

Family, Friends, and Cultural Connectedness: A Comparison Between WeChat and Facebook User Motivation, Experience and NPS Among Chinese People Living Overseas

Chunhui Xie^(✉), Jagannadha Sri Harsha Putrevu, and Chelsea Linder

Department of Product-User Experience, Angie's List,
1030 E. Washington Street, Indianapolis, IN 46202, USA
{victoria.xie, sri.putrevu, chelsea.c}@angieslist.com,
victoriaxie886@gmail.com

Abstract. This empirical study compared the user experience of WeChat—the most popular mobile application and social networking platform in China, and Facebook—one of the most popular social networking sites in the world through the lenses of NPS and user motivation among Chinese people living overseas. An online survey with 423 responses measured user engagement, user experience, and user motivation of both applications. 10 follow-up interviews were conducted based on the survey responses. This study also explored the Net Promoter Score (NPS) for both WeChat and Facebook among the same group of Chinese users, and concluded that WeChat has a more positive word-of-mouth than Facebook in this particular group of users. This study found positive correlations between NPS and user engagement and user experience. The authors hope to further understand user experience in social and cultural context.

Keywords: WeChat · Facebook · User motivation · User experience · NPS · Cultural context

1 Introduction

Social networking sites such as Facebook have attracted millions of users worldwide, and more than 80% of teens and young adults in the U.S. (Duggan and Brenner 2013). Facebook released its 2016 full year operational highlights in its fourth quarter earnings call, and reported 1.86 billion monthly active users (MAUs) as of December 31, 2016, an increase of 17% year-over-year (Facebook 2016). Since its founding in 2004, people have used Facebook to stay connected with family and friends, and to discover what's going on in the world.

As is known to many, Facebook has been blocked in mainland China since 2009 due to political reasons, leaving the opportunity for alternative local social networking sites to grow their user base. One of these alternatives is WeChat (called Weixin in Chinese), a free, cross-platform and mobile text and voice messaging communication service and social media platform developed by Tencent, a Chinese technological company. Tencent is one of the largest Internet companies as well as the largest gaming

company in the world (Newzoo 2016). Since its first release in January 2011, WeChat has grown rapidly both inside and outside of China. As of December 2015, WeChat had more than one billion created accounts, and 70 million of its 697 million users were located outside of China (Business Insider 2016). The active WeChat users in Malaysia grew by 1,187% from quarter one of 2013 to quarter three of 2014 with 80% of the user base belonging to the young demographic, aged between 16 and 34. WeChat also boasts a 95% smartphone penetration rate (Bakar 2016). According to Tencent's 2016 third quarter earnings call, WeChat had 846.1 million monthly active user (MAUs) accounts as of WeChat September 2016 WeChat (2016), a 21% increase from the fourth quarter of 2015's reported monthly active user of 697 million. The tech giant surveyed a group of 40,443 netizens in China and reported that 94% of WeChat users are daily active users, and half of them used it more than an hour every day (AllChinaTech 2016).

Compared to WeChat's rapid growth and stable daily user engagement, 61% of Facebook users say that one time or another in the past, they have voluntarily taken a break from using Facebook for a period of several weeks or more (Madden et al. 2013). Based on this data along with the authors' initial participatory observation, this paper will compare the user experience of WeChat and Facebook using the same group of users who own accounts for both platforms, to see whether there is a preference in the user participation between these two social media applications.

One of the most popular functions within WeChat is called Hongbao, or digital Red Packet/Lucky Money in English. WeChat Red Packet allows the sender to send a certain amount of money through either a 1:1 chat window, or a group chat setting by controlling the amount, the number of Red Packets available, and the way of receiving. The sender can default an identical amount of money to everyone or a random amount to individuals in the group. 70% of WeChat users spend more than 100 Chinese Yuan (15.4 US dollars) on Red Packet every month (AllChinaTech 2016). From New Year's Eve to the fifth day of the first month in Chinese Lunar calendar in 2015, WeChat Red Packets were sent 32.7 billion times. Culturally, in demand and popular, it's since ancient times, and still practiced today, the Red Packet ritual clearly illustrates a process that is rich with symbolism and meaning in the Chinese society (Liu et al. 2015; Park 2016). Chinese people love the color red, and regard red as the symbol of energy, happiness and good luck. Sending red envelopes is a way to send love, luck, and good wishes. This paper explored the social and cultural aspects of WeChat usage among Chinese people to understand its popularity both in and outside China.

2 Literature Review

As the world becomes a global marketplace where technological products and services are being sold and utilized worldwide throughout different cultures, it has become increasingly critical to understand how culture affects the user acceptance and user experience of mobile services through globalization.

2.1 Usability and User Experience

User experience (UX) has been used in several ways in the HCI literature. On one hand, it is used to denote the design and use of user interfaces, in effect working as a synonym for interaction, usability, or even user-centered design. It was referred as “an umbrella phrase for new ways of understanding and studying the quality-in-use of interactive products” (Bargas-Avila and Hornbaek 2011). As Walsh et al. (2010) pointed out, usability focuses on how the user interacts with the product or whether the user finds a product useful in task completion. Global users, however, expect more from products and services than utility and usability: they are looking for experiences—human experiences that that fulfil users’ stimulation, identity needs, and values.

For many researchers, the emphasis on positive aspects of UX leads to a focus on human values and needs, which include symbolic and aesthetic value. They ultimately determine why users react positively to something (Van Schaik and Ling 2009). This paper will measure UX through emotional, symbolic and cultural perspectives.

2.2 Emotional Experience

The HCI community has been showing a great deal of interest in refining the concepts of “user-centered design”. Researchers and professionals in HCI increasingly moved the emphasis from efficiency and usability to a broader holistic context of human behavior. This holistic and behavioral context tries to understand human-computer interaction by studying the meanings, experiences, and values relevant to personal or cultural contexts (Norman 2006). This research direction has opened up deeper investigations of the meaning of affect, emotion, and experience (Lim et al. 2008).

Emotion was defined as “a resource for understanding and communicating what we experience” (Forlizzi and Battarbee, 2004, p. 264) and “a significant channel for expressing experience” (Lim et al. 2008, p. 4). The framework used in this paper to categorize and organize the different emotional responses users have was adopted from Jordan’s (2002) definition of pleasurable experience. This includes physical pleasures, evoked by textures, sizes, temperatures, or colors; physiological pleasures, related to a behavioral control for a short period of time; and ideological and social pleasures, the reflective level, also the highest level of intellectual or cultural reaction.

2.3 Cultural Factors in UX Design

UX design should take into account users’ socio-cultural context, because in designing UX there is greater focus on content, brand, and emotions, rather than a focus on designing merely for usability (Marcus 2006). Companies that succeed in their efforts usually understand the importance of culture of their target audience and how cultural inheritance plays a vital role in user-centered design. Much literature shows that cultures impact the process of information selection, receiving, and cognition. As early as 1993, Ockman (1993) proposed that good designs rely on users’ cultures, including tastes, habits, and lifestyles, and cultural images could be divided into both implicit and explicit directions. Similarly, Taiwanese scholars Chen et al. (2009) found that culture

reflected on interaction design in three levels: surface layer (visual and material), middle layer (behavior and habits), and inner layer (thoughts and spirit).

Lei and Wei (2013) analyzed the task flows of 20 Android mobile applications that integrated the ink-rhyme effect of Chinese calligraphy culture into interactive feedback, to form gradient modality, and concluded that the integration of cultural factors enhanced user experience, especially emotional experience of excitement, fun, and deep impression.

2.4 Chinese Red Packet Culture

In Chinese traditional culture, the senior members of society give some money to the unwed juniors during Chinese New Year. The senior members of the society may also give newlyweds some money in a red envelope when they meet for the first time. This unique type of monetary gift-giving culture has grown from Chinese New Year (Spring Festival) greetings to many other social occasions such as new births, weddings, graduation ceremonies, and even birthdays. The red envelopes/packets represent love, wealth, abundance, and good fortune.

Red Packets are still associated with traditional meanings in Chinese culture. Besides luck and wishes for special occasions, they also represent a social code that indicates a hierarchal bestowal from senior to junior parties (Chan et al. 2003). Further, the Red Packet ritual symbolically manifests the traditional values of social harmony and respect to hierarchy, evoking traditional collectivist Chinese culture (Park 2016).

Given the popularity of Facebook and WeChat, and the fact that no research has been done to measure and compare WeChat and Facebook user experience through the lens of Net Promoter Score (NPS) and cultural context, this paper tries to fill the research gap in the HIC community, and explores the relationship between user motivation, user experience and NPS, and how cultural factors affect them.

3 Method

3.1 Instruments

A triangulation research approach was utilized with an online survey and follow-up interviews for this study. The online survey (Cronbach's Alpha = .94) was created based on expert interviews with the authors' colleagues, including user experience researchers and strategists, and initial online panel discussions with 12 users.

There are three sections in the survey. The first section captured basic usage metrics of both applications, including frequency of use, daily length of use, total count of "friends", and length of ownership of the accounts.

The second section measured user motivations while using both Facebook and WeChat. Lien and Cao (2014) examined the effects of psychological motivations (entertainment, sociality, and information) on WeChat users' attitudes. The researchers drafted a questionnaire categorizing statements of "WeChat is fun/entertaining/pleasing to use" as "Entertainment", "I can meet new friends/find old friends/keep in touch with my family and friends through WeChat" as "Sociality", and "WeChat is a

convenient/good/timely source of information” as “Information”. This paper adopted a similar question design, and drafted statements for both WeChat and Facebook to measure user motivation and attitudes.

The third section measured the users’ emotional experience through satisfaction ratings regarding the overall experience, and other aspects of WeChat and Facebook that provide physical/visual pleasures, physiological pleasures, and ideological and social pleasures (Jordan 2002). This included “look and feel”, “security”, “positive attitude”, and “cultural connectedness” aspects of both applications. In addition, a Net Promoter Score (NPS) question was asked to measure user loyalty.

Reichheld (2003) introduced the idea of a Net Promoter Score (NPS). He claimed that this single summary number is a sufficient basis for profitably measuring and managing customer loyalty. On a 0-to-10 scale, users answer the question “How likely is it that you would recommend [company X] to a friend or colleague?” Users who rate the company 0–6 are labeled as “detractors”, 7 or 8 are “passives”, and 9 or 10 are “promoters”. The Net Promoter Score (NPS) is the percent of “promoters” minus the percent “detractors.” According to Reichheld (2003), this single number has more relationship to company financial performance than all others he tested. As part of the survey, a Net Promoter Score (NPS) question was asked to both WeChat and Facebook users to measure their level of positive word-of-mouth and user loyalty.

The questionnaire was reviewed and pre-tested by the authors’ colleagues—a group of user experience researchers, and was piloted with a small group of WeChat and Facebook users. It resulted in 423 responses after the full-launch and the data was analyzed using SPSS.

10 interviews to follow up with the survey responses were conducted after the survey was closed. Each interview was half an hour in length, and was conducted remotely.

3.2 Participants

Chinese people who are currently living outside China were recruited by snowball sampling from all over the world. Survey respondents were screened to be both WeChat and Facebook users. A total of 423 users participated in the study (233 females, 190 males). Participants were aged from 14 to 60, with an average age of 27.99 (SD = 8.18). Participants reported 9 countries of residence (Australia, Canada, France, New Zealand, Singapore, Malawi, UK, South Korea and United States) in 5 continents (Australia, North America, Asia, Europe, and Africa) as their current residency. Remote follow-up interviews were conducted with 10 participants who currently reside in the United States and Australia.

3.3 Procedures

The survey was created online and the web link was sent by WeChat and Facebook platforms. The survey was closed after the number of responses reached a statistically valid sample size (over 384) at a 95% confidence level.

After data was collected, Pearson’s Correlation was run to test the correlation between NPS and users’ satisfaction level, user engagement level, and other metrics.

One-way T-test was run to see whether the two groups (WeChat and Facebook) have any significant difference in terms of NPS, and overall user satisfaction. Textual analysis was conducted by coding all the open-ended comments from the survey and the interview transcriptions.

4 Analysis

4.1 Quantitative Results

WeChat Has a Significantly Higher Level of User Engagement than Facebook

Frequency: 89% of users reported they use WeChat at least twice a day, which is significantly higher than Facebook’s 12% in the same category ($p < .005$).

Daily time spent: More than 60% of WeChat users reported they spend at least one hour per day on the platform, with a peak of almost 30% of users stating more than 3 h spent on WeChat on a daily basis (see Table 1). Only 12% of users reported using Facebook at least one hour per day with a peak of 45% users reporting less than 30 min per day, which is significantly lower than WeChat ($p < .005$, sig.).

Table 1. WeChat, daily time spent on platform

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Less than 30 min	52	15.1	15.1	15.1
	30–60 min	104	24.7	24.7	39.8
	1–2 h	80	19.1	19.1	58.9
	2–3 h	56	13.3	13.3	72.2
	3 h+	121	27.8	27.8	100
	Total	423	100.0	100.0	
Missing	System	0	0		
Total		423	100.0		

Account ownership length: 32% of users reported they have used Facebook for more than 5 years, while 15% of users reported WeChat usage for more than 5 years.

WeChat Has a Significantly Higher NPS than Facebook Among the Chinese Users

When asked to rate the 11-point scale of “How likely is it that you would recommend WeChat to a friend or colleague?” 66% rated 9 or 10, 21% rated 0 to 6, which makes WeChat’s NPS 46 among the Chinese users overseas. 46 is a very high score based on industry best practices. On the other hand, Facebook’s NPS among the same group of users is -21, which is significantly lower than WeChat’s NPS ($p < .005$, sig.).

WeChat Has Better User Experience than Facebook Among the Chinese Users

Overall experience: 87% of users reported being “satisfied” or “very satisfied” with WeChat, which is significantly higher than Facebook’s favorable ratings of 42% ($p < .005$, sig.). More Chinese users feel indifferent about Facebook (43%) than WeChat (11%) ($p < .005$, sig.).

Significant difference was also found between WeChat and Facebook ratings for all the other user experience metrics, such as “look and feel”, “ease of use”, “navigation”, “security”, “reliability”, “usefulness”, and “intuitiveness”.

User Motivation: WeChat Provides more Sociality, Entertainment and Information than Facebook to the Chinese Users

When comparing WeChat and Facebook, ratings on WeChat in terms of all three categories of user motivation (entertainment, sociality, and information) are significantly higher than Facebook. T-test results showed significant difference between the means of WeChat and Facebook’s user motivation ratings. The statements being rated were “WeChat/Facebook is fun/entertaining/pleasing to use”, “I can meet new friends/find old friends/keep in touch with my family and friends through WeChat/Facebook”, and “WeChat/Facebook is a good/timely/convenient source of information”.

Comparing the ratings of the three layers of user motivation within each platform, WeChat provides more entertainment and sociality than information, while Facebook provides more information than entertainment and sociality for Chinese users.

NPS Is Positively Correlated with User Satisfaction and User Experience

NPS is positively correlated with user satisfaction and positive user experience: “overall experience” ($r = .851, n = 423, p = .000$), “frequency of use” ($r = .663, n = 423, p = .000$), and “daily time spent on the platform” ($r = .666, n = 423, p = .000$) Tables (2, 3, 4, 5, 6, 7, and 8).

Table 2. Correlations between WeChat NPS & overall experience satisfaction

		WeChat, NPS	WeChat, overall satisfaction
WeChat, NPS	Pearson Correlation	1	.851**
	Sig. (2-tailed)		.000
	N	423	423
WeChat, overall satisfaction	Pearson Correlation	.851**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Table 3. Correlations between WeChat NPS & frequency of use

		WeChat frequency of use	WeChat, NPS
WeChat frequency of use	Pearson Correlation	1	.663**
	Sig. (2-tailed)		.000
	N	423	423
WeChat, NPS	Pearson Correlation	.663**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Table 4. Correlations between WeChat NPS & daily time spent on platform

		WeChat, NPS	WeChat, daily time spent
WeChat, NPS	Pearson Correlation	1	.666**
	Sig. (2-tailed)		.000
	N	423	423
WeChat, daily time spent	Pearson Correlation	.666**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Table 5. Correlations between WeChat positive attitude & sociality

		WeChat, positive attitude	Most of my family friends use WeChat
WeChat, positive attitude	Pearson Correlation	1	.687**
	Sig. (2-tailed)		.000
	N	423	423
Most of my family friends use WeChat	Pearson Correlation	.687**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Table 6. Correlations between positive attitude towards WeChat and cultural connectedness

		WeChat, positive attitude	WeChat, cultural connectedness
WeChat, positive attitude	Pearson Correlation	1	.523**
	Sig. (2-tailed)		.000
	N	423	423
WeChat, cultural connectedness	Pearson Correlation	.523**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Table 7. Correlations between positive attitude towards WeChat and information

		WeChat, positive attitude	WeChat, good source of information
WeChat, positive attitude	Pearson Correlation	1	.518**
	Sig. (2-tailed)		.000
	N	423	423
WeChat, good source of information	Pearson Correlation	.518**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Table 8. Correlations between positive attitude towards WeChat and entertainment

		WeChat, positive attitude	WeChat, entertaining
WeChat, positive attitude	Pearson Correlation	1	.440**
	Sig. (2-tailed)		.000
	N	423	423
WeChat, entertaining	Pearson Correlation	.440**	1
	Sig. (2-tailed)	.000	
	N	423	423

**Correlation is significant at the 0.01 level (2-tailed).

Sociality Has the Strongest Correlation with Users' Positive Attitude Towards WeChat, Followed by Cultural Connectedness, Entertainment and Information

Pearson Correlation results showed that positive attitude towards WeChat is positively correlated with sociality ($r = .687$, $n = 423$, $p = .000$), cultural connectedness ($r = .523$, $n = 423$, $p = .000$), entertainment ($r = .518$, $n = 423$, $p = .000$), and information ($r = .440$, $n = 423$, $p = .000$). Among all these factors, sociality has the strongest correlation with positive attitude towards WeChat.

The majority of Chinese users installed WeChat in its Chinese version (75%), instead of the English version (12%), and another 13% switch the language option between Chinese and English from time to time. Additionally, 97% of users responded they have used and 95% of them like the Red Packet feature on WeChat.

4.2 Textual Analysis

After coding all the comments and interview transcriptions, a few themes emerged:

Sociality. In addition to the quantitative results shown above, participants also stated, “it is very convenient to talk to my family and friends using WeChat”¹ and “I like using WeChat to keep in touch with my family and friends”² during interview sessions.

WeChat has a feature of selecting up to five contacts on top as the users’ favorites in the contact book. When asked who these favorites are and why, most users put: “because they are important people in my life and we talk almost every day”³. According to Venkatesh et al. (2003), social influence is defined as the extent to which individual perceived that people who are important to him or her think he or she should use the system. Given the popularity of WeChat in mainland China, social influence definitely plays a role for its Chinese users overseas.

Cultural Connectedness: Traditional and New. A participant who lives in the United States stated the following in her interview:

“WeChat is a way of communication, but also a way of life. Everyone in my family uses WeChat, including my parents who barely know how to send an email. WeChat is free compared to expensive international texting or data plans my mobile carrier offers. Also, I enjoy following my family and friends’ Moments postings...it feels like I am not too far away from home.”⁴

Regarding the reasons why Chinese users like the Red Packets feature, most respondents reported that it’s a way to show love and send wishes, especially during the Chinese New Year season. “It’s like you are celebrating the Spring Festival even when you are just going through your normal daily routines”⁵. A new element surfaced besides the traditional cultural aspect of the Red Packets, which is using it as a new way of saying “hello”. Most Chinese users surveyed reported that sending a Red Packet now serves as an ice-breaker and usually the Red Packet greetings are reciprocal.

5 Discussion

WeChat versus Facebook. The Chinese users dominantly reported they prefer WeChat versus Facebook in terms of the frequency of use, daily time spent on the platform, and almost all other user participation and engagement metrics. The social context that Facebook is not publicly accessible in mainland China leaves WeChat the advantage of building user base in China. Once it spreads within China, the sociality

¹ Interview participants 3, 5, 7, 8, 9 and 10.

² Interview participants 1, 2, 3, 5, 6, 7, 8 and 10.

³ Interview participants 2, 3, 4, 5, 6, 7, and 9.

⁴ Interview participant 3.

⁵ Interview participant 5.

and cultural context helps WeChat reach the users overseas who share the same language and cultural background.

Information versus Communication and Connectedness. The survey respondents reported that they use Facebook more for information, and rated Facebook favorably regarding its availability of timely information. In comparison, WeChat users mainly focused on the social aspect of using WeChat as a communication tool to stay connected with family, friends, and their home culture. The Chinese government has long kept tight reins on both traditional and new media to avoid potential subversion of its authority. Its tactics often entail strict media controls using monitoring systems and firewalls, which shutter publications or websites by keyword search (Xu 2014). This particular study didn't further explore the media censorship and whether it contributed to the amount of information available, or what type of information Chinese users are seeking. Most participants (7 out of 10) reported in the follow-up interviews that they enjoyed checking Facebook for its updates and news, but not necessarily initiating posts and sharing them.

Cultural Context: Filial Piety and Online Collectivism. Chinese Filial Piety, which is a virtue of respect for one's parents, elders, and ancestors in Confucian philosophy, was demonstrated in WeChat. WeChat enables Chinese people overseas to pay respect to their parents and elders by daily communication and sending monetary gifts very conveniently. The respondents reported that WeChat makes them feel less guilty for "leaving parents at home and living abroad"⁶, especially for empty nesters. The linking of their bank cards to WeChat reduced the physical distance with family and allowed families to share the experience and culture of Red Packets virtually (Yangtze Evening Post 2014).

Cultures are defined as collectivist if the society holds a consistent world view, where adherence is given to interpersonal relationships, reciprocity, and social norms (Hempel et al. 2009; Oyserman et al. 2002). 95% of the respondents in this study use the Moments feature of WeChat (Social networking profile) and post something there on an average of once a week. Interestingly, users repost and share family and friends' moments more on WeChat than on Facebook, especially the ones that were seeking help, either in a commercial way or non-commercial way. Noronha (2002) stated that collectivist cultures have been observed to have a tendency toward social group inclusion and support, and a general value is placed on social obligations and commitments. The reciprocal relationship of Red Packet sending and receiving almost instantly manifests the collectivist culture as well.

6 Limitations and Future Research

This study used snowball sampling and an unknown amount of respondents are friends and family members of the authors'. This convenient sampling methodology might have been biased by the "like-minded" social group as the authors are in. Also, 83% of

⁶ Interview participant 2, 3, 4, 5, 7, 9 and 10.

the respondents are millennials (aged under 34), and 84% of them have a bachelor's degree and above, which makes the sample possibly biased with first-generation Chinese immigrants, such as international students and young professionals who have not been living abroad for too long, and still have strong ties in China. It will be interesting to explore the popularity of WeChat among the second or third generation of Chinese users, who might not share as much strong connection as their parents or grandparents do.

Another limitation of the study would be that the definition of emotional experience was not very clear, and is hard to measure or quantify to begin with. More in-depth qualitative research, or usability testing sessions could help determine the emotional aspect of the user experience and usability of WeChat. Additionally, although NPS is widely adopted in the industry, and used by companies such as Apple, Southwest, and Best Buy, to track customer satisfaction and loyalty, it also has some critical concerns regarding its validity from scholars and practitioners (Grisaffe 2007).

Lastly, despite the popularity of both Facebook and WeChat worldwide, and the fact that they share a great amount of similar features and functionalities, they are not the same. Additionally, Facebook is blocked in China. Further research could include experiments with Chinese participants from mainland China who use Virtual Private Network (VPN) to access Facebook, and measure their user experience in comparison with their usage of WeChat.

7 Conclusion

This study examined users' perceived user experience of WeChat and Facebook. A triangulation research approach was utilized, including a survey with 423 Chinese users of both WeChat and Facebook, and textual analysis of the open-ended comments and follow-up interviews. It concluded that Chinese users who live outside China, prefer using WeChat over Facebook. WeChat has a much higher NPS, overall satisfaction, and user engagement compared with Facebook among this group. Social context and cultural factors were included to better understand the findings. The quick adoption and popularity of WeChat among Chinese people overseas, especially the digital Red Packets feature, and the way users post on Moments, are deeply rooted in the traditional Red Packets, filial piety, and the collectivist nature of the Chinese culture.

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