

Research on the Privacy Paradox Behavior in WeChat Moments Based on Grounded Theory

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Abstract: As an important content sharing platform in social life, WeChat Moments has gradually shown a “cold” phenomenon, reflecting the characteristics of users’ privacy paradox behavior in posting Moments. In this context, there is a gap between users’ attitudes toward privacy on social media and their actual behaviors. This study collected data on the privacy paradox behavior of 20 users through semi-structured interviews and used NVivo12 software based on the three-level coding framework of grounded theory to discuss the factors influencing privacy paradox behavior in WeChat Moments users and to construct a model of influencing factors for privacy paradox behavior. The study found that social factors, user factors, platform factors, and situational factors all have a significant impact on the privacy paradox behavior of Moments users. The platform still needs to optimize user privacy protection functions and enhance users’ awareness of personal information protection.

Keywords: WeChat Moments, privacy paradox, grounded theory, influencing factors, semi-structured interviews.

1. Introduction

With the rapid advancement of internet technology and the widespread availability of smart devices, social platforms have evolved into an indispensable part of contemporary life. They have not only changed the way people communicate but also reshaped the mode of information dissemination. However, this transformation has not come without a cost. While enjoying the convenience brought by social media, users are increasingly concerned about privacy leaks, which have garnered widespread attention from all sectors of society[1]. As people benefit from the convenience and pleasure provided by social media, they also face the risk of their private information being exposed. This phenomenon reflects, to some extent, the contradiction between users’ awareness of privacy protection and the risk of privacy leakage. The sharing behavior of users on social platforms often involves a balance between privacy concerns and privacy benefits, and the outcome of this balance directly affects the state of users’ privacy protection. Privacy protection has become an important issue in the era of social media. How to enjoy the convenience of social media while effectively protecting personal privacy and avoiding the risk of privacy leakage is a question that everyone needs to face and consider. In China, WeChat, with its rich features and excellent user experience, has firmly

established itself as the leading social application in the market. According to Tencent's 2023 annual economic report, the combined monthly active accounts of WeChat and WeChat have risen to 1.343 billion. This enormous user base not only demonstrates WeChat's significant influence in the social realm but also highlights its deep integration into everyday life. Research shows that college students have a positive attitude towards privacy settings in WeChat Moments and adopt a diversified approach to privacy management in WeChat Moments, mainly combining preemptive management and remedial management[2]. Although the use of WeChat Moments is very common, in recent years, there has been a frequent occurrence of "cold" phenomena and privacy paradox behaviors in WeChat Moments. The underlying influencing factors and the generation of users' privacy paradox behaviors remain topics worthy of in-depth exploration. This study aims to thoroughly analyze the current usage of WeChat Moments and explore the factors influencing users' privacy paradox behaviors. Through this research, I hope to gain a more comprehensive understanding of social interactions in the digital age and provide valuable insights for the healthy development of WeChat Moments.

2. Literature Review

As one of the largest social networking platforms in China, WeChat Moments has garnered significant attention from researchers regarding user privacy behavior. The privacy paradox describes the phenomenon where users share personal information on social media while simultaneously expressing concerns about privacy breaches, a phenomenon particularly evident in WeChat Moments. Early studies primarily focused on the relationship between users' privacy awareness and behavior. For example, Smith et al.[3] found that users' privacy settings do not always reflect their actual privacy needs. As research has progressed, scholars have begun exploring various factors influencing user privacy behavior, including cultural differences[4], technological characteristics[5], and social influences[6]. In recent years, the application of grounded theory in social media privacy research has increased. Grounded theory, with its unique advantages, allows researchers to inductively derive theories from data, providing new perspectives for understanding complex user behaviors. For instance, some researchers have employed grounded theory-based methods to investigate the social and cultural drivers behind ChatGPT users' acceptance of new technologies and to explain the process of new technology adoption[7]. Additionally, Lu Xinyuan and colleagues[8] used grounded theory to study the privacy paradox behavior of users in a multi-social media platform environment, expanding the application of grounded theory in the context of new media. However, there are still gaps in the existing literature regarding the study of privacy paradox behavior in WeChat Moments. First, most research has concentrated on Western social media platforms, with relatively fewer studies on WeChat Moments, a social media platform with Chinese characteristics. Second, existing research predominantly employs quantitative methods, lacking sufficient exploration of the deeper psychological mechanisms and contextual factors influencing user privacy behavior. Lastly, although grounded theory has shown potential in privacy research and has been applied in new media contexts, it has not yet been systematically applied to the study of privacy paradox behavior in WeChat Moments. To fill these research gaps, this study adopts a grounded theory approach to qualitatively analyze the privacy paradox behavior of WeChat Moments users. Through in-depth interviews and content analysis, the study aims to reveal the motivations and influencing factors behind users' sharing of personal information in WeChat Moments and how they manage their privacy risks while enjoying social interactions.

WeChat Moments, as an integral part of the WeChat social network, provides a platform for users to share information and communicate, based on a structure of strong and weak social ties. Searching for "WeChat Moments privacy" in China National Knowledge Infrastructure (CNKI) yields 167 related academic journal research reports, indicating substantial scholarly interest in privacy research on this content aggregation platform. Studies show that various factors influence information-sharing

behavior in WeChat Moments, including users' social capital, usage motivations and needs satisfaction, and the reciprocity principle in social exchange theory. Users' interactions in Moments, such as likes, comments, and shares, not only showcase their social engagement patterns but also serve as effective means for accumulating social capital and building social network influence. WeChat Moments is not merely a place for information exchange but also a platform for cultural display and emotional communication. Research has pointed out that the "like" behavior in Moments has evolved into a cultural phenomenon, embodying deep social significance and emotional exchange[9]. However, with the popularity of Moments, users have started experiencing social fatigue and emotional distancing. While pursuing social benefits, they also face challenges of information overload and social pressure[10]. Furthermore, experts in the academic field reveal that in this era of big data, "digital representation" has widely become a regular phenomenon in digital lifestyles. Despite this trend, issues of self-disclosure of privacy and deliberate privacy breaches by others cannot be overlooked and require considerable attention. Therefore, as research deepens, it is expected that grounded theory can be used to conduct more in-depth discussions on content sharing and privacy protection in WeChat Moments, providing theoretical basis and practical guidance for the healthy development of social media and the guidance of user behavior.

3. Research Design

In 1967, two experts in the field of American sociology, Barney G. Glaser and Anselm Strauss, first introduced the concept of grounded theory[11]. This theory aims to explain social phenomena by abstracting ideas and constructing frameworks based on everyday life experiences and social realities, using an inductive approach that moves from specific observations to broader generalizations[12]. Grounded theory research typically follows four steps: problem formulation, data collection and organization, coding, and model construction. This study adheres to the coding procedures proposed by Strauss, which include open coding, axial coding, and selective coding[13]. Initially, materials related to personal privacy protection in WeChat Moments were collected online, and a preliminary interview outline was drafted based on this information. Subsequently, semi-structured interviews were conducted with WeChat Moments users, and the outline was continuously revised and refined during the interviews to gather original interview data. Using Strauss's systematic grounded theory method[14], supplemented by NVivo 12 software to assist with coding, the collected interview data were deeply analyzed. Through three levels of coding and by reviewing the theoretical saturation, a theoretical framework for the factors influencing privacy paradox behavior was gradually constructed.

In-depth interviews typically do not use random sampling[15]; instead, a more flexible and purposive sampling method is preferred. Considering the differentiated usage behavior of users on social applications and the specific research objectives, the following criteria were adhered to when selecting interview subjects: ① only users active on two or more social network platforms were chosen; ② gender balance was ensured, and demographic characteristics such as educational background, professional direction, occupation category, and educational level were moderately diversified. The core standard for selecting interview subjects was to ensure representativeness and diversity of the sample to facilitate obtaining rich and detailed interview data. Previous studies have explored the formation process of privacy protection awareness among local residents in the digital age, revealing a significant conflict between privacy protection awareness and the content shared by this group[16]. Based on this, the interview subjects selected for this study were mostly university students aged between 20 and 30, who have higher internet engagement and more experience using social network platforms compared to digital immigrants. Ultimately, semi-structured interviews were conducted with 20 samples through a combination of online and offline, one-on-one and group interviews. During the interviews, the researcher did not actively guide the opinions and tendencies

of the respondents and flexibly changed questions for in-depth exploration, with each interview averaging 40 minutes. For detailed content of the interview outline, please refer to Appendix 1. With the consent of the respondents, the interview content was recorded in writing and audio, and the audio files were transcribed into text using Feishu Seconds software, totaling 92,162 words. The original text was stored in the format “A-*-*” (e.g., A-1-1 represents the first sentence of the first interviewee) as the original material for coding. The valid data collected were imported into the NVivo12 program for node coding, with fifteen documents selected as samples for grounded theory analysis, and the remaining five documents used to test the saturation of the theory.

Table 1: Interview Outline

Section	No.	Specific Questions
Part One	1	Age, gender, educational level, and occupation
	2	Daily duration and frequency of using WeChat Moments
Part Two	3	Why do you choose to use WeChat Moments? What content do you share?
	4	What role do you think WeChat Moments plays in your social life?
Part Three	5	How do you define “personal privacy”?
	6	What privacy factors do you consider when sharing content on WeChat Moments?
	7	Do you think the privacy settings of WeChat Moments are sufficient to protect your privacy? Why?
	8	Do you think “likes” and “comments” on WeChat Moments affect privacy?
	9	Please describe a specific scenario where you wanted to share something on Moments but did not due to privacy concerns. How do you balance the desire to share with privacy protection when sharing certain content?
	10	How do you think social and cultural backgrounds (e.g., age, occupation, region) influence your privacy awareness?
	11	How has the “sharing culture” on social media affected your privacy awareness?
	12	What impact do you think the privacy paradox has on your personal life?
	13	What impact do you think the privacy paradox has on society or the social media environment as a whole?
Part Four	14	If there were different personas on social media, which one do you think you belong to?
	15	How do you typically cope with the privacy paradox?
	16	How do you think WeChat Moments can improve to better protect user privacy?
	17	What are your views on the privacy protection measures of other social media platforms?
	18	What technical measures or methods do you think can help you better protect your privacy on WeChat Moments?
	19	In what situations would you still post something despite knowing it might leak information, thus creating a privacy paradox?
	20	What are your views or predictions for the future development of WeChat Moments and privacy protection?

4. Research Based on Grounded Theory

4.1. Open Coding

Open coding, the initial stage of grounded theory research, requires researchers to maintain an open and neutral attitude, starting from the original data to establish clear concepts and categories. Through meticulous analysis and summarization, 40 concepts and 20 categories were extracted from the collected raw data. During the coding process, NVivo12 software was utilized to assist in data coding,

ensuring accuracy and efficiency. To embody the principle of “natural emergence” in grounded theory, researchers retained the original phrasing as much as possible during the transcription of spoken interviews.

4.2. Axial Coding

Under the framework of grounded theory, axial coding serves as an extension of open coding, aiming to reveal and construct the deeper logical relationships between concepts and categories. By thoroughly analyzing the 40 concepts and 20 subcategories identified in the open coding stage, this study further explored their internal connections and re-coded them to develop main categories and subcategories. The analysis results indicated that there are close interrelationships among the 20 categories. On this basis, the study further integrated and refined these to ultimately form four main categories: platform, user, social, and situational. This process not only deepened the understanding of the factors influencing the dissemination of data news but also provided a solid foundation for constructing a more systematic theoretical framework. Through axial coding, the study successfully transformed preliminary concepts and categories into higher-level theoretical constructs, providing significant theoretical support for subsequent research. Details are shown in Table 2.

Table 2: Axial Coding Process

Main Categories	Subcategories	Category Implications
Platform Factors	Privacy Protection Measures	Specific measures taken by users to protect privacy, such as grouping and masking
	Social Media Features	Social functions like “likes” and “comments” and their potential impact on privacy
	Privacy Paradox	The conflict between the desire to share and the need for privacy protection
	Privacy Awareness	Emotional satisfaction or recognition gained through sharing
User Factors	Emotional Needs	Sensitivity and awareness of personal privacy
	Sharing Motivation	Reasons for sharing content, such as recording life or expressing emotions
	Technical Proficiency	Users’ familiarity with social media functions
	Social Roles	Users’ roles on social media, such as observer, sharer, or transparent person
	Personal Image Management	The image users create on social media
	Emotional Influence	The impact of emotional states on sharing behavior
Situational Factors	Temporal Factors	Changes in sharing behavior during specific time periods
	Social and Cultural Background	The influence of factors such as age, occupation, and region on privacy awareness
	Privacy Boundaries	Users’ definitions of private content
	Content Types	Types of shared content, such as daily life, scenery, food, etc.

Table 2: (continued).

	Selective Information Sharing	Strategies for selectively sharing information in different contexts
	Privacy Settings Awareness	Users' understanding and use of social media privacy settings
Social Factors	Consequences of Privacy Breach	Users' concerns about the potential consequences of privacy breaches
	Information Overload	Users' perception of information volume and its impact on sharing behavior
	Social Interaction Frequency	Frequency of users' interactions with others on social media
	Social Pressure	The impact of social network pressure on sharing behavior

4.3. Selective Coding

In the advanced stage of grounded theory, selective coding plays a crucial role in refining the research. The main task is to identify and further develop the central category, creating a theoretical framework that reveals the true nature of the initial data. This study meticulously examined the main categories and selected the behavior of privacy paradox as the central category. It then deeply analyzed and discussed its logical relationships with the four main categories: platform, user, situational, and social factors. Through this process, the results of axial coding were integrated and refined, establishing a grounded theory model based on the interaction of these categories. Additionally, this theoretical model was visualized to form a structured model, providing a new perspective for understanding the privacy paradox behavior of WeChat Moments users.

4.4. Theoretical Saturation Test

Following the principle of theoretical saturation as stipulated by grounded theory, this research achieved a close integration of interviews and analysis throughout the process. During and after the interviews, I carefully reviewed and deeply analyzed the content obtained from the interviews, striving to streamline ideas and summarize core viewpoints. Based on the preliminary analysis data, I continuously adjusted the interview outline until no new information emerged. Additionally, several rounds of supplementary interviews were conducted. In the subsequent data processing and analysis stages, this study applied the three steps of grounded theory—open coding, axial coding, and selective coding—to five selected interview records to verify the level of theoretical saturation. The verification results indicated that the categories formed from the sample coding could be subsumed under the previous coding results, and no new concepts or categories were discovered, meeting the standard of theoretical saturation. Thus, it was determined that the framework for the influencing factors of the privacy paradox behavior of WeChat Moments users constructed in this study meets the requirements of theoretical saturation.

4.5. Model Interpretation and Research Findings

Social factors include information overload, social pressure, frequency of social interactions, and consequences of privacy breaches. In the rapid development of media, we unconsciously enter a flood of information, often resulting in not wanting to look at our phones or respond to messages. The large amount of information causes us fear and pressure in social situations. Social pressure may come

from users' concerns about others' opinions, worrying that shared content will receive negative feedback. The like and comment functions can lead some users to choose silence in the face of high-frequency social interactions. Interviewee A-6 is an introverted user who does not want to overexpose herself in public. She does not participate in liking or commenting on new content posted by other users in her circle of friends, fearing that certain information might have a negative impact and lead to a privacy violation. However, from another perspective, the frequency and quality of social interactions can positively influence users' privacy behaviors. Frequent social interactions can make users more attentive to privacy protection to avoid the troubles and pressure brought by information overload.

User factors delve into individual motivations and psychological states on social platforms. Emotional needs and sharing motives are key factors influencing users' content sharing in their circle of friends. Users may share information to seek recognition, express themselves, or record their lives. For example, when a user refines a beautiful picture to record and preserve it, and then posts it on their circle of friends and receives praise, preservation is their motivation, and praise fulfills their emotional need. Many interviewees indicated that recording beautiful moments and important holidays are significant reasons for posting in their circle of friends. They believe that marking the time and location of such records, which involves privacy, does not conflict with their intentions, thereby avoiding the privacy paradox. Additionally, A-1 mentioned that they often feel emotionally down at night (EMO), which leads to posting content in their circle of friends that they wouldn't usually post and often deleting it the next day. This indicates that privacy paradox behavior is influenced by emotional control. When users' roles and images on social media vary, they often have different views on privacy protection and disclosure. Moreover, users' technical proficiency also affects the effectiveness of their use of privacy settings. Technically proficient users are more likely to use the platform's privacy protection tools effectively to manage their online image and information sharing.

As a social platform, WeChat Moments' privacy settings directly influence users' privacy protection awareness. For example, A-4 supports the current privacy protection functions in Moments and mentions that the "three-day visibility" feature may reduce users' concerns about privacy leaks, thereby increasing their willingness to share. However, this could also lead to a false sense of security regarding privacy protection, causing users to inadvertently share more sensitive information. One interviewee noted that when they want to post on Moments but are concerned about privacy leaks, they often choose to make the post visible only to themselves. This is indeed a method to overcome the privacy paradox but contradicts social exchange theory. Therefore, the social media functions and privacy protection measures in Moments still have certain shortcomings, even though they are stronger than those of QQ in terms of privacy awareness. Consequently, the platform needs to strengthen guidance on user privacy protection while providing convenient social functions and optimize the privacy protection features.

Situational factors emphasize the impact of the external environment on users' privacy behaviors, with time factors and socio-cultural background playing significant roles. For example, in specific cultural contexts, users may be more inclined to share certain types of information while keeping other information private. Users might choose to post sad content on a rainy day that contrasts with their previously positive image to match the mood of the moment, thereby breaking the privacy paradox. Additionally, after major social privacy breaches, users may become more concerned about protecting their personal information. As a content aggregation platform, Moments showcases a blend of diversity and uniqueness in its content. Faced with overwhelming information, users' selective browsing and tagging may expose some of their privacy while still marking content of interest, demonstrating characteristics of the privacy paradox. Furthermore, there are differences in privacy feature awareness between students and white-collar professionals. For instance, A-11 mentioned that

after entering the workforce, they clearly felt the change in environment; they would set their Moments content to be invisible to new friends added, only making exceptions after social gatherings or team-building events.

5. Conclusion and Future Directions

This paper employs a theoretical framework based on grounded theory through a three-phase qualitative research approach and collects preliminary data from semi-structured interviews. The research focuses on identifying the factors influencing users' decisions on privacy paradox behaviors in WeChat Moments and the interactions between these factors. It establishes a framework for analyzing the motivations behind privacy paradox behaviors among WeChat Moments users. Through the analysis of these four main areas, we conclude that the complexity of privacy paradox behaviors among WeChat Moments users is a result of the interplay of numerous factors. In response to this complexity, online platforms need to gradually improve privacy settings by developing more intuitive and user-friendly privacy management tools. Additionally, platforms should enhance user education on privacy protection to raise awareness about personal information security. The paper provides an in-depth study on the following aspects: First, using grounded theory methodology, we organized and analyzed 20 interview texts with NVivo12 software's coding functions. This presentation clarifies users' genuine experiences and feelings regarding privacy dilemmas and explores the underlying causes of such behaviors. Second, based on grounded theory analysis, we investigated various factors influencing privacy paradox behaviors and proposed corresponding privacy protection optimization strategies. However, this study also has limitations. Despite prior research on privacy paradoxes, the conclusions and propositions presented in this paper still require validation and refinement through further research due to the inherent complexity of privacy paradox behaviors. Additionally, limitations in interview responses and the finite sample size may introduce biases during the refinement process of the three-stage coding.

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