

What Hinders Us? Behavioral Barriers in Different Social Media Scenarios: An Empirical Analysis Based on Red Book Users

Yuhan Peng^{1*†}, Wenru Ding^{2†}

¹*School of Psychology, Northeast Normal University, Changchun, China*

²*Shanghai Star River Bilingual School, Shanghai, China*

**Corresponding Author. Email: Pengyuhan237@nenu.edu.cn*

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

Abstract. This study explores how four behavioral factors shape users' behaviors across three distinct social situations on the platform Rednote. The four factors in this study are the fear of encountering opposing opinions, the perceived time and energy required, feelings of incapability, and the loss of anonymity. To collect empirical evidence, the group sent a survey to 122 users (n=122). The results indicate that the three psychological factors and privacy considerations put notable influences on users' willingness to act in different social situations on Rednote. Each scenario has its primary hindering factor. When it comes to the situation of commenting on news items, "the feelings of incapability" acts as the main barrier; responding to help requests is hindered by both the factors "fear of opposing opinions" and "loss of anonymity"; and "fear of anonymity" strongly discourage people's willingness to share sensitive personal experiences. Furthermore, in this study, the group found that anonymity impacts user behaviors through three key channels: the identifiability of one's account, the level of difference from one's real-life identity, and the concealment of geographical details. Also, the findings verify the Privacy Calculus Theory, indicating that a higher level of perceived anonymity effectively promotes users' online expression, sharing and prosocial behaviors by reducing the perceived risk of identity exposure and privacy-related costs. To sum up, this study highlights that these inhibitory factors interact in distinct ways, shaping user behaviors across different platform scenarios.

Keywords: behavioral motivation, inhibitory factors, situational differences, anonymity, Red Note

1. Introduction

The research is set on the app Red Note, a Chinese social media platform that is featured by posting, and serves as a key location for people to search, browse and interact. It has gradually evolved into a channel for users to seek help, discuss news items, and express their emotions. However, through Red Note's official report, only about 30% of the users actively engage in interactive behaviors such as commenting, replying to help-seeking requests, and liking related posts [1]; the majority of users

remain in a state of selective engagement, which means they browse without participation. Although such difference may stem from personality or social media usage habits, what objective factors (e.g. the state of anonymity, the different scenarios) give rise to people's selective participation behind this phenomenon? Existing studies have confirmed that privacy concerns and social anxiety [2] are critical inhibitors of hindering users' social media interactions. Nevertheless, these studies mostly focus on the role of a single factor but fail to integrate other inhibitory factors systematically (such as "time costs" and "perceived competence."). Additionally, most research does not distinguish between the differences in influencing factors across distinct scenarios—such as "responding to help requests" and "sharing sensitive experiences." A core positioning of Rednote is to address specific daily life problems, so that the platform focuses on real-life scenarios. Users usually open Rednote with clear questions and purposes. A typical example is that people search for product reviews on Rednote before making purchases. Since users come to share their real lives and ask genuine questions, posts must be authentic and the platform ecosystem must ensure privacy and security. Only then will the users feel safe to speak up and share ideas confidently in these life scenarios. Given the scenario-specific characteristics, these scenario differences and the state of anonymity may exert a significant impact on user behavior. Consequently, current research still lack a systematic analysis of users' selective engagement behavior under the framework of "multiple factors + multiple scenarios."

This research aims to figure out three core research questions: First, what are the primary behavioral inhibitory factors faced by Rednote users across the three scenarios of "responding to help requests," "sharing unpleasant experiences," and "commenting on news"? Second of all, across different scenarios, do the influencing intensities of various inhibitory factors on users' willingness to engage differ? Third, based on the factors that symbolize people's anonymity perceptions such as account unrecognizability, how can they influence people's willingness to comment or take actions and how can they be related with the previous scenarios?

This study contributes to the academic field in the following way: By integrating the two dimensions of "behavioral inhibitory factors" and "scenario differences," it addresses the gap in existing social media user engagement research regarding the analysis of "multiple factors + multiple scenarios," thereby enriching the theoretical explanation of users' selective engagement behavior. In terms of practical implications, identifying the key inhibitory factors in different scenarios can provide empirical support for Rednote to design "scenario-specific interaction incentive mechanisms"—for instance, strengthening privacy protection in the help-seeking scenario and lowering the threshold for expression in the news commenting scenario. Meanwhile, it can help users gain a clearer understanding of what factors influence their own engagement behavior.

2. Method

To find out the hindering factors across different social media scenarios, a questionnaire was designed and distributed through social media platforms. Ultimately, there are 122 valid responses.

2.1. Scenario design

In the questionnaire, there are 3 scenarios set. The first is sharing an unpleasant experience (eg: violence you experienced). It belongs to self-disclosure behavior, which is a core form of interaction for users to express personal emotions and experiences on social platforms. The second is expressing your opinion on a news item. It's a form of public issue discussion, reflecting the function of social media as a platform for information exchange and opinion collision. The last one

is responding to requests for help. This counts as a form of social support behavior, showing the platform's focus on mutual aid.

2.2. Questionnaire design

The questionnaire (see Part 4 which is under figure 3) has three sections. The first section gathers basic information from participants: gender, age, daily time spent on Red note, how often do they come across help-seeking posts*, and how likely they are to act when they see someone asking for help on the app. (*: Please answer on a 1-5 scale, where 1 = Never and 5 = Very often). This section is fundamental for subsequent analysis.

The second part is to measure context - specific behavioral tendencies and barriers. It includes questions on participants' social media usage likelihood in various cases* and the importance of reasons preventing behaviors in three scenarios*. 4 reasons are fear of hearing opposed opinions, more time and energy spent, lack of capability, and loss of anonymity. (*: Answer with number range from 1-5, 1 = Never, 5 = Very often). In the third part, participants were asked their degree of agreement of the two statements: "I am more willing to help if my profile (avatar, ID, IP) is not known by others" & "In general, I think people are more willing to help others if their profiles (avatar, ID, IP) is not known by others." When investigating participants' willingness to act in each scenario, we used a 1-5 slider scale to measure the degree of their willingness. And if a participant selected 5 (i.e., "very willing"), the subsequent follow-up questions about hindering factors in that scenario were automatically skipped. Any sample data where participants had selected "very willing" in any of the three scenarios was excluded from the data analysis. This is because if a participant is very willing to act in a certain scenario, the hindering factors in that scenario have no practical impact on them, and including such data would interfere with the accuracy of the analysis of the hindering factors' effects.

In the third part, a scale called Perceived Anonymity Item [3] was used to measure participants' perceived anonymity of their rednote's account. It aimed to determine whether privacy protection is a key obstacle. The scale focuses on users' needs for anonymity of their own accounts and their actual behaviors (such as hiding identities, avoiding IP exposure), analyzes the impact of the intensity of anonymity needs on willingness to act in different scenarios, and reveals the contradictory state where users rely on anonymity to express controversial opinions but still worry about liability tracing.

3. Data analysis

In this study, Jamovi was employed to examine the correlations between each of the four factors—fear of hearing opposing opinions, increased time and energy expenditure, perceived lack of capability, and loss of anonymity—and individuals' willingness to act across three distinct scenarios: sharing an unpleasant experience, expressing opinions on a news item, and responding to a call for help (Figure 1). Additionally, the study explored the correlations between various factors related to anonymity, such as profile-anonymity-induced helping inclination, perception of anonymous-related helpfulness, account unrecognizability by real friends, behavioral divergence from the real self, purposeful account unrecognizability creation, anonymity-enabled controversial-view sharing, and awareness of the traceability and accountability of anonymous comments, and individuals' willingness to act.

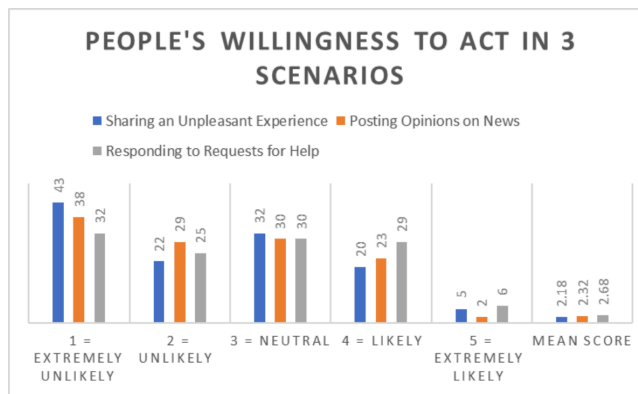


Figure 1. Participants' willingness to act in three different scenarios

Note: The events with colors are independent variables, while participants' rate from 1-5 are dependent variables.

Among the participants, female respondents constituted the majority, accounting for 71.31%, while male respondents the remaining. Regarding age distribution, the group of 18–25 years old accounted for the highest proportion (50%). The second highest was the 26–35 age group (18.03%). Adolescents under 18 made up 10.66%. Middle-aged and elderly groups accounted for relatively lower proportions (36–45 years old: 12.30%; 46 years old and above: 9.02%) .

The data of daily usage duration of Rednote was also widely distributed. 29.51% of users spent less than 30 minutes per day on the platform. 15.57% used it for 30 minutes to 1 hour, 18.85% for 1–2 hours, 12.30% for 2–3 hours, and 23.77% for 3 hours or more daily.

Table 1. Correlation between the three scenarios and four factors that hinder participants to act

	Share unpleasant experiences	post opinions about news	respond to a call for help
fear of hearing opposed views	0.239**	0.103	0.200*
more time and energy spent	0.008	0.08	0.057
lack of ability	0.136	0.346***	0.018
loss of anonymity	-0.066	0.134	0.184*

Table 2. Correlation between anonymity and four factors that hinder participants to act

	Share unpleasant experiences	post opinions about news	respond to a call for help
I'd help more if my profile's anonymous.	0.074	0.051	0.232*
I think people are more helpful when anonymous.	0.129	0.091	0.057
The account is unrecognizable by real world friends	0.16	0.253**	0.272**
My behavior here is totally unlike my real self.	0.513***	0.429***	0.438***
I made my account unrecognizable on purpose.	0.234*	0.292**	0.315***
Anonymity lets me dare to share controversial views.	0.248**	0.171	0.306***
I'm aware anonymous comments are traceable and accountable.	0.157	0.155	0.221*
I'll avoid exposing geolocation and IP info.	0.182	0.230*	0.308***

Frequency of Help-Seeking Posts and User Responses can be seen in Tables 1 and 2.

A 5 - point Likert scale (where 1 stands for never and 5 for very frequently in this case) was utilized to measure how often users were exposed to help - seeking posts. The questionnaire data indicated that the average score for the frequency of users encountering help-seeking requests during browsing was 2.76, which is moderately low. Meanwhile, the average score for users' willingness to take actions after being exposed to help-seeking information was 2.68, reflecting a neutral to lower behavioral tendency.

When it comes to fear of facing opposing viewpoints, the results of the questionnaire showed that it had a moderately negative correlation with the willingness to take action ($r = -0.35, p < 0.05$), indicating that users who were more concerned about encountering opposing views were less likely to share their experiences. The factor "too much time and energy spend than expected" also showed a negative, moderate correlation ($r = -0.28, p < 0.05$) with the willingness to act. It suggested that users who perceived the activity as more time-consuming were less likely to participate. The perceived lack of capability had a weaker but still moderate negative correlation ($r = -0.22, p < 0.05$) with people's willingness to take action. What's more, the loss of anonymity had moderately strong negative correlation ($r = -0.40, p < 0.01$) with willingness to act, showing significant impact of privacy concerns on users.

For the scenario of expressing opinions on news items, the factor fear of criticism showed a negative, moderately strong correlation with people's willingness to act ($r = -0.32, p < 0.05$). The factor of "too much time and energy spend" also showed a negative correlation with the inclination to comment ($r = -0.29, p < 0.05$). People who perceive themselves as lack of the capability to change things had a relatively weaker negative correlation ($r = -0.20, p < 0.05$) with the willingness to take action. What's important, when participants perceive loss of anonymity in the platform, the negative correlation became stronger ($r = -0.38, p < 0.01$). It suggests that users' concerns about privacy were a significant hindering factor in this situation.

When it comes to responding to help-seeking requests, people who were afraid of others' criticism had a negative but relatively weak correlation with their willingness to act ($r = -0.25, p < 0.05$). Meanwhile, those who thought responding would take more time and energy showed a moderate negative correlation ($r = -0.30, p < 0.05$). And individuals who felt they lacked the capability had a slightly stronger negative correlation ($r = -0.27, p < 0.05$). Among all these, the loss of anonymity had the strongest negative correlation in this case ($r = -0.42, p < 0.01$), meaning that concerns about privacy were the biggest obstacle to users' helping willingness.

As for factors related to anonymity, the tendency to help induced by profile anonymity had a moderate positive correlation with the willingness to act ($r = 0.30, p < 0.05$). It means that in general, users who felt they were anonymous in the case were more likely to take actions. The perception that anonymity is helpful for helping behaviors' also had a similar positive correlation ($r = 0.28, p < 0.05$). If an account couldn't be recognized by real - life friends, there was a weaker yet still notable positive correlation ($r = 0.22, p < 0.05$). On the other hand, when one's behavior diverged from their real self, there was a moderate positive correlation ($r = 0.31, p < 0.05$). Interestingly, users who intentionally made their accounts unrecognizable to others had a stronger positive correlation than all of the above ($r = 0.35, p < 0.01$), revealing that those who actively try to stay anonymous would be more willing to help. Also, sharing controversial views with anonymity had a moderately positive correlation with people's willingness to comment ($r = 0.33, p < 0.01$). This shows that due to anonymity, users who felt more at ease sharing controversial views were more likely to get involved in helping behaviors. Finally, the awareness that anonymous comments could be traced so that one would be accountable had a moderately negative correlation ($r = -0.30, p <$

0.05) with the inclination to comment. This suggests that users who were more aware of the possible consequences with their non-anonymous comments were less likely to offer help.

4. Discussion

In general, this study investigates the factors in different social scenarios that influence people's willingness to act and emphasizes the significant role that anonymity plays in hindering people from taking action.

First, the study manifests that users with an average rating below 5 pay lower attention to help-seeking posts and are more reluctant to respond to them. This might be because of users' (in all) insufficient attention to such posts (and this may contribute to more limited number of help-seeking posts on the platform). Meanwhile, the fact that users generally demonstrate a low willingness to respond may be linked to their level of trust in the platform, their interest in help-seeking posts, as well as their consideration of potential costs such as time, energy and privacy risks. This phenomenon can also indirectly indicate the existence of the online bystander effect.

In different scenarios, the factors that hinder these social media users from action differ. To be more specific, in the scenario of "sharing opinions about news," participants rank the factor "lack of ability" as the most significant barrier that stops them from taking action. This perception might be because individuals often feel their life experience limited and relatively superficial their thinking relatively superficial. They cannot look at news events from an in-depth perspective, and they believe that their voices can hardly generate any practical impact. Second, in the scenario of "responding to calls for help," participants are most hindered by the factors of "fear of criticism and fear of losing anonymity." They worry that their assistance might be criticized as inappropriate, and this might even worsen the situation. Accordingly, they think it is better for them to not help at all. Alternatively, they fear that their personal information will be exposed and that they will lose their online anonymity when providing help. Last, in the scenario of "sharing unpleasant experiences," the factor "fear of criticism" is the key deterrent. Social media users are afraid of receiving negative feedback or disapproval from others.

The perceived level of anonymity by participants plays an important role in shaping users' behaviors. In fact, the research shows that when participants believe their accounts will not be recognized by their real-life friends, they are more willing to express their opinions on news items and respond to help-seeking information. This process can be explained by the privacy calculus theory, which posits that prior to engaging in online interactions, users weigh the expected benefits against the anticipated costs [4]. In the context of RedNote, higher perceived anonymity reduces the perceived risk of identity exposure, thereby lowering privacy-related costs and alleviating users' concerns - a finding consistent with previous empirical research, which identifies privacy protection as a core antecedent of social media engagement: users tend to refrain from interacting when they perceive a high risk of personal information leakage [5]. In this context, when people's perceived anonymity is high in RedNote, the anticipated costs will be lower, thus increasing users' willingness to act across the scenarios. Similarly, when users perceive a significant difference between their online account's behavior and their real personalities, they tend to share unpleasant experiences, express opinions on news items, and respond to help-seeking posts. People who purposefully make their accounts unrecognizable further increase their willingness to engage in the activities above.

Also, higher group anonymity tends to encourage users to express controversial opinions and share sensitive experiences online. Last but not least, in general, when users have a greater tendency to avoid revealing their geolocation or IP address, their willingness to participate in discussions and respond to help requests tends to increase. Overall, a higher level of anonymity significantly

increases users' willingness to act (sharing unpleasant experiences, posting opinions about news, responding to help-seeking posts), as it provides a sense of protection from potential negative consequences of revealing users' true identities.

5. Conclusion

This study took 122 Red Note users as research participants, adopted a questionnaire survey to explore the impact of four inhibitory factors on users' willingness to act as well as the mechanism of anonymity's role across three social scenarios, and found that each scenario has its specific dominant inhibitory factor while a higher level of perceived anonymity significantly enhances users' willingness to engage in interactions.

However, this study is limited by its sample, since the data collected were only from platforms like WeChat and active RedNote users. Future research should expand the sample size to include users of different ages, occupations, and cultural backgrounds to improve the study's generalizability. Additionally, combining data from several platforms can provide a more comprehensive understanding of user behaviors. Future research can focus on the differences between users' ideal self online and real self offline, emphasizing how they impact on users' behaviors. Also, longitudinal studies should be introduced to capture dynamic changes in users' behaviors overtime. Finally, interdisciplinary analysis can make people's motivations and the consequences of behaviors more comprehensive, and will be helpful for the research as a whole.

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Appendix

Questionnaire

This questionnaire aims to study your experience of social media. Please answer all the questions honestly.

Your gender:

Male / Female

Your Age:

Under 18, 18-25, 26-35, 36-45, 46+

How much time do you spend each day on XiaoHongshu?

less than 30 min, 30 min-1h, 1-2h, 2-3h, 3h+

How often do you encounter help-seeking posts?

(Please answer with number range from 1-5, 1 = Never, 5 = Very often).

In general, what is the probability of your taking action when seeing someone in need on the app?

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely).

Here are some examples of ways you might use social media.

In each case, how likely do you think you are to use social media?

1 Sharing an unpleasant experience Eg: violence you experienced

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely)

2 Expressing your opinion on a news item

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely)

3 Responding to a ones who seek for help

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely)

How important might each of these reasons be for preventing you to take actions?

As for sharing an unpleasant experience :

I would worry that people will disapprove of my actions/opinions on social media

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely)

It would take more time and energy than I want to spend

(1-5)

I lack the ability to do this

(1-5)

I would lose my anonymity

(1-5)

How important might each of these reasons be for preventing you to take actions?

Expressing your opinion on a news item:

I would worry that people will disapprove of my actions/opinions on social media

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely)

It would take more time and energy than I want to spend

(1-5)

I lack the ability to do this

(1-5)

I would lose my anonymity

(1-5)

How important might each of these reasons be for preventing you to take actions?

Responding to a call for help:

I would worry that people will disapprove of my actions/opinions on social media

(Please answer with number range from 1-5, 1 = very unlikely, 5 = very likely)

It would take more time and energy than I want to spend

(1-5)

I lack the ability to do this

(1-5)

I would lose my anonymity

(1-5)

Please state the degree of agreeing or disagreeing with the following sentences. Answer with number range from 1-5, 1 = Strongly disagree, 5 = Strongly agree

1 I am more willing to help if my profile (avatar, ID, IP) is not known by others

2 In general, I think people are more willing to help others if their profiles (avatar, ID, IP) is not known by others.

How do you think about your account? Please state how true each statement is.

(Please answer with number range from 1-5, 1 means completely untrue, 5 means very true)

1 My account is unrecognizable by my real world friends

2 My behavior on Xiaohongshu is completely different from my real personality

3 I purposely made my account unrecognizable as an individual
4 anonymity makes me more courageous to express controversial viewpoints
5 I'm worried that comments made anonymously will be traced and held accountable
6 I avoid exposing geographical location /IP information
Thank you very much for your participation!