



# Exploring TikTok Use and Non-use Practices and Experiences in China

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**Abstract.** Short-form video sharing mobile applications like TikTok (Douyin) have been gaining traction globally in recent years. These video sharing platforms have transformed how users consume online content in a drastic way. The recommendation algorithms of these applications form a “ludic loop” for users – the more users watch videos, the better the algorithms work, and the more users are exposed to content of their interest. Although prior research has explored how and why users watch short-form videos, relatively little research has studied those who choose not to use Douyin. To address this, we conducted a survey study with Internet users in China (N = 192), focusing specifically on Douyin and those who have abandoned or never adopted Douyin. Our results show that various perceptions of these users shape diverse practices of engagement with and disengagement from Douyin. Those who choose not to use Douyin are mostly motivated by the fear of addiction, or the stigmatized perceptions of videos on Douyin that deemed low-quality. Those who are using Douyin and those who choose to quit Douyin have different perceptions of the efficacy of Douyin’s recommendation algorithms. We situate our findings with prior research on technology non-use, and provide design implications for future video-based social media.

**Keywords:** Short video sharing · Uses and gratifications · User engagement · Social computing · Non-use · TikTok

## 1 Introduction

TikTok (or Douyin, 抖音, for its Chinese version) is a short-form video sharing mobile application launched in autumn 2016. As of January 2020, Douyin boasts 400 million daily active users in China [24], and TikTok is still gaining great traction around the globe, among the most downloaded non-game apps of iOS App Store and Google Play App Store globally [14]. It allows users to produce and browse quick-fire short-form videos lasting from 15s to a few minutes, to share funny and even nonsense videos widely online. Douyin’s influence has also

extended to people’s offline life: many commodities, places of interest, cultural practices, fancy food, and songs become widely spread on the platform, and users eagerly pursue such things in their real life as a fashionable life style [8]. Because of its worldwide popularity, some early research has explored the use of TikTok or Douyin, examining the roles such platforms play in their users’ social lives. However, most of the existing literature are qualitative in its nature, and mainly focuses on specific use scenarios, such as sharing content of intangible cultural heritage on Douyin [9] or outdoor experiences on Douyin [10].

In this paper, we are interested in both the use and non-use of Douyin. It is worth exploring why some Internet users in China choose not to use Douyin or to quit using Douyin given that more than half of the Internet users in China (400 million) are using Douyin daily [24]. As shown in prior research that using Douyin is seen as ‘a fashionable lifestyle’ in China [8], refusing Douyin could exclude a user from information access and social interactions in a way that refusing few other technologies would in China, thus making Douyin non-use an important area of study. To our knowledge, no extant research has examined the prevalence of leaving or not using TikTok, the commonality of the desire to leave TikTok, types of opinions about leaving TikTok, or other practices of limiting TikTok use without leaving entirely. Furthermore, little is known about what the leaving process of TikTok entails or its personal and social ramifications. Specifically, we are interested in the following questions:

**RQ1:** What motivates users to use Douyin and to not use Douyin?

**RQ2:** How do users use Douyin and how do users abandon using Douyin?

**RQ3:** How do users perceive the efficacy of Douyin’s recommendation algorithms, and how does the perception influence their use and non-use?

More specifically, we are interested in the following four types of users:

- *current user*, who currently has Douyin app on their device and uses Douyin;
- *deleted with no intention to come back*, who has deleted Douyin and is very unlikely to come back;
- *temporarily deleted*, who has temporarily deleted Douyin but could technically reinstall at any time; and
- *never used*, who has never had used Douyin.

This paper aims to address this gap by a survey study of 192 participants in China about their use and/or non-use of Douyin. Our results shed light on the prevalence of non-using or leaving Douyin, in what contexts users are using Douyin, what features of Douyin users make use of, what content and genres of videos users watch on Douyin, and how users perceive the user experience of the recommendation algorithms. We relate our results to prior research in video interaction and video sharing platforms, live streaming, and social computing theories. We also discuss design and social implications from our investigation in the situated cultural context of China.

## 2 Background and Related Work

Sharing videos online have been adopted by Internet users and communities since the birth of online video or image sharing platforms such as YouTube and Instagram. Compared with these popular online video sharing platforms, Douyin has some unique features, such as emphasizing short-form videos, background music, and special visual effects and filters. Given the traction it has been gaining in the past few years, we chose to focus on Douyin to understand the specific practices of using short video sharing platforms, and to investigate the affordances of such platforms in the unique social media landscapes and social contexts of China.

Motivations for use of online video sharing platforms such as YouTube, Instagram and Snapchat are well studied. For example, a survey of online videos found that adult content producers mostly post videos of family and friends doing everyday things, themselves or other people behaving in funny ways, and events they attend [6]. Research has also found that video sharing platform users often want to present themselves differently from their social life [13], and youth content providers want to perform, tell stories, and express their opinions and identities in a performative way [25]. Several research has also explored motivations, e.g., aspirational, educational, inspirational, entertainment, community, and ambience [20], and use practices of live streaming, e.g., video gaming [4], information behavior on social live streaming services [18, 26], mobile live streaming [19], live streaming in China [7, 11, 12], gamification in live streaming [17], and live streaming shopping. Several research also focuses on different stakeholders of live streaming, e.g., how viewers support streamers [22] and how moderators get involved in helping streamers [21].

However, non-use of video sharing platforms have been less explored, mostly because there are many different video-sharing platforms available in the world, and not using one specific platform may result from arbitrary reasons. However, as Douyin has its unique features and has become almost a dominating video sharing platform in China, refusing Douyin could exclude a user from information and social interactions in a way that refusing few other technologies would in China, thus making Douyin non-use an important and interesting area of study. Researchers have studied non-use of technology more generally [1, 3], and have provided typologies of non-users. For example, Wyatt's proposed four dimensions of non-users (i.e., resisters, rejectors, the excluded, and the expelled) [23], and Satchell and Dourish proposed a more nuanced six varieties of non-use particular to HCI (i.e., lagging adoption, active resistance, disenchantment, disenfranchisement, displacement, and disinterest) [16].

To the best of our knowledge, this paper is one of the first to examine the use and non-use of short video sharing practices on Douyin using a quantitative method. We also provide a nuanced understanding of how perceptions of recommendation algorithms influence use and non-use of Douyin.

## 3 Methods

### 3.1 Data Collection: Survey

We adapted the methods of Rader et al. [15] and Baumer et al. [1], who used an online survey-based methodology to collect stories about issues related to computer security and Facebook non-use, respectively. We developed an online questionnaire in a similar manner, using two types of questions. The questionnaire was first developed in English with the research team, then translated into Chinese by one of the native Chinese authors and validated by another.

The first line of questioning probed the use or non-use of Douyin. These questions included mostly yes/no, multiple choice, or 5 point Likert-style questions and focused on understanding whether the respondent is currently actively using Douyin, when s/he first started using Douyin, which features s/he uses most often, whether s/he had ever deactivated or deleted her or his account, or deleted the mobile app, whether s/he had ever considered deleting or deactivated her or his own account, how they perceived the usefulness of Douyin's recommendation algorithms, and how they perceived their privacy using Douyin, and other similar questions. The items were adapted from the framework of evaluating user experience of recommender system from Knijnenburg et al. [5], which includes questions probing users' perceptions of recommendation quality and variety.

The second set of questions were open-ended and probed the experience and practices of deactivating or deleting Douyin. Similar to Baumer et al. [1], all respondents were asked to tell a story about a time when they or someone they knew either left/delete Douyin or systematically limited their use in some way.

Additionally, certain parts of the questionnaire were either shown or hidden depending on responses to certain questions. For example, respondents who had deleted their Douyin app were asked to describe how they made the decision and what happened afterward. Those who had not deactivated their account or deleted their app but had considered doing so were asked to describe a time that made them consider leaving. Respondents who had never used Douyin were asked why they did not. The factual questions about use and non-use similarly adapted to respondents' answers. For example, respondents who did not currently use Douyin were not shown questions about their most used features. Those who had deactivated their account or deleted Douyin app were asked how satisfied they were with that decision. Respondents who had not deleted Douyin app were asked if they had ever considered deleting it. The survey concluded with demographic information, including age, gender, occupation, and city.

The questionnaire was distributed mainly through WeChat, where the authors posted the link to online survey in many chat groups on WeChat, followed by a brief description of the study goals. In addition, respondents were asked to forward the questionnaire to anyone they thought might be interested.

### 3.2 Analysis of Open-Ended Data

Responses to the open-ended questions were analyzed using an open coding method [3]. The authors coded the first 20% of responses and met to gain consensus on the codes. One author coded the remaining responses and met with the other coder to reach agreement. All the codes were then discussed by all the authors using affinity diagramming to group and find emerging themes.

## 4 Results

The survey was completed by 192 respondents. In what follows, we first provide the demographic data of the respondents, then we report on their motivations and practices of use/non-use of Douyin. After that, we detailed their perceptions of the recommendation algorithms of Douyin.

Most respondents in our study (81.2%) were between 15–25 years old, and 78.7% were college or university students, with 56.3% being male, 39.1% being female, and 4.7% not disclosed. Although our sample skewed a little young, it aligns with Douyin’s target – young users. In terms of education, over half of the respondents (69.3%) either were studying for a bachelor’s degree or already got one, while 17.7% either were studying for a master’s degree or already got one, which aligns with previous market report of Douyin users in China. Our respondents also spanned 15 different provinces in China, although they were mostly located in Guangdong (18.8%) and Ningxia (57.3%) due to the limitation of our sampling method.

Of all the respondents, 34.9% ( $N = 67$ ) were current users of Douyin, 44.3% ( $N = 85$ ) never used Douyin, 13.5% ( $N = 26$ ) had temporarily deleted Douyin, and 7.3% ( $N = 14$ ) had used Douyin but quitted Douyin without an intention to come back. So in total, 55.7% ( $N = 107$ ) respondents were using or had used Douyin.

### 4.1 Usage of Douyin

When asked about how often the current users use Douyin, about two thirds of the respondents (65.7%) use Douyin at least once a day. Only 7.5% respondents use Douyin less than once per week (Fig. 1). The results demonstrated that many respondents are dedicated Douyin users.

In terms of different Douyin features the respondents use, we found that over 90% of respondents focus on watching Douyin videos and liking videos posted by others (Fig. 2). About 65.7% respondents also often search for Douyin videos or specific music. Surprisingly, over half of respondents (62.7%) also often download Douyin videos to keep the record or share the videos to other social media, however, less than 30% of respondents share videos to other users regularly. This could partly be due to the fact that sharing Douyin video links directly is banned on WeChat, and the workaround for users to share Douyin videos with friends is to download the video on the device and send it as a video message. It also indicates that Douyin users are highly motivated to keep a record

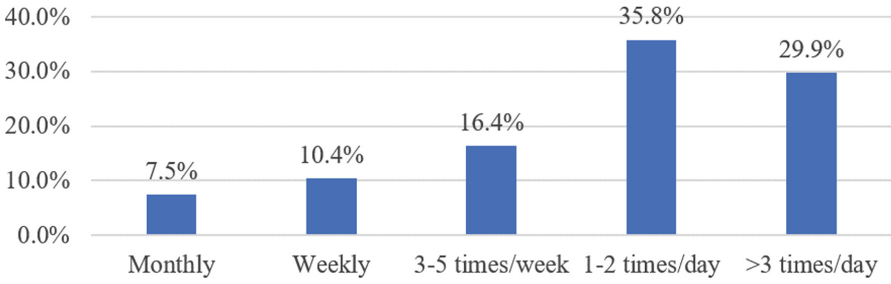


Fig. 1. Frequency of using Douyin (N = 67).

of the videos they watched on their devices, especially those videos that catch their attention. Our respondents also regularly look for local videos (44.8%), comment on Douyin videos by other users (44.8%), and watch livestreams on Douyin (43.3%). However, only about one third of our respondents (34.3%) regularly make videos and upload to Douyin. Further, less than 30% respondents send messages to other Douyin users and comment on livestreams on Douyin, even lesser purchase commodities on Douyin (14.9%) or send virtual gifts for livestreamers (7.4%).

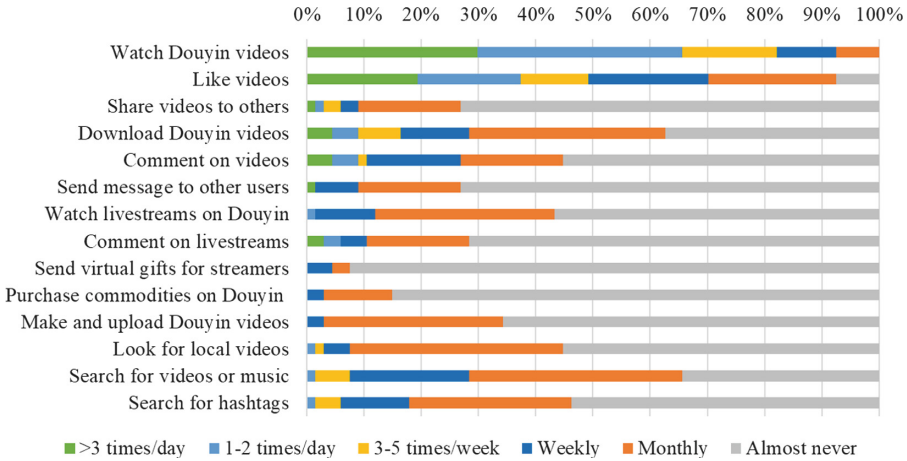
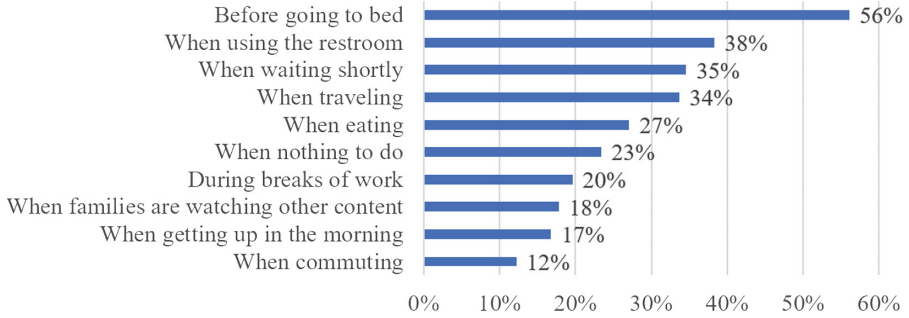


Fig. 2. Frequency of using Douyin features (N = 67).

We adapted items from the study of Bentley and Lottridge [2] on situations where people watch mobile TV to ask about different situations where respondents used Douyin. Over half of the respondents watch Douyin before going to bed (Fig. 3). Other commonly reported situations include when using the restroom, when waiting shortly, when traveling, when eating, and when nothing to do. It seems that the short-form nature of Douyin videos fits the spontaneous

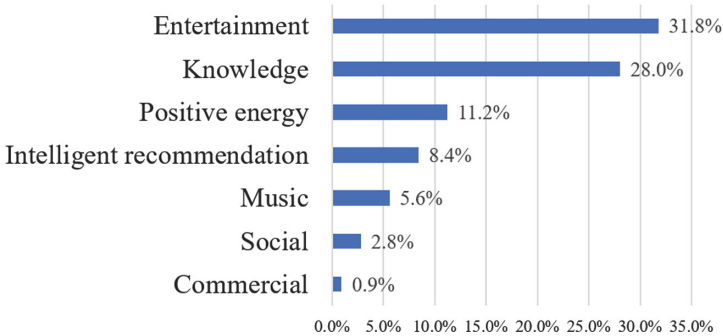


**Fig. 3.** The situations where people watched Douyin videos (N = 67).

nature of these situations. It also implicates that dedicated users use Douyin in various situations throughout the day, mostly in a short period of time.

## 4.2 Motivations and Gratifications of Using Douyin

We asked the respondents to describe what they think is the most valuable in using Douyin in their own words. We analyzed their free-text responses and aggregated similar responses into themes. The most prevalent themes include entertainment (e.g., for fun and killing time), knowledge (e.g., information), positive energy, intelligent recommendation, music, social, and commercial, see Fig. 4. It is surprising that about 28% of respondents reported knowledge or educational value as the most valuable gratification of using Douyin, even approaching those who reported entertainment or fun. There were also 11.2% respondents reported positive energy Douyin provided as the most valuable. This implicates that besides fun and happiness, a lot of dedicated Douyin users are motivated by Douyin's educational value or the positivity it brings to users, which seems to be an unique phenomenon considering the actual affordances of short-form video (producing eye-catching, joking, or even nonsense videos).



**Fig. 4.** The most important and valued motivation of using Douyin (N = 107).

### 4.3 Content and Genres

With regards to the content that was most favored by respondents, there were a variety of video genres that users had a high interest in watching (Fig. 5). The survey items used for content categories and genres of videos on Douyin were adapted from prior research about Douyin and live streaming by Lu et al. [8] and Lu et al. [12]. Again, many respondents (68.2%) reported that they enjoy watching videos about *positive energy*, i.e., where the content providers share videos to advocate for pro-social behaviors or charity engagement. Music and songs, knowledge sharing, movie-related, food-related, and life tips are also among the top favorite content genres by our respondents. Funny videos were only reported by 11.2% respondents as one of their favorite genres of videos.

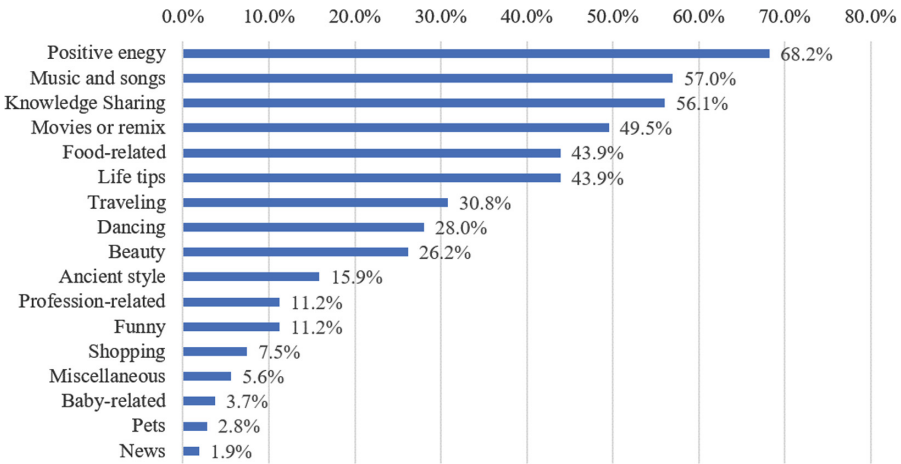


Fig. 5. Genres of videos respondents liked to watch on Douyin (N = 107).

### 4.4 Motivations and Practices of Douyin Non-use

We now reported on the motivations and practices of Douyin non-users through the analysis of their open-ended responses.

For those who had never used Douyin before (N = 85), the most reported reasons for not using Douyin include the anticipation that using Douyin costs too much time, fear of being addicted to Douyin, an impression that Douyin is full of ‘vulgar’ videos, fear of being influenced by low-quality content or inappropriate values, fear of toxicity of the community, and preferring text or image to video. Several respondents noted that they saw a lot of news on social media that some content providers on Douyin create vulgar or low-quality content, or share videos with inappropriate values, which they thought deemed to have negative influence on users, especially young people. They got stigmatized impressions



from other channels and eventually choose to stay away from using Douyin, and even ask people around not to use Douyin. As noted in the following quote,

“From my impression on Douyin videos shared from my friends who are using Douyin, I think many Douyin videos are boring and low-quality videos uploaded by people who have too much free time, or are just for commercial purposes and they produce videos to catch your attention. I think using Douyin to watch such videos is like reducing IQ for me.”

For those who had used Douyin but deleted it ( $N = 40$ ), the most reported reasons for deleting Douyin mobile app include feeling that Douyin ‘wastes’ too much time, having to focus on work or study, continuously seeing homogeneous videos, fear of being addicted, taking up too much memory of the mobile device, using up too much mobile data, distrusting videos that use filters, fear of health getting affected by overusing Douyin, and dissatisfaction with the recommended videos. For example, one respondent noted,

“When using Douyin, I often stayed up late at night watching those videos, which caused me not having enough energy to study the next day. Later I felt that some videos on Douyin are vulgar and homogeneous. Douyin’s filters are so powerful that those good-looking girls may not really be beautiful in real life. After deleting Douyin, I have enough mobile data, go to bed earlier, and I no longer have unrealistic fantasy about beautiful girls.”

When asked whether they had adopted any practices to limit their use of Douyin, 69.2% of respondents ( $N = 74$ ) who had used Douyin reported they had deleted Douyin app, and 37% reported that they had used other approaches to reduce Douyin use. Among the 74 respondents who had deleted Douyin, 41.9% were neutral (neither satisfied nor unsatisfied) with the decision, 18.9% satisfied, and 31.1% very satisfied. This indicates that for some users, simply deleting Douyin did not make them happier – although they could save time, they might still miss the joy or value provided by Douyin after deleting it. Several respondents who were students reported that during the end of semesters they usually delete Douyin to focus on study. Some also reported that they used some time management tools to limit the time they spend using Douyin every day, or set up alarm to stop using Douyin before going to bed. Basically, most strategies they adopted were to combat their addictions with Douyin.

Several responses also revealed several unique cases where they persuade or even force their friends or families to limit the use of Douyin or quit using Douyin. For example, some people think watching Douyin videos too much could influence adolescents’ values, so they would persuade young people limit their use of Douyin, as noted by the following quote, “*Many videos on Douyin could twisted young people’s perceptions of life and values. I think they should focus more on learning than watchign Douyin*”. In another case, a respondent reported that one of his female friends urged her boyfriend to stop using Douyin, because she did not want him to be involved with too many beautiful female content

providers on Douyin, which could bring risks to their relationship, “*A girl noticed that her boy friend followed many female content providers on Douyin. She felt a little offensive, so she forced her boyfriend to delete Douyin*”. This indicates that Douyin has become so influential in China that many people begin to control the use of Douyin in their close-tie relationships to avoid being negatively influenced by Douyin in real life.

#### 4.5 Experience with Recommendation Algorithms of Douyin and Its Relationship to Non-use

We also asked all the respondents who had used Douyin (current users or quitted users;  $N = 107$ ) to rate their user experience of the recommendation algorithms of Douyin. We now report on the differences on their user experience between those who are currently still using Douyin ( $N = 67$ ; Group A) and those who quit Douyin ( $N = 40$ ; Group B, see Table 1).

We found that between the two groups, they had no significant difference in their perceptions of relevance of the recommended videos on Douyin, perceptions of the variety of content recommended by Douyin, perceptions of the relevance of content providers of the recommended videos, and confidence in Douyin’s respect for their privacy. On the other hand, current users agreed more on the statements that the recommended videos on Douyin fit their preference, are fun and of good quality, and they like the recommended videos. Current users also agreed that the recommended videos on Douyin are less similar, have various genres, and they would like to recommend Douyin to their friends. Those who had used Douyin but deleted it also agreed more than current Douyin users that Douyin discloses their private information and invades their privacy.

Our results show that the perceived quality of user experience of Douyin’s recommendation algorithms influence Douyin users’ use or non-use. Those who abandon Douyin in general perceived that Douyin’s recommendation algorithms work worse than current Douyin users perceived, and they were more concerned about their privacy using Douyin’s recommendation algorithms. This implicates that the perceived efficacy of recommendation algorithms of Douyin play an important role for its users to decide whether to keep using Douyin.

## 5 Discussion

Our results describe the varying degrees and types of dis/engagement with/from Douyin, and the motivations and justifications respondents gave for their choices. We reflect on our findings and relate to prior work on the negation of technology.

### 5.1 Use and Non-use of Social Media

Our findings echoed several findings of prior work on non-use. Respondents who did not use Douyin could be described as actively resisting Douyin [16]. Such users include not only those who had never installed Douyin on their mobile

**Table 1.** Descriptive statistics for scales and variables used in survey instrument

	A Current users N = 67 Mean(SD)	B Deleted N = 40 Mean(SD)	Difference between A & B
Recommended videos are relevant	3.25 (0.68)	3.05 (0.78)	n.s.
Recommended videos fit my preference	3.48 (0.73)	3.20 (0.72)	p < 0.1
Recommended videos are fun	3.49 (0.66)	3.08 (0.69)	p < 0.01
Recommended videos are of good quality	3.27 (0.62)	2.98 (0.62)	p < 0.05
I like recommended videos	3.30 (0.60)	2.90 (0.59)	p < 0.01
Recommended videos are not from favorite content providers	3.00 (0.67)	3.00 (0.72)	n.s.
Recommended videos have various content	3.40 (0.55)	3.23 (0.73)	n.s.
Recommended videos are similar	3.04 (0.64)	3.45 (0.75)	p < 0.01
Recommended videos have various genres	3.25 (0.59)	2.90 (0.78)	p < 0.01
I would recommend Douyin to others	3.21 (0.79)	2.65 (0.89)	p < 0.001
Douyin discloses private information about me	3.00 (0.83)	3.35 (0.70)	p < 0.05
Douyin invades my privacy	2.67 (0.75)	3.17 (0.64)	p < 0.001
I feel confident that Douyin respects my privacy	3.09 (0.60)	2.85 (0.74)	n.s.

device, but also those who had used Douyin but decided to delete the app, i.e., resisters and rejectors [23]. Disenchantment [16] aligns with several respondents who reported that they thought the content on Douyin is banal, and prevalence of videos with filters on Douyin makes them distrust content on Douyin. We also found that many users have a strong opinion that they wanted to influence people in their close-tie relationships (children, parents, or intimate relationship), which are seldom reported in prior research. This might be partly due to the nature of collective culture, which worth further exploration.

We also saw something we term *conditional* or *contextual resistance*, that several respondents only quit temporally but return to using Douyin after certain conditions are cleared, e.g., those who wanted to focus on studying during the exams deleted Douyin temporally but installed Douyin after finishing the exams. This could partly be explained by that people easily get addicted to Douyin and it is hard to quit, and that they may find value in the content on Douyin that totally leaving Douyin will make them feel lost. However, future research should further explore this group of users and their motivations and practices.

We also found a interesting conflicting perceptions from those who keep using Douyin and those who do not use or quit Douyin in that the former reported that they found that many videos on Douyin which has **positive energy** were valuable to them, while the latter reported that they thought a lot of videos are low-quality and have twisted values. Although it might be true that they had

different channels which took them to different types of content, there is also a chance that they actually had different standards for ‘positive energy’, especially considering that many videos with ‘positive energy’ may not be that visually pleasant to watch (e.g., some organizations helping homeless people or those in poverty in rural areas). Future research should better probe how different people perceive positive energy, and how their perceptions on positive energy influence their social media use.

## 5.2 User Perceptions on Recommendation Algorithms

Our results empirically show that users who perceived better user experience with recommendation algorithms of Douyin tend to keep using Douyin, which highlights the important role recommendation algorithms of Douyin plays in engaging users. We also show that those who quitted using Douyin had more concerns with privacy issues regarding the recommendation algorithms of Douyin. However, due to the limitation of our method, we could not conclude the low perceptions of recommendation algorithms and Douyin non-use have causality, nor that privacy concerns and Douyin non-use have causality.

Our result also raises an interesting question regarding user perceptions on recommendation algorithms: how Douyin use influence users perceptions and concerns on privacy? From the open-ended data, it seems that those dedicated Douyin users seemed to be more tolerant to privacy issues. They experienced the benefits of Douyin’s recommendation algorithms which could accurately provide interesting content for them to watch whenever they want. They might gradually perceive privacy intrusion as “normal” and even grant more access of their personal data to Douyin if they want more ‘convenience’ from Douyin. Future work should explore the long-term influence of recommendation algorithms – would such ludic recommendation algorithms of Douyin make users more tolerant to privacy issues? How should we design better privacy mechanisms for platforms like Douyin to make people more aware of privacy risks?

## 5.3 Limitations and Outlook

Our study has several limitations. The survey data is based on self-reported use, and is subject to the usual biases that can appear when people are asked to remember their behaviors. Since this exploratory study include many open-ended questions, where we simply collected stories rather than ask about specific motivations or experiences. Thus, the proportions for each theme may not be representative; a respondent not mentioning does not mean s/he has not experienced it. Our sampling is also not ideal, since it is a combination of snowball sampling and convenient sampling. Our sample skewed a little young in Chinese population, and did not proportionally cover people in different areas of China.

In addition to aforementioned research opportunities, the medium of prepared questions yielded responses that were often ambiguous and hinted at more insights “under the surface”. Future work should use techniques such as in-depth

interviews, focus groups, diaries, and other methods to explore deeper. Larger-scale quantitative data could also be leveraged to investigate Douyin non-use at scale.

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