



Second Life, Second Choice? The effects of virtual identity on consumer behavior. A conceptual framework.

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Abstract

Virtual social worlds, such as Second Life, by gaining more and more popularity, have attracted the attention of the business media. The aim of the present article is to explore the relationship between the Second Life avatar (using the term of virtual identity) and shopping habits in Second Life focusing on consumer behaviour. Firstly, we present how virtual social worlds function and how they differ from other social media. Secondly, we will illustrate how online identity construction affects one's behavior in such environments from a business perspective. To study Second Life we used the term virtual identity which was compared to the actual person's actual self-representation. According to the literature, people tend to construct their virtual identity in a different way from the real one. Therefore, it is extremely important to study both the aspects of the everyday life and the presentation of the virtual self. We also wish to highlight the points companies should pay particular attention to in their virtual social world activities from the perspective of the psychological mechanisms that conduct people's online behaviour and thinking. Finally, we demonstrate our hypothetical model of Second Life identity construction along with its effects on consumption and its implications for the future.

Keywords: Second Life, Virtual Identity, Virtual Worlds, Consumption

1. Introduction

The Internet as a business tool has proved to be a useful concept for both individuals and corporations. The past few years can be characterized by a shift in focus from individual desktop computers to networks, particularly the Internet. Earlier, the Internet was primarily for research, government and educational institutions. Now, it is open to individuals and businesses, with the latter becoming its fastest growing segment. More and more business opportunities are arising on the Internet and companies have to transform in order to profit by these. With the extension of national economic boundaries companies have to reorganize the way they conduct business, to make substantial investments in Internet technology. In a highly competitive market, companies that can reach their

customers the most effectively have the upper-hand. The Internet, with its global and collaborative nature, can help in maintaining positive relationships with customers. In the age of Web 2.0, Community Web Sites, especially Second Life, present new opportunities for companies to get to know their customers better. (Shelton, 2010; Kaplan & Haenlein, 2009b). The Internet has radically changed the way people search for information. The Internet also provides sources of entertainment, research and, for many, a platform to connect and socialize. It would be crucial for the business sector to analyze Net features that interest people (Souitaris & Cohen, 2003). This paper, however, will focus on a specific, limited area, namely Second Life.

Second Life is probably the best-known 3D virtual world. People use virtual avatars to show and present their characters to others. That is the reason why identity construction and self-presentation can be important parts of the study of Second Life. This virtual world is not only for entertainment but for economical transactions, as well. Our article firstly presents virtual worlds with a focus on Second Life (using the terms virtual reality and virtual environment), then the identity construction process in virtual environments. After these sections, we will demonstrate how these parts can be integrated which leads to our framework.

2. Literature review

2. 1. About the virtual worlds

A great number of virtual worlds have appeared since the early 1990s, along with the development of 2D social-networking sites. Taking part in such worlds has grown exponentially since 2000, due to improvements in virtual-reality technology (adapted from electronic gaming), continued drops in personal computer prices, increases in computing capacity, and greater broadband network access. Organizations and businesses quickly decided to establish a presence in these worlds. The purpose of this section is to provide an overview of the current state of the virtual world sector, in particular of Second Life.

Virtual worlds, where thousands of people can interact simultaneously within the same simulated three-dimensional space, represent a frontier in social computing with critical implications for business. Members take place in virtual worlds through their avatars which are graphical representations of themselves (Kang & Yang, 2006). In Sanskrit, "avatara" means an animal or human body that can be possessed by a deity (Damer et al., 1999). This term was made popular by Neal Stephenson in his novel *Snow Crash* (Kaplan & Haenlein, 2009a). Avatars, in the novel, interact in a virtual-reality that he refers to as a "metaverse," which is very similar to the more common term, virtual world. Members of a virtual world (through their avatars) can engage in versatile interactions with each other: they can exchange messages, have conversations, run or dance and express their own feelings in several different ways. So, virtual worlds are becoming increasingly complex entities, making organizations and individuals use the internet (Messinger et al., 2009).

Fox et al. (2009) made the following distinctions among virtual based abstractions. In their terms, virtual reality (VR) means a digitally created space that humans can access by complex computer equipment. Once inside that space, people could be transported to a different world, a computer mediated reality in which one could interact with objects, people, and different environments. Furthermore, the virtual environment (VE) is a digital space in which a user's movements are tracked, and their surroundings are digitally composed and presented to the senses, in accordance with their actions. Representations of people in VEs can vary from a living virtual human to an animal-like creature, and this representation can have effects on both the user and observers (Castronova, 2005; Schroeder, 2002; Schroeder & Axelsson, 2006; Yee & Bailenson, 2007; Yee, Bailenson, & Ducheneaut, 2009). Beyond their appearance, these representations are distinguished by who or what controls their actions. Avatars, which we mentioned earlier, are controlled by a human user, while agents are controlled by an algorithm (Bailenson & Blascovich, 2004). When a virtual human is controlled by an algorithm, it is called an embodied agent (Cassell, 2000). This distinction is worth mentioning because previous researches have shown that people behave differently when they believe a virtual representation is controlled by a human as opposed to a computer. In addition, when people think that they are interacting with an avatar, their physiological responses and behaviour are more similar to how they would interact with a real person (Hoyt, Blascovich, & Swinth, 2003; Okita, Bailenson, & Schwartz, 2008).

Second Life has surely these characteristics (VR and VE), but what makes it so special amongst other applications? Within social media, virtual worlds have three important features that distinguish them from other applications (e.g. YouTube, Facebook or Wikipedia). First, through the virtual worlds its users can interact with each other in real time. Second, residents of the virtual worlds can fully customize themselves using avatars as virtual self-presentations in very flexible ways. Finally, virtual worlds are 3D, while other forms of social media are 2D which primary focus is content sharing. According to Pan et al. (2006) 3D environments have a significant advantage over virtual communities based on "2D" technology: they induce a strong presence sensation. Users move in a virtual space generated by the computer, react to actions and change their point of view on the scene with movement. The most of the users has a sensation to be part of the virtual environment (feeling of "being there", and the more this sensation is strong, the more the experience is meaningful. Presence and learning are strongly related: increasing presence also increases learning and performance.

In addition, two different virtual worlds can be distinguished, namely the virtual social worlds (as the Second Life) and the virtual game worlds (as World of Warcraft). In virtual game worlds users must follow very strict rules, e.g. you have to be a wizard to be able to use magic. Thus, economic activities are usually not available in these worlds. On the other hand, virtual social worlds have much more options for their users and they allow its residents economic activities.

2. 2. Second Life – how does it work?

Second Life (SL) was founded in 2003 by the San Francisco-based company Linden Research, Inc., and has generated a wide-ranged interest from the business to the educational sector (Kaplan & Haenlein, 2009a). Anybody can download the Second Life programm tool freely (from www.secondlife.com): the only requirements for clients are a good performance computer graphics card and a broadband Internet connection. Since Second Life was launched it has been considered by some users to be the “mother-lode” game, a really massive technological and social experiment (Yee & Bailenson, 2008). In this virtual world, residents can manipulate the world around them, particularly their virtual property, which is located on simulators (in game terms: „sims”). Residents can create code to manipulate the environment, sell objects and land for money, make or purchase their own clothes, join to several kind of group activities, work, explore, play, and interact socially (Second Life Starter’s Guide, 2003). Residents can easily own lots of objects, including buildings and structures in all possible architectural styles, clothing and furniture in classic to modern fashions, various vehicles, etc (MacMillian, 2007).

In the last five years, Second Life has grown at an exponential rate. According to Messinger et al. (2009) the total number of participants has grown from 1 in 2001, to 2.2 million by the end of 2006, to 5.5 million by 2007. Furthermore, by August 2007, there were 8.3 million residents. Interestingly, the average age of the adult Second Life world is 33 years, while the average age of the teen is 15, with 41.1% of all residents female. Interestingly,

Second Life is most popular among Americans. A great variety of real-world organizations present themselves in SL. Several governments hold embassies in SL’s diplomacy island (e.g. Maldives, Sweden and Estonia). In addition, many universities have their own space that they use for educational purposes. More recently, religious organizations have discovered SL as well. For example, in early 2007, LifeChurch.tv, a Christian church based in Oklahoma, opened in SL its twelfth campus – its first in a virtual world. There are also a growing number of companies that are present in SL, ranging from IT companies to news services (Azzara, 2007).

Second Life is also unique from other MMORPGs because residents do not play it. It does not have point system; therefore there are not „winners” or „losers”. Instead of competing, every resident can do whatever they want but can not hurt each other. Most importantly, users of SL can actively choose how to work and live and what to sell and buy in order to be happier and more satisfied (Siklos, 2006). Interestingly, purchase and consumption activities occur in Second Life as they do in the real world. Therefore, an interesting feature needs to be mentioned which plays a significant role in the act of exchange. This world has a marketplace, called Second Life Marketplace, which is a location within the online community designated to various virtual economic activities. Products sold in this place are created by the residents themselves, and purchased with Linden Dollars (L\$). L\$ can be exchanged to real world U.S. dollars at a different rate, for example 270L\$ was worth 1 U.S. dollar in 2009 (Shelton, 2010).

Until recently, few academic research has been carried out which focused on the consumption in the virtual social worlds. McMillian (2007) and Drennan & Keffe (2007) examined some aspects of virtual consumption, while Kaplan & Haenlein (2009b) mainly

focused on advices to companies that want to take part in Second Life. As a result, Second Life offers companies a great number of opportunities to reach consumers. However, they must get a greater insight on the residents of this world. For this reason the mechanisms of the avatars used by various SL participants is extremely important to understand. We think avatars are the markers of the virtual identity that are constructed to express one's feelings and thoughts in relationship with other virtual persons. In the following section we will discuss this issue.

2. 3. The virtual identity

Identity plays a very important role in the self-concept (Zhao et al., 2008). In definition, self-concept is the sum of a person's thoughts and feelings in reference to oneself as an object (Rosenberg, 1986), and identity is that part of the self "by which we are known to others" (Altheide, 2000, p. 2). Therefore, the construction of an identity is a public process that draws on both the "identity announcement" made by the individual claiming an identity and the "identity placement" made by others who approve of the claimed identity, and an identity comes to life when there is a "coincidence of placements and announcements" (Stone, 1981, Zwick & Dholakia, 2004). We assume that in the case of Second Life, virtual identity is an entity that was created in the cyberspace to express one's feelings and thoughts. Virtual identity includes virtual elements (avatar and environment) and non-virtual elements as well (language usage, reactions to certain happenings, etc). Furthermore we think that additional distinctions must be set to understand how „usual“ offline identity and virtual identity differ from each other.

In the usual face-to-face interactions, identity is constructed under a unique set of constraints. The presence of the corporal body in social encounters prevent people from claiming identities that are inconsistent with the visible part of their physical characteristics (e.g., sex, race, and looks), and the shared knowledge of each other's social background and personality attributes renders it difficult for an individual to pretend to be what he or she is not. Therefore, constructing identity under these circumstances involves mostly the manipulation of physical settings (e.g., furniture) and "personal front" (e.g., appearance and language) to generate a desired impression on others (Goffman, 1959). In situations where face-to-face interactions take place among strangers (e.g., in bars), people may want to hide their background and personality to produce a new identity, but such identity claims still cannot go beyond the limits set by embodiment. Thus, on an analytical level, it is crucial to recognise that "persons" are constructed from what we perceive and from what we know. As Geser (2007) mentions in his article, under face-to-face conditions, interactions are shaped heavily by mutual perceptions: by what we see, hear or even smell.

However, the appearance of the Internet has changed the former conditions of the construction of identity (Zholá et al., 2008), because virtual environments opened the door to new identity experiences. Entering in a virtual world where the real characteristics (both physical and personal) are not directly evident to others is, from a psychosocial point of view, a way of communicating which implies new ways of being, of showing and

negotiating identities at stake. Having the possibility to enter in a new community, where any personal information is directly shown to others, is a possibility of experiencing a different self and thus to show and build new identities. Furthermore, as the corporeal body is detached from social encounters in the online environment, it becomes possible for individuals to interact with one another on the Internet in fully disembodied environmental mode that reveals nothing about their physical features. In addition, even in situations where the audiovisual mode is utilized in online contact, anonymity can be maintained through withholding information about one's personal background, such as name and residence. The combination of disembodiment and anonymity creates a technologically mediated environment in which a new mode of identity production comes to existence (Bargh et al., 2002). This occurs because every online registration and every "virtual incarnation" is a free decision to create a new identity unrelated to any self-commitments and social expectations from the past. It provides a starting point for fresh courses of action and new strategies of "identity management" that are shaped exclusively by current motivations, opportunities and situational conditions. Furthermore, online identities can be turned on and switched off without passing intermediary phases (e. g. by logging in and out), and they can be modified within moments by changing registering profiles, nicknames or avatar characteristics. Online "role-playing," as the phenomenon has come to be known, can be an empowering process. Research has shown that the removal of physical "gating features" (e.g. stigmatized appearance) enables certain disadvantaged people to bypass the usual obstacles that prevent them from constructing desired identities in face-to-face settings (McKenna et al., 2002). The online environment also provides space for the expression of one's "hidden selves" (Suler, 2002) and the experimentation with various non-conventional identities (Rosenmann & Safir, 2006). As such, the Internet plays an important role in identity empowerment. Also, virtual worlds force individual to make very sudden and comprehensive role-switches that may not harmonize with the fact that their psychological moods change softly and adaptation to new attentional focuses takes time. In addition, other constructs have been introduced to frame virtual identity in a more precise way. The following aspects of the virtual identity are considered to be important features, as well.

According to Markus and Nurius (1986), a person's conception of him- or herself at a given time can be divided into two categories: the "now selves" and the "possible selves." Now selves are established identities known to others, whereas possible selves are images of the self that are currently unknown to others. Hoped-for possible selves are a subcomponent of the possible selves that are different from both the suppressed or hidden "true self" and the unrealistic or fantasized "ideal self" (Higgins, 1987). Hoped-for possible selves are socially desirable identities an individual would like to create and thinks that they can be established by the right circumstances. The actualization of hoped-for possible selves can also be blocked by the presence of physical "gating features," such as unattractive appearance. Online environments can in these circumstances allow "gated" individuals to create the identities they hope to present but are not able to carry out in face-to-face situations (Bargh et al., 2002; McKenna et al., 2002). Tosun & Lajunen (2010) suggested that global personality traits may explain social Internet use to some extent. However, an Internet specific variable – "real me" on the Internet – is more strongly related with Internet use as a social substitute, and it mediates the link between psychoticism and Internet use as a social substitute. Their findings had contributed to

the literature by demonstrating two points. The first point is that paying attention to the differentiation of social Internet activities as the activities of “social substitution” and of “social extension” may be important to gain a better insight into the associations between internet users’ characteristics and their Internet uses. The second point is that the expression of one’s true self might be an intended, or sought-after gratification for using the Internet, and the person’s psychoticism level might be one of the determinants of to what extent the individual will tend to gratify the need for expressing himself/herself through the Internet (Amichai-Hamburger et al., 2004; Correa et al., 2010). As it can be seen, the online identity is considered to be one that is usually embellished to make the physical person appear more intelligent or sexier. The personality chosen usually embellishes what the person already has or aspires to be. To facilitate the online identity in communication systems a ‘virtual identity’ has to be created to execute the specific online identity. It can be temporary (for the period the online contributor is online with that specific identity) or permanent (when the virtual identity stays active or mute in the online network). In addition, identities need to be presented and to be acknowledged as a unique form. Otherwise a person won’t recognise the specific identity. For ease of distinction and execution a virtual identity needs to have a textual, graphical or other representation, because the technology processing in the computers and networks requires it to be identified as a unique form.

2. 4. Consumption and its relationship to the virtual identity in Second Life

In the previous sections we introduced Second Life and the term of virtual identity. Our framework indicates that the residents of Second Life construct their virtual identity by using avatars. Additionally, Second Life Marketplace can be a perfect field to study the relationship between virtual identity and consumption. How and why does virtual identity affect consumption in Second Life? Unfortunately, such research has not been carried out yet, but the field of online shopping and its correlations to particular personality traits were studied by many researchers. This section is dedicated to reveal online consumption and its implications that can be used in our framework.

According to Anderhub et al. (2001) the Internet provides a perfect experimental field to research complex phenomena. With regards to consumption, the Internet-based environments for digital information goods are truly global markets where, barring any legal hurdles, consumers from different countries can seamlessly access the same goods. Indeed, the emergence of Internet related technologies have had an immense impact on the marketing and distribution of digital goods (Chandrashekar et al., 2010). However, Whitty’s (2008) research highlights that it is critical that researchers should not develop one grand theory to explain how everyone presents themselves within cyberspace. Cyberspace is not one generic space. As she stated, it is more important to consider how differently online spaces are constructed. Keeling et al. (2009) stated in their article that online shopping induces trust in the consumers, if during the shopping the would-be consumers can quickly obtain information about the internet shops or persons who try to sell them particular goods. In addition, during the online selling process the companies or vendors have to judge the quantity of the information about the goods that are enough

to impress the customers. Their interesting and relevant experiment included participants interacting with an avatar on a specially constructed Internet shopping site, in order to make a hypothetical purchase. After completing a (virtual) purchase task, participants evaluated the avatar and the website. Beside these circumstances, a majority of people express a preference for shopping with an avatar as a guide through this set of structured tasks, designed to culminate in the shopper purchase choice. This structured approach to Internet shopping is common on e-retail sites. From their findings, the use of carefully designed avatars can complement the task of shopping online, suggesting their profitable application in this situation. The attractions of shopping on the Internet include speed, convenience and information. Their result indicates that an avatar could generate value to an e-tail site, if the avatar can guide the customer efficiently through the shopping task and aid information search, additionally enhancing the customer experience of these benefits. These conclusions can be supported by also other findings (e.g. Chen et al., 2009; Menon & Kahn, 2002).

Sicilia & Ruiz's (2010) study shows that the optimal range of information may differ depending on whether we are referring to consumer processing or consumer attitudes. Thus, they demonstrated that more information can be better or worse depending on individual characteristics, such as need for cognition. Interestingly, Menon & Kahn (2002) found that the decision to shop online is made with emotion rather than reasoning. However, the picture is not so clear as it might seem at first glance. According to Poddar et al. (2009) every Website has a „personality” that is characterised by the same attributes as brands have (Aaker, 1997). Their findings indicate that understanding Web site personality provides firms with a competitive edge in the marketplace. This personality can become the basis of a firm's Web site strategy and affect everything from the way Web sites interact with customers to advertising strategy. The twin ideas of Web site customer orientation and personality indicate that consumers build associations between the behavior and the characteristics of Web sites. Therefore, the way Web sites handle consumers is just as important as how the Web site looks and feels; together, these factors determine consumer willingness to make further transactions with the site. This research underlines the importance of Web site congruity as a fundamental principle of Web site management and strategy. Online retailers would benefit from further studies that examine which Web site personality traits they might manipulate to affect consumer satisfaction. Similarly, Koufaris & Hampton-Sosa (2004) found that perceived reputation of the company and perceived willingness of the company to customize its products and services were significant antecedents to initial trust in the company. They also found that perceived usefulness and ease of use of the web site as well as perceived security control of the site were also significant antecedents of initial trust in the company. In addition, Wang & Head's (2007) research confirmed that a higher level of perceived switching costs lead to a lower level of satisfaction in online shopping. Their findings provided a further step in explaining the complex relation between it and satisfaction. While switching cost has a direct positive effect on relationship building, it had a negative effect on customer satisfaction in online shopping. Thus, online retailers who chose to be listed in search engines, shopping agents, or provided competitor price search buttons and matched the lowest competitor price instantly, probably generate higher consumer satisfaction and trust (Urban et al., 2009).

Shin's (2008) findings indicate that trust impacts behavioral intention indirectly through attitude and vendors should establish user trust in Web 2.0 transactions by ensuring that their services are conducted in accordance with users' expectations – namely, that their virtual currency is reliable and exchangeable for real currency, and that promises and commitments are kept. His study also shows that Web 2.0 (such as Second Life) user communities are comprised of socially involved individuals who share values or feel involved with a line of services. Because of the frequency of their social interactions, they have significantly lower perceived risk than other online communities, so that vendors might provide a forum where customers can interact and share information, which eventually will lead to lower perceived risk. The shared trust among users clearly has the potential to be a powerful means of persuasion in avatar enriched computer-mediated communication and Web 2.0 in particular. Thus, according to McKnight & Chervany (2001) due to the emergence of the Internet, new products can be experienced long before they even exist. Products come to existence and can be experienced in two worlds—online and offline and in two forms virtual and solid. Virtual products embedded in a virtual world empower customers to experience the value of future products and product features. Thereby, consumers are able to explore what they want and expect from new products.

These studies point out that consumption is shaped by many important factors. Besides this, in the consumer society the act of consumption itself plays a significant role in the everyday life. Through the intervention of consumption, people can express their personality and can also locate themselves in the society (Wattanasuvan, 2005) and interestingly, consumption can also cause flow experiences to the consumers (Smith & Sivakumar, 2004; Bridges & Florsheim, 2008). Certainly, people do not consume products or activities just to satisfy their needs but also to carry out „self-creation project”. Following this logic, people tend to consume things that hold particular symbolic meanings which can be commonly shared with others. For instance, buying or selling particular goods in Second Life Marketplace may symbolize „I'm a very creative person” or „I'm said to be popular”. Literature suggests that people's material possessions can be viewed as major parts of their extended selves (Wattanasuvan, 2005). These objects embody a system of meanings through expression and communication with others. In addition, being a social self, people usually employ symbolic consumption to obtain favorable connections with others. As the self, belongings are also socialized objects that may carry different meanings in different social contexts. Thus, possessions embody lots of symbolic meanings through which people can bridge their selves with others in the society (in this case „virtual communities”).

To sum up, these demonstrated researches indicate that the amount of information presented on a certain Web site plays a significant role during the consumer decision process. If a personalized avatar as well takes part in online based trade actions, the consumers feel less risktaking. Second Life, being a virtual social world, gives its residents such values and possibilities to involve them in its worldsystem by high degree. Additionally, consuming in SL can empower one's self-presentation through using avatars (which are extensions of the virtual identity). The field of consumption can be examined in Second Life Marketplace which is very popular among its users – where the most successful residents can earn actually real U.S. dollars by selling virtual goods. Thus, an attractive avatar providing enough information about its goods can easily be a successful „businessman”.

3. Discussion of the Proposal

Following the logic that was demonstrated in the previous sections, we propose our framework to test it in an extended empirical study. Then, we discuss our conclusions that come from our framework. It is very important to keep in mind, that it is a synthesis that links together the virtual identity (avatars and their extended attributes used in Second Life) and the consumer behavior that is manifested through the Second Life Marketplace economic activities.

3. 1. Our framework

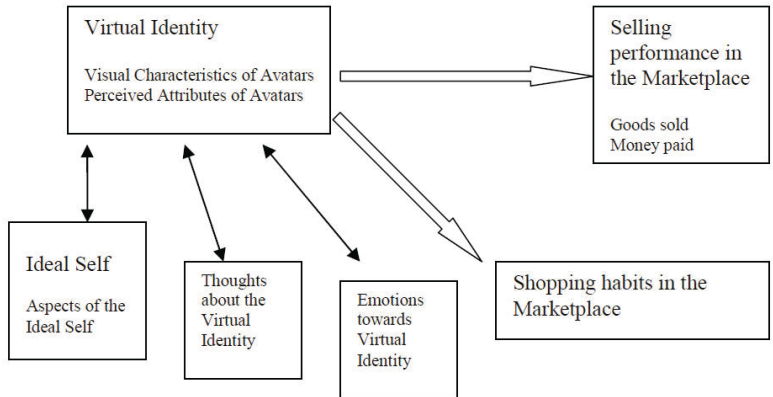


Table I. It demonstrates our hypothesised model

TABLE I. demonstrates our hypothetical model that describes the relationship between the characteristics of the virtual identity and the consumer behavior with regards to the Marketplace application. The aspects of the framework are the following components:

- (1) Virtual Identity. As it was demonstrated in the earlier sections, the avatars represents the virtual identity that are constructed to express one’s feelings and thoughts toward other virtual persons. It contains the visual characterists of the avatars (how it looks like and the objects they have) and the perceived attributes of the avatars (one’s perceptions about their own avatars’ dispositions, e.g. energetic, brave, sexy etc.).
- (2) Ideal Self. The ideal self is the composite of all the things that an individual wants to be (Higgins, 1987). It means different things for everybody, thus there are no general standards that describe all of the population.
- (3) Thoughts about the virtual identity. It indicates that how other people think about one’s avatar (virtual identity). We think it involves cognitive processes.
- (4) Emotions towards the virtual identity. It demonstrates other people’s feelings or opinions toward one’s avatar (virtual identity).

(5) Selling performance in the Marketplace. This part of the model indicates that how one's avatar can successfully sell virtual goods (measured in quantity) and how much money was gained during these transactions. Both of these features must be taken to consideration in order to measure this aspect more precisely.

(6) Shopping habits in the Marketplace. As we mentioned in the earlier sections, symbolic consumption plays a significant role in Second Life. Therefore, besides the other parts of this model this factor highlights the pattern of consumption of one's virtual avatar.

3. 2. Conclusions

The model presented above integrates sophisticated constructs (virtual identity and online consumption) to explain economic behaviour in Second Life. To create the model several approaches were used: computer studies, sociology, psychology and consumer behaviour. The articles suggest that being online indicates that the user alters perception of one's own self which may also involve the purchase decision processes. However empirical research has not been carried out yet. To understand better these effects the research should consist of qualitative and quantitative studies. We claim that virtual identity significantly influenced by the desire to present one's self in a way to accomplish certain goals that occurs Ideal Self Aspects of the Ideal Self Shopping habits in the Marketplace Thoughts about the Virtual Identity Emotions towards Virtual Identity Selling performance in the Marketplace Goods sold Money paid Virtual Identity Visual Characteristics of Avatars Perceived Attributes of Avatars in the field of retailing and purchasing. If the model is proved and the online business activities are understood more deeply marketing can be used more accurately and efficiently to reach online consumers. By also understanding the meanings of products and the online communities other sciences can benefit from our findings.

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