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Trust, Social Presence and Customer Loyalty in Social Virtual Worlds

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Abstract

Social virtual worlds (SVWs) have drawn substantial attention in business and academia. This research focuses on how trust affects customer loyalty in the SVW setting. Specifically, this study pinpoints how trust in SVW staff and other users influences the continuous use and purchase behaviour in SVWs. Additionally, we examine the influence of social presence on the two aspects trust and customer loyalty. The research model is tested with PLS using a sample of 2111 Finnish Habbo users. The two facets of trust are important antecedents on customer loyalty, yet differing in their effect. Social presence is a strong determinant of trust but also a direct antecedent of customer loyalty. Together, trust and social presence account for a considerable amount of variance in continuous use and purchase intention.

Keywords: Social virtual worlds, trust, customer loyalty, social presence

1 Introduction

Social virtual worlds (SVWs) are persistent, immersive 3D environments where the users are represented as avatars (see e.g. Jung & Kang (forthcoming)). In contrast to games, SVWs have no narrative goals. The focus of SVWs is on social interaction and entertainment similarly as with social networking sites or online communities. Being engaged in SVWs is not a marginal phenomenon; the child-focused Poptropica alone have been reported to have attracted 36 million new registered users only in Q2 2009¹. Virtual worlds influence the way individuals spend their free time and interact with

¹Virtual World News, July 15 2009: Virtual Worlds Popularity Spikes
<http://www.virtualworldsnews.com/2009/07/virtual-world-popularity-spikes.html>

others and they have also been claimed to have a profound societal and economic impact (Messinger et al. 2009).

Therefore, similarly to several other online services (Gefen 2002), attracting and retaining existing users, i.e. customer loyalty, is a paramount issue to the economic success in the SVW business. Additionally, as selling virtual items and/or value-added services is a major source of revenue for many SVWs, understanding the drivers of purchase behavior is essential. This study examines experienced Habbo users and places two important manifestations of behavioral loyalty, continuous use and purchase behavior as the dependent variables.

Numerous studies have verified trust being a cornerstone of long-term relationships and a driver of customer loyalty both offline and online (Eastlick et al. 2006; Gefen et al. 2003). Despite the abundance of trust research, the literature includes very few studies discussing the role of user trust in the virtual world setting.

SVWs are a theoretically insightful context to examine trust and its impact since they combine elements from online social networking, gaming and e-commerce within one platform. While dishonest behavior is harmful from social interaction and economic exchange perspective, from a gaming perspective, i.e. cheating other users, can be a part of the excitement of the SVW user experience.

Moreover, in whom one trusts in the SVW setting is an interesting question. First, one needs to have a certain level of trust in the service itself to log in. Additionally, the trust in the other users is likely to have an impact on how one behaves in the virtual environment. Finally, for instance in Habbo, the presence of staff is visible to the users and hence staff is a potential subject and contributor of trust. A very limited number prior research has empirically examined these issues in virtual world settings.

Thus, with regard to trust we argue: 1. In SVWs where the staff is visibly virtually present trust in the integrity and benevolence of staff is a distinct dimension of trust and an important contributor of customer loyalty. 2. Trust in the other SVW users represents another key dimension of trust and an antecedent of customer loyalty on its own right. 3. Both aspects of trust are important contributors in users' intention to repetitively engage in the SVW and place purchases from the SVW operator.

Social presence has been found to influence the adoption of electronic communication (Gefen 1997), online purchasing and e-loyalty (Cyr 2007). Currently, there is a limited understanding of the role of social presence in the use of virtual worlds. Thus, this research scrutinizes social presence as an antecedent of trust and a direct determinant of the loyalty-related behaviors.

The main contributions of this research are; first, it differentiates between trust in the SVW staff and other SVW users and empirically examines their influence on the two key manifestations of customer loyalty, namely continuous use and purchase behavior. Second, this study investigates the effect of social presence on trust and customer loyalty in SVWs.

2 Background

2.1 Research context

In this research, we investigate Habbo, which has 16.5 million monthly unique visitors in 31 local portals, making it the world's largest SVW designed for teens². Habbo collects no access fee but offers virtual furniture for decorating user-generated virtual rooms, and voluntary memberships that allow members additional benefits not available to non-subscribers. All these can be bought with Habbo credits, virtual currency purchased with real-life money.

In contrast to most online services where the user interacts solely with the service, i.e. the customer interface, in Habbo the staff is rather visibly present and accessible for the users. This makes investigating the trust in the staff specifically meaningful.

Members of Habbo staff have their own avatars and they interact with users. Advanced users can volunteer to work virtually as advisors for the novices. Moreover, the moderators monitor the discussions and intervene when e.g. bullying or stealing is noticed. Users breaking the code of conduct can receive penalties such as a temporary freezing of user accounts.

2.2 Customer loyalty in social virtual worlds

The post-purchase behavior of consumers, including customer loyalty, has been discussed at great length in consumer behavior literature (Oliver 1999) The presence of the Internet has further underscored the importance of retaining existing customers (see Reichheld et al. 2000) but also addressed the need to strive for deeper levels of customer loyalty than just patronage or retention (Coyles & Gokey 2002). In the e-commerce domain, customer loyalty has been rather extensively discussed (Chao-Min Chiu et al. 2009; Gefen 2002). Yet prior research examining customer loyalty in social virtual worlds is scant (Mäntymäki, 2009), prior research has examined customer loyalty in related contexts such as virtual communities (Lin et al. 2008) and online games (Yang et al. 2009).

Customer loyalty is salient in the SVW business because of the revenue models applied by the service operators. The revenue can be collected directly from the customers via subscriptions or usage fees. Alternatively, the SVW operators can sell value-added services, premium memberships or virtual items to upgrade the user experience. Therefore, purchase behavior is an important aspect of customer loyalty in the SVW setting. Moreover, selling advertising space can act as a source of revenue if the SVW is able to attract a sufficient number of visitors. Extensive and active usage keeps the social interaction vibrant and makes using SVWs meaningful. Also hybrid models, i.e. those combining advertising and revenue derived from the users, are widely applied. Taken together, both continuous use and purchase behavior are important aspects of behavioral loyalty in the SVW setting.

In the marketing literature repurchase behavior is perhaps the most commonly examined form of behavioral loyalty. In the present study, we do not differentiate between initial and repetitive purchasing since users normally do not start the usage by first purchasing virtual items or services but try the SVW and learn the features without investing money

² <http://www.sulake.com/habbo/>

in it. Therefore, already purchase behavior in general reflects a level of loyalty and focusing only on repurchase behavior is not necessary.

2.3 Trust

Trust overarches several walks of life and has thus been extensively examined in various disciplines such as the e-commerce and information systems literature (McKnight et al. 2002). Numerous studies have verified trust being an influential determinant of users' acceptance of e-commerce (see e.g. Gefen et al. 2003; Pavlou & Fygenson 2006; Pavlou 2003). In the marketing literature, trust has been found to be a key foundation of long-term business relationships both offline (Dwyer et al. 1987; Morgan & Hunt 1994) and online (Eastlick et al. 2006). Moreover, in relation to e-commerce and online services, trust has also been found to act as a determinant of customer loyalty and post-adoption user behavior (Anderson & Srinivasan 2003; Kim et al. 2009).

The role of trust has also been discussed with regard to online social networking (Sledgianowski & Kulviwat 2009), online communities (Hsu et al. 2007; Porter & Donthu 2008) and recently also the user acceptance of virtual worlds (Goel & Prokopec 2009). However, in relation to continuous engagement in SVWs and virtual purchase behavior, the influence of trust has not been exhaustively discussed. SVWs can be viewed as conceptually related to online communities and social networking sites. This body of literature is employed as a basis when formulating the research hypotheses.

In the literature trust has been defined and conceptualized in various ways (Gefen et al. 2003; McKnight et al. 2002). Mayer et al. (1995, p. 712) defined trust as *"the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party"*. Gefen et al. (2003) and McKnight et al. (2002) conceptualized trust as a set of trusting beliefs. Additionally, the dispositional dimensions and the importance of institutional (Shapiro 1987) and technological (Hu et al. 2010) mechanisms to reinforce individuals' trust have been examined.

Despite diverse terminology on the dimensions of trust and trusting beliefs and varying definitions, there is a consensus that trust is indeed a multi-dimensional concept and that at least integrity, benevolence and competence are relevant trusting beliefs in an online environment (e.g. Gefen et al. 2003). Respectively, in the present paper trust is viewed as a set of trusting beliefs, measured with integrity and benevolence.

Another key issue is the subject of trust. Prior research on online communities has addressed the importance of trust in the community and in the other members of the community (Hsu et al. 2007). In SVWs the users interact with others, take part in competitions and events, and trade their virtual possessions. In some SVWs, such as Habbo, the members of staff are present and accessible for the users. Therefore, investigating trust in the SVW staff and other users is an important avenue for research.

2.4 Social presence

Social presence can be defined as the extent to which a medium allows users to experience others as being psychologically present (Fulk et al. 1987). According to Short et al. (, 1976), social presence theory views social presence as a quality inherent in

a communication medium. The social presence of a medium has been characterized in relation to the media's ability to transmit e.g. non-verbal cues (Short et al., 1976). Social presence has also been found related to the information richness theory (Daft & Lengel 1986; Straub & Karahanna 1998). From a psychological standpoint, social presence can be characterized as the "warmth" of the media, i.e. its ability to transmit the feeling of human warmth and sensitivity (see Yoo & Alavi 2001). In the online context, social presence has been characterized as the website's capacity to convey a feeling of human warmth and sociability (see Cyr 2007). In this research, we adopt this view of social presence.

Social presence has been found to have a positive impact on e.g. customers online purchase intentions and e-loyalty (Cyr 2007; Gefen & Straub 2003). Moreover, social presence reinforces customers' trust in the online shopping setting (Gefen & Straub 2004). Photographs and personal greetings, among others, have been found to increase websites' social presence (Hassanein & Head 2006).

Social presence has been found to increase trust via its impact on increased electronic communication (Gefen 1997). SVWs are also used for social interaction and communication. Additionally, the SVW users do not generally know each other from the offline world. Thus high perceived social presence can be assumed to be a relevant factor regarding loyalty and trust.

3 Research model and hypotheses

The post-purchase behavior of consumers, including customer loyalty, has been discussed extensively in marketing literature (Churchill & Surprenant 1982; Oliver, 1997). The importance of continuous consumption and loyalty for the economic success of companies has been widely acknowledged (Helgesen 2006).

From the late 90's, IS literature has shown increasing interest in post-adoption behavior and IS continuance (Bhattacharjee 2001; Chieh-Peng Lin & Bhattacharjee 2008; Kim & Malhotra 2005; Kim & Son 2009; Premkumar & Bhattacharjee 2008), highlighting the importance of continuous use to materialize business benefits. However, as addressed by e.g. Kim & Son (2009) and Chea & Luo (2008), continuous use is not the only important post-adoption behavior. Hence, this research examines both continuous engagement and purchase intention as the endogenous constructs.

As in offline business relationships (see e.g. Morgan & Hunt 1994), trust is a contributor in the formation of online customer relationships and customer loyalty (Kim et al. 2009; Kim & Son 2009; Mukherjee & Nath 2007). Trust has also been found to have a positive impact on users' acceptance of social networking sites (Sledgianowski & Kulviwat 2009) and continuous participation in online communities (Hsu et al. 2007). As Habbo is used primarily for leisure purposes it can be assumed that benevolence and integrity of the staff rather than competence are the key trusting beliefs. Moreover, the competence of the staff is not clearly visible for the users and thus evaluating it can be problematic. Therefore, the present research focuses only integrity and benevolence.

H1. Trust in the integrity and benevolence of the SVW staff positively affects the continuous use intention.

Selling various virtual items and premium memberships is an important part of Habbo's and many other SVW's revenue model. An extensive body of literature has addressed the importance of trust in e-commerce (Gefen et al. 2003; McKnight et al. 2002) In

relation to virtual item purchasing Guo & Barnes (2009, p. 91) suggested that despite the mechanisms to protect the customers, trust may still play a role.

H2. Trust in integrity and benevolence of the SVW staff positively affects the purchase intention.

Similarly to online communities, social interaction with other users is a key feature of SVWs. Trust has been found to have a positive impact on participation in online communities (see e.g. Mathwick et al. 2008; Ridings et al. 2002).

H3: Trust in the other SVW users' integrity positively affects the continuous use intention.

In the SVWs, virtual items are purchased to decorate user's own space, to show status or to be traded with other users. Purchasing virtual items from Habbo is practically risk-free. Since Habbo does not provide a secondary market for the virtual items, the users simply exchange their virtual possessions with one another. This underscores the importance of the belief in mutual integrity. In case the user does not purchase virtual items for trading purposes, the risk of fraud is less salient. The importance of trust and risk with regard to online purchasing has been extensively addressed in the e-commerce literature. (see e.g. Gefen et al. 2003)

H4. Trust in the other SVW users' integrity positively affects the purchase intention

Prior research on the role of social presence in users' engagement in SVWs or virtual worlds in general is scarce. Social presence has been found to directly reinforce loyalty in e-service context (Cyr 2007) and having a positive impact on the adoption of e-mail (Gefen 1997). With regard to SVWs a friendly and warm atmosphere is likely to encourage social interaction between users and thus increase user's willingness to continue using the service.

H5. Perceived social presence positively affects the continuous use intention.

Social presence has been found to have a direct positive impact on users' online purchase intentions (Hassanein & Head 2007). Similarly than with the continuous engagement, the users are likely willing to invest in their experience with the SVWm if they feel human warmth and sociability when using the service.

H6. Perceived social presence positively affects the purchase intention.

In prior studies perceived social presence has been found to have a positive effect on trust (Gefen & Straub 2004; Hassanein & Head 2007). Alongside the presence of staff, the opportunity to create a group of friends and invite them to one's own personal space is also likely to constitute social presence.

H7. Perceived social presence has positively affects the trust in the integrity & benevolence of the SVW staff.

H8. Perceived social presence positively affects the trust in the integrity of other SVW users.

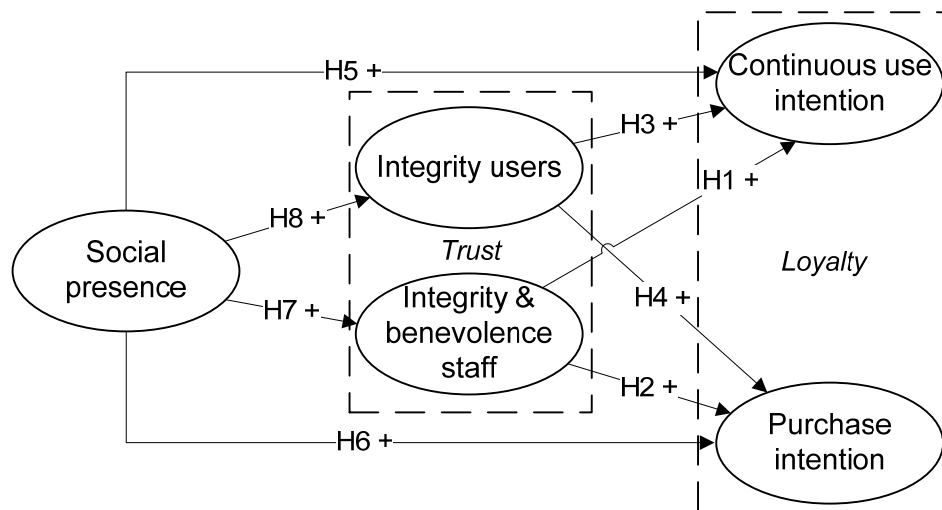


Figure 1. The research model

4 Empirical Research

4.1 Data collection

The data was collected with an online survey from the users of the Finnish Habbo portal. In contrast to e.g. Second Life, Habbo users log on to the local portal that uses the local language and also has to some extent its own specific content. The data collection was done in co-operation with Sulake Corporation, the company running Habbo. A link to the survey with a message from the operator encouraging users to participate the survey was published in the front page of the portal. Thus, the sampling procedure was based on voluntariness. In total, the online survey was opened 8939 times. A total of 3267 usable responses were received yielding a response rate of 36.5 per cent.

Habbo is targeted for teenagers; according to Sulake Corporation, 90 % of the users are aged between 13-18 years old. Therefore, only the respondents aged between 12 and 18 were analyzed. Respondents who did not provide the background information, demographics and length of Habbo experience were also excluded from the sample. Moreover, since the aim was particularly to focus on the sustained SVW engagement, users with less than six months of experience were excluded from the analysis. Thus, the final sample size was 2111 respondents, of which 59.1 % were females. Respondents in the age of 12 formed the largest age category (579) followed by 13 (570) and 14 (421).

4.2 Measurement

The survey contained worded items on a 7-point Likert-scale anchoring from strongly agree to strongly disagree, adapted from existing measures, mainly from IS. The measurement items with literature references are presented in Appendix 1. The measurement was done with reflective indicators. The analysis was started with a principal component analysis with varimax rotation to verify the existence of the two

dimensions of trust. The principal component analysis revealed two factors with eigenvalues over 1. Trust in the benevolence and integrity of staff formed the first factor, trust in other users' integrity being the second one.

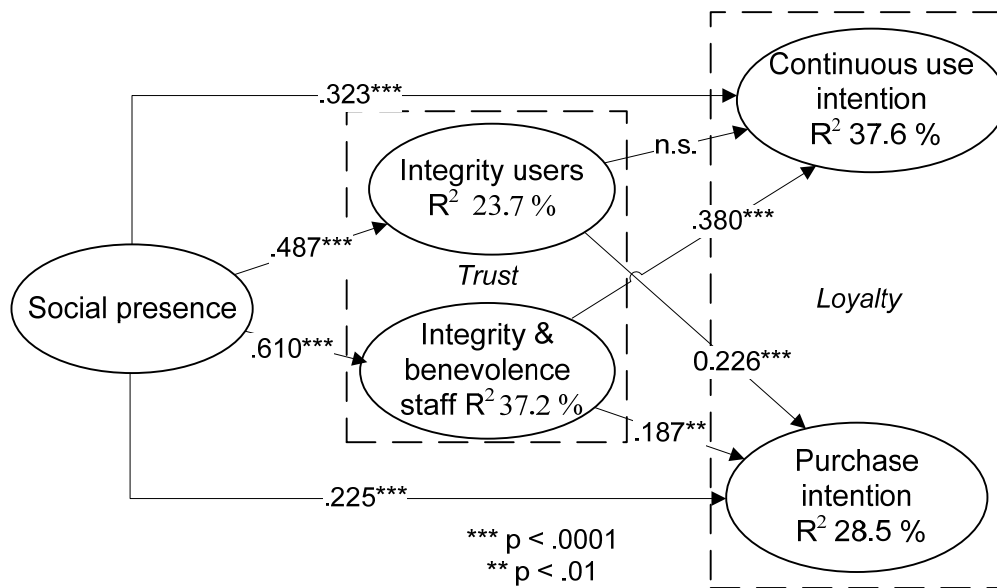
The data was analyzed using partial least squares (PLS) with SmartPLS M3 software (Ringle et al. 2005). PLS was selected over a covariance-based SEM since the purpose of the research is to examine to what extent trust and social presence predict the dependent variables rather than how well the model fits the data. Furthermore, PLS is well suitable for explorative research (Chin, 1998).

The convergent validity was evaluated based on three criteria: 1) all indicator factor loadings should be significant and exceed 0.7, 2) composite reliabilities should exceed 0.80, and 3) average variance extracted (AVE) by each construct should be greater than the variance due to measurement error ($AVE > 0.50$). (see Appendix 2.) Discriminant validity was investigated by examining whether the AVE for construct was higher than the squared correlation between it and all other constructs (Fornell & Larcker 1981). (see Appendix 3). In sum, the criteria for convergent and discriminant validity were met.

4.3 Results

Of the eight hypotheses all except H3 were supported. The R^2 values for continuous use intention were 37.6 and 28.5 percent for purchase intention, indicating that trust and social presence are relevant determinants of loyalty-related behaviors. The fact that social presence alone accounted for such a significant proportion of the variance in both trust constructs, and its direct effect on the dependent variables underscores the importance of human warmth and sociability in the SVW context.

After having tested the structural model, a post hoc analysis was conducted to examine the impact of age, gender and the length of experience on dependent variables. The analysis did not show any significant relationships. We also examined the risk for common method bias using Harmon's single-factor test. The results indicated that CMV was not a major source of the variance in the observed variables. Figure 2 summarizes the results of the PLS analysis.



Fig

ure 2. Results of the PLS analysis

5 Discussion

5.1 Theoretical implications

Trust in the SVW staff was found to be relatively strong predictor of continuous use intention but less important in relation to purchase intention. Interestingly, trust in the other users was a significant predictor of purchasing but, contrary to our original argument, not of continuous use. This can reflect that fact, that users consider opportunistic behavior to be part of the experience in the SVW. However, to deepen the level of commitment towards spending money in the SVW, the integrity of other users becomes salient. As a result, increasing the level of trust among the users can increase spending in virtual products and services. Taken together, examining trust as two distinct variables can be considered a viable approach.

Social presence was found an important determinant of the both facets of trust but also having a significant direct positive effect on the constituent factors of customer loyalty in SVWs, positioned as the dependent variables. In sum, by empirically testing the effect of trust and social presence on the two behavioral dimensions of customer loyalty in virtual world context, this study contributes in the online consumer behavior literature and the research on virtual worlds.

From a holistic perspective SVWs are a part of social computing phenomenon (see Messinger et al. 2009; Parameswaran & Whinston 2007). Since SVWs contain features of social media applications and games, the findings obtained from SVW context can have implications to many areas in the field of hedonic and social information systems. (Sledgianowski & Kulviwat 2009; van der Heijden 2004)

5.2 Managerial implications

From a managerial perspective, the present study provides new information about user behavior in SVWs. Continuous use and purchase behavior are the core foundations of customer loyalty and financial success of SVWs. If an SVW is able to create a feeling

of social presence e.g. having employees visible for the users, the trust in the employees and the other users will be reinforced, leading to a higher level of customer loyalty. Moreover, active and committed users are more likely to purchase virtual items or value-added services to boost their experience in the SVW.

Taken together, reinforcing trust by creating visible indicators of trust and social presence seems to be a managerially relevant approach to promote customer loyalty. Furthermore, as some of the users may behave opportunistically or even dishonestly, the visible and indivisible presence of staff, advisors and moderators is likely to contribute in creating a safer virtual environment.

Creating of feeling of human warmth and sociability seems to be important also in the virtual world setting. Thus, users generally value the SVW as an environment that supports friendly and supportive rather than opportunistic and aggressive behavior (cf. Chesney et al. 2009).

5.3 Limitations and further research

First and foremost, the empirical data was collected from the users of only one SVW from one country. SVWs vary in terms of the array of services and the demographic, sociographic and cultural background of the users. As Habbo is primarily targeted at teenagers, the respondents were mostly teens. Additionally, due to the self-selection of the respondents, the data is potentially biased towards active users.

Therefore, natural path forward from this research would be to extend the scope of research to other Habbo portals and possibly to other SVWs to examine the potential differences of how social presence, trust and loyalty play out.

Second, trust was measured only with trusting beliefs, consisting of items measuring integrity and benevolence with regard to SVW staff and integrity in relation to other users. The multi-dimensionality of trust in mind, the present study was unable to grasp all the dimensions of trust relevant in the SVW context. Thus, incorporating more trusting beliefs and perhaps also structural assurances in the research model would indeed give a more comprehensive picture of trust. By the same token, further research should employ covariance-based SEM to establish the research model.

Third, the present study found that social presence is an important predictor of the investigated variables. However, it is likely that it would influence also on other variables. Hence, further research examining the role of social presence e.g. in the enjoyment would be highly appropriate.

Fourth, to gain a higher explanatory power and to provide a more extensive illustration of the determinants of customer loyalty, trust and social presence could be employed to complement established theoretical framework such as TRA and TAM.

Finally, additional research examining why trust in the other users had no impact on the continuous use intention, and why trust in staff had only a moderate influence on the purchase intention would be insightful.

	Measurement item	Applied from
SP1	There is a sense of human contact in Habbo.	Gefen & Straub 2004
SP2	There is a sense of sociability in Habbo (users are companionable).	
SP3	There is a sense of human warmth in Habbo.	
Trust Staff1	My wishes and needs are very important for Habbo staff.	McKnight et al. 2002; Gefen & Straub 2004
Trust Staff2	I feel that the Habbo staff is committed to acting in my best interest.	
Trust Staff3	I believe the Habbo staff has good intentions.	
Trust Staff4	I believe that Habbo staff are honest.	
Trust Staff5	I believe in the integrity of Habbo staff.	
Trust Staff6	I believe Habbo staff always keep their promises.	
Trust Others1	I believe the other Habbo users are honest.	
Trust Others2	I believe in users' integrity.	
Trust Others3	I believe that the other Habbo users always keep their promises.	
PURCH1	I intend to purchase Habbo items and/or Habbo Club memberships shortly.	Bhattacharjee 2001
PURCH2	I predict I will purchase Habbo items and/or Habbo Club memberships in the short term.	
PURCH3	I will frequently purchase Habbo items and/or Habbo Club memberships in the future.	
CUI1	I intend to continue using Habbo during the next three months.	Bhattacharjee 2001
CUI2	I intend to continue using Habbo frequently during the next three months.	
CUI3	I intend to revisit Habbo shortly.	
CUI4	I will keep on using Habbo in the future.	

Appendix 1. The Questionnaire

Item	Mean	S.D.	Loading	AVE	C.R.	Cronbach's Alfa
SP1	5,069	1,946	0,859	0,791	0,919	0,868
SP2	5,022	1,844	0,909			
SP3	4,603	1,973	0,898			
Trust Staff1	4,392	2,137	0,773	0,730	0,942	0,925
Trust Staff2	4,124	2,126	0,785			
Trust Staff3	5,132	1,932	0,878			
Trust Staff4	5,575	1,836	0,887			
Trust Staff5	5,538	1,824	0,899			
Trust Staff6	5,166	1,936	0,894			
Trust Others1	3,692	1,973	0,961	0,906	0,967	0,948
Trust Others2	3,754	1,979	0,964			
Trust Others3	3,334	2,067	0,930			
PURCH1	4,142	2,244	0,945	0,866	0,951	0,923
PURCH2	3,929	2,239	0,934			
PURCH3	4,609	2,208	0,913			
CUI1	5,476	1,927	0,909	0,815	0,946	0,924
CUI2	4,969	2,075	0,891			
CUI3	5,572	1,797	0,912			
CUI4	5,324	1,940	0,897			

Appendix 2. Convergent validity

	CUI	Trust others	PURCH	Trust staff	SP
CUI	0,903				
Trust others	0,341	0,952			
Purch int.	0,586	0,441	0,931		
Trust staff	0,559	0,568	0,452	0,854	
Social presence	0,540	0,487	0,449	0,610	0,889

Appendix 3. Discriminant validity

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