

# Analysis of the Reasons for the Formation of Network Group Polarization and its Implications

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## Abstract.

With the development of the Internet, the phenomenon of network group polarization has become more and more serious. This paper looks at how network group Polarization has developed from the original concept of group polarization after the Internet was created and popularized. The reasons for the emergence of online groups are categorized as (1) The Internet provides a wealth of information that people can selectively receive, and algorithmic mechanisms on the web push information based on user data. (2) people can communicate virtually on the Internet, (3) the influence of the media and public figures, (4) the platform's vetting mechanism of the information, and (5) the accumulation of social contradictions for which the Internet provides a platform for catharsis. At the same time, group polarization may exacerbate the antagonism of different groups in society, but it will also help minorities find a sense of identity and increase cultural inclusiveness.

**Keywords:** Internet, Net group polarization.

## 1. Introduction

With the passage of time, information and communication technology (ICT) has made tremendous progress over the past few decades, with Internet penetration growing rapidly and playing an increasingly important role in people's daily lives. With data suggesting that by the end of 2021, there will be more than 5 billion Internet users worldwide, the emergence of the Internet has dramatically changed how people live and socialite.

Sociologist Cass Sunstein pointed out in a study that people on the Internet tend to focus only on information that agrees with their views [1]. Today, there is a wide variety of groups and viewpoints on the Internet, making it easier for people to find groups that match their position and those that share their position. When individuals participate in the communication of groups, certain views that can represent the positions and thoughts of the group will appear naturally without guidance, and the opinion leaders in the group will support these views after full discussion and deliberation. With the support of opinion leaders in the group, individual views will gradually converge to the mainstream views of the group. Moreover, after a period of intra-group communication, the views of all members will be more radical than before the group communication [2]. Therefore, the phenomenon of network group polarization has appeared on the Internet. In recent years, various reasons have led to the increasing severity of network group polarization on the Internet, which can often be seen on the network. First of all, the views expressed by various groups under their positions on the Internet show a tendency of polarization; for example, in the comment section of the same event on social platforms,

some attacks on groups with opposite or unrelated positions can be seen, which leads to the polarization of the views of different groups, and triggers conflicts under different groups and the problem of social inequality. Network group polarization is intensified on the Internet, and the polarization of views and conflicts between different groups on the network can also change people's thoughts and behaviors in life [2] and impact society.

There are few papers analyzing the causes of group polarization on the Internet, and the earliest article proposing the concept of group polarization on the Internet can be traced back to 2009. There is also much literature related to online group polarization and the impact of its phenomenon on society, some of which indirectly mention the relationship between the two. At the same time, some analyze group polarization from the perspective of a certain kind of social conflict, e.g., from the perspective of social inequality. The research in this paper will reasonably cite and refer to the previous literature, review the development of network group polarization, and analyze the reasons for the emergence of network group polarization on the Internet and its phenomenon or impact on society.

## 2. The Definition and History of Net Group Polarization

The concept of group polarization was first proposed by the American social psychologist Irving L. Janis in the 1960's. The original meaning is that when an individual participates in a group discussion, the bias that the individual members have at the beginning, after the

discussion within the group, the viewpoints will usually be more extreme than the position of the individual members before the discussion [3]. Since its inception, this idea has received widespread attention from the social psychology and sociology communities. As time progressed, ICT technology also developed tremendously, and the creation of the Internet had a huge impact on this theory. In 2009, Cass Sunstein, an American professor, combined the concepts of group polarization and the Internet in his research, and in the book *Going to Extremes: How Like Minds Unite and Divide*, he pointed out that the Internet provides a wider and more varied communication channel for people, making it easier for people to interact and communicate with people with similar viewpoints. When people have easier access to information on the Internet similar to their views, a greater number of communication channels can sometimes provide a platform for network group polarization [1].

### **3. The Reasons for the Formation of Network Group Polarization**

#### **3.1. The Flood of Information on the Internet and Algorithmic Recommendations for User Content**

In today's internet age, people face a plethora of information, from social media and news sites to various blogs and forums. In such a flood of information, people have more ability to selectively receive information; people tend to receive information and ideas that are the same as their position and autonomously block out those ideas that are opposite or irrelevant to their position [4]. When people selectively receive the same viewpoints as their position on the Internet, people may form the same group invisibly because of the same concepts and positions or classify themselves or others into different social groups [5]. When people place themselves in a group with a specific identity, they will lose themselves and stay in this group identity to guide their behavior and produce a sense of identification with the group. When individuals feel the radical nature of the group's viewpoints begin to unify, they will also want to conform to the group's expectations to change their behavior and thoughts [6]. So, when an individual member of a group expresses extreme views and develops a certain influence, the group members' views are all reinforced by each other and finally become more radical.

With the continuous advancement of ICT technology, social media, shopping, short videos, and other platforms on the Internet, to provide better products or services, will be given to analyze people's historical data on the Internet and use algorithms to provide users with accurate

personalized push. Most of these contents overlap with the user's past viewpoints, which may lead to the user becoming increasingly deeper into the same particular position and viewpoint, ignoring the diversity of other viewpoints deeper and ignoring other diversity of viewpoints [7]. This algorithmic mechanism, which is widely used on the web, leads to the fact that people are exposed to information that is always pushed based on their historical data, which is more and more in line with their original position and will also allow individuals to go deeper and deeper into a certain field or point of view, and keep encountering people with the same stance and viewpoints, e.g., the creators of the content that the user comes in contact with or the evaluators of the content are the products of algorithmic recommendations based on the user's data. Moreover, these people and viewpoints may be in the same group and position as the user. Furthermore, there are few opportunities for users to be exposed to diverse viewpoints without specific searches. In this case, each new information the user receives on the web may reinforce the original position. Over time, the group's views can become progressively more extreme.

#### **3.2. The Virtuality and Anonymity of Socializing on the Internet**

The Internet has revolutionized the way people interact with each other by providing a platform for virtual identities. Virtual identities in the online society can also post information anonymously. This form of anonymity makes people identify less with social responsibility and not have to intuitively bear the social pressure that comes with speech on the Internet; people are also more inclined to express views on the Internet that they may not typically mention in their daily lives or even extreme [8]. These views may be the germ of the polarization of the online community. When views are expressed and communicated through the Internet, they may become extreme views shared by the community, or the combination of other extreme views may reinforce them.

#### **3.3. The Influence of the Media and Public Figures in Online Communication.**

With the popularity of the Internet, online communication has become a channel for many people to learn about information. To gain higher traffic and click-through rates, some media outlets may publish incorrect and one-sided information, exaggerate facts, or even use sensitive topics to gain attention, such as content containing gender oppositions and racial inequalities. The dissemination of such misinformation and exaggerated facts can lead to the formation of extreme positions by group members on particular issues, which promotes network group

polarization because the Internet allows people to ignore time, place, and space barriers to communication and dissemination, which means that information released by the media, no matter whether it is correct or incorrect, can be disseminated in large quantities in a very short period. There may not be any time for the platforms to re-examine and cancel the information before it is already known and discussed by the public, which may lead to the creation of networks group polarization. At the same time, comments made by influential people on the network, such as experts who are authoritative or celebrities and internet celebrities who are not professional, can and do have a polarizing effect on the network group. The degree of influence may be greater than that of the media, as users on social media are more inclined to accept information from authoritative people, such as celebrities or internet celebrities, and less likely to be influenced by traditional media [4].

### **3.4. Impact of Web-Based Audit Mechanisms on Different Platforms**

At present, many platforms have lower and lower requirements for becoming a publisher of information, such as Twitter and Facebook. Everyone on these platforms is free to publish information, which can lead to high and low quality and sensitivity of content on the Internet, making the platform's auditing mechanism particularly important. The auditing mechanisms of different platforms on the Internet are designed to ensure that the content published by users is in line with the platform's norms and policies to safeguard the image of the platform and the user experience. However, unclear auditing standards and negligence on the part of the reviewers may lead to the dissemination of certain non-compliant and extreme information on the Internet, laying the foundation for the polarization of online groups. At the same time, the review mechanisms of different platforms may also filter out information that contains certain views, which are usually not mainstream due to their positions. Among minorities, when they feel neglected or discriminated against, they are more likely to gather and communicate with their peers and fight for their rights. Especially in groups contrary to the dominant viewpoint in the perception of events, these groups communicate more intensely and defend their positions more strongly when they feel silenced. At the same time, their views become more polarized [9].

### **3.5. The Internet as a Platform for Cathartic Resolution of Long-standing Social Conflicts**

Over time, and especially after COVID-19, social conflicts are accumulating, and the pressure of life is rising, but people have few ways to claim or defend their

interests. Although it is possible to prosecute through legal channels, the cost is too high, and for most people, it will only be used when there is a major interest to claim and defend. However, the Internet has effectively changed the way information is exchanged. On the Internet, speech is relatively free, and the published speech will not feel the social pressure of real life [7]. So the Internet provides a platform for people to claim interests and vent their dissatisfaction, and this platform can cross the time and place limitations; the point of view is very easy to resonate on the Internet, resulting in network group polarization of the discussion occurs, especially in the topics related to the political stance and religious stance.

## **4. Impact of Network Group Polarization on Society**

As people rely more and more on the Internet, the impact of network group polarization on society is becoming increasingly obvious, and this impact is complex and diverse, which will be described in the following section in terms of the positive and negative impacts.

### **4.1 The Negative Impact of Network Group Polarization on Society**

Online group polarization can exacerbate the antagonism of different groups in society. On the Internet, communication between people is more convenient, ignoring the influence of time and place, and information on the Internet is very flooded, coupled with the system tends to recommend to users the content they already like, people can easily find other people or organizations that resonate with their viewpoints. They tend to assign themselves or others to different organizations [5]. When people enter a group, they also develop a sense of identification with the group and consider themselves members of the organization. When individuals are aware of the reinforcement of uniformity of viewpoints in the group, it is too difficult for them to think rationally. They may change their behaviors and thoughts to satisfy the group's expectations [6]. Because individuals tend to exhibit collective unconsciousness when discussing with a strong emotional atmosphere, so they are easily influenced by the group's psychology and emotions and act irrationally. They are more susceptible to misinformation and extreme viewpoints [10]. This systematic content recommendation mechanism and intra-group discussion and exchange may cause users to fall deeper and deeper into a certain position and viewpoint, allowing their position and viewpoint to be strengthened while ignoring the diversity of other viewpoints and increasing the possibility of divergence of viewpoints among different groups [7]. Especially in the case of politically

marginalized groups, when they learn that their group's views have been discriminated against or ignored, intra-group discussions will be strengthened in a short period, and their views and positions will become more radical [9]. This polarization of views between different groups, as well as attitudes such as non-acceptance of other diverse views and discrimination against groups, exacerbate antagonism and conflict between different groups in society.

### 4.2 The Positive Impact of Network Group Polarization on Society

While network group Polarization has had a significant negative impact on society, there are also positive, albeit relatively minor, effects. The flood of information on the Internet and the characteristics of communication across time and place barriers can make it easier for people from minority groups to find empathy, possibly niche culture groups, a group that is not socialistically concerned, and network group Polarization can allow them to feel a sense of identity and increase their pride in their own cultures and perspectives, which can be beneficial to an individual's mental health and well-being. At the same time, people in niche cultural groups, because of their shared experiences, also show a high degree of inclusiveness towards other cultures, and members develop a stronger sense of community and collective responsibility, which makes them more willing to offer help to strangers in that cultural context [11].

## 5. Conclusion

When network group Polarization becomes more and more serious, society also seems to be very concerned about this phenomenon; the short essay from the five reasons about how network group Polarization is generated and strengthened reasons are (1) the Internet is flooded with information, which allows people to have more choice to receive the information that is compatible with their standpoints. However, according to the mechanism on the Internet, where algorithms push content based on users' historical data, most of the information people are exposed to is already in line with the original viewpoints and positions. This can lead to getting deeper and deeper into the same position and point of view. (2) The Internet provides a platform for people to communicate with each other in a virtual capacity, which reduces the social pressure on people to express their views, thus generating extreme views. (3) One-sided or incorrect guidance from the media and public figures can lead to social discussions due to the rapid spread of the Internet. (4) Different

platforms and vetting mechanisms for information may reinforce the polarization of minority views. (5) With the accumulation of social conflicts, the emergence of the Internet has provided a platform for people to prosecute and vent their interests. Suggested solutions to these five causes are: (1) Increase social pluralism and encourage people to accept a diversity of viewpoints. (2) Implementing a real-name system for Internet accounts, as well as strict control over social media platforms and calling on people in the online society to abide by the behavioral norms in the platforms. (3) Strengthen and improve the network for information release audit mechanism to avoid the emergence of information that does not meet the platform norms. Finally, this paper also analyzes how network group Polarization can exacerbate the antagonism of different groups in society. Network group polarization helps minority groups find identity and niche cultures to find pride, improving the cultural inclusiveness of these two groups.

## References

- [1] Sunstein C R. *Going to extremes: How like minds unite and divide*. Oxford University Press, 2009.
- [2] Brignall III T W, Van Valey T. The impact of Internet communications on social interaction. *Sociological Spectrum*, 2005, 25(3): 335-348.
- [3] Janis I L. *Groupthink: Psychological studies of policy decisions and fiascoes*. 1982.
- [4] Chang J. The role of anonymity in deindividuated behavior: a comparison of deindividuation theory and the social identity model of deindividuation effect. *The Pulse*, 2008, 6(1): 1-8.
- [5] Tajfel H, Turner J C, Austin W G, et al. An integrative theory of intergroup conflict. *Organizational identity: A reader*, 1979, 56(65): 9780203505984-16.
- [6] Reicher S D, Spears R, Postmes T. A social identity model of deindividuation phenomena. *European review of social psychology*, 1995, 6(1): 161-198.
- [7] Pariser, E. *The filter bubble: How the new personalized web is changing what we read and how we think*. Penguin. 2011.
- [8] Chang J. The role of anonymity in deindividuated behavior: a comparison of deindividuation theory and the social identity model of deindividuation effect. *The Pulse*, 2008, 6(1): 1-8.
- [9] DiMaggio P, Evans J, Bryson B. Have American's social attitudes become more polarized?. *American Journal of Sociology*, 1996, 102(3): 690-755.
- [10] Le Bon G. *The crowd: A study of the popular mind*. Courier Corporation, 2002.
- [11] Jamieson K H, Cappella J N. *Echo chamber: Rush Limbaugh and the conservative media establishment*. Oxford University Press, 2008..