Abstract: The sustainable development of mobile government social media depends citizens’ continued use. Based on the Stimulus-Organism-Response framework and social response theory, the present study investigated the impacts of perceived similarity and anthropomorphic cues on citizens’ mobile government microblog continuance. A research model of mobile government microblog continuance was developed and empirically tested by using dataset collected from 428 mobile government microblog citizens in China. The results of structural equation modeling demonstrated that perceived similarity (including external similarity and internal similarity), and anthropomorphic cues (including social interaction value, visual appearance, and identity attractiveness), have positive influences on both cognitive and affective involvement, which further determinate mobile government microblog continuance. Considering the path coefficient and significant levels, the impact from affective involvement on mobile government microblog continuance is stronger than from cognitive involvement.

Keywords: mobile government microblog; social response theory; anthropomorphic cues; perceived similarity; continuance

1. Introduction

With the advance of mobile technology and prevalence of social media services, the applications of mobile social media in public administration have been increasingly strengthened [1,2]. As a typical representative of mobile social media, mobile government microblog (GM) can provide up-to-date information to citizens and interact with citizens anytime and anywhere, which have been increasingly embraced by various government offices and departments [3]. In accordance with the 43nd China Internet Development Statistics Report (CIDS R), the number of government microblog accounts on Sina Weibo had increased continuously these years and reached 139,270 by the end of September 2019 [4]. However, despite the government microblog spreads very fast and attracts a lot of microblog followers, the continuance use rate of many government microblogs is still very low [2]. How to lead citizens to continue use of mobile government microblog is a question that many microblog managers are asking.

In academia, although many previous studies have devoted to understanding mobile government social media adoption and use behaviors, most of them explain its usage from a technical-center point of view [2,5,6]. Theories such as the technology acceptance model [7] and its extension [8] have been adopted to explain citizens’ mobile government microblog use behaviors. Little research has explored
the impacts of social factors, such as social interaction and social anthropomorphic cues, on citizens’ continuance usage of mobile government microblog. In addition, previous studies usually examined the direct influences of technical factors on mobile government microblog use [6], the process underlay citizens’ continuance usage of mobile government microblog has seldom been explored.

Based on stimulus-organism-response (SOR) framework [9] and social response theory (SRT) [10], the present study intents to explore how social stimulus motivate citizens cognitive and affective involvement and then stimulate citizens’ response to continue use of mobile government microblog. Specifically, our study investigated:

1. how citizens’ perceived similarity (including external similarity and internal similarity) and anthropomorphic cues (including social interactive value, visual appearance and identify attractiveness) influence their cognitive and affective involvement?
2. what is the role of citizens’ cognitive and affective involvement in shaping their continuance intention of mobile government microblog?

The contributions of the present study are as follows. First, unlike many previous studies mainly examined the mobile government microblog use behaviors from technical-center perspective, the present study applied the SOR and SRT theories to explore the underlying processes of citizens’ mobile government microblog involvement development and continuance intention formation. Second, the existing studies mainly focused on the cognitive elements to explain citizens’ mobile government microblog behaviors, the affective elements have been rarely examined. The current study examines citizens’ mobile government microblog continuance behaviors by focusing on both cognitive and affective determinants. Finally, the present study examined how the social stimulus including perceived similarity and anthropomorphic cues may affect citizens’ involvement, which in turn further determines mobile government microblog continuance. The present study thus provides a better theoretical understanding of citizens’ mobile government microblog behaviors and offers practical insights to managers for managing the sustainable development of mobile government microblog.

The reminder of this study is organized as following. Section 2 presented a review of the relevant literature. In Section 3, the research model and corresponding hypothesis are proposed. Sections 4 and 5 introduce research methodology and data analysis, respectively. Section 6 discusses the results, theoretical implications, and practical implications. Finally, the present study concludes by summarizing the findings, limitations and future research directions.

2. Literature Review

2.1. Stimulus-Organism-Response (SOR) Framework

The stimulus-organism-response (SOR) framework stems from the field of environmental psychology [11]. This framework proposes a logical assumption that various environmental cues play a role as stimuli (S) and affects individuals’ cognitive or emotional responses (O), which leads to their behavioral responses (R) [2,11]. The SOR framework has been widely used to testify the association between environmental stimuli and behavioral responses by scholars [1–3]. Due to the psychology content it includes, several scholars extended its original pattern and applied it in the study of usage behaviors in various research contexts [2,12–14]. For instance, Jiang, Chan, Tan and Wei [13] applied the SOR framework in the e-commerce setting and found that website interactive features can be regarded as a stimulus to influence individuals’ affective and cognitive involvement, which in turn affect their purchase intention. Based on the SOR framework, Islam and Rahman [14] operationalized online brand communities’ unique features as a stimulus and investigated their impacts on customer engagement, which further affects customer loyalty.

More recently, several studies applied the SOR framework in mobile government social media settings to explain the key success elements for promoting government social media platforms [1,2]. For instance, Guo, Liu and Liu [1] treated gratification factors as the stimulus and examined their
influences on the online experiential states and the responses of government microblog use. Ding, shuiqing, Chen, Long and Wei [2] also found that atmosphere and perceived integration as the stimulus significantly affect citizens’ gratifications and their responses of their mobile social media participation.

Based on the SOR framework, the present study therefore tried to verify the impacts of social stimulus on citizens’ cognitive and affective involvement and their continuance usage response of mobile government microblog services. Specifically, in the present study, perceived similarity and anthropomorphic cues were measured as stimuli which would affect individuals’ cognitive or affective involvement as well as their continuance usage.

2.2. Social Response Theory

The social response theory proposes that social cues can arouse citizens’ response to information technology with human-like properties [10]. The social cues equipped with anthropomorphic attributes appearing on websites in information field have increasingly developed and caught the attention of websites managers [15,16]. Integrating social cues into websites can increase the users’ perception of operators presence and enhance their online experience [17]. In the present study, anthropomorphic cues were incorporated to explore their impacts on the usage of mobile government microblog services. It is not difficult to understand anthropomorphism in that the process by which consumers start to believe the services are rational and intentional [18]. The interaction between government microblog and citizens in the anthropomorphic state is highly similar to interpersonal communication through the network. People tend to regard government microblog as social actors rather than media and express their opinions or suggestions to it. In addition to the auto-responses, the managers of microblog accounts will accept these suggestions and give back corresponding replies acting as ordinary friends. More specifically, when the government microblog possesses a set of human characteristics to communicate with citizens, it is more possible for citizens to respond actively [19]. The positive effects of anthropomorphic cues elicit citizens’ involvement in the interaction between the government and citizens through the microblog platform and consequently arouse the intention to continuous use mobile government microblog services [16].

The present study applied social response theory to the context of mobile government microblog services and proposes that citizens interacting with the mobile government microblog operators may positively motivate their subsequent use and influence other citizens around them. As hypothesized in social response theory, mobile government microblog can elicit social reactions when it shows human-like attributes and social cues. Thus, the visual appearance and identity attractiveness of the microblog can affect interactions between citizens and government microblog. Similarly, the social interaction value perceived by citizens who use the mobile government microblog is also critical in determining social cues of a government microblog [16]. Based on the social response theory [16], it is expected that social cues including visual appearance, identity attractiveness, and social interaction value will trigger citizens’ involvement and their responses to mobile government microblog continuance usage.

2.3. Perceived Similarity

Perceived similarity refers to the extent that a user is perceived as similar or dissimilar to other users which is an important predictor of attitudes [20]. Based on the extant studies [21], the present research conceptualized perceived similarity as internal similarity and external similarity. Internal similarity, which is subjective, defined as the similarity of user’s internal thoughts and values [21]. Likewise, external similarity refers to the similarity of users’ objective conditions, such as in a region and so on [22]. People who share similarities regardless of values, interests or backgrounds tend to attract each other unconsciously [23]. Previous studies examined the impacts of perceived similarity on consumers’ attitude and usage intention [21]. For instance, Fu, Yan and Feng [21] found that consumers’ internal similarity and external similarity positively affects their perceptions including
perceived usefulness, perceived enjoyment and trust toward members, which determine online movie tickets purchase intention.

In the present study, citizens’ internal similarity and external similarity will contribute to the interaction between citizens thus facilitates the involvement of citizens [22]. The sense of involvement can further help citizens to generate a willingness to continue using of mobile government microblog. Therefore, it is expected that perceived similarity will have positive effects on citizens’ involvement.

3. Research Model and Hypotheses

Drawing on social response theory and stimulus-organism-response framework, the present study explores the process how social stimuli may affect citizens’ organism response and further motivate their usage intention to mobile government microblog services [11]. Figure 1 shows the research model and the hypotheses.

![Research model](image)

**Figure 1.** Research model.

3.1. Perceived Similarity

People who have the same birthday or live in the same area or other conditions can easily interact on the same topic because they have a high level of external similarities [21]. Through their communication, citizens are likely to be changed by the others’ understanding of things and tend to have a whole new understanding of things. What’s more, during the process of interaction, citizens’ affection can be easily influenced by external similarities [22]. For instance, if a user meets a person from the same area on the mobile government microblog platform, he/she will feel excited and subsequently involve the communication.

On the other hand, extant studies also proposed that there are positive relationships between internal similarity and interpersonal interaction attitudes [20]. Past researches pointed out that individuals with similar attitudes are more likely to communicate with each other [21]. Individuals who have similar values naturally tend to have a similar understanding towards each other [22].

Under such circumstances, people with similar living conditions and values will prefer to communicate with people they feel similar to and these interactions will influence their cognition and affection. Similarity then contributes to the development of cognitive and affective involvement [24]. It is expected that perceived similarity will has an impact on citizens’ cognitive and affective involvement. Therefore, we hypothesize:

**Hypothesis 1a (H1a).** Perceived similarity will positively affect cognitive involvement.

**Hypothesis 1b (H1b).** Perceived similarity will positively affect affective involvement.
3.2. Anthropomorphic Cues

The visual appearance of a government microblog refers to the layout of a microblog homepage, published pictures, overall look and the first impression. This is an extremely crucial part of the government microblog platform [25]. Government microblog designs with aesthetic value are usually superior to those with less delicate designs in attracting users [12]. A well-designed microblog homepage may leave a deep impression on users and significantly affect their usage behavior [26]. Visual appearance has found to be a success factor for positive involvement of microblog [27].

The degree to which citizens are attracted to and show their preference for government microblog can be considered as identity attractiveness [28]. Users are likely to be attracted to government microblog that are close to their lives and identities [28]. As the existence of attractiveness, the likelihood of user involvement will increase. Social media provides a means for users and governments interactions, we assume that the social interaction cues of the government microblog can be enhanced when the identity attractiveness in such social media channels increased [16].

Social interaction value is perceived from the generation, growth, maintenance, and expansion of the relationships with others [5,15]. Social interaction can stimulate involvement and promote users’ interaction in the online environments and also makes the interaction between the government and citizens more appealing and enjoyable [2,16]. Due to the social interaction value, users actively participate in the interaction and can form new cognition and affection in the process of interaction. It is expected that when users perceive social interaction value, the anthropomorphic cues would increase [20]. Therefore, the anthropomorphic cues including visual appearance, social interactive value, identity attractiveness will have positive influences on involvement. Thus, we hypothesize:

**Hypothesis 2a (H2a).** Anthropomorphic cues will positively affect cognitive involvement.

**Hypothesis 2b (H2b).** Anthropomorphic cues will positively affect affective involvement.

3.3. Involvement

Involvement is defined as people’s perceived relevance of an entity based on inherent needs and value, which can be measured by cognitive involvement and affective involvement [13]. Cognitive involvement is defined as rational understanding or thinking induced by utilitarian and cognitive motives [13]. High cognitive involvement indicates that users have a high understanding of the information about mobile government microblog services, which are the result of active participation in information collection and social interaction [29]. As such, the process of acquiring information promotes subsequent cognitive involvement, high cognitive involvement is likely to lead to further favorable usage responses [30]. Thus, we hypothesize:

**Hypothesis 3 (H3).** Cognitive involvement will positively affect citizens’ mobile government microblog continuance.

On the other hand, affective involvement, which is stemmed from hedonistic or emotional motives, refers to the enhancement of emotional feelings associated with the mobile government microblog [13]. These sensory states exist in every process of interaction including comments, likes, reposts which may affect the willingness to usage [31]. In the context of the present study, positive emotional states are often expressed as happiness and satisfaction [32], with which citizens will intend to use mobile government microblog services. Existing studies have shown that cognitive and affective involvement exert positive impact on continuance intention [30,33]. Therefore, we can propose:

**Hypothesis 4 (H4).** Affective involvement will positively affect citizens’ mobile government microblog continuance.
4. Methodology

4.1. Instrument

In order to ensure the instrument’s content validity, all the constructs with multiple items were adapted from the extant validated scales and modified to fit the mobile government microblog setting. Three items of external similarity and four items of internal similarity were adopted from Shen, Huang and Hsu [22]. Items of social interactive value were borrowed from Jahn, Verma and Kunz [15] and Perez-Vega, Taheri, Farrington and O’Gorman [16]. Items of visual appearance and identify attractiveness were adopted from Perez-Vega, Taheri, Farrington and O’Gorman [16], Shukla [25] and Marin and Maya [34] respectively. The items of cognitive involvement and affective involvement were borrowed from Jiang, Chan, Tan and Wei [13]. The items of mobile government microblog continuance were adapted from Bhattacharjee [35]. All items were measured on a seven-point Likert scale, ranging from strongly disagree to strongly agree.

As the items were originally in English, a back-to-back translation procedure was conducted to ensure the validity of the translation. First, we invited a researcher whose native language was Chinese to translate the English items into Chinese. Then, the Chinese items were independently translated back to English by another researcher. Further, two researchers reviewed the two English version and confirm the final Chinese version items. We invited a panel of information system domain experts to give suggestions for our instrument. Based on the feedback, the items were modified to make them more understandable. To further test the flow and the wording of the questionnaire, we conducted a pilot test by using sample of 28 citizens who were current mobile government microblog users. Appendix A listed the final questionnaire.

4.2. Data Collection

Empirical data were collected via an Internet survey on a professional online survey website (www.wjx.cn). We employed the sample payment services provided by the online survey platform for data collection. This popular online survey platform has over 2.6 million registered members in its sample pool from different cities. As the aim of our study is to examine citizens’ cognitive and effective involvement and continuance behaviors, we ensure that all participants have certain experience of mobile government microblog use. Subjects in the sample pool who had mobile government microblog experience in Sina microblog platform were randomly invited to participate in this study. We collected a total of 482 valid samples after dropped those samples without mobile government microblog experience, and these invalid responses (e.g., those who used the same answers for all questions). Detailed descriptive statistics of respondents’ characteristics are listed in Table 1. Among the respondents, 49.5% were males and 50.5% were females. 40.2% of the participants were in their twenties and over half of them have a bachelor’s degree or above.
Table 1. Sample Demographics.

| Measure       | Item                | Number (N = 428) | Percentage |
|---------------|---------------------|------------------|------------|
| Gender        | Male                | 212              | 49.5%      |
|               | Female              | 216              | 50.5%      |
| Age           | <18 years           | 26               | 6.1%       |
|               | >19 and ≤30 years   | 172              | 40.2%      |
|               | >31 and ≤45 years   | 144              | 33.6%      |
|               | >46 and ≤59 years   | 75               | 17.5%      |
|               | ≥60 years           | 11               | 2.6%       |
| Education     | Middle school or below | 24             | 5.6%       |
|               | High school         | 49               | 11.4%      |
|               | 3-Year college      | 118              | 27.6%      |
|               | 4-Year university   | 202              | 47.2%      |
|               | Master or above     | 35               | 8.2%       |
| Mobile microblog experience | ≤3 years | 76           | 17.8%      |
|               | >3 and ≤5 years     | 194              | 63.1%      |
|               | >5 years            | 158              | 36.9%      |

5. Data Analysis and Results

Following the two-step procedure of Structural Equation Modeling analysis approach put forward by Anderson and Gerbing [36], we first tested the measurement model to ensure the items’ reliability and validity were up to standard. Then PLS was used to measure the structure model to verify the hypothesis in the research model.

5.1. Measurement Model

We used both composite reliability (CR) and cronbach’s alpha to test the reliability of the instrument. As is shown in Table 2, all CR and cronbach’s alpha coefficients are greater than 0.7, which shows good internal consistency [37].

Table 2. Scale Properties.

| Variable               | Item | Standard Loading | Cronbach’s Alpha | CR | AVE |
|------------------------|------|------------------|------------------|----|-----|
| External similarity (ES) | ES1  | 0.936            |                   |    |     |
|                        | ES2  | 0.922            |                   |    |     |
|                        | ES3  | 0.918            |                   |    |     |
| Internal similarity (IS) | IS1  | 0.850            |                   |    |     |
|                        | IS2  | 0.911            |                   |    |     |
|                        | IS3  | 0.873            |                   |    |     |
|                        | IS4  | 0.806            |                   |    |     |
| Social interactive value (SIV) | SIV1 | 0.855            |                   |    |     |
|                        | SIV2 | 0.881            |                   |    |     |
|                        | SIV3 | 0.880            |                   |    |     |
|                        | SIV4 | 0.804            |                   |    |     |
| Visual appearance (VA) | VA1  | 0.905            |                   |    |     |
|                        | VA2  | 0.915            |                   |    |     |
|                        | VA3  | 0.883            |                   |    |     |
| Identify attractiveness (IA) | IA1 | 0.898            |                   |    |     |
|                         | IA2  | 0.902            |                   |    |     |
|                         | IA3  | 0.844            |                   |    |     |
| Cognitive involvement (CIN) | CIN1 | 0.894            |                   |    |     |
|                         | CIN2 | 0.914            |                   |    |     |
|                         | CIN3 | 0.875            |                   |    |     |
| Affective involvement (AIN) | AIN1 | 0.904            |                   |    |     |
|                         | AIN2 | 0.908            |                   |    |     |
|                         | AIN3 | 0.882            |                   |    |     |
| Mobile government microblog continuance (MGC) | MGC1 | 0.911            |                   |    |     |
|                         | MGC2 | 0.920            |                   |    |     |
|                         | MGC3 | 0.895            |                   |    |     |
We conducted a confirmatory factor analysis in order to further assess the constructs’ reliability and validity. Standardized loadings and average variance extracted (AVE) values were also listed in Table 2. As shown in the table, most item loadings are larger than 0.80 and all AVEs are higher than 0.70, which provides support for the convergent validity of measures [38].

Following the procedure conducted by Fornell and Larcker [38], the present study accessed discriminant validity of the instrument by comparing the AVE’s square root and the correlation coefficients of factors. As shown in Table 3, diagonal values are greater than off-diagonal values, indicating that the constructs have reasonable discriminant validity.

| Mean | SD  | AIN | CIN  | ES  | IA  | IS  | MGC | SIV | VA  |
|------|-----|-----|------|-----|-----|-----|-----|-----|-----|
| 5.122 | 1.578 | 0.898 |      |     |     |     |     |     |     |
| 5.084 | 1.523 | 0.5082 | 0.894 |     |     |     |     |     |     |
| 4.739 | 1.623 | 0.2144 | 0.2834 | 0.926 |     |     |     |     |     |
| 5.185 | 1.437 | 0.3730 | 0.2813 | 0.1342 | 0.881 |     |     |     |     |
| 5.174 | 1.519 | 0.1544 | 0.2448 | 0.1337 | 0.2665 | 0.860 |     |     |     |
| 5.057 | 1.625 | 0.4594 | 0.4198 | 0.2792 | 0.3527 | 0.2164 | 0.909 |     |     |
| 5.217 | 1.488 | 0.2638 | 0.1543 | 0.0426 | 0.5364 | 0.1596 | 0.2207 | 0.855 |     |
| 5.354 | 1.483 | 0.2315 | 0.0925 | −0.0139 | 0.7934 | 0.0781 | 0.1832 | 0.6739 | 0.901 |

* Diagonal elements are the square root of AVE. These values should exceed the Inter-Construct Correlations for adequate discriminant validity. Note: ES = External similarity; IS = Internal similarity; SIV = Social interact value; VA = Visual appearance; IA = Identify attractiveness; CIN = Cognitive involvement; AIN = Affective involvement; MGC = Mobile government microblog continuance.

To further test the discriminant validity of the scales, we also conducted a Heterotrait-Monotrait Ratio (HTMT) test [39]. The results demonstrated that the HTMT ratios were all less than one, which are consistent with the results of the Fornell-Larcker’s criterion test.

Two statistical analyses were conducted to assess the potential common method variance (CMV) [40]. First, we conducted a Harman’s one-factor test based on the procedure performed by Podsakoff and Organ [41]. The results indicated that the most explained variance among the eight extracted factors is 12.36%, which suggests that the CMV was not a serious concern in this research (please see Appendix B). Second, following the procedure suggested by Liang, et al. [42], we build a new measurement model which included a common method factor and compared the original model and the new developed model. The results indicated that the loadings of the original measurement are all significant at $p < 0.001$ level, while the loadings of the developed common method factor are all insignificant. This result shown that the CMV was unlikely a serious concern in the present study.

5.2. Structural Model

We employed a component-based SEM method to test our research model and the hypotheses. As a typical component-based method, PLS-SEM can analyze both reflective and formative constructs and can also handle the second-order constructs model. In the present study, perceived similarity and anthropomorphic cues are conceptualized as second-order reflective constructs. Therefore, PLS-SEM (SmartPLS 3.0) was employed to analyze our research model. Figure 2 summarizes the PLS results of the research model, including the path coefficients for each path along with its significance, and the variance (R2) for each endogenous variable. The results demonstrated that the hypothesized paths are all validated by the empirical data.
The direct positive influence from perceived similarity and anthropomorphic cues to cognitive and affective involvement were respectively demonstrated significantly. However, the significance of each path is different. Similarly, cognitive and affective involvement was proved to give a significant effect on mobile government microblog services usage intention positively. The results from the PLS analysis support all hypotheses by empirical data. The model explains 30% of the variance in intention to use mobile government microblog services and 15% of the variance in cognitive involvement and 16% of the variance in affective involvement. This model reasonably explains the influence of perceived similarity and anthropomorphic cues on cognitive and affective involvement and the subsequent influence on the use behavior.

The hypothesized paths from perceived similarity on cognitive and affective involvement were all positively significant, validating Hypotheses H1a and H1b. The impacts of anthropomorphic cues on both cognitive and affective involvement were also positively significant, supporting Hypotheses H2a and H2b. The hypothesized paths from cognitive and affective involvement on mobile government microblog continuance were both significant, supporting Hypotheses H3 and H4. The model explains 25.8% of the variance in mobile government microblog services continuance, and 14.1% of the variance in cognitive involvement and 14.6% of the variance in affective involvement.

6. Discussion

6.1. Summary of Findings

Government services rely heavily on technology platforms such as mobile microblog platforms to contact and interact with citizens in order to achieve deeper political engagement. Drawing on the SOR framework and social response theory, we investigated the impacts of perceived similarity and anthropomorphic cues on citizens’ involvement and mobile government microblog continuance. The results of our study provided several important findings.

First, the present study found that perceived similarity including external and internal similarity have positive impacts on citizens’ cognitive and affective involvement. The results are consistent with the findings of Fu, Yan and Feng [21], which shown that online buyers’ external and internal similarity positively affect perceived usefulness, perceived enjoyment and trust. This suggests that citizens’ external and internal similarity perceptions play an important role in forming their cognitive and affective involvement. Indeed, in terms of internal similarity, citizens who have similar thoughts and values will be easy to achieve the same cognitive and affective involvement because of their inherent perceptual similarity [21]. In terms of external similarity, citizens who are belonging to the
same region and age bracket will be more likely to produce feelings of sympathy, which will inevitably lead to higher cognitive and affective involvement. Specifically, in terms of the path coefficient and significant levels, perceived similarity exerts a stronger impact on cognitive involvement when compared with its influence on affective involvement. This is similar to the results of Fu, Yan and Feng [21], which shown that perceived similarity has a stronger influence on perceived usefulness than that on perceived enjoyment.

Second, the present study found that the anthropomorphic cues, including social interaction value, visual appearance, and identity attractiveness, have a positive impact on citizens’ cognitive and affective involvement. This is consistent with findings of Perez-Vega, Taheri, Farrington and O’Gorman [16], which found that anthropomorphic cues positively affect experiential flow and fan page engagement. Indeed, if citizens who used the mobile government microblog can gain social interaction value from the platform and are attracted to and show preference for the platform, they will be involved in cognitive and affective experience. The simplified and beautiful design of the mobile government microblog homepage will also have an impact on citizens’ cognition and affection involvement. During the interaction between the citizens, they will generate cognition and affection involvement when the mobile government microblog homepage is simple, usable and in line with the citizens’ aesthetics. In other words, if the mobile government microblog can provide services with high social interaction value, visual appearance, and identity attractiveness, these anthropomorphic cues will arouse citizens’ affective and cognitive involvement on the mobile government microblog.

Finally, the results of our study show that cognitive and affective involvement have positive influences on citizens’ continuance intention. This is consistent with findings of Yang, Zhou and Cheng [30], which found that learners’ cognitive and affective involvement positively affect their continuance intention to use mobile learning. This suggests that the use of mobile government microblog services will generate different utilitarian and emotional motives, which will further determine the response of mobile government microblog continuance. Specifically, considering the path coefficient and significant levels, affective involvement exerts a stronger impact on mobile government microblog use than that of cognitive involvement. This is also in line with the findings of Yang, Zhou and Cheng [30], which further emphasize the important role of affective or hedonistic factors in determining mobile government microblog use. In this process, if citizens’ experience in using the mobile government microblog platform are happy and enjoyable, they will be more likely to continue using it.

6.2. Limitation and Future Work

The present research has certain limitations, which also provide a broader perspective for further research. First, our research is cross-sectional in nature, which limits the dynamic research on citizens’ adoption of mobile government microblog services. Future studies are encouraged to design longitudinal experiments in different time periods to analyze citizens’ mobile government microblog continuance. Second, our data comes from citizens who have experiences of mobile microblog services in China. The results must be treated with caution to in terms of their applicability to other users who have used mobile microblog services in different countries. Finally, the present study examined impacts of perceived similarity and anthropomorphic cues on citizens’ involvement and mobile government microblog continuance. Other factors, such as perceived online and offline channel integration based on mobile technologies [40] may also have potential influences on mobile government microblog continuance. Future works are encouraged to explore the impacts of channel integration on mobile government microblog continuance.
7. Conclusions

7.1. Theoretical Implications

The present research has several theoretical contributions. First, the present study developed and validated a mobile government microblog continuance model by focusing on impacts of perceived similarity and anthropomorphic cues. Specifically, our study examined how perceived similarity and anthropomorphic cues may affect both cognitive and affective involvement. The results of our research showed that to explain mobile government microblog continuance both cognitive and affective involvement should be taken into consideration. A narrow focus on one of the two involvements would not fully predict citizens’ mobile government microblog continuance and the sustainable development of mobile government microblog.

Second, previous technical-center studies [2,5,6] tend to employ the leading technology acceptance model or its extended models to explain user behavior, the underlying process of citizens’ mobile government microblog continuance has seldom been explored. Drawing on SOR framework and social response theory, our study examined the process of mobile government microblog continuance by conceptualized “stimulus” as perceived similarity and anthropomorphic cues, “organism” as cognitive and affective involvement, and “response” as mobile government microblog continuance. The results of our study demonstrated that the SOR framework and social response theory are useful to explain how citizens’ social cues affect their cognitive and affective involvement and continuance in the mobile government microblog context.

7.2. Practical Implications

The present study also has some practical implications. First, considering the important role of perceived similarity in formatting citizen’s involvement and continuance intention, the microblog designers or managers should take measures to improve citizens’ similarity perceptions. For instance, they can develop a module including similar people and the people who are watching the same content on the homepage of the government microblog. In this ways, similar people can communicate with those who have the same background or values, which will facilitate their interaction and the continuance usage of mobile government microblog services.

Second, anthropomorphic cues are also important factors influencing citizen’s continuance intention. Therefore, the managers of mobile government microblog should take measures to promote citizens’ social interaction, visual appearance, and identify attractiveness. For instance, managers can build a point system to promote active communication between citizens which further enhance the social interaction value. They can also strengthen the aesthetic design of the microblog homepage. The design must be not only simple and practical, but also have a certain sense of beauty which ensure users have a pleasant mood during usage. In addition, managers can certify the special identity of government microblog and strengthen citizens’ recognition of government microblog to attract citizens’ attention.

Finally, citizens’ affective and cognitive involvement positively affect their mobile government microblog use. The implication for managers is straightforward: they should consider both citizens’ affective and cognitive involvement when promoting the mobile government microblog. For example, mobile government microblog managers can enhance citizens’ affective motivation by using intimate language and handling the issues from the perspective of citizens. On the other hand, they can also improve citizens’ cognitive motivation by providing useful and reliable microblog services to citizens.

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Appendix A Scales and Items

• External similarity [22]
  
  ES1: The mobile government microblog platform has features by which I identify members with whom I share similar place of residence.
  
  ES2: The mobile government microblog has features by which I recognize members with whom I share a similar age or the same period of life span.
  
  ES3: The mobile government microblog platform has features by which I find members with whom I share the same birthday or constellation.

• Internal similarity [22]
  
  IS1: The mobile government microblog platform has features by which I find members with whom I share similar values.
  
  IS2: The mobile government microblog platform has features by which I identify members with whom I share similar opinions or attitudes.
  
  IS3: The mobile government microblog platform has features by which I recognize members with whom I share similar interests.
  
  IS4: The mobile government microblog platform has features by which I identify members with whom I share similar viewing preferences.

• Social interactive value [15,16]
  
  SIV1: I can meet people like me on the mobile government microblog platform.
  
  SIV2: I can meet new people like me on the mobile government microblog platform.
  
  SIV3: I can find out about people like me on the mobile government microblog platform.
  
  SIV4: I can interact with people like me on the mobile government microblog platform.

• Visual appearance [16,25]
  
  VA1: The visual appearance and manner of the mobile government microblog platform is professional.
  
  VA2: The mobile government microblog platform displays a high level of artistic sophistication/creativity.
  
  VA3: There are useful links to other sites that aid the primary purpose of coming to the mobile government microblog platform.

• Identify attractiveness [16,34]
  
  IA1: The mobile government microblog is a service with a very attractive identity.
  
  IA2: I like the mobile government microblog because it is different from the rest of government services.
  
  IA3: When I use the mobile government microblog, I feel good because I see they understand me.

• Cognitive Involvement [13]
  
  CIN1: I think the mobile government microblog platform is important.
  
  CIN2: I think the mobile government microblog platform is meaning a lot.
  
  CIN3: I think the mobile government microblog platform is valuable.

• Affective involvement [13]
  
  AIN1: I think the mobile government microblog platform is interesting.
  
  AIN2: I think the mobile government microblog platform is exciting.
  
  AIN3: I think the mobile government microblog platform is appealing.
• Mobile government microblog continuance [35]
  
  MGC1: I will continue using the mobile government microblog platform in the future.
  MGC2: If could, I will continue using the mobile government microblog platform.
  MGC3: I will recommend my friends and family members to use the mobile government microblog platform.

Appendix B

Table A1. Loadings and Cross-Loading.

| Factor | SIV   | IS    | ES    | MGC   | AIN   | CIN   | VA    | IA    |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| SIV1   | 0.799 | 0.052 | 0.000 | 0.120 | 0.090 | 0.000 | 0.242 | 0.133 |
| SIV2   | 0.797 | 0.027 | −0.018| 0.021 | 0.041 | 0.016 | 0.314 | 0.183 |
| SIV3   | 0.847 | 0.065 | 0.003 | 0.058 | 0.025 | 0.028 | 0.204 | 0.153 |
| SIV4   | 0.742 | 0.100 | 0.046 | 0.053 | 0.158 | 0.117 | 0.198 |
| IS1    | 0.087 | 0.841 | 0.026 | 0.098 | 0.008 | 0.064 | −0.024| 0.050 |
| IS2    | 0.027 | 0.901 | 0.035 | 0.061 | −0.011| 0.063 | −0.002| 0.119 |
| IS3    | 0.039 | 0.861 | 0.040 | 0.080 | 0.009 | 0.053 | −0.009| 0.106 |
| IS4    | 0.057 | 0.784 | 0.072 | 0.022 | 0.147 | 0.123 | 0.080 | 0.030 |
| ES1    | 0.011 | 0.078 | 0.918 | 0.097 | 0.046 | 0.125 | 0.007 | 0.010 |
| ES2    | 0.021 | 0.051 | 0.896 | 0.145 | 0.105 | 0.096 | −0.016| 0.051 |
| ES3    | −0.012| 0.037 | 0.911 | 0.078 | 0.055 | 0.093 | −0.042| 0.046 |
| MGC1   | 0.085 | 0.097 | 0.112 | 0.857 | 0.177 | 0.132 | 0.082 | 0.124 |
| MGC2   | 0.082 | 0.057 | 0.145 | 0.862 | 0.169 | 0.176 | 0.033 | 0.103 |
| MGC3   | 0.068 | 0.121 | 0.096 | 0.836 | 0.178 | 0.162 | 0.031 | 0.105 |
| AIN1   | 0.089 | 0.062 | 0.069 | 0.185 | 0.842 | 0.210 | 0.097 | 0.097 |
| AIN2   | 0.133 | 0.034 | 0.102 | 0.233 | 0.789 | 0.260 | 0.046 | 0.140 |
| AIN3   | 0.080 | 0.054 | 0.063 | 0.139 | 0.857 | 0.166 | 0.053 | 0.120 |
| CIN1   | 0.012 | 0.083 | 0.093 | 0.163 | 0.201 | 0.848 | 0.033 | 0.085 |
| CIN2   | 0.047 | 0.141 | 0.131 | 0.205 | 0.246 | 0.809 | 0.039 | 0.092 |
| CIN3   | 0.075 | 0.105 | 0.125 | 0.111 | 0.160 | 0.852 | −0.038| 0.060 |
| VA1    | 0.357 | −0.023| −0.002| 0.037 | 0.100 | 0.025 | 0.816 | 0.168 |
| VA2    | 0.410 | 0.029 | −0.020| 0.056 | 0.085 | 0.011 | 0.769 | 0.224 |
| VA3    | 0.341 | 0.030 | −0.050| 0.075 | 0.035 | −0.006| 0.771 | 0.250 |
| IA1    | 0.234 | 0.121 | 0.067 | 0.177 | 0.183 | 0.080 | 0.170 | 0.503 |
| IA2    | 0.300 | 0.104 | 0.070 | 0.161 | 0.112 | 0.147 | 0.174 | 0.786 |
| IA3    | 0.208 | 0.144 | 0.006 | 0.053 | 0.101 | 0.051 | 0.273 | 0.756 |
| Eigen-values | 3.214 | 3.025 | 2.602 | 2.514 | 2.431 | 2.418 | 2.244 | 2.224 |
| Variance% | 12.360 | 11.634 | 10.008 | 9.668 | 9.350 | 9.302 | 8.629 | 8.552 |
| Cumulative% | 12.360 | 23.995 | 34.003 | 43.671 | 53.021 | 62.323 | 70.952 | 79.504 |

Note: Bold is the internal-construct loading of each extracted factor. ES = External similarity; IS = Internal similarity; SIV = Social interact value; VA = Visual appearance; IA = Identify attractiveness; CIN = Cognitive involvement; AIN = Affective involvement; MGC = Mobile government microblog Continuance.

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