



Digital natives in social virtual worlds: A multi-method study of gratifications and social influences in Habbo Hotel[☆]



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ABSTRACT

Millions of teenagers today engage in social virtual worlds (SVWs). However, teenagers, often referred to as digital natives, represent an under-investigated group in the virtual world research and the Information Systems literature. To this end, we draw on developmental psychology and the uses and gratifications approach to examine teenagers' continuous SVW use with a multi-method approach. We first investigate role of psychological gratifications and social influences in predicting teenagers' intention to continue using Habbo Hotel. Thereafter, to gain a deeper understanding of their in-world activities, we triangulate our findings with a structured content analysis of the respondents' open-ended comments. Our quantitative and qualitative findings show that the intentions to continue SVW use are predominantly hedonically motivated. Moreover, we demonstrate that inside the platform users engage in social activities that are often associated with the hedonic experience. Finally, we discuss how these activities both extend and are distinct from digital natives' offline and online social interactions.

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1. Introduction

Engagement in virtual worlds (VWs) is increasing rapidly, particularly among young people. As of July 2011, VWs had 1.4 billion registered users, 70% of which were between 5 and 15 years old (kZero, 2012). Habbo Hotel, one of the largest social virtual worlds (SVWs) for teenagers, has a total number of registered users of over 273 million.¹ However, considering that the number of active users in Habbo Hotel has dropped from 11 million (Mäntymäki & Salo, 2011) to 5 million¹ in two years' time, and Second Life today has been estimated to have 600,000 active users² globally, converting the initial attraction to sustained engagement represents a major challenge in the VW business. Hence, the sustained use of the services, often referred to as continuance, is an important area of VW research (Barnes, 2011; Goel, Johnson, Junglas, & Ives, 2011; Jung, 2011; Mäntymäki & Salo, 2011; Merikivi, Verhagen, & Feldberg,

2013; Nevo, Nevo, & Kim, 2012; Schwarz, Schwarz, Jung, Perez, & Wiley-Patton, 2012; Zhou, Fang, Vogel, Jin, & Zhang, 2012).

Teenagers, often labeled as digital natives (Prensky, 2001; Jones, Ramanau, Cross, & Healing, 2010), constitute the largest VW user segment (kZero, 2012; Wasko, Teigland, Leidner, & Jarvenpaa, 2011). However, compared to their importance, this group has been under-represented in the VW literature thus far, as most studies focus on Second Life (see e.g. Animesh, Pinsonneault, Yang, & Oh, 2011; Goel et al., 2011; Nah, Eschenbrenner, & DeWester, 2011; Shelton, 2010) or World of Warcraft (Guo & Barnes, 2012), both platforms targeted at the adult audience. In particular, research on digital natives' sustained engagement in VWs has thus far remained scant. Altogether, this corresponds with Vodanovich, Sundaram, & Myers (2010) who have claimed that digital natives are an under-investigated group in the IS literature.

Online digital spaces such as VWs are not isolated from their users' other online and offline social interactions but rather extend one another (Katz & Rice, 2002; Subrahmanyam, Garcia, Harsono, Li, & Lipana, 2009). However, the focus of the present VW research has been predominantly on social factors intrinsic to the virtual environment (Goel et al., 2011; Jung, 2011; Saunders, Rutkowski, van Genuchten, Vogel, & Orrego, 2011). Hence, we scrutinize to what extent VW engagement is a function of factors intrinsic to the VW and one's social influences outside the VW.

Against this backdrop, we investigate teenagers' continuous use of Habbo Hotel, perhaps the best-known social virtual world (SVW) for young people. Our objective is to investigate the factors that drive teenagers to participate in a SVW on a continuous basis. To

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¹ Sulake Corporation: Habbo Hotel – Where Else? <http://www.sulake.com/habbo>.

² New World Notes: Now With 300K Members, Second Life's Facebook Page is By Far SL's Largest Social Media Presence – And Disproves an Old SL Myth <http://nwn.blogs.com/nwn/2013/04/second-life-facebook.html/>.

this end, we draw on social psychology (Fishbein & Ajzen, 1975), developmental psychology (Erikson, 1968), the uses & gratifications (U & G) approach (Blumler, 1979; Katz, Blumler, & Gurevitch, 1974). We employ a multi-method research design (Morse, 2003). We first develop a research model that incorporates utilitarian, hedonic and social outcomes of SVW use with the role of normative beliefs. The research model is then empirically tested with a sample of 842 users of the German Habbo Hotel portal and analyzed using structural equation modeling. We complement our analysis with a structured content analysis (Jauch, Osborn, & Martin, 1980) of users' comments regarding their reasons for using Habbo Hotel.

Our main contributions are twofold: First, by discussing our findings against the developmental needs of teenagers and the interplay between their virtual and "real" lives, we advance the understanding of the digital native user group. Second, we contribute to the VW literature with a more granular understanding of the role of social influences and social context in SVWs targeted at young people.

The paper proceeds as follows: First, we outline prior research and introduce the phenomena of SVWs, Habbo Hotel and digital natives. In Section 3, we develop the research model and hypotheses for the quantitative part of the study. In Section 4, we elaborate on the data collection, measurement and the two-step analysis. In Section 5 we present our main findings. In Section 6, we discuss the findings against the nature of Habbo Hotel as an IT artifact and the nature of the digital natives user group. We derive conclusions and expose design choices and future research opportunities in the last section.

2. Research background

2.1. Social virtual worlds

VWs can be divided into Gaming Virtual Worlds (GVWs) and SVWs (see e.g. Jung & Kang, 2010). In contrast to GVWs, SVWs do not feature explicit narratives or level-ups. Rather, they are open spaces in which the purpose of use is largely emergent. According to Bell (2008, 2) a VW is defined as "a synchronous, persistent network of people, represented as avatars, facilitated by networked computers." SVWs can be further characterized as "non-game spaces where games can be part of them but are not the defining characteristic of a virtual world" (Iqbal, Kankaanranta, & Neittaanmäki, 2010). We base our study on the following definition: *SVWs are persistent, computer-mediated, networked environments that are used for various user-determined purposes such as social interaction and communication, where users are represented as avatars.*

Prior literature has found the use of SVWs to vary widely, from taking classes to having cybersex (Zhou, Jin, Vogel, Fang, & Chen, 2011). From a motivational standpoint, SVW use has been viewed as a function of utilitarian and hedonic motives (Barnes, 2011). SVWs offer value for users through a pleasant environment for social interaction and enhancing communication within their social circle (Schwarz et al., 2012; Shin, 2009). In addition to the value and motivational factors, perceived network externalities (Mäntymäki & Salo, 2011) have been found to affect SVW participation. Hence, it has been argued that SVW use is determined by factors related to the IT artifact, the user, and the social setting (Schwarz et al., 2012).

2.2. Habbo Hotel

Habbo Hotel was founded in 2000 and has grown to accommodate 5 million unique visitors every month in altogether 32 country-specific portals. Hence, Habbo Hotel remains one of the most popular SVWs targeted at young people. According to Sulake,

the Finnish platform provider, 90% of its users are aged between 13 and 18.

Habbo Hotel runs on a web browser; its environment "resembles a giant contemporary Western indoor space, presented in isometric 'retro style' three-dimensional graphics and populated by blocky avatars, each controlled by a user" (Lehdonvirta, Wilska, & Johnson, 2009, 1065). In other words, Habbo avatars do not resemble human beings but look more like cartoon figures.

Unlike Second Life, users in Habbo cannot recreate the virtual world or buy new land. Users are provided with an avatar and a virtual hotel room that they can decorate using pieces of furniture. Habbo Hotel also incorporates various non-violent games and organizes events on a regular basis, such as celebrity visits, dress-up and decoration competitions. Using Habbo Hotel is free, but users can purchase virtual items and premium memberships with exclusive features for real money.

Habbo aims to provide a safe and friendly environment for young users; hence, activities found on Second Life such as cyber violence, gambling or sex are prohibited. Moreover, users remain anonymous in Habbo; revealing one's real identity or contact information inside the platform is prohibited and moderated by the operator. However, it is common for users to reveal their identities to friends using Facebook, Twitter or other applications.

Habbo Hotel is a representative example of VWs targeted at the young because of the user activities it facilitates and the contextual characteristics the platform shares with other similar services such as Club Penguin, Stardoll and GoSupermodel. Hence, Habbo Hotel has been utilized as a research context before: Mäntymäki and Salo (2011) found perceived enjoyment to be the primary determinant of continuous engagement of Habbo users. This notion was supported by Merikivi et al. (2013) who found that the continual participation in Habbo Hotel is a function of motivational and control beliefs. Iqbal et al. (2010) explored how children use VW platforms, one of which was Habbo. Finally, Griffiths and Light (2008) have investigated the ethical implications of Habbo as a social platform for teenagers.

2.3. Digital natives: a developmental perspective

The term digital natives is generally taken to refer to the first generation that was born into a world permeated by ICT and that has thus grown up with using ICT in their everyday lives (Palfrey & Gasser, 2008; Prensky, 2001). Digital natives are also said to naturally assume multiple virtual identities and view privacy differently than older generations (Palfrey & Gasser, 2008). However, in light of recent studies, digital natives should be viewed more as a descriptive category rather than an exact group or generation that by their very nature possesses better ICT skills (Bennett & Maton, 2010).

From a developmental psychology perspective, teenagers are experiencing a transfer period between childhood and adulthood, referred to as adolescence (see e.g. Erikson, 1968; Marcia, 1980). A core developmental process during adolescence is the development of a stable, coherent self (Erikson, 1968), whereby young people find their place in relation to others and come to understand the plethora of social practices that make up the social world (Brown, 1990). In the course of building their social identity (see Tajfel & Turner, 1986) they typically experiment with different roles to gain feedback (Harter, 2006) and contrast themselves to others (Brown, 1990), while they also acquire the necessary skills to interact competently in groups and establish relationships. With respect to social influence, during adolescence, teenagers "out-grow" their parents as the primary referent group and other peer groups become more influential (Harris, 1995).

At the same time, prior research reveals a strong link between young people's offline and online lives (Subrahmanyam, Reich, Waechter, & Espinoza, 2008). Hence, the volatility and fluidity of

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