Understanding Mobile Social Media Usage: Uses and Gratification Expectancy Model

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Completed Research Paper

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Abstract

Despite the increasing popularity and growing trend of mobile social media in China, factors affecting users' continued usage behavior remains unclear and deserves further scholarly attention. Synthesizing theories of expectation confirmation as well as uses and gratification, we advance a uses and gratification expectancy model that depicts how confirmation, perceived usability and gratification affect users' continuance intention towards mobile social media. Empirical findings from an online survey of 247 respondents reveal that continuance intention is determined by a range of gratifications, including information sharing, media appeal and perceived enjoyment. In addition, confirmation of expectations and perceptions of usefulness gleaned through prior usage of mobile social media have significant effects on gratifications of information sharing, perceived enjoyment, social interaction, passing time and media appeal. Conversely, perceived ease of use exerts a weak impact on gratifications of media appeal and social interaction.

Keywords: Mobile social media, continuance intention, uses and gratification, expectation confirmation, uses and gratification expectancy, WeChat

Introduction

Mobile social media (e.g., WeChat) is gaining in popularity and has radically transformed individuals' daily lives (CNNIC 2016b). WeChat (Wéixìn or "微信" in Chinese), being the most popular social media in China, was launched in 2011 by Tencent (CNNIC 2016a). WeChat offers multiple mobile services to individuals and organizations, including mobile communication services via text and voice, and mobile social networking services (Wikipedia 2013). Compared to other social media, a distinctive characteristic of WeChat lies in the familiarity among users: WeChat "friends" are typically acquainted with each other in reality (Gan 2017). The high degree of socialization and ubiquity of WeChat has culminated in an expanding user base in recent years (CNNIC 2016b). According to the latest report issued by Tencent, the number of monthly active WeChat users has reached 846 million towards the end of the third quarter of 2016 (Tencent 2016). Yet, despite a huge following in China, there is still an urgency to pay attention to users' continued usage of mobile social media services. Due to the availability of competing social media platforms offering comparable services (e.g., QQ and Momo) (CNNIC 2016b) and the low switching costs incurred by users in migrating from one service to another (Gan 2016), user retention over the longer term becomes an elusive challenge for mobile social media platform providers. Given that users' continued usage is instrumental for achieving information system success (Bhattacherjee 2001), the motives driving users' continued usage of mobile social media services deserve further scholarly attention.

Within extant literature, different theories have been applied to examine continuance intention in the context of social media, such as Uses and Gratification Theory (UGT) (Katz et al. 1974), Expectation Confirmation Theory (ECT) (Bhattacherjee 2001) and IS Success Model (DeLone and McLean 1992). Building on UGT, one dominant stream of research on continuance behavior in social media has accentuated the effects of distinct gratifications (e.g., content gratification, hedonic gratification, utilitarian gratification, social gratification and technology gratification) (Heijden 2004; Katz et al. 1973; Stafford et al. 2004), in influencing users' continuance intention across diverse settings in the likes of Facebook (Chaouali 2016; Hsu et al. 2015), microblogging (Guo et al. 2016), online game (Chang et al. 2006) and WeChat (Gan 2017). However, less attention is paid to how these gratifications

are induced. Additionally, WeChat possesses unique characteristics (e.g., private social networking) (WeChat 2013) so much so that users' continuance intention may be precipitated on a different set of gratifications acquired from utilizing the service. Furthermore, compared to non-mobile social media, mobile social media affords users with a different usage context, such as constant connection and situation-dependent services (Figge 2004; Katz and Aakhus 2002). Conceivably, the motives driving continuance behavior of non-mobile social media users may not hold in the context of mobile social media. To bridge the abovementioned knowledge gaps, this study endeavors to provide answers to the following research question: What are the effects of distinct gratifications on users' perceived usability and continued usage of mobile social media services and how can these gratifications be induced?

Specifically, we advance a research model that attempts to shed light on the factors affecting users' continuance intention towards mobile social media with WeChat serving as our empirical context. Our proposed research model was validated via a survey that was administered 274 WeChat users in China. In doing so, this study yields significant implications for theory and practice. Theoretically, this study contributes to an in-depth appreciation of continuance behavior in mobile contexts by revealing how confirmation and perceived usability impact distinct gratifications as well as the differential effects of these gratifications on continuance intention. On the practical front, this study generates insights to guide practitioners in retaining existing mobile social media users.

Theoretical Background

Uses and Gratifications Theory

Originating from research into radio communication, the Uses and Gratifications Theory (UGT) has been widely employed to explain user behavior from a user-level perspective. According to UGT, individuals are active in choosing media to satisfy their own needs (Katz et al. 1974). UGT emphasizes psychological and social motives driving individuals' preference for a select media (Leung and Wei 2000). Because UGT assumes that individuals are aware of their own requirements (Rubin 1993), it has been employed for deciphering why individuals choose one media over another based on the former's needs (Katz et al. 1974). UGT has been extensively applied to investigate individuals' usage of different media, such as traditional media and Internet (Babrow 1987; Dimmick et al. 2000; Elliott and Rosenberg 1987). More recently, scholars have turned to UGT to explain and predict user behavior in the context of social media (Chaouali 2016; Ha et al. 2015), such as microblogging (Gan and Wang 2015; Liu et al. 2016), Twitter (Coursaris et al. 2013) and social networking (Ng 2016; Raacke and Bonds-Raacke 2008). Empirical findings reveal that user behavior is motivated by a range of gratifications, such as content gratification, hedonic gratification, social gratification and utilitarian gratification (Heijden 2004; Katz et al. 1973; Stafford et al. 2004).

Expectation Confirmation Theory

Expectation Confirmation Theory (ECT) is a predominant theory being applied in the Information System (IS) domain for predicting continuance behavior. ECT aims to explain IS continuance behavior by examining three core constructs: confirmation of expectations through prior IS use, perceived usefulness as post-adoption expectations and user satisfaction toward IS (Bhattacherjee 2001). ECT assumes that confirmation has a significant effect on perceived usefulness and user satisfaction, which further significantly influence IS continuance intention; also, user satisfaction is determined by perceived usefulness (Bhattacherjee 2001). Several studies have applied ECT to examine IS continuance behavior, such as web portal (Lin et al. 2005), information technology (Brown et al. 2012; Thong et al. 2006), online service (Li and Liu 2014) and e-learning (Cheng 2014; Lee 2010). Recently, ECT has been employed in mobile contexts to explore continuance behavior with regard to mobile instant messaging (Oghuma et al. 2016), mobile apps (Hsu and Lin 2015) and mobile data service (Chen et al. 2013; Kim 2010).

Towards a Uses and Gratification Expectancy Model of Continuance Intention in Mobile Social Media

Though UGT and ECT have been extensively employed in the IS domain to explain usage behavior towards information technology, critics have countered that UGT is "too simplistic to accurately account for audiences' gratification sought or gratification obtained from the media" (Littlejohn 1992; Mondi et al. 2008) whereas ECT focuses on "users' cognitive evaluation of how information systems will improve their performance" and "does not consider the influence of users' beliefs on their motivation to use the specific technology" (Shin 2011). In response to these criticisms, Mondi et al.

(2008) and Shin (2011) synthesized ECT and UGT in proposing the Uses and Gratification Expectancy Model (UGEM). The UGEM extends the basic tenets of uses and gratifications by alluding to the importance of delivering gratifications that users expect and value through media usage.

Gratification is defined as "a psychological affect related to and resulting from a cognitive appraisal of the expectation-performance discrepancy" (Davis et al. 1989; Shin 2011). Individuals could acquire a variety of gratifications from utilizing social media (e.g., WeChat), such as information sharing, passing time, perceived enjoyment and social interaction (Gan and Wang 2015; Liu et al. 2016). As a positive affect, gratification has been touted to be a focal determinant of system usage behavior (Davis et al. 1989; Shin 2011). In particular, Katz et al. (1973), through a detailed scrutiny of individuals' motives for utilizing mass media, arrived at five types of gratifications to be gained from media usage, namely: cognitive gratification, affective gratification, personal integrative gratification, social integrative gratification and tension-release gratification. Extending the work of Katz et al. (1973), Liu et al. (2016) discovered that social media, due to its digitized nature, gives rise to another separate type of gratification: technology gratification.

Within extant literature, information sharing, perceived enjoyment and passing time have been empirically shown to be salient predictors of social media usage behavior (Gallego et al. 2016; Xu et al. 2012). Not only do social media facilitate users in sharing information with others through postings and comments, it also brings fun and entertainment. In the same vein, social media, through its multimedia capabilities, can help users to pass time when they feel bored or have nothing better to do. In addition, prior research has borne witness to the critical role of social interaction and self-presentation in driving usage behavior on social media (Li et al. 2015; Stafford et al. 2004). Not only can social media users easily communicate with others through chatting, instant messaging or voice recording, they can also deliberately craft a self-image to make themselves appear more desirable to others (e.g., being fashionable or sociable). Furthermore, since social media offers convenient access for users to interact with others, media appeal can be construed as another core motive driving user behavior (Gulvady 2009; Liu et al. 2016). In light of past studies on social media usage (Gan and Wang 2015), we hypothesize that gratifications in the form of information sharing (cognitive gratification), perceived enjoyment (affective gratification), social interaction (social integrative gratification), passing time (tension-release gratification), self-presentation (personal integrative gratification) and media appeal (technology gratification) could significantly affect users' continuance intention towards mobile social media:

Hypothesis 1: Gratifications in the form of (a) information sharing, (b) perceived enjoyment, (c) social interaction, (d) passing time, (e) self-presentation and (f) media appeal has a positive effect on users' continuance intention towards mobile social media.

According to ECT, confirmation refers to the degree to which actual usage experience confirms users' expectation of benefits (Bhattacherjee 2001). In the context of mobile social media, confirmation thus reflects users' cognitive belief about the extent to which their *ex ante* expectations were fulfilled. The positive relationship between cognitive beliefs and affect is well established in the Theory of Planned Behavior (Ajzen 1991), and has been further corroborated across diverse system usage behaviors (Davis et al. 1989; Mathieson 1991; Taylor and Todd 1995), especially with regards to the relationship between confirmation and gratification. Shin (2011) found that confirmation significantly influences users' gratification in the context of e-books. Lin et al. (2005) observed that confirmation significantly impacts one's gratification of perceived playfulness. Lee and Kwon (2011) uncovered that gratifications of familiarity and intimacy with web-based services are affected by confirmation during the utilization of these services. Oghuma et al. (2016) maintained that confirmation significantly affects mobile users' hedonic gratification (perceived enjoyment). Arguably, if users' expectations are confirmed through the initial usage of social media, it implies that their gratifications, in the likes of information sharing, social interaction and passing time will be satisfied. We hence anticipate that confirmation through mobile social media usage will significantly affect gratifications of information sharing, perceived enjoyment, social interaction, passing time, self-presentation and media appeal:

Hypothesis 2: Confirmation through mobile social media usage has a positive effect on gratifications in the form of (a) information sharing, (b) perceived enjoyment, (c) social interaction, (d) passing time, (e) self-presentation and (f) media appeal.

Perceived usability is defined as "the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use" (ISO 1997). Following ISO's definition, we delineate perceived usability into two primary dimensions: perceived usefulness and perceived ease of use. According to the Technology Acceptance Model (TAM), perceived usefulness is defined as the degree to which users believe that system usage will improve the

accomplishment of their immediate tasks whereas perceived ease of use refers to the extent to which users believe that system usage will be free of effort (Davis 1989). ECT holds that confirmation of users' expectations significantly influences their perceived usefulness (Bhattacherjee 2001). Similarly, confirmation may have a significant effect on perceived ease of use (Thong et al. 2006). Recent studies have testified to the relationships among confirmation, perceived usefulness and perceived ease of use in diverse contexts, such as information technology (Thong et al. 2006), e-learning (Roca et al. 2006; Shin 2011), mobile instant messaging (Oghuma et al. 2016), mobile app (Hsu and Lin 2015) and mobile data service (Kim 2010). Thong et al. 's (2006) work revealed that confirmation significantly impacts perceived usefulness and perceived ease of use for information technology continuance. Shin (2011) found that confirmation significantly affects perceived usefulness and perceived ease of use of e-books. Oghuma et al. 's (2016) empirical study on mobile instant messaging shows that confirmation has a significant influence on usefulness and user interface. When mobile social media users' expectations are confirmed, they will consider the service to be useful and easy to use. We therefore hypothesize that a high level of confirmation will enhance mobile social media users' perceptions of usefulness and ease of use:

Hypothesis 3: Confirmation through mobile social media usage has a positive effect on perceived usefulness.

Hypothesis 4: Confirmation through mobile social media usage has a positive effect on perceived ease of use.

Perceived usability reflects the effectiveness and efficiency of a given service (ISO 1997). High usability indicates that social media affords users with the ability to fulfill their needs with speed and accuracy (Harrison et al. 2013). Prior research has substantiated the relationship between perceive usability and gratification (Shin 2011; Zolkepli and Kamarulzaman 2015). Shin (2011) argued that perceived usefulness and perceived ease of use have significant impact on gratification in e-book usage. Conceivably, whenever users perceive that utilizing mobile social media is free of effort and useful in terms of its performance, their needs will be met. High level of perceived usefulness and perceived ease of use will improve mobile social media users' fulfillment of gratifications in the likes of information sharing, social interaction and media appeal. For example, users can easily utilize mobile social media for sharing information with others through such functions as postings and comments. Also, with the mere click of a button (e.g., 'like' button), users can easily interact with others and convey such information as agreement or enjoyment (Gan 2017; Lee et al. 2016b). Consequently, we hypothesize that perceived usefulness and perceived ease of use will lead to a variety of gratifications in the context of mobile social media:

Hypothesis 5: Perceived usefulness of utilizing mobile social media has a positive effect on gratifications in the form of (a) information sharing, (b) perceived enjoyment, (c) social interaction, (d) passing time, (e) self-presentation and (f) media appeal.

Hypothesis 6: Perceived ease of use of utilizing mobile social media has a positive effect on gratifications in the form of (a) information sharing, (b) perceived enjoyment, (c) social interaction, (d) passing time, (e) self-presentation and (f) media appeal.

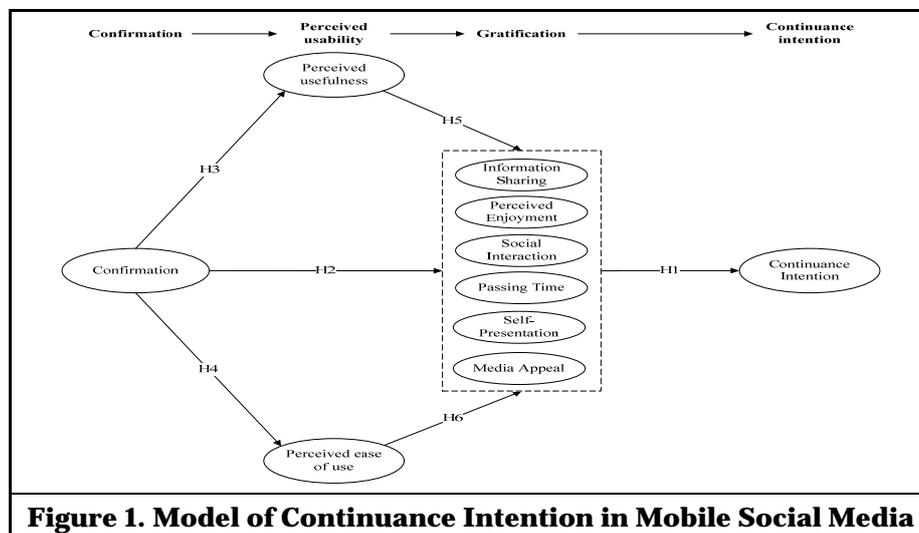Our proposed research model is depicted in Figure 1 below.

Figure 1. Model of Continuance Intention in Mobile Social Media

Methodology

Instrument Development

Two to four measurement items were generated for each construct. All measurement items were adapted from prior empirical work on social media to align with the WeChat context. Measures for confirmation and continuance intention were derived from Bhattacherjee (2001). Items for perceived ease of use and perceived usefulness were gotten from Davis (1989) whereas measures for information sharing and media appeal were modified from Liu et al. (2016). Conversely, items for perceived enjoyment were obtained from van der Heijden (2003) whereas measures for passing time were revised from Papacharissi (2002). Finally, items for social interaction were solicited from Papacharissi (2002) and Liu et al. (2016) whereas measures for self-presentation were taken from Goffman (1959). The survey questionnaire was originally formulated in English and reviewed by three information systems researchers for face validity. Because the survey was targeted at Chinese users of WeChat, we adhered to Brislin's (1970) back-translation procedure whereby the questionnaire was first translated into Chinese by one researcher whose mother tongue is Mandarin (i.e., forward translation) before having it translated back into English by another researcher (i.e., backward translation) to ensure content validity. All items in the questionnaire were measured with a seven-point Likert scale, ranging from "strongly disagree (1)" to "strongly agree (7)". In addition, we verified the proper functioning of the questionnaire across multiple platforms, such as Internet and mobile phones. Last but not least, based on feedback elicited from pretesting the questionnaire on a sample of 20 university students with WeChat usage experience, measurement items were further modified to improve their precision and comprehensibility. A list of final items can be found in the Appendix A.

Data Collection

Given the target users of WeChat, we opted for an online survey. Convenience and snowball sampling method was employed in the current study. Students at a large university in southern China were first recruited to answer the questionnaire before being asked to distribute the survey to their friends and family. Respondents who completed the survey would be automatically enrolled in a lottery with random red packets valued between 0.1 RMB and 5 RMB. Of the initial 326 responses collected from the survey, 52 responses were deleted due to data runs, thereby yielding an eventual sample of 274 respondents for data analysis. Table 1 summarizes the descriptive statistic for the valid sample.

Table 1. Demographic Characteristic of Respondents (Sample *N* = 274)						
Characteristic		**Number**	**%**	**Characteristic**		**Number**	**%**
Gender	Male	99	36.1	Age	17-21	106	38.7
	Female	175	63.9		22-26	62	22.6
Frequency	Many times a day	197	71.9		27-31	63	23.0
	Several times a day	64	23.4		32-36	27	9.9
	Once a day	6	2.2		Over 36	16	5.8
	Several times a week	4	1.5	User Experience	Less than 6 months	6	2.2
	Once a week	2	0.7		6 – 12 months	20	7.3
	Less than once a month	1	0.4		1 – 2 years	102	37.2
					2 – 3 years	87	31.8
					3 – 4 years	59	21.5

Data Analysis

We employed Partial Least Squares (PLS) to assess the measurement and structural models. SmartPLS 2.0 software was utilized for the data analysis. PLS was chosen over other SEM techniques because PLS simultaneously analyzes both the measurement items and the hypothesized paths (Wixom and Watson 2001). Abiding by standard procedures for Structural Equation Modeling (SEM), we first evaluated the measurement model, and then tested the structural model.

Test of Measurement Model

Because data was gathered via a self-reporting survey, common method bias may be a threat to the study. In line with the recommendation of (Podsakoff and Organ 1986), we performed Harman's single-factor test by conducting Exploratory Factor Analysis (EFA) on the 29 variables. Results from the EFA indicated that 8 components with eigenvalues greater than 1.0 were extracted and explained 77.26 percent of the total variance. Because the largest variance explained by a single factor was less than 50 percent of total variance explained (i.e., 17.55%), we can deduce that common method bias is not a concern in this study.

Convergent and discriminant validity tests were conducted to assess the measurement properties of the research model. Convergent validity was evaluated by inspecting the values for Average Variance Extracted (AVE), Composite Reliability (CR) and Cronbach's Alpha (CA). As shown in Table 2, the AVE, CR and CA values for all constructs were greater than their respective recommended thresholds (Chin, 1998; Fornell & Larcker, 1981), thereby attesting to the convergent validity of the measurement model. To ensure discriminant validity, the square root of the AVE for each construct should be larger than its correlations with other constructs (Fornell and Larcker 1981). As illustrated in Table 2, discriminant validity was verified in that the square root of the AVEs for all constructs were significantly higher than their correlations with any other construct. We further tested the factor loadings and cross-loadings of all items included in the study. Results from Appendix A indicated that the factorial loadings of all items exceed the acceptable level of 0.50 on their targeted constructs (Wixom and Watson 2001), and these loadings were higher than cross-loadings on any other untargeted constructs (Chin 1998). This in turn offers further support for the convergent and discriminant validity of the measurement model.

| Table 2. Internal Consistency of Latent Constructs (Sample *N* = 274)												
Construct	**Average Variance Extracted (AVE) [> 0.50]**	**Composite Reliability (CR) [> 0.70]**	**Cronbach's Alpha (CA) [> 0.70]**	**CI**	**CON**	**EU**	**IS**	**MA**	**PE**	**PRE**	**PT**	**PU**	**SI**
Continuance Intention (CI)	**0.857**	**0.947**	**0.917**	**0.926**									
Confirmation (CON)	**0.855**	**0.946**	**0.915**	0.650	**0.925**								
Perceived Ease of Use (EU)	**0.845**	**0.942**	**0.907**	0.456	0.367	**0.919**							
Information Sharing (IS)	**0.737**	**0.894**	**0.822**	0.458	0.389	0.219	**0.859**						
Media Appeal (MA)	**0.832**	**0.909**	**0.799**	0.594	0.534	0.356	0.407	**0.912**					
Perceived Enjoyment (PE)	**0.879**	**0.956**	**0.931**	0.570	0.557	0.312	0.462	0.486	**0.938**				
Self-Presentation (PRE)	**0.777**	**0.933**	**0.905**	0.272	0.235	0.095	0.351	0.265	0.321	**0.882**			
Passing Time (PT)	**0.680**	**0.863**	**0.810**	0.285	0.281	0.141	0.170	0.276	0.317	0.340	**0.824**		
Perceived Usefulness (PU)	**0.934**	**0.966**	**0.930**	0.405	0.442	0.226	0.465	0.460	0.393	0.324	0.263	**0.967**	
Social Interaction (SI)	**0.773**	**0.911**	**0.853**	0.416	0.422	0.273	0.417	0.349	0.464	0.298	0.201	0.398	**0.879**

Note: Square-root of Average Variance Extracted (AVE) shown on Diagonals

Test of Structural Model

Figure 2 presents the results from our analysis of the structural model, including path coefficients and corresponding levels of significance. Continuance intention is significantly influenced by gratifications of information sharing, perceived enjoyment and media appeal, thus confirming H1a, H1b and H1f. Together, the paths explain 48.6 percent of the variance for continuance intention. Confirmation exerts significant effects on gratifications of information sharing, perceived enjoyment, social interaction, passing time and media appeal, as well as perceived usefulness and perceived ease of use, thus corroborating H2a, H2b, H2c, H2d, H2f, H3 and H4. Perceived usefulness significantly affects gratifications of information sharing, perceived enjoyment, social interaction, passing time, self-presentation and media appeal, hence supporting H5a, H5b, H5c, H5d, H5e and H5f. Perceived ease of use has a significant effect on gratifications of social interaction and media appeal, thereby substantiating H6c and H6f. However, gratifications of social interaction (β=0.051, t=1.949), passing

time (β=0.041, t=1.480) and self-presentation (β=0.032, t=0.241) have no effect on continuance intention. H1c, H1d and H1e are thus not supported by our empirical evidence. Likewise, contrary to H2e, confirmation (β=0.069, t=1.691) is found to have no impact on gratification of self-presentation. Finally, there is no discernable effect of perceived ease of use on gratifications of information sharing (β=0.049, t=1.259), perceived enjoyment (β=0.061, t=1.848), passing time (β=0.039, t=0.802) and self-presentation (β=0.035, t=0.283). In this sense, H6a, H6b, H6d and H6e are not supported.

Figure 2. Structural Model Analysis
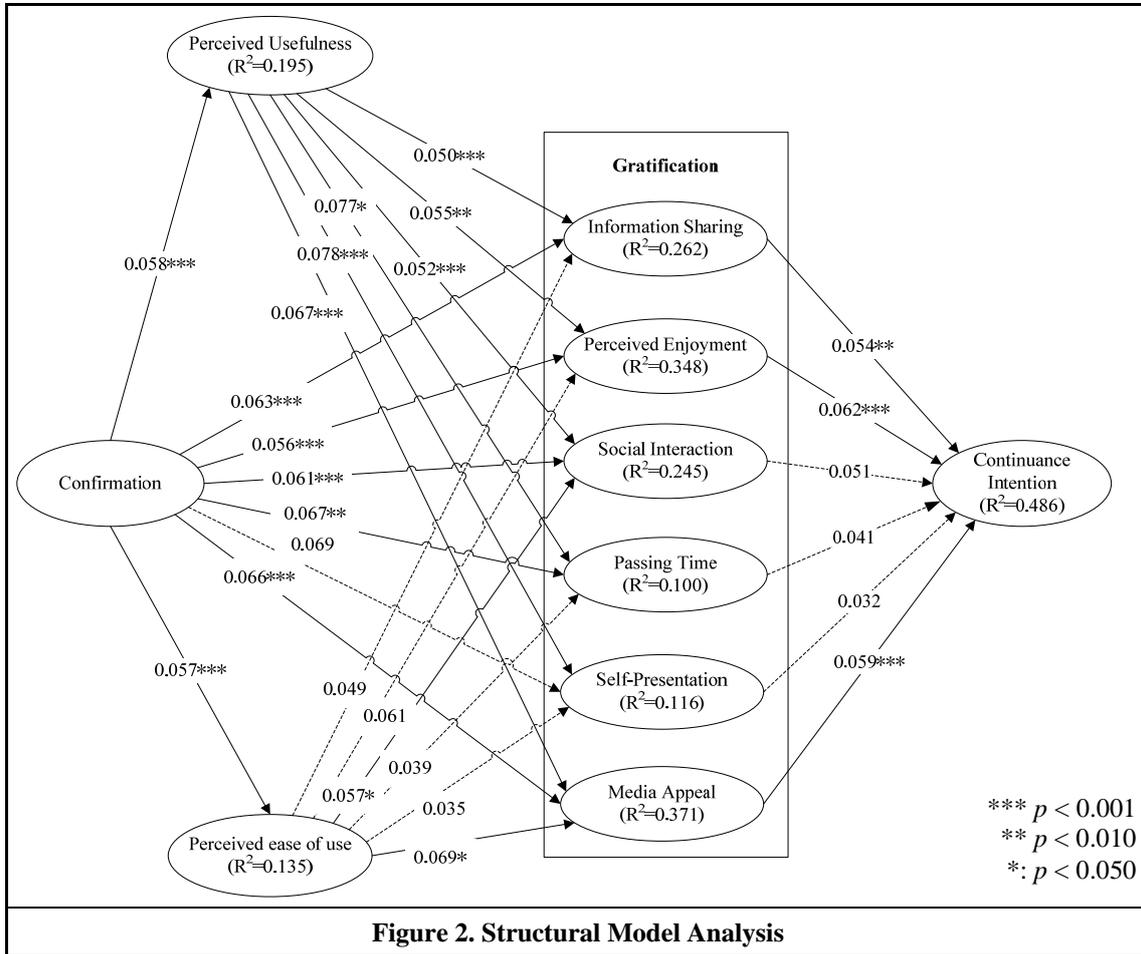
Discussion

Grounded in the UGEM, this study endeavors to examine factors affecting mobile social media users' continuance intention. Consistent with extant literature (Gallego et al. 2016; Gulvady 2009; Xu et al. 2012), evidence from our empirical study reveals that continuance intention to utilize mobile social media is determined by a variety of gratifications, including perceived enjoyment (affective gratification), media appeal (technology gratification) and information sharing (cognitive gratification). Mobile social media users could enjoy themselves during the usage process such as chatting via voice messages or reading interesting posts from acquaintances. Also, users could easily sharing information with others through postings and comments. In addition, mobile social media enables users to conveniently access its services in a ubiquitous environment. Such gratifications, when fulfilled, could further drive users' intention to continue utilizing the services. However, in contrast to our anticipations, self-presentation (personal integrative gratification), social interaction (social integrative gratification) and passing time (tension-release gratification) do not impact continuance intention. One plausible explanation for the non-significant effect of self-presentation on continuance intention is that WeChat "friends" are usually acquainted with each other in real life due to its characteristics of private social networking. For this reason, users may not feel the necessity to project a particular image of themselves online. As for the non-significant influence of social interaction, a possible reason may be that users could experience social fatigue through excessive usage of WeChat (Lee et al. 2016a) and they would rather interact with their friends offline to maintain their relationships. Finally, the non-significant effect of passing time on continuance intention may be due to the fact that mobile social

media users could spend their time via other means and they utilize the service mainly for enjoyment and information sharing.

Findings also show that gratifications, except for self-presentation, are driven by confirmation of expectations through prior usage of mobile social media. This conforms to past studies (e.g., Shin, 2011; Oghuma et al., 2016) that outline confirmation as users' evaluation process of the extent to which their *ex ante* expectations are fulfilled from utilizing the service (Bhattacherjee 2001). High level of confirmation indicates that mobile social media users' expectations are met (e.g., have fun, share information, interact with others and convenient access). In addition, confirmation has a significant effect on perceived usefulness and perceived ease of use, which reinforces the findings of Thong et al. (2006) and Shin (2011). When users' expectations are confirmed, they will perceive that the mobile social media is useful and easy to use. The greater the level of confirmation possessed by mobile social media users, the higher their perceptions of usefulness and easy to use.

Last but not least, findings indicate that gratifications are also determined by perceived usefulness. That is, perceived usefulness significantly impacts gratifications of information sharing, perceived enjoyment, social interaction, passing time, self-presentation and media appeal. In other words, if users deem that mobile social media is useful, it generally translates into the satisfaction of users' gratifications. Conversely, perceived ease of use has a weak effect on gratifications of media appeal and social interaction. Because perceived ease of use reflects the efficiency of mobile social media, it fulfills gratifications such as media appeal (e.g., quick responsive time) and social interaction (e.g., smooth communication with others) (Deci and Ryan 2000; James et al. 1995). However, perceived ease of use does not significantly affect gratifications of information sharing, perceived enjoyment, passing time and self-presentation. One plausible reason may be that such gratifications are usually acquired through other avenues such that user-friendliness does not necessarily play a crucial role.

Implications for Theory and Practice

From a theoretical standpoint, this study furthers our knowledge of continuance behavior in mobile contexts. By employing UGT or ECT as the theoretical lens for investigating continuance behavior in social media, past studies have given little credence to the mobile context. As motivations for mobile usage are distinguishable from those for non-mobile usage (Han et al. 2015), UGT or ECT has its own limitations (Littlejohn 1992; Mondi et al. 2008; Shin 2011). This study thus draws on UGT and ECT to advance a uses and gratification expectancy model that sheds light on continuance intention in mobile social media and especially private social networking by integrating confirmation, perceived usability and gratification. Specifically, this study uncovers how confirmation and perceived usability influence gratifications. Because extant literature tends to concentrate on the effects of gratifications on user behavior, there is a paucity of studies that investigate how these gratifications are acquired. Results indicate that gratifications are primarily determined by perceived usefulness and confirmation of expectations from prior mobile social media usage. Moreover, this study reported that media appeal, as a technology gratification, plays a pivotal role in motivating continuance intention. This in turn bolsters our understanding of the effect of technology gratification in the usage of mobile social media services.

Findings of this study bear significant implications for practitioners striving to retain existing users of mobile social media. First, this study attests to the saliency of perceived enjoyment, information sharing and media appeal in determining mobile social media users' continuance intention. Consequently, practitioners could improve their services by delivering more entertainment value for users via interesting posts, offering convenient channels for users to share information and permitting users to access the service in a ubiquitous setting. Second, results indicate that confirmation and perceived usefulness play central roles in fostering mobile social media users' continuance intention. Practitioners could thus conduct surveys at a regular time to comprehend users' needs from utilizing mobile social media. These needs can then be fed into service enhancements to meet users' expectations, thus attaining a high level of confirmation and usefulness perception.

Limitations

There are three limitations that should be taken into account in the interpretation of our empirical findings. First, since we collected data from Chinese WeChat users, it is likely that cultural disparities may factor into our explanation of users' continuance behavior (Hsu et al. 2015). Future research should thus consider the plausible effects of Chinese culture. Second, as WeChat is a private social media service, the extent to which findings from this study can be generalized to other mobile social media contexts (e.g., social networking service for strangers) needs to be investigated further. Third, as can be seen from Table 2, there is a small segment (or 5.8%) of respondents who are aged above 36.

Given the ubiquity of mobile social media, there are a growing number of elderly individuals who utilize the service in their leisure and professional lives. Consequently, future studies should distinguish among varying contexts and users in discrete age groups in order to illuminate discrepancies in mobile social media usage pattern. Finally, gratifications investigated in this study were mainly derived from extant literature. As mobile social media is increasingly deployed in settings beyond socialization, findings from past studies may not be adequate in exposing the spectrum of gratifications acquired by users in reality. Further research could attempt to derive gratifications from utilizing mobile social media via exploratory analysis (e.g., interviews) or grounded theory.

Appendix A: List of Measurement Items

Construct	Reflective Measure	Mean	SD	Factorial Loading
Perceived enjoyment (PE)	PE1: I find using WeChat to be enjoyable.	5.46	1.062	0.948
	PE2: The actual process of using WeChat is pleasant.	5.43	1.043	0.953
	PE3: I have fun using WeChat.	5.36	1.131	0.912
Passing time (PT)	PT1: I use WeChat because it passes the time away when bored.	4.88	1.471	0.793
	PT2: I use WeChat because it is the thing to do to occupy my time.	4.34	1.393	0.924
	PT3: I use WeChat when I have nothing better to do.	4.67	1.565	0.746
Social interaction (SI)	SI1: Using WeChat enables me to maintain a daily, personal connection with friends and family.	5.59	1.136	0.839
	SI2: Using WeChat enables me to connect with friends in my real life.	5.49	1.077	0.891
	SI3: Using WeChat enables me to keep in touch with friends in my real life.	5.76	.964	0.907
Self-presentation (PRE)	PRE1: I use WeChat, because I want others to perceive me as open.	4.64	1.339	0.849
	PRE2: I use WeChat, because I want others to perceive me as keeping pace with trends.	5.00	1.292	0.922
	PRE3: I use WeChat, because I want others to perceive me as sociable.	5.14	1.251	0.897
	PRE4: I use WeChat, because I want others to perceive me as fashionable.	4.50	1.299	0.857
Information sharing (IS)	IS1: I use WeChat to provide information.	5.25	1.030	0.860
	IS2: I use WeChat to share information that is useful to other people.	5.35	1.063	0.903
	IS3: I use WeChat to present information on my interests.	5.33	1.124	0.811
Perceived ease of use (EU)	EU1: WeChat is easy to use.	6.08	.780	0.920
	EU2: Learning to operate WeChat is easy.	6.12	.794	0.961
	EU3: It is easy for me to become skillful at using WeChat.	6.13	.828	0.873
Perceived usefulness (PU)	PU2: Using WeChat helps me accomplish things more quickly.	4.88	1.218	0.970
	PU3: Using WeChat helps me perform many things more efficiently.	4.79	1.254	0.963
Media appeal (MA)	MA2: WeChat is the easiest, most cost-effective way for communication.	5.31	1.097	0.920
	MA3: WeChat is easier for me to maintain.	5.29	1.096	0.904
Confirmation (CON)	CON1: My experience with using WeChat was better than what I expected.	5.25	1.004	0.941
	CON2: The service level provided by WeChat was better than what I expected.	5.23	0.966	0.927
	CON3: Overall, most of my expectations from using WeChat were confirmed.	5.35	0.943	0.904

Continuance intention (CI)	CI1: I intend to continue using WeChat rather than discontinue its use.	5.85	0.833	0.931
	CI2: My intentions are to continue using WeChat than use any alternative means.	5.61	0.940	0.904
	CI3: I would like to continue my use of WeChat.	5.85	0.824	0.943

Acknowledgements

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