### Online Carnival and Offline Solitude: "Information Cocoon" Effect in the Age of Algorithms

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#### **ABSTRACT**

With the development of the times and industrial abilities, information technology provides more egotistical thinking space and enormous knowledge in every field. In this case, some people will probably further escape contradictions in society and become isolated. With communication being more effective, it does not necessarily mean the communication is becoming smoother and more efficient than in the era of information scarcity. With the continuous development and progress of social media, our communication and information acquisition mechanisms have changed significantly, yet the resulting "collective loneliness" phenomenon is also worth societal attention.

**Keywords:** Information cocoon; Group loneliness; Internet

#### 1. INTRODUCTION

Social media has become the core domain of Internet actions, and such actions are a social practice in broader social scenarios. Relevant studies committed to exploring how the political and economic environment, social structure, and cultural context shape each other in the development of Internet phenomena, and how multiple actors adapt to such changes through the adjustment of action strategies and codes; Why do actors carry out framework construction, discourse rivalry, and meaning competition according to their interest demands to obtain the legitimacy basis of Internet actions; To what extent do such actions affect the transformation of public policies, and why do they have a subtle shaping effect on social psychology. Therefore, the research significance of Internet phenomena lies not only in explaining and interpreting Internet actions themselves but also in taking Internet actions based on social media as the starting point to explore the mutual shaping relationship between international networked politics and changes in social power relations.

#### 2. LITERATURE REVIEW

#### 2.1. Information cocoons

Information cocoons refers to the phenomenon that people's attention to information domains is likely to be habitually guided by their interests, and thus their life will be trapped in "cocoons" built by silkworms. In Information Utopia, Sunstein first proposed "information cocoons", which means that the public only chooses information fields that please them [1]. They will confine themselves in a "cocoon" in the long run. Sunstein argued that the main reason why people are confined to cocoons is the "filtering" of information. Later, Pariser put forward "filter bubbles" in his speech, which refers to the audience being estranged from other groups or the external world and trapped unconsciously in "bubbles" due to contacting homogeneous content long [2]. With the continuous development and progress of social media, modern current communication and information acquisition mechanisms have changed significantly yet the resulting phenomenon of "Group loneliness" is also worth our attention.

#### 2.2. Group loneliness

"Group loneliness" under the context of social media refers to the sub-health mental condition formed in the Internet social environment. Currently, "collective loneliness" in social media is mainly reflected in indulging in online social networking, ignoring interpersonal communication in real life, being infatuated with online games, and becoming dependent on emotional robots. From a perspective, "collective loneliness" under the context of social media is the concrete embodiment of the continuous deterioration of

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information cocoons; that is to say, the behavioral subject of "collective loneliness" under the context of social media is the emergence of various unhealthy mentalities in the process of constantly moving towards information cocoons. Therefore, people must examine phenomenon of "collective loneliness" under social media from the perspective of the formation mechanism of information cocoons and then find solutions. China Youth Daily once conducted a public opinion survey on the Internet experience for the society, and the number of people in the survey was nearly 20,000 across 30 provinces. Survey data shows that 63.6% of people feel that spending too much time on the Internet makes them "become introverted"; and 57.3% feel that relying on or indulging in social networks all day makes people "more lonely"[3].

Sherry Turkle, an American psychologist, holds that people sacrifice dialogue for the sake of connection [4]. As scientific revolution is getting momentum and robot keeps updating, people's expectations on technology developers are much lower than that of technology itself. Audiences are wrapped in the enclosed information recipient, which generates the "hydatidiform mole effect". It seems that people are connected closely with each other, but they live in the environment created by themselves. Will the close relationship with frequent interaction through technology and the Internet make us fall into greater social loneliness?

Why did the Internet cause such a deteriorating result? Dong Chenyu and Zhang Tian summarized it into three reasons: (1) The "shallow social" provided by the Internet replaced the deep social in real life; (2) The Internet provided a false imagination of friendship; (3) Online social time and offline social time constitute a zero-sum game relationship that goes from one to the other [5]. As a result, the beautiful imagination across time and space provided by the Internet has become a new social choice in the 21st century.

#### 2.3. Relationships

The relationship of the two lies in that both belong to the social or cultural phenomena in today's information age. Based on the existing references, this work believe that the influence of information cocoons is the deciding factor in social groups segregation. In the panentertainment era, people are using more fragmented ways of acquiring knowledge and information, and they are also greatly relying on the prompt broadcast of online media. It seems that reading newspapers or listening to the news broadcast are considered relatively backward ways of acquiring information, which was unimaginable in the past 20 years. Nowadays, it is clear that we are stepping into a brand-new age that formed publications to join into the wave of social media revolution even more participants. With the development of the times and industrial abilities, Information technology provides more egotistical thinking space and enormous knowledge in every field [6]. In this case, some people will probably further escape contradictions in society and become With the communication in different communities being more effective, it does not necessarily mean the communication is becoming smoother and more efficient than in the era of information scarcity. With the continuous development and progress of social mutual communication and information acquisition mechanisms have changed significantly, loneliness" therefore the resulting "collective phenomenon is also worth public attention.

#### 3. QUESTIONS

This article aims to study group loneliness in a social media environment. Social media is social media, which mainly provides people with a virtual environment and network platform for creating, sharing, and exchanging opinions in text, images, music and videos. General social media mainly refers to online social media (platform) and mobile social media (mobile phone). However, in recent years, due to the emergence of Weibo and WeChat as social applications, they have quickly become popular, and they have the socialization function of social media. Therefore, social applications such as WeChat and Weibo also fall into social media. The research questions specifically include the following aspects:

- (1) How does the current state of people's reliance on social media behave?
- (2) What are the media contact needs behind social media reliance?
- (3) Will the progress of media technology deepen the connection between people, or will it make us more lonely?

The influence of social media on people's hearts has become a common social phenomenon, and it has a strong broadness and representativeness. Therefore, it directly impacts re-examining the relationship between technology and people and treating people's inner loneliness with the development of modern society.

### 4. FINDINGS

## 4.1. The performance of group loneliness in modern social media

The advancement of communication technology is changing the way of life of human beings. Social media meets people's communication needs to the greatest extent, making everyone stay in front of the screen. When people interact with people on the screen attentively and undisturbed, loneliness at this time seems more like a prerequisite for gathering [7]. It seems that people always want to enter a social gathering place, whether they are



physically present or not, they must always stay online so that they can enter the connection with others at any time. Social media has added social objects in every "place" where people live, and whether it is a subway station or a concert, even their bedroom has become the center of the conversation. However, people gather here without talking to each other but connecting their attention to the "place" provided by social media.

It is not so much that people are evading real-life problems, as it is that they will be attracted by the information that follows. Being ready to be "interrupted" at any time is not a passive state of mind but a positive psychological pressure. It refers to the "fear of missing out" on what happens on social media (including news and gossip), resulting in anxiety and anxiety. This "fear of missing out" mental state is an instinct that people are born with. It is not a new phenomenon, but it stands out in the context of social media. This average ability to know has gradually evolved into an " information addiction" because social media can provide too many messages that are constantly sent and responded to. This makes people reluctant to miss any information that they can receive instinctively, so they cannot get rid of social media and cannot help but flip through tablets and mobile phones at any time. The psychological pressure of these people is manifested in fear of being discovered "I do not know or have heard of this", fear of not communicating with others and feeling inferior [8]. We are afraid to miss the "unknown" information and the more possibilities contained in the "unknown". Fear of missing the immediate news that you want to know, afraid of missing the possibility of interacting with people, our dependence on social media does not depend on the form of information dissemination but on the information itself, an unknown possibility.

The formation of the online self by social media is not only an escape from the real world but also how to deal with the relationship between online identity and real-life behind the many identities that need transformation desperately needs an idealized and straightforward role. Thus, the masses turned to social media. In social media, people try to "dress up" their appearances, make themselves look more attractive, and use this as a tool to develop their desired personality or express ourselves [9]. The information cocoon room provides a "role-playing" pool, and more groups wishing to play a role can get selfsatisfaction in an increasingly closed environment. For example, players reshape their identities to complete "scenes" that cannot be reached in real life due to work. Social media can support individuals in elaborating and practicing the "possible self" they expect in their hearts and even expressing a long-repressed "real" self [10]. When the "possible selves" shown by people's virtual identities are recognized, this is likely to motivate them to achieve the "possible selves" in their real identities.

# 4.2. "Information cocoons" relies on the media contact needs behind the dependence

People are born with a desire for self-evaluation, and individuals need to rely on external feedback to obtain and maintain an accurate and stable self-image. Even with quantitative standards, individuals tend to evaluate themselves through comparison with others [3]. When we compare, we do not evaluate under identical circumstances but make selective comparisons most of the time. Under normal circumstances, there are two ways to compare: when individuals need to gain confidence, they usually compare with people who are inferior to them, that is, downward comparison. Because in the process of comparison, individuals can see their own positive side, thereby gaining self-confidence; the other is that when individuals need self-motivation and improve motivation, they will compare themselves with people who are better than themselves, that is, upward comparison. The emergence of social media has made such comparisons more frequent. However, finding suitable comparison candidates on social platforms is not easy. Instead, we passively accept the perfect image displayed following the value of others. However, after receiving such information, we use an excessively high comparison standard to evaluate our true selves. As a result, we are prone to negative mental states. When we increasingly hope to make upward comparisons, coupled with the polarization tendency of social platform algorithms, we will become more and more inclined to treat those modified photos and good images as our true selves, hoping to get more attention and evaluation. The fantasies brought about by social media are manifested in gaining attention through social comparison and in the fantasies that enable individuals to be listened to at all times. Due to the asynchronous nature of information exchange in social media. Therefore, the time interval between receiving and replying to information and the period of information processing have been intentionally extended, making people feel that they are always in the information space for communicating with each other. In addition, in this case, people are also affected by the psychological cues of the projection effect. When an individual is forming an impression of others, he always presupposes a situation in which he has the same tendency as himself and projects this kind of illusion that he can be listened to at the moment. However, in the final analysis, this projection is the individual's unilateral imagination. If the projection is too strong or the action time is too long, the individual will have a psychological state of irritability or loneliness.

The last fantasy brought about by social media is the intimate relationship demonstrated through technological demonstrations and individual self-expression. If online intimacy has a real impact, then social media's communication and display functions can also promote and develop an existing connection. For example, when



social media plays the role of defenders of real relationships, couples who are far together will not feel lonely and sad because they can often use social media to communicate and communicate. Moreover, the textbased communication of social media can free them from various restrictions in face-to-face communication. which is likely to increase their mutual emotions. However, the authenticity of communication is the key to establishing emotion, which depends on the individual's reflection on the nature of the self. In providing selfexhibition, social media also increases the possibility of self-concern, allowing individuals to pay more attention to the authenticity of the communication. The exchange of shared ideas and suitable negotiation methods guarantees online interaction. The interpersonal fantasy that social media brings to individuals is, on the one hand, the result of the function of social media, and on the other hand, individuals use social media to generate new cognitions of new behaviors.

# 4.3. The severe consequences of indulging in the "information cocoons"

When people greet each other on social media, people living in modern society are always looking for a balance in a social way. After enjoying the carnival on social media, one will feel overwhelmed in fundamental social interactions and show indifference to others while emphasizing the right to "privacy". People's communication on social media is more of an emotional attribute, but they are talking about non-painful topics in real life. Chasing inflammation has become a common phenomenon of interpersonal communication in modern society and has even been used to brag and show off. Although an individual encounters someone who "cannot understand" in real life, as long as it does not affect his "private field", he will show an "indifferent" attitude. However, once personal interests are touched, social methods become extreme.

As a result, a balance of two social methods has emerged in modern society: one is the revelry of virtual social interaction and the internal transformation of real social interaction; the other is the emphasis on personal interests and indifference to others. The results of the balance of the two social methods are the same, and both will produce the posture that the individual has consistently maintained in modern social methods and deepen the sense of alienation between people. This sense of alienation can not only save you from getting into trouble but also politely refuse others to enter your life. In this way of socializing, our lives will be affected in the same way. People who yell on the subway will regard other people as not present, but people around will not remind him of his impoliteness. This is because everyone maintains the mentality of "someone will be reminded", but the actual state of mind is "it has nothing to do with oneself."

The prerequisite for strengthening close ties is to strengthen information exchange, which highlights the subjectivity of information and regards information exchange as a spiritual "massage" for modern people. The concept of information can be transformed from meeting people's social needs to deeper functionality. Information can make people's lives more comfortable by satisfying the inner needs of individuals, and social media create comfortable environment. Urbanization industrialization have brought about changes in social lifestyles, which have improved individual living standards and awareness of rights, but at the same time, it has also deepened people's inner loneliness. The workplace is no longer social, and simple terms of workflow replace the connections between people. As a result, the "massage" brought about by social media will follow, and it will be more convenient and faster, allowing individuals to live in the bubbles connected to social media.

#### 5. CONCLUSION

In individual interpersonal communication, the need for social interaction is directly proportional to the energy invested. The greater the individual's need for interpersonal communication, the more time and energy he spends in the communication process; the smaller the individual's need for interpersonal communication, the less willing to spend time and energy in interpersonal communication. However, people's energy for social input is limited. When the time and energy invested online is too much, the body functions at this time need to rest or focus elsewhere, then the participation in offline social interaction will be reduced. Nowadays, both electronic indigenous people and individuals who use social networks to work are dependent on social media to varying degrees. However, the way of dependence is different, and it will have an impact along with changes in its characteristics and the surrounding environment. Nevertheless, whether it is Facebook, WeChat, Weibo, or online games, they are just tools. Like technology, it depends on how humans use them. Shirley Turkel portrays a virtual avatar in "Second Life", but "Second Life" can only play an entertainment and pastime role in real life, which is also the node where technology should reach. Humans use the Internet to make our lives more convenient and connect people closer. This is the original intention and goal. Individuals should follow the rules of reality, both in consciousness and behavior, not to mention that we must return to reality in the end. Just like "after your virtual avatar has eaten the delicacies of the mountains and the sea, you still have to turn off the screen and silently walk to the kitchen".

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These authors contributed equally to this work and should be considered co-first authors.



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