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What Habbo Goers Do in Practice? Decomposing Attitudinal Beliefs.

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The popularity of social virtual worlds (SVWs) stems from the proficiency of designing appealing activities. In a volitional use context, hedonic outcomes, such as pleasure and enjoyment, along with social interactivity are fundamental attitudinal beliefs fostering the success of SVW. As such, the attitudinal beliefs affecting attitude toward using SVWs with multiple functions is worth studying. The practitioners should however focus on the actual behavioural success factors beyond using SVWs. Using Habbo as an example, this study paper develops a research framework and examines how attitude toward using SVWs mediates Habbo goers' attitudinal beliefs on the actual behavioural incentives. Based on a review of prior literature a decomposed theory of planned behaviour suggested by Taylor and Todd (1995) *is employed. The research model is tested with data collected from 1225 active Habbo goers. The main findings of the study suggest that while the Habbo goers desire for social interaction within Habbo the construct of attitude toward using the service fails to reflect it. This indicates that following the omission of discovering the proper attitudinal beliefs behind the actual behavioural factors investments may well be lost.*

Keywords: Social Virtual world, Decomposed Theory of Planned Behaviour, Continuous Use, Attitude

1 INTRODUCTION AND BACKGROUND

Social virtual worlds, such as Habbo, Club Penguin, Teen Second Life, Precious Girls Club, and Poptropica, are analytically separable from game worlds which offer the users an opportunity to contend with each other adherence to a set of rules (cf. Bartle, 2004). While possibly including games for pastime SVWs may be described as simulating the physical space of everyday existence, not entirely conjured up by one's imagination. SVWs are practically persistent environments with no specific narrative goal structures congruent with games. These social environments are attracting an enormous group of people sharing somewhat common interest, that is, a need for social interaction (see Fetscherin & Lattemann, 2008). In comparison to virtual communities which are largely designed for communication, SVWs, for example, serve as a technological tool to make videos or design clothes, and contain graphic elements such as avatars in either two or three dimensional virtual environment in order to create an immersive experience.

From users' perspective, successful SVWs aimed particularly at the young perform multiple functions. What these SVWs provide is, however, as individual as the uniqueness of the young themselves. But for nearly every young person they generally are social interaction and gaming. Habbo, for example, is a popular and influential commercial social virtual world among those targeted for preteens and teens aged 10 to 18. It provides a free access to over 30 local portals with several public facilities such as virtual parks, and cafés, and millions of user-generated private virtual rooms. In Habbo, the young Habbo goers are able to communicate with one another and play various non-violent online games. To express themselves the Habbo goers may customise their walking, talking, shouting, and dancing avatars which are representations of themselves or their alter egos, and buy Habbo credits to create and furnish their very own personal virtual rooms. The positive attitude toward participating in free events, running distinct groups, or activities, and creating the content, for example, to honour celebrities has extended beyond the boundaries of the service, motivating them to establish an infinite number of fan sites on the internet (Global Habbo Youth Survey, 2006). Especially the live visits of famous real-life athletes and artists from the music and film industry have endeared Habbo to the young (Global Habbo Youth Survey, 2008). Not building on access fees but commercials, and voluntary premium services Habbo has so far succeeded in holding the critical mass of the young and translated their loyalty directly into monetary value.

The technology acceptance and post-adoption behaviour have attracted prominent and extensive research coverage within IS discipline (Agarwal & Prasad, 1997; Bhattacherjee, 2001; Hsu & Lin, 2008; Karahanna, Straub & Chervany, 1999; Venkatesh & Brown, 2001). Furthermore, prior studies have focused on virtual communities and their unique characteristics through various methods (Bagozzi & Dholakia, 2002; Wellman & Gulia, 1999). Little information is, however, available on expanding the understanding of continued use intention of using SVW with multiple purposes. Consequently, SVWs offer opportunities for testing theories and models in a new context. Hence, for thoroughly grasping the phenomenon regarding the behavioural incentives behind using SVWs calls research in several disciplines such as sociology, economics, and psychology, to mention only a few.

To better complement these existing approaches and to focus more explicitly on examining the conceptualised role of attitudes and the accessible behavioural beliefs behind them, this study exemplifies the theory of planned behaviour (TBP) (Ajzen, 2005). Moreover, agreeing with Shimp and Kavas (1984), who suggest that cognitive constructs of belief cannot be combined to single conceptual determinant, the study expands upon decomposed TPB (Taylor & Todd, 1995; Hsieh, Rai & Keil, 2008) as it provides a comprehensive framework for analysing the information on the antecedents of attitude toward using SVWs. It should, however, be worth noting that behavioural models, such as the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975), the technology acceptance model (TAM) (Davis, Bagozzi & Warshaw, 1989; Davis, 1989) and TPB (Ajzen, 2005)

are constrained to analysing only one behaviour of interest. Applying these theories is rather challenging when examining the use of any technological innovation serving multiple purposes. Consequently, this study is confined here to dealing only with factors regarding attitude toward using SVWs, for which the decomposed TPB is assumed to provide a valuable framework.

In this study, the focus is on Habbo, which is favoured by many active young people because they use it for playing games, trading in virtual furniture, familiarising themselves and communicating with online and offline friends (Global Habbo Youth Survey, 2006; 2008). In other words, meeting with new and old friends and creating, sharing, and consuming the interesting content influenced by norms, values, and offline life is perceived important within such pleasing and enjoyable virtual environment (Bagozzi & Dholakia, 2002; Hagel, 1999). The SVWs have clearly moved beyond mere entertainment into social realm. Therefore, attention is particularly paid on hedonic and social outcomes. Developing the construct of attitude toward use is of major importance, as it may increase the risk of losing information instead of identifying the actual evaluative variables to distinguish in details why exactly SVWs are being used and how the accessible beliefs are linked to them.

As a result, the purpose of this study paper is to develop a framework and examine how the attitude toward using SVWs mediates the impact of Habbo goers' attitudinal beliefs on the underlying actual behavioural interests. This study paper has three primary goals. First, by identifying the actual factors behind using SVWs it should enhance theoretical knowledge of developing behavioural frameworks utilised in other online services as well, and, second, provide better managerially relevant and readily discernible in-depth understanding of true behavioural incentives that are beneficial in designing features and services for SVWs. Thirdly, by examining particularly the existing Habbo goers it accumulates the post-adoption user behaviour research (Limayem & Cheung, 2008; Premkumar & Bhattacherjee, 2008).

2 RESEARCH MODEL

Individuals use information technology from both extrinsic and extrinsic motives (Davis, Bagozzi & Warshav, 1992; Vallerand, 1997), also articulated in consumer behaviour (Venkatraman & MacInnis, 1985) and IS literature on technology acceptance (Hsieh et al. 2008; van der Heijden, 2004; Venkatesh & Brown, 2001). Extrinsic incentive propels individuals for achieving a specific goal, whereas intrinsic, in other words, hedonic is the degree to which users experience pleasure, joy, or satisfaction derived from a specific behaviour (Deci & Ryan, 1980). Teo, Lim, and Lai (1999) have empirically shown that intrinsic incentive has a significant effect on using computer and the internet. In a post-adoption context, users may obtain, at least in part, pleasure through appealing environmental characteristics but more salient is the need for maintaining the concentration and curiosity, as well as satisfying the entertainment purposes (cf. e.g. Ahn, Ryu & Han, 2007; Igbaria, Schiffman & Wieckowski, 1994). For example, the Habbo goers look for a playful job or task inside Habbo in a form of a role play and work as fashion models walking on virtual catwalks. As a result, perceived enjoyment (ENJ) is an emotionally fulfilling activity, and playfulness (PLA), which represents the user's short-term cognitive involvement, are believed to influence attitude toward using SVWs (Woszczynski, Roth & Segars, 2002). It is, thus, postulated that:

H1: Enjoyment (ENJ) positively affects the attitude toward using Habbo.

H2: Playfulness (PLA) positively affects the attitude toward using Habbo.

It is assumed that leisure-oriented post-adoption user behaviour is not driven by strong productivity but rather instrumental value as to effectively communicate and develop social identity (Bagozzi & Dholakia, 2002). In SVWs, the interaction occurs with one another, not between users and the system as mentioned by Heijden (van der Heijden, 2004). The behaviour may still be extrinsic when the purpose of exchanging information or resources through computers is to accomplish tasks, for instance, to express uniqueness. Unfortunately, it may, however, be extremely difficult to differentiate extrinsic from intrinsic behaviour since interaction may as well carry positive or negative emotions not

necessary in achieving external objectives (Yuan & Gay, 2006). Therefore, within this study paper, interaction with one another implies to social outcomes such as social connectedness (CON), self-exploration (UNI), and status (STA), indicating that these three concepts should be distinguished from intrinsic and extrinsic, and discussed separately.

The Habbo goers have an access to a virtual network that facilitates the exchange of social closeness and status. The need for belongingness reflects subjective awareness of interpersonal closeness (Lee & Robbins, 1995; Lee & Robbins, 1998). Therefore, social connectedness particularly relates to self-fulfilling emotional outcomes such as affiliation and support in bringing individuals together both in offline and online (Baumeister & Leary, 1995; Chiu, Hsu & Wang, 2006; Rheingold, 2000; Wellman & Gulia, 1999). As a result, it is hypothesised, that:

H3: Connectedness (CON) positively affects the attitude toward using Habbo.

Social status pertains to the probable instrumental value and is, therefore, conferred on individuals as a result of adopting a technological innovation (Moore & Benbasat, 1991; Venkatesh & Brown, 2001; Venkatesh & Davis, 2000). In SVWs, through participation individuals are volitionally pursuing to gain the esteem, in which others hold them. The relative position of individuals in SVWs is closely linked to the need for uniqueness in differentiating themselves from others through consumption of virtual items (cf. e.g. Ruvio, 2008; Snyder & Fromkin, 1977; Tian, 2001). In Habbo, to appeal the users' desire for uniqueness Habbo goers are able to express their true or idealised identity via acquiring and possessing products such as avatars and virtual furniture that are not recognised as being outside of the norm. To encourage the Habbo goers to purchase and possess new and vintage virtual furniture it is designed to convey product-scarcity, uniqueness, and nonconformity. On the other hand, the Habbo goers exploit the opportunity to use avatars reflecting their offline appearance, expressing sometimes provoking messages, or releasing themselves from offline social norms (Vasalou, Joinson, Bänziger, Goldie & Pitt, 2008). For empowering the Habbo goers to seek status and uniqueness it is hypothesised that:

H4: Self-exploration (UNI) positively affects the attitude toward using Habbo.

H5: Status (STA) positively affects the attitude toward using Habbo.

In SVWs, where individuals are geographically separated and it is literally impossible to touch one another, they share the illusion of being physically in the same virtual environment in the guise of fictional characters conveying and embodying real-time socio-emotional behaviour such as movements and facial expressions (Bente, 2008; Bailenson, 2005). The feeling of closeness of another individual refers to the concept of social presence (PRE) in a mediated interaction (Biocca, Harms & Burgoon, 2003; Rice & Love, 1987; Short, 1976). If the shared virtual environment and the existence of avatars enable the users to experience non-verbal cues, they both facilitate the experience of social presence in virtual encounters and strengthen the positive evaluation of using Habbo. Therefore, it is postulated that:

H6: Social presence (PRE) affects positively toward using Habbo.

Development of the scales to measure the evaluation summary of attitude toward behaviour of interest is generated based on the suggestions of Ajzen (2005). The construct of attitude is the degree to which using Habbo is valued. In order to investigate the suitability of the construct of attitude used in prior IS literature (e.g. Hsieh et al., 2008; Karahanna et al., 1999) and its ability to mediate behavioural beliefs and the behavioural goals in the context of SVWs with multiple functions, items measuring the most popular underlying and actual prevailing behaviour, such as attitude toward playing games (GAM), trading in furniture (TRA), and becoming friends (SOC) were grounded on the empirical studies (Global Habbo Youth Survey, 2006; 2008). The construct of attitude should thus reflect the evaluation of performing the actual behaviour of interest since it would be challenging to specify every action beyond using technologies with multiple functions. The attitude of construct must therefore be accordingly determined. As a result, the following hypotheses are proposed:

H7: Attitude toward using Habbo mediates the actual willingness to social interaction with one another.

H8: Attitude toward using Habbo mediates the actual willingness to collect virtual furniture.

H9: Attitude toward using Habbo mediates the actual willingness to play games within Habbo.

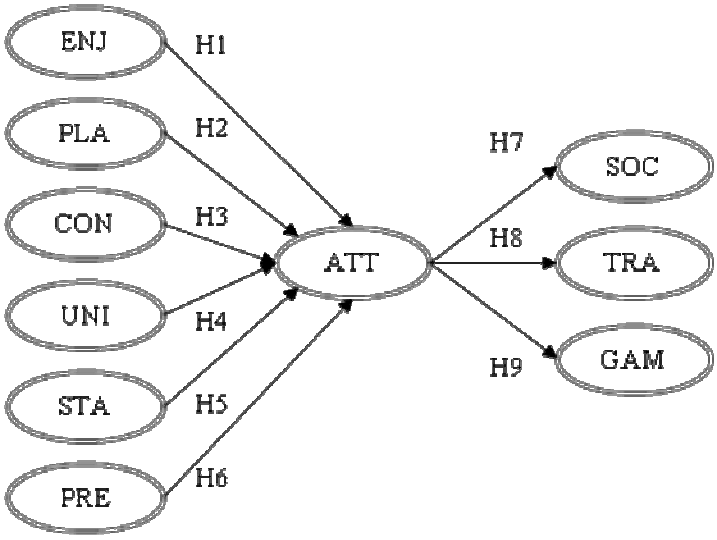

Figure 1. Research model

3 EMPIRICAL RESEARCH

3.1 Research design and data collection

First, to explain the key factors why Habbo is actually being used the attitudinal beliefs were drawn from prior literature. Second, the research model was developed on the basis of TPB and the constructs as represented in IS research with one exception: those constructs founded on the key factors indicating the actual behaviour beyond using SVWs were formed using exploratory factor analysis (EFA). After the key factors were found, pilot study was conducted prior to the primary data collection. Finally, the goal of the empirical part of the study was to validate and test the research model (Figure 1) with confirmatory factor analysis (CFA), and investigate causal relationships between the latent variables.

The actual online survey instrument was built, and, in July 2008, the quantitative data from the users of Habbo Finland was collected. The survey was available approximately for a week and it contained worded items which respondents had to evaluate on a 7-point Likert-scale adapted from existing measures. To receive only one response from a single respondent a reward of any kind was not offered to the respondents (O'Neill & Penrod, 2001). In addition, multiple submissions were software-disallowed by excluding any responses from the same computer. The results reported here, are the responses of those willing to participate. That is to say, those Habbo goers who were the focus of the study were able to reach out.

A total of 3265 usable responses were received. To ensure the best possible quality of the responses, only fully completed responses were totally included in the analysis. After excluding cases with missing or incomplete responses 1225 fully completed and usable cases were retained for the analysis. Large drop of valuable responses was due to a long survey. 94 % of the respondents were between 10 and 18 years old.

To test the applicability of the research model AMOS 16.0.1, the maximum likelihood estimation method was applied here since it has been considered robust against the moderate violation of

multivariate normality with sample sizes exceeding 100 cases (Muthén & Kaplan, 1985; Steenkamp & van Trijp, 1991). The distortion of chi-squares and standard errors is likely if most of the skewness and/or kurtosis are larger in absolute value than 2.0, and the correlations are 0.5 or higher. According to Bollen (1989), all normal distribution estimations methods, including maximum likelihood, are consistent even if the assumption of normality is moderately violated. The test for normality showed that the skewness of only a few observed variables was higher than 2.0, thus, implying that the data is moderately non-normal, and therefore maximum likelihood would be an appropriate and robust estimation method. Asymptotical distribution free is suggested as superior to maximum likelihood only when the observed variables have an average univariate kurtosis larger than three and the sample size greater than 400 (Hoogland & Boomsma, 1998). The assessment of normality showed that every univariate kurtosis was below three.

3.2 Measurement Model and Results

The adapted constructs of the research model were evaluated by examining internal consistency and convergent validity. To do this, the item-construct-loading, composite reliability, and average value extracted (AVE) were assessed. As regards item reliability, item loadings exceed 0.707 (Agarwal & Karahanna, 2000), the composite reliabilities 0.707 (Nunnally, 1978) and AVE values 0.50 (Fornell & Larcker, 1981). The information on the loadings of the measures used in the research model, descriptive statistics, and the reliability of the constructs are represented in table 1. The results showed that all reflective measures fulfilled the recommended levels of composite reliability and average variance extracted.

Construct	Loading	Composite Reliability	AVE
ENJ1	0.909	0.953	0.723
ENJ2	0.958		
ENJ3	0.933		
PLA1	0.869	0.842	0.593
PLA2	0.837		
CON1	0.813	0.841	0.592
CON2	0.889		
UNI1	0.907	0.953	0.769
UNI2	0.923		
UNI3	0.902		
UNI4	0.921		
STA1	0.888	0.893	0.618
STA2	0.909		
PRE1	0.872	0.859	0.601
PRE2	0.864		
ATT1	0.915	0.936	0.713
ATT2	0.906		
ATT3	0.910		
SOC1	0.818	0.851	0.597
SOC2	0.902		
TRA1	0.935	0.943	0.641
TRA2	0.954		
GAM1	0.778	0.785	0.564
GAM2	0.829		

Table 1. Loadings, Composite Reliability, and AVE

Discriminant validity was investigated by examining whether the AVE was higher than the squared correlation for each construct (Fornell & Larcker, 1981). The correlations provided clear evidence that the relationship among all constructs were below the AVE in question (Table 2). Model fit indices address (GFI=.921, TLI=.954; NFI=.953, CFI=.962, and RMSEA=.058) that the proposed model was acceptable with the exception that AGFI (0.896) went slightly below the recommended threshold (see (Gefen, Straub & Boudreau, 2000).

	GAM	SOC	TRA	ATT	ENJ	PLA	CON	STA	PRE	UNI
GAM	**0.564**									
SOC	0.047	**0.597**								
TRA	0.036	0.036	**0.641**							
ATT	0.224	0.209	0.160	**0.713**						
ENJ	0.113	0.105	0.081	0.503	**0.723**					
PLA	0.088	0.082	0.063	0.393	0.637	**0.593**				
CON	0.000	0.000	0.000	0.002	0.010	0.002	**0.592**			
STA	0.034	0.032	0.025	0.154	0.206	0.416	0.098	**0.618**		
PRE	0.076	0.070	0.054	0.336	0.504	0.490	0.011	0.274	**0.601**	
UNI	0.017	0.016	0.012	0.077	0.103	0.205	0.061	0.249	0.158	**0.769**

Table 2. Squared pairwise correlations and assessment of discrimination validity

In total, the results support six of the nine hypotheses. Contrary to initial postulations, connectedness (CON), self-exploration (UNI), and status (STA) had no significant effect on attitude (ATT). Playing games (PLA) (0.13) alongside social presence (PRE) (0.12), a noteworthy exception of those measures associated with social outcomes, had only a moderate impact on ATT, whereas ENJ (0.52) had the strongest influence, a finding consistent with past research. On the other hand, the path coefficients from ATT to becoming friends (SOC) (0.46), trading in furniture (TRA) (0.40), and GAM (0.47) were statistically significant and interpretable if only somewhat surprising, given that the strength of paths from CON, UNI, and STA were statistically insignificant. The attitudinal constructs examined within this study paper explained 52 percent of the variance in the Habbo goers' evaluation of using the service. ATT, for one, explained 21 percent (SOC), 16 percent (TRA), and 22 percent (GAM) of the variance in Habbo goers' actual behavioural incentives. Figure 2 represents the path coefficients and the squared multiple correlations.

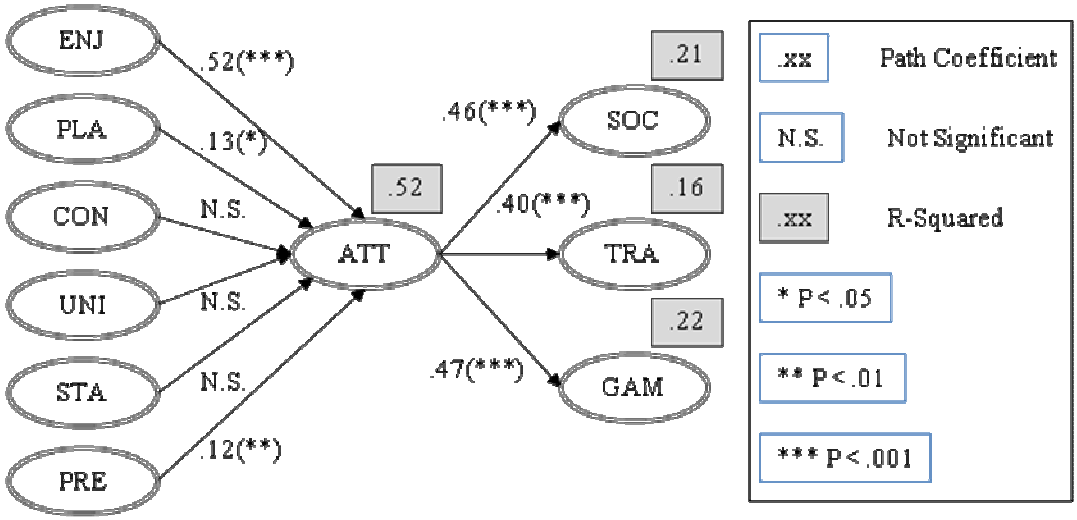

Figure 2. Structural Model

4 DISCUSSION

4.1 Findings

The results showed that 52 percent of the variance in the Habbo goers' evaluation of using Habbo attitude (ATT) was shaped by enjoyment (ENJ), playfulness (PLA), and social presence (PRE), indicating that those social outcomes, such as connectedness (CON), self-exploration (UNI), and status (STA), had no significant influence on attitude. However, a post hoc analysis revealed that when paths from connectedness, self-exploration, and status were directly connected to becoming friends (SOC), trading in furniture (TRA), and playing games (GAM), the actual behavioural incentives beyond use were better explained. Thus, in the context of SVWs with multiple functions aimed particularly at the young, the users are not only craving for pleasure but social interaction with one another. These findings are in line with empirical evidence presented in prior literature examining virtual communities (Bagozzi & Dholakia, 2002; Rheingold, 2000; Wellman & Gulia, 1999) and leisure oriented technologies (van der Heijden, 2004). Taken as a whole, the users who volitionally have engaged with SVWs are especially driven by enjoyable social activities, such as playing games, collecting virtual items, and becoming friends with other users.

4.2 Implications for theory and practice

Empirical evidence on how both hedonic and social outcomes can be included in a research model adapted to virtual worlds, has been somewhat an open question. This study paper examines this issue by demonstrating, that among the experienced young users, hedonic and social aspects are pivotal factors for successful hedonic information systems. Contrary to prior studies that focus on social influence (i.e. social pressure to perform behaviour), this study has introduced the lack of a sophisticated attitudinal construct that measures the need for social interaction (cf. e.g. the distinct between playing video games alone or with other individuals). Therefore, the represented research model expands upon the current continued use model by underscoring the user's need for enjoyable experiences and social interaction, postulating a direct path between them and the attitude toward continued use of SVWs. First, by identifying the actual key factors behind using SVWs the study enhances theoretical knowledge of developing behavioural frameworks built upon the IS research. Second, since practitioners are responsible for designing attracting virtual environments, the study has focused on providing better managerially relevant in-depth understanding of true behavioural incentives that contributes to the building of user commitment. The results suggest that managers should not concentrate only on the technology use but the actual reasons why it is being used. When adding or removing features it is important to be aware how attitudinal beliefs affect the actual behavioural incentives. Thirdly, by particularly examining the experienced Habbo goers the study accumulates the post-adoption user behaviour research (e.g. Limayem & Cheung, 2008; Premkumar & Bhattacherjee, 2008).

To develop a robust research model for examining the use behaviour, it is likely that the items related to the attitude toward using SVWs must cover the social aspect as well. Since only a few, if any, studies that focus on developing behavioural constructs to measure the use of SVWs exist, this study paper offers a theoretical implication for IS research.

4.3 Limitations and future research

Employing IS theories is rather challenging when examining the use of any technological innovation serving multiple purposes. Consequently investigating SVWs is confined to dealing only with factors regarding attitude toward using SVWs, determined by the individual's assessment of the outcomes associated with the behaviour (Ajzen, 2005). Determinants such as subjective norms and perceived behavioural control have been deliberately omitted. The future research is, thus, required to examine how subjective norms, and perceived behavioural control, in addition to attitude, affect continued use intention in the context of SVWs. Furthermore, large drop of valuable responses due to a long survey

may have limited the accuracy of the results. Also, generalising these results into context other than SVWs should be handled with care. It is proposed to take into account that the results depend on respondents' subjective assessment (see Straub & Limayem, 1995) and their socio-cultural backgrounds that may have a significant impact on usage behaviour. This is of great importance especially when the service is globally available. Finally, this study represents a cross-section of behavioural incentives beyond using SVWs. When the appropriate measures are discovered longitudinal study examining post adoption behaviour may provide better understanding of the users' behaviour, their motivation, and their intentions.

5 CONCLUSIONS

Providers of SVWs should focus on the actual behavioural incentives beyond using the technology. Creating interactive and hedonic services to the young is a fundamental goal which is virtually as central as the technical characteristics of SVWs. The present study paper exemplifies a decomposed theory of planned behaviour in order to represent an important step toward examining and developing the construct of attitude toward using SVWs with multiple functions aimed at the young. Most importantly, using Habbo as an example, study paper empirically demonstrates how TPB-grounded research model explains a significant amount of variance in the Habbo goers' evaluation of using SVWs but, at the same time, relegates the social aspects into the background. The findings indicate that, in the context of SVWs, the construct of attitude toward using the technology, must include items related to social outcomes together with hedonic outcomes.

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APPENDIX 1

Construct	Measurement Item (on a 7-point Likert-scale)	Source
ATT1	Extremely displeasing...pleasing	Karahanna et al., 1999; Ajzen, 2005)
ATT2	Extremely frustrating...easy; a great pleasure to use	
ATT3	Extremely terrible...delightful	
SOC1	I like getting to know new people	Global Habbo Youth Survey 2006; 2008
SOC2	I like making friends with other Habbo users	
TRA1	I like collecting rare furniture	
TRA2	I like collecting valuable furniture	
GAM1	I like organising and playing games as well as participating in competitions	
GAM2	I like playing games	
UNI1	I actively seek to develop my personal uniqueness by using special products or brands	Ruvio, 2008; Snyder & Fromkin, 1977; Tian, 2001
UNI2	Having an eye for products that are interesting and unusual assist me in establishing a distinctive image	
UNI3	The products and the brand I like the best are the ones that express my individuality	
UNI4	I am often on the lookout for new products or brands that will add to my personal uniqueness	
ENJ1	It is fun to use Habbo	Venkatesh & Brown, 2001; Davis et al. 1992; van der Heijden, 2004
ENJ2	It is entertaining to use Habbo	
ENJ3	It is pleasant to use Habbo	
PRE1	There is a sense of sociability in Habbo (users are companionable)	Short, 1976
PRE2	There is a sense of human warmth in Habbo	
STA1	Using Habbo improves my status among those who are richest and smartest	Venkatesh & Brown, 2001
STA2	Using Habbo improves my status among those who are the most meaningful to me	
CON1	I feel so distant from others in Habbo	Lee & Robbins, 1995; Lee & Robbins, 1998
CON2	I have no feeling of togetherness with others in Habbo	
PLA1	Using Habbo increases my interest in exploring things	Ghani & Deshpande, 1994; Koufaris, Kambil & Labarbera, 2001; Koufaris, 2002
PLA2	Using Habbo arouses my imagination	