a leader and collaboration without a leader [1]. Although roles such as “leaders,” “topic initiators,” and “domain experts” exist, relationships among users remain equal. All can contribute to improving and maintaining entries, serving as steadfast guardians of the community. Wikipedia has no review or certification system for members’ professional identities. Scholar Zhang Weiwei’s empirical research indicates that Wikipedia, which has the lowest degree of professional identity certification, receives the highest evaluations for content quality [2]. Unlike traditional encyclopedias that follow expert-based knowledge evaluation mechanisms, Wikipedia disseminates non-original knowledge. Although Wikipedia’s neutrality may be questioned, it publicly declares its commitment to maintaining a neutral point of view.

From the perspective of user circle composition, Wikipedia’s users are differentiated and diverse. Such group characteristics positively affect the functioning of content construction and community maintenance on Wikipedia. Editors of Chinese Wikipedia exhibit diversified characteristics, primarily concentrated in East and Southeast Asia [3]. Scholar Shang Wenyi considers the first approach to balancing group polarization to be the composition of diversified and differentiated participants [4]. The diverse attributes of participants are the secret to Wikipedia’s ability to improve writing quality, particularly in suppressing group polarization. Wilkinson et al. examined the impact of editing and collaborative behaviors on entry quality, confirming a positive correlation between the diversity of contributors and entry quality [5].

## 2. Participatory Culture in Wikipedia

Since Wikipedia’s inception, user participation patterns have shifted from “authoritative expert orientation” to “collective collaboration” mode. In the process of constructing collective meaning, users face challenges such as “group polarization,” “collective intelligence,” and “social relationships.”

### 2.1 Community Group Polarization

Wikipedia is not without roles similar to “community leaders.” As discussed in *The Crowd: A Study of the Popular Mind*, the essence of groups is unconsciousness, susceptibility to suggestion, and tendency to follow leaders within the mechanism. Wikipedia has established rules, and experts in this community play a role akin to “community leaders,” though they guide not the thoughts of the masses but the direction of topics. “Community leaders” possess profound and unique understandings of topic directions. They analyze topics and events from dimensions such as historical context, politics, society, economy, and environment, using various citations to substantiate their viewpoints and influence more community users participating in discussions.

Wikipedia users come from different cultural backgrounds and social experiences. The perspectives of scholars, experts, and experienced individuals can reveal the depth and breadth behind topics and events. In other words, “commu-

nity leaders” can satisfy users’ needs for information, participation, and identity. However, Wikipedia is an improvisational management organization without a hierarchical system. Since a “self-correction” system exists, the relationships among correctors, those being corrected, and readers will not always remain harmonious.

The environment of Wikipedia’s knowledge community is indeed complex and contentious. After all, users’ media literacy varies, the dimensions for elaborating events and the logical angles for deriving viewpoints differ. The internet, labeled with “everyone is equal” and “everyone has a microphone,” sees the expansion of the concept of identity equality also leading to the expansion of individualism. Coupled with the interference of “opinion leaders” and public opinion trends, the situation becomes even more complex and diverse. In the inclination of group members’ opinions, the phenomenon of “group polarization” is inevitable. Scholar Yan Qidong conducted a quantitative analysis of the “China-India Doklam Standoff” using content analysis, concluding that social media exhibits “significant official public opinion guidance effects, enhanced rational consciousness among netizens who welcome in-depth opinions, substantial influence of online opinion leaders, and weak discursive power of grassroots groups” [1].

Other scholars have conducted case studies on different entries from perspectives such as the construction of discourse system conflicts, the manifestation of Wikipedia’s collaborative mechanisms, and group rights. Scholar Huang Shunming analyzed Wikipedia’s user negotiation mechanism through the “Nanjing Massacre” entry. Despite intense debates among Wikipedia users from different cultural backgrounds and knowledge levels, Wikipedia’s adherence to the principle of “neutrality” influences the collective narrative of this entry on the Wikipedia website [2]. Scholar Shang Wenyi proposes: “The diversified composition of Wikipedia participants and its negotiation mechanism that promotes full confrontation of viewpoints generate numerous conflicts, yet these conflicts are also key to suppressing group polarization and achieving negotiation and reconciliation.” The study also reaches an empirical conclusion: “Regarding the emotional tendencies of discussion page texts, within the same discussion group, users’ emotional tendencies intensify over time, while across different groups, discussions tend to become more moderate” [3].

Wikipedia does have mechanisms to check and balance group polarization. First, expanding the scale and diversity of user groups—diversified knowledge backgrounds and cultural influences—can positively affect the quality of Wikipedia’s content output. Second, operating collaborative mechanisms, such as allowing users to discuss on “talk pages,” which resembles a harmonious negotiation mechanism, and Wikipedia’s “reversion” mechanism that allows continuous correction and modification of page content. The phenomenon of group polarization cannot be completely hedged merely by strategies implemented by Wikipedia as a platform. In recent years, as diverse entities—including online actors, social institutions, and government agencies—have continuously improved their

supervision and guidance mechanisms for complex public opinion phenomena on social media, various “Cyber Purification” campaigns have yielded fruitful results, bringing about a new public opinion atmosphere.

## 2.2 Collective Wisdom of the Masses

In *Convergence Culture: Where Old and New Media Collide*, Jenkins mentions the “politics of participation,” assuming that grassroots groups possess greater collective bargaining power and arguing that convergence culture encourages participation and collective intelligence [4]. Against the backdrop of media convergence, citizens use mobile terminals to focus on grand issues, provide feedback on policy implementation, offer suggestions for social governance, and participate in cultural construction.

As a community, Wikipedia’s users tend toward collective living. The ancient Greek philosopher Aristotle believed that humans are political animals by nature, naturally inclined toward life in the polis; whereas Plato argued that if a polis were governed according to the moral standards of ordinary people, it would likely result in poor governance. If we regard Wikipedia as a vast internet polis, could collective wisdom lead to “poor governance”?

Collective intelligence influences politics within participatory culture. Take user-generated content websites as an example: In 2005, Current TV was founded with the goal of “allowing young people to express their voices and democratizing television,” encouraging young people to actively participate in the production, screening, and distribution of news programs as citizen journalists [4]. This resembles concepts frequently discussed in recent years, such as “citizen journalism” and “constructive journalism,” which focus on ordinary people’s participation to demonstrate concern for civic life.

However, Wikipedia’s collective intelligence more closely resembles the “wise individuals” described by Bao Gangsheng rather than “political participants.” In *Introduction to Political Science*, Bao Gangsheng states: “The construction of a political order depends less on the contemplation of wise individuals and more on the actions of political participants. It is not political philosophical principles that determine a country’s political order, but rather the concepts, behaviors, choices, and political games among major political groups” [5]. In other words, while the collective intelligence manifested in Wikipedia’s participatory culture may be wise from a political science perspective, its long-term impact requires further research to confirm.

Alternatively, Wikipedia’s collective intelligence might not even qualify as “wise individuals,” as user participation on Wikipedia primarily involves promoting non-original content—“tertiary sources.” “Primary sources” refer to original works, while “secondary sources” are other scholars’ research and studies on primary sources. Overall, while ordinary registered users on Wikipedia have ample discussion space and produce numerous posts, Wikipedia follows the “tertiary source” principle, meaning content must be cited from other web pages or liter-

ature, or reproduced from non-mainstream media articles, with at most a few personal comments added to substantiate existing viewpoints. It is difficult to claim that such non-original content possesses depth and inspirational value. Consequently, this community discourse form of mass “tertiary sources,” combined with some simple and superficial web discussions, makes it difficult to obtain substantive discursive power. In mass political topics, most people participate as contributors to this culture to demonstrate collective intelligence, rather than as professional “political participants.”

### 2.3 New Relationships Among Community Users

Community users’ behaviors are inseparable from the community’s management mechanisms. However, the influence mechanisms of participatory culture on community users during collaboration—such as deepening community identity and optimizing hierarchies—require further exploration. Scholar Shang Wenyi conducted similar research through a social network analysis of editors of the English Wikipedia entry “Islamophobia.” The study found that “in terms of the social network of entry editors, the proportion of reciprocal relationships reflecting ‘A revises B, and B in turn revises A’ has decreased year by year, and the editing network has also undergone large-scale reorganization. That is, groups of users who belong to the same community as a particular editor and have dense mutual editing relationships show significant differences across different time periods” [1].

We can hypothesize that in the first collaboration, members of Wikipedia’s knowledge community enter this “derived” specific-topic group because they are more familiar with and interested in a particular topic, and they collaboratively produce and edit entries as “like-minded” individuals. In the second collaboration, this small, specific-topic community again focuses its wisdom on the same specific topic, or some of its members concentrate their intelligence on new topics. Whether the user performance in the second collective intelligence differs in connotation from the first collective intelligence is not addressed in this study and hopefully can be improved in future research.

Wikipedia’s user relationships are always socially demand-driven. The spontaneous organizational model of Wikipedia, characterized by neutrality, openness, and mutual collaboration as discussed above, can promote equal sharing of content production. Users who participate are motivated by aspirations for common progress, advocacy for diverse values, or even the pursuit of self-actualization in Maslow’s hierarchy of needs. Such socially demand-driven motivations further strengthen the foundation of the community network among users.

Wikipedia also influences the construction of online educational networks for offline user networks in reality. Survey research has found that Wikipedia can enhance the quality of knowledge management processes and increase teacher and student satisfaction in designing interdisciplinary project collaborations [2]. From this perspective, Wikipedia has opened up a new community relation-

ship within teacher-student relationships. Based on online and offline collaborative relationships, it has developed a unique convergence culture, also redemonstrating that Wikipedia, as a mass medium, indirectly undertakes the responsibility of popularizing science and educating the public through its user organizations.

Furthermore, whether in social, political, or educational contexts, Wikipedia's participatory culture represents a participation mechanism against the backdrop of digital technology. Among its users are many "digital natives," mixed with "digital divides." The user relationships dominated by mobile clients as the primary devices are completely different from the technological backgrounds and devices held by users when the website was first established. This is also the purpose of this study: to explore and reflect on users' cultural participation roles in knowledge construction through Wikipedia as a typical case, a dissemination channel for non-original content, and a popular science tool with a massive user base.

Digital technology enables more diverse cultures to converge across different platforms, allowing more differentiated users to continue constructing new forms of collective intelligence within these cultures. Within this process, there are certainly intense struggles for discursive power regarding topic direction, correctness of knowledge, and even personal attacks. In recent years, stricter information management systems, further consolidation of social consensus, and the promotion of critical research by numerous scholars have all exerted constraining forces on phenomena such as "group polarization." As Jenkins states in *Convergence Culture: Where Old and New Media Collide*, in the context of convergent media, ordinary grassroots individuals in participatory culture possess collective bargaining power, pooling collective intelligence through brainstorming and skill concentration [4]. By analyzing Wikipedia's cultural participation characteristics and its production and editing management mechanisms, this study explores a new paradigm where individual users scattered around the world voluntarily contribute their personal time, energy, and experience to building a knowledge-sharing cultural community with more diverse entries and more concentrated, wiser collective intelligence.

## References

- [1] Tencent News. *2021 China Online Media Development Report* Released [EB/OL]. [2022-04-29]. <https://new.qq.com/omn/20220429/20220429A0AQBAA00.html>.
- [2] Zhuang Ziyun, Chen Jingliang, Luo Yaocheng. A Review of Research on Online Collective Intelligence [J]. *Journal of Intelligence*, 2014, 33(05): 31-37.
- [3] Zhao Fei, Zhou Tao, Zhang Liang, Ma Minghui, Liu Jinhu, Yu Fei, Zha Yilong, Li Ruiqi. A Review of Wikipedia Research [J]. *Journal of University of Electronic Science and Technology of China*, 2010, 39(03): 321-334.
- [4] Aniket Kittur and Robert E. Kraut. 2008. Harnessing the wisdom of

crowds in wikipedia: quality through coordination. In *Proceedings of the 2008 ACM conference on Computer supported cooperative work (CSCW '08)*. Association for Computing Machinery, New York, NY, USA, 37–46. <https://doi.org/10.1145/1460563.1460572>

[5] Chen Yaohua, Yang Xianmin. Research on User Classification in Open Knowledge Communities—A Case Study of Chinese Wikipedia [J]. *Modern Educational Technology*, 2016, 26(06): 47-53.

[6] Zhang Weiwei, Cui Weijun, Shan Haiyan. Research on Credibility Evaluation of User Contribution Behavior in Open Encyclopedia [J]. *Science Research Management*, 2015, 36(03): 152-160.

[7] Chen Lingzhu. A Comparison of Content Production Mechanisms Between Baidu Baike and Chinese Wikipedia [J]. *Media*, 2017(10): 49-51.

[8] Shang Wenyi, Che Shankun. Group Polarization or Negotiation and Reconciliation?—An Empirical Study of Wikipedia’s “Islamophobia” Entry [J]. *Library Tribune*, 2019, 39(09): 71-81.

[9] Wilkinson, DM, Huberman, BA. Cooperation and quality in Wikipedia. In: *Proceedings of the 2007 international symposium on Wikis*, Montreal, QC, Canada, 21–25 October 2007, pp. 157–164. New York: ACM.

[10] Yan Qidong. Research on Public Opinion Communication Characteristics of Social Media in Emergencies—A Case Study of the “China-India Doklam Standoff” [J]. *Today’s Media*, 2018, 26(07): 49-51.

[11] Huang Shunming, Li Hongtao. Collaborative Writing of Online Collective Memory—A Case Study of the Chinese Wikipedia “Nanjing Massacre” Entry (2004-2014) [J]. *Journalism & Communication*, 2015, 22(01): 5-23+126.

[12] Jenkins, H. *Convergence Culture: Where Old and New Media Collide* [M]. 1st Edition. The Commercial Press, October 2012.

[13] Bao Gangsheng. *Introduction to Political Science* [M]. 1st Edition. Peking University Press, November 2015.

[14] Michele Biasutti and Heba EL-Deghaidy. Using Wiki in teacher education: Impact on knowledge management processes and student satisfaction [J]. *Computers & Education*, 2012, 59(3).

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