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Discrepancy between Actual Self and Virtual Self: Theoretical Extensions, Measurement and Relation to Contribution in Virtual Communities

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DISCREPANCY BETWEEN ACTUAL SELF AND VIRTUAL SELF: THEORETICAL EXTENSIONS, MEASUREMENT AND RELATION TO CONTRIBUTION IN VIRTUAL COMMUNITIES

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Abstract

Virtual communities enable one to pretend to be a different person or to possess a different identity at little or no cost. Despite the ubiquity of such communities, there is only limited theoretical and empirical research on how taking on a different identity is associated with one's contributive behavior in those communities. Drawing on the social psychology literature, we adopt the concept of self-discrepancy rooted in self-identity and derive an index for self-discrepancy by using the differences between actual and virtual identities. Next, we link the self-discrepancy with perceived privacy rights and with quality and quantity of contribution. Analysis of 299 respondents showed that self-discrepancy significantly influenced perceived privacy rights and indirectly reduced quality and quantity of contribution in virtual communities. Furthermore, sub-group analysis revealed that the effects of self-discrepancy varied depending on whether the virtual community was utilitarian or hedonic. The present study aims to show how an individual member's self-concept is associated with his or her psychological state in a virtual community, thereby offering practical insights for managers of virtual communities by suggesting how multi-identity should be managed therein.

Keywords: Virtual Community, Self-discrepancy, Perceived Privacy Rights, Contribution

1 INTRODUCTION

In a virtual community (VC), anonymity and lack of social cues enable the individual to create an alternate identity in contrast to his or her actual identity. Taking on a different identity makes it possible to spread false rumors and groundless slander. Conversely, people want to break free from their daily personas, and in a virtual space this alternate identity allows them to freely do as they please, without having to conform to social norms or experiencing anxiety about social regulations (Pedersen, 1997). For example, by creating alternate identities, people feel they can express their emotions and do things that do not seem feasible in real life. In some cases, people also feel they can engage more in creative activities within their virtual communities. We posit that alternate identities may have positive or negative repercussions in VCs; however, little research exists that examines which consequences are caused by taking on a different identity in a VC.

Considering the distinct properties of a VC, in which people easily change their identities at little or no cost, it is imperative to explore how taking on a different identity is associated with people's contributions to their communities. To this end, we employ the concept of self-discrepancy, from the social psychology theory rooted in self-identity, and develop a theoretical model to predict quality of contribution of individual members. Such examination may reveal how best to manage or control members' virtual identities and anonymous statuses in order to stimulate contributions. In this study, we raise the following questions:

(1) How does self-discrepancy between actual self and virtual self influence perceived privacy rights?

(2) How do perceived privacy rights influence contribution, especially in terms of quality and quantity?

(3) Do the underlying relationships among self-discrepancy, perceived privacy rights, and contribution vary across different types of VCs?

2 THEORETICAL BACKGROUND

In this study, we use the term "self-discrepancy" to describe instances in a VC where a person has an alternate identity and acts like a different person, creating a virtual self distinct from his or her actual self. Our point of departure is the difference between the real-life identity ("actual identity") and the alternative identity represented in a virtual setting ("virtual identity"). In the next section, we will discuss the concept of self-identity and self-discrepancy in order to infer the consequences of taking on an alternate identity.

2.1 Self-identity

Self-identity is "the individual's self-appraisal of a variety of attributes along the dimensions of physical and cognitive abilities, personal traits and motives, and the multiplicity of social roles" (Whitbourne & Connolly, 1999). Markus (1977) argues that self-identity is the sum total of beliefs one has about oneself, which is directly associated with the term "self-concept." Self-concept is made up of cognitive molecules called self-schemas: beliefs about oneself that guide the processing of information relevant to the self. Researchers explain self-concept using hierarchical self-schemas (Franzio, 1966; Kihlstorm & Cantor, 1984) that elucidate how we see ourselves. Theorists have hypothesized that the self involves multiple components (Cooley 1902; Loevinger 1976; Mead 1934), with the primary distinction between the personal self and the social self. The former refers to the properties that constitute an individual's learning abilities, while the latter refers to the properties constituting an individual's social relationships.

2.2 Discrepancy between actual self and virtual self

Self-discrepancy, however, arises from the mismatch between the ways we see ourselves, especially when we perceive that we have different selves. Self-discrepancy theory (Higgins, 1987) explains how self-discrepancy can be formed and how it influences an individual's psychological state. Higgins (1987) argues that people have a psychological structure that helps them understand the different types of negative emotions experienced by those who hold conflicting beliefs—a discrepancy—about themselves. By applying the notion of self-discrepancy to this study, which attempts to capture the discrepancy between the "actual self" and the "virtual self," we assume that discrepancy occurs when the attributes associated with one's self-state (*e.g.*, the actual self) do not correspond with those associated with a different self-state (*e.g.*, the virtual self).

2.3 Perceived privacy rights

Anonymity mitigates status differences, social pressure, and fear of retribution (Flanagin et al., 2002; Postmes & Lea, 2000), and thus makes it easier for individual members to exercise their privacy rights in VCs. Lack of privacy may negatively affect information sharing processes, and consequently result in loss of VC members. Research suggests three types of privacy rights that can be exercised under anonymous conditions (Pederson, 1997). More specifically, people perceive possession of privacy rights in a VC when they experience (1) recovery from social injury, (2) catharsis by expressing their emotions freely, and (3) autonomy by trying out new behaviors, engaging in creative activities, or breaking social norms and loosening their inhibitions.

2.4 Contribution

Contribution refers to the extent to which people may be willing to exert themselves on behalf of a community. Almost all VCs rely upon voluntary commitment, participation, and contributions: they need visitors to return and members to interact with others in order to maintain the community infrastructure, generate new and updated information, and provide social and emotional support to other members. Regarding member contributions in a VC, research suggests that quantity and quality should be taken into consideration at the same time (Wasko and Faraj, 2005; Peddibhotla and Subramani, 2009). As both quality and quantity of contribution are critical for the sustainability of a VC, neither one should outweigh the other.

3 RESEARCH MODEL AND HYPOTHESES

We use the concept of self-discrepancy to capture the degree of difference between actual identity and virtual identity. As is discussed above, we categorized self-concept into (1) personal self and (2) social self. The former represents the perception of a person's learning ability (*e.g.*, intelligence, education, expertise), while the latter reflects a person's social relationship with friends, family, and others (*e.g.*, morality, sociability, and accordance with social norms). Next, we link the two types of self-discrepancy with three dimensions of perceived privacy rights such as autonomy, recovery, and catharsis, which are considered as determinants of contribution quality and quantity in our model.

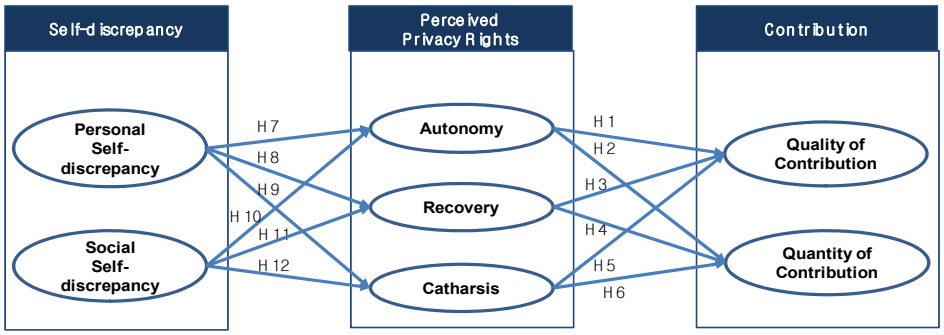

Figure 1. Research Model

3.1 Determinants of contribution

Contribution is driven by individual-level calculations of costs and benefits (DeSanctis & Gallupe, 1987). Writing and posting take time and effort; however, there are benefits to doing so, since contributors are able to conceal their personal identities, and confidentiality is maintained through anonymity. Such benefits may cause diverse dysfunctional behaviors such as humiliation, antagonism, and selfishness, but in the context of a VC people are more likely to give honest answers or disclose confidential information when they can protect their privacy. Research has suggested that people experience recovery, catharsis, and autonomy as part of their privacy rights (Pedersen, 1997), and that those privacy rights enable them to focus on the merits of an individual's contribution—as opposed to his or her status or other social cues—and thus foster more effective discussions and knowledge contributions (DeSanctis & Gallupe, 1987; Rains, 2007; Valachi et al., 1992).

[Hypothesis 1]: *Perceived autonomy is positively associated with quality of contribution.*

[Hypothesis 2]: *Perceived autonomy is positively associated with quantity of contribution.*

[Hypothesis 3]: *Perceived catharsis is positively associated with quality of contribution.*

[Hypothesis 4]: *Perceived catharsis is positively associated with quantity of contribution.*

[Hypothesis 5]: *Perceived recovery is positively associated with quality of contribution.*

[Hypothesis 6]: *Perceived recovery is positively associated with quantity of contribution.*

3.2 Self-discrepancy and perceived privacy rights

Personal self represents the aspect of one's intelligence, education, and expertise. People can change their identities in VCs: some pretend to be professionals or gurus even though they are not fully educated or have no job in the real world; conversely, some hide their social status or intelligence and act like novices or non-educated people. By taking on a different identity in a VC, one can act freely without fear of social norms or regulations. Such behaviors allow people to recover from social injury and express their emotions. People usually feel they can protect themselves from the hurtful remarks of others and recover from negative social experiences when they are guaranteed anonymity. Thus,

[Hypothesis 7]: *Personal self-discrepancy is positively associated with perceived autonomy.*

[Hypothesis 8]: *Personal self-discrepancy is positively associated with perceived recovery.*

[Hypothesis 9]: *Personal self-discrepancy is positively associated with perceived catharsis.*

On the other hand, social self reflects a person's morality, sociability, and sensitivity to social norms. By changing these aspects in a VC, one is more likely to be honest and to reveal one's less polished sides, unrestrained by social norms or regulations; this environment fosters effective discussion in online spaces (DeSanctis & Gallupe, 1987). Some people try out new behaviors, engaging in creative activities in their VCs or breaking social norms and loosening their inhibitions. Thus, the greater the extent to which people perceive discrepancy between their actual and virtual identities, the greater the perception of privacy rights in their VCs.

[Hypothesis 10]: *Social self-discrepancy is positively associated with perceived autonomy.*

[Hypothesis 11]: *Social self-discrepancy is positively associated with perceived recovery.*

[Hypothesis 12]: *Social self-discrepancy is positively associated with perceived catharsis.*

3.3 VC type

Researchers classify VCs into different categories according to their underlying principles or focus. For example, Hargel and Armstrong (1997) indicate that online communities meet four types of participants' needs: (1) interest, (2) relationship building, (3) transaction, and (4) fantasy. More broadly, needs are commonly classified by two types: utilitarian and hedonic (Lee et al., 2007). Utilitarian needs are related to obtaining information, hedonic needs to social relationships or amusement. Accordingly, we classify VCs into the latter two categories. In a hedonic VC, people seek more fun and fantasy, and thus, while they may not care about others' actual identities as much, they are more likely to focus on their own virtual identities. As a result, we can infer that the self-discrepancy between actual and virtual self is not salient in a hedonic VC.

[Hypothesis 13]: *The effects of self-discrepancy will be more strongly associated with perceived privacy rights in utilitarian VCs than in hedonic VCs.*

4 METHOD

To test the proposed research model, we adopted the cross-sectional survey method for data collection and examined our hypotheses by applying the partial least squares (PLS) method to the collected data. Given that this study is an early attempt to develop a theoretical model that predicts the influence of multi-identity on psychological state and contribution behavior, PLS is appropriate. The individual is the unit of analysis for this study.

4.1 Measurement

Based on the theoretical framework presented above, new measures of self-discrepancy and perceived privacy rights were developed. To measure self-discrepancy, we adapted and modified items from Marsh et al.'s Tennessee Self-Concept Scale (TSCS) and Marsh et al.'s Self-Description Questionnaire (SDQ). Based on these two methods, we derived several scales to measure specific aspects regarding self-concept. Firstly, using seven items measuring self-concept, we asked the respondents to answer the question: "Who are you in the real world?" Second, we asked: "Who are you in your VC?" To capture the discrepancy between actual self and virtual self, we derived a numerical index representing self-discrepancy by calculating the difference between actual self and virtual self.

Data Collection

A web survey was conducted to test the model proposed above. The sample population for this study was comprised of panel members of an Internet survey company. E-mail messages were sent to the people selected by a stratified sampling method. They were solicited to visit a website for the survey. To filter the proper respondents, we first used the filtering question: "Are you now a member of a virtual community?" If a respondent answered "no," then the survey did not proceed. We asked the respondents to select one virtual community in which they were engaged as an active member. Next, we asked questions to measure perceived self-identity, perceived privacy rights, and behaviors associated with contributions in their virtual communities. We used 299 questionnaires from 378 people who started to answer the survey to test the hypotheses. According to the results of the survey, 171 respondents answered that their VCs are related with games and socializing, thus we categorized them into hedonic VC users. 128 respondents are memberships of the VC related with information sharing or business related, thus we categorized them into utilitarian VC users.

5 RESULTS

5.1 Measurement Model

Internal consistency was examined using the composite scale reliability index developed by Fornell and Larcker (1981), which is a measure similar to Cronbach's alpha. All reliability measures were 0.8 or higher, well above the recommended level of 0.7, indicating adequate internal consistency. Discriminant validity is assessed by comparing the correlation between the two constructs and the respective Average Variance Extracted (AVE). For each construct, the square root of the average variance extracted should exceed the construct's correlation with every other construct. This condition of discriminant validity is upheld in our study.

5.2 Test of Structural Model

Figure 2 shows the results of the test of the hypothesized structural model for the total sample (n=299). The results of the PLS suggest that three dimensions of Perceived Privacy Rights we suggested in this study have significant effects on Quality and Quantity of Contribution. Autonomy and Recovery positively influence Quality and Quantity of Contribution, supporting H1, H2, H, 3 and H4. Contrary to our expectation, Catharsis negatively influences Quality of Contribution and has no significant effect on Quantity of Contribution, rejecting H5 and H6. On the other hand, the results show that both Personal Self-discrepancy and Social Self-discrepancy negatively influence Autonomy and Recovery while they do not have any significant influence on Catharsis.

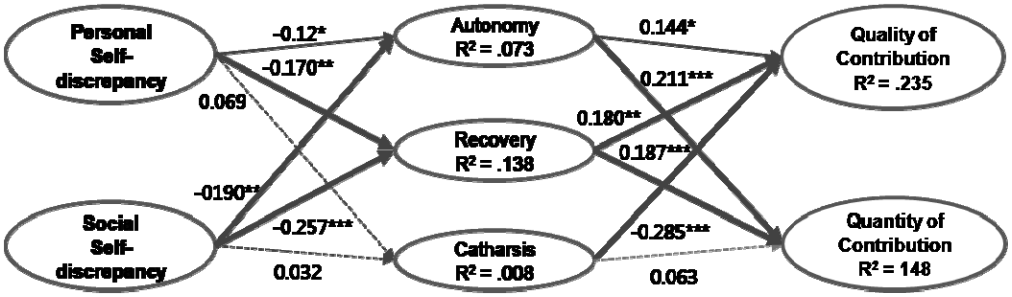

Figure 2. Summary of PLS Analysis (Total Sample)

In this study, the VC type was used as a global moderator. To increase understanding of the moderating role that the VC type might play, the base model for subgroups of the sample (i.e., utilitarian vs. hedonic VC) were analyzed. Figure 3 shows the results of the test of the hypothesized structural model for utilitarian VC users (n=128) and hedonic VC users (n=171). In utilitarian VC, the results of analysis show that Personal Self-discrepancy and Social Self-discrepancy negatively influence Recovery, which positively increases Quantity of Contribution. Catharsis negatively influences Quality of Contribution. By contrast, in hedonic VCs, the results show that Recovery increases Quality of Contribution while Autonomy increases Quantity of Contribution. Consistent with utilitarian VCs, Catharsis negatively influences Quality of Contribution. On the other hand, Personal Self-discrepancy negatively influences Recovery, while Social Self-discrepancy negatively influences Autonomy and Recovery. However, it is notable that these relationships are weak ($p<0.1$).

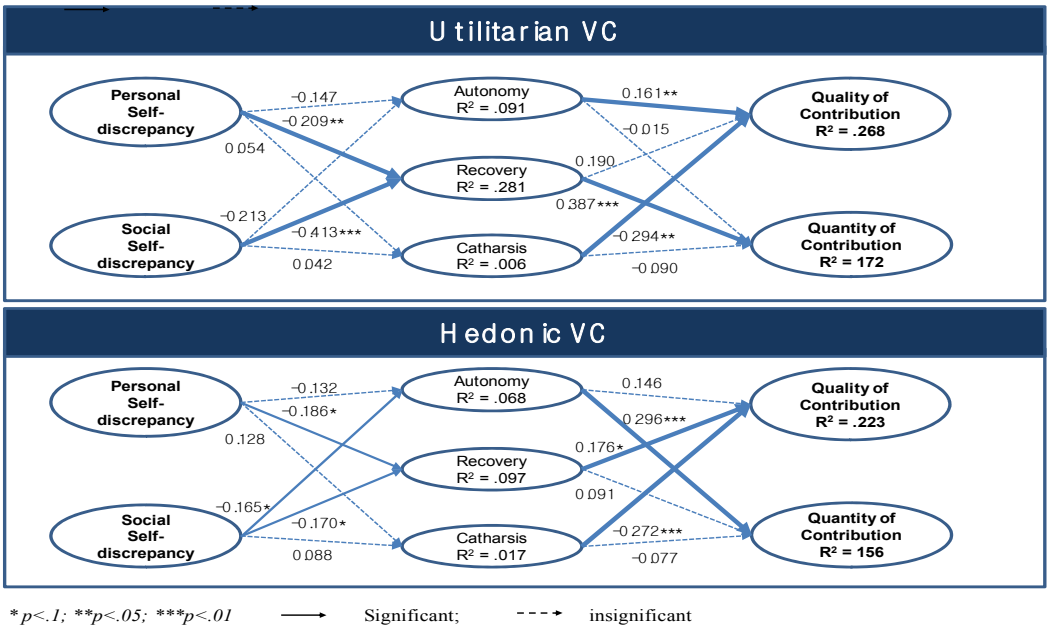

Figure 3. Summary of Sub-group Analysis

6 DISCUSSION, IMPLICATIONS AND LIMITATIONS

Relatively little attention has been paid to the role of self-identity in a VC. The objective of this study is to add to the understanding of the self-identity and the influences of identity discrepancy between actual and virtual self on one's perceived privacy rights and contributive behaviour in a VC. Accordingly, we set out to develop a theory-driven multi-dimensional measure of self-discrepancy and perceived privacy rights that included the full breath of the construct. The results of the empirical study reveal that the degree of self-discrepancy between actual self and virtual self negatively influences Perceived Privacy Rights. The following lists the major findings of this research. First, among the three dimensions of Perceived Privacy Rights we suggest, Autonomy and Recovery enhance not only the Quality of Contribution but also the Quantity of Contribution, which means that the more people feel that they are recovered from social injury and they are able to try out new behaviors, engaging in creative activities, or breaking social norms and loosening their inhibitions in their VCs, the more people contribute themselves to their VCs in terms of quality and quantity. However, it is surprising that Catharsis reduces the Quality of Contribution. This result implies that the more people express their emotions freely, the less relevant and accurate information or knowledge people contribute to their VCs.

Second, Social Self-discrepancy—which represents the difference between actual and virtual self in terms of morality, sociability, and social norms—exercises a significant negative influence on Recovery and Autonomy in total sample while it does not have significant influence on Autonomy in utilitarian VCs. The conventional wisdom tell us that people perceive a higher level of privacy rights when engaging in social behaviors without any constraints (e.g., social norms, moral pressure, and regulations) in VCs. Surprisingly, the results of this study showed that participants did not perceive a high level of privacy rights reflecting Catharsis, Recovery, or Autonomy, even though they created different selves and engaged in socially undesirable behaviors in a virtual community. The results imply that people who pretend to be different by engaging in socially undesirable behaviors under their alternative identities are more likely to suffer lower levels of psychological wellbeing and thus experience lower levels of Perceived Privacy Rights (expecially such as recovery) than others. Based on the results of this analysis, we can explain the dysfunctions of Social self-discrepancy in VCs.

Third, Personal Self-discrepancy it significantly decreases the level of perceived Recovery and Autonomy in total sample. The negative relationship between Personal Self-discrepancy and

Recovery is stronger in utilitarian VCs and is weaker in hedonic VCs. this effect is stronger in utilitarian VCs. The negative relationship between Personal Self-discrepancy and Autonomy is disappeared in subgroup-analysis. This result implies that those who pretend to be a different person in terms of intelligence, education, or expertise also indirectly debase the quality of contribution and quantity of contribution by decreasing perceived Recovery.

7 CONCLUSION

Our knowledge of multi-identity in virtual communities is severely limited compared with what we know about the dynamics of virtual communities. This study presents a conceptual framework that highlights the concept of self-discrepancy between actual and virtual identities, assuming that they may influence individuals' psychological states and contribution quality in virtual communities. Our findings help resolve the conflicting views on the effects of multi-identity in a virtual community. The results suggest that virtual community managers should pay more attention to the negative influences exercised by multi-identity on the quality of contribution, thereby controlling the need to create alternative identities in virtual communities. We hope that more research will be conducted on this underexplored area of multi-identity and that our theoretical framework will serve as a useful conceptual tool for all endeavors.

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