Second Life Experience: Preliminary Analysis Regarding Novel Experience as a Necessary Component of Customer Expectation in Second Life

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ABSTRACT

This paper employs a historical analysis of business-to-consumer (B2C) success in the virtual world Second Life (SL) and proposes a model for success based on an extension to Expectation Confirmation Theory. SL is classified as a hedonic information system which is an information system designed to deliver an enjoyable experience to the user as its main goal. Expectation Confirmation Theory is used to guide the review process. Literature analysis indicates that novelty or virtual experience is likely to play a part in customer expectation of B2C offerings. A modified version of the ECT theory is proposed with utility and novelty constructs integrated into the existing expectation and perceived performance constructs. Novel experience, therefore, is proposed as a component of player expectation that contributes to the success of B2C transactions within Second Life.

INTRODUCTION

The purpose of this paper is to examine industry literature regarding business-to-consumer (B2C) activity in the popular virtual community known as Second Life (SL), and to propose factors for success in B2C e-commerce activity based on the literature. Expectation Confirmation Theory (ECT) is used to frame the literature review and to propose a model for customer satisfaction in B2C transactions in Second Life. The proposed model is essentially hypothetical; development of the model and empirical validation will require additional research.

The virtual community known as Second Life (SL) has its own economy based on real-life currency. Its users engage in entrepreneurial activities as well as business-to-business (B2B) and business-to-consumer (B2C) transactions (Carr, 2007). The inhabitants of this virtual world are seen as a desirable untapped market by industry spokespeople (Anon., 2007e). Many businesses have attempted to establish a presence in SL in order to reach the consumers that inhabit it. Despite SL’s focus on commerce and economy, traditional B2C approaches have been ineffective (Anon, 2007d; Bidlake, 2007; Capps, 2007). This paper looks at the collective body
It is proposed here that Second Life is a *hedonic information system*. This differentiates SL from the more common *utilitarian information systems* which have the goal of providing productive value to the user (Van der Heijden, 2004). Most scholarly information systems research is concerned with utilitarian information systems. Hedonic information systems get their name from the word *hedonism* which describes the doctrine that pleasure or happiness is the highest good (Random House, 2007). Hedonic information systems do not strive to provide utility to the user beyond that of the interaction between the user and the system itself. Essentially, the goal of a hedonic information system is to impart enjoyment through the experience delivered by the interaction with the system. In consideration of that goal, these types of information systems will typically employ pleasurable displayed images or graphics, pleasing or exciting colors, sounds, and content or subject matter designed to encourage prolonged use (Van der Heijden, 2004). Second Life fits the mold of a hedonic information system because of its lack of utilitarian purpose, and because of the presence of characteristics native to hedonic information systems.

Although this paper classifies Second Life as a hedonic information system, it is clearly more than a computer game, or even a massive multiplayer online game. It exhibits many aspects of what is known as a “Web 2.0” application. Recently there has been a practitioner trend to re-classify emerging and innovative web applications under the term Web 2.0 (O’Reilly, 2005; Dagres & Hornik, 2006). The exact characteristics that make up a Web 2.0 application are still under debate, but they often include:

- an architecture of user-participation where users create, manage, and own their data;
- aspects of social networking which may include open distribution of web content;
- use of emergent web technologies for collaboration and dissemination of content;
(Huang & Behara, 2007). SL exhibits all three of these characteristics.

Additionally, SL is enabled as a B2C platform. The phrase “business-to-consumer” generally refers to electronic commerce between businesses and consumers that involves the exchange of goods or services and utilizes the Internet (Jessup & Valecich, 2006; Alter, 2002). Traditional B2C e-commerce involves a business website that facilitates consumer purchases using a web browser (Schneider, 2006). SL connects users to its servers and other users through the Internet. SL incorporates web links within its visual content that allow for e-commerce transactions to occur during play (user activity within the SL virtual world) using a web browser.

**RESEARCH METHOD**

At the present time, a literature review on Second Life must of necessity be composed almost entirely of practitioner literature. The virtual world is too new to have spawned enough scholarly articles for a thorough academic review. Research using practitioner literature has some limitations, such as the topics written about, and the method of writing, not to mention the lack
of peer review. Gosain et al. (1994) wrote that practitioner literature focuses on usefulness and short-term issues that have practical impact.

A wide sample of practitioner literature concerning Second Life was examined, and the following subjects were found to be available for analysis:

- Business use of SL
- Business cases for specific organizations and tasks (marketing, e-commerce, etc.)
- Experts/consultants offering advice (“best-practices”), predictions, and assessments of business use
- Facts, tables, and statistics about SL business use and users
- Goal statements from organizations using SL

The literature base for this study was compiled through the use of electronic search indexes, and then supplemented by cross referencing relevant articles that were cited by the foundational works. Webster & Watson (2002) advocate focusing a literature review around concepts. Accordingly, the search targeted articles that addressed the following concepts: Commerce, customer expectation, customer satisfaction, and business activity; all within the context of Second Life. The search took place in two passes. The first pass created a collection of articles delivered by the electronic search, and retained only those articles that appeared to have relevant information on the search criteria. Relevance was determined by a summary reading of each article and judgment of whether it offered any significant information on the criteria to be examined. Articles that were questionable as to their relevance were retained in lieu of the second pass. The second pass consisted of a thorough reading of all articles retained after the first pass, with only those articles confirmed to offer relevant information on the search criteria retained.

The first pass began with a search on the quoted phrase “Second Life” in the ABI/Inform database. It yielded 145 articles, of which 12 were retained as relevant to the guidelines of the search. An additional search was performed on the phrase “Virtual Reality” AND “Linden Lab” (the creator and maintainer of Second Life), and that search found 41 more documents of which 28 were retained. A third search on Business Source Complete (EBSCO) using the quoted phrase “Second Life” yielded 549 documents, of which 79 were found to be relevant and informative enough to include. The total number of articles retained from the search databases was 119. An additional 12 documents were added as a result of citations from the 119, bringing the total retained on the first pass to 131.

The second pass was accomplished by reading all of the articles and retaining only those that offered reliable information relevant to the criteria of the study. Reliability was determined by either the presence of empirical data (i.e., statistics, sales figures, etc.), the presence of a case study or sales documentary story that could be analyzed, or an appeal to a reliable authority (i.e., a researcher, consultant, or expert). Many articles gave the impression during the first pass that they contained relevant, reliable information, but under scrutiny turned out to be more or less a writer’s opinion with only a small set of experience to draw upon. Of the 131 articles left over from the first pass, only 17 were retained. All searches were done on or around November 23rd, 2007. Table 1 documents the literature collection process.
Table 1: Literature Selection

Expectation Confirmation Theory (ECT) is used to guide the literature collection on B2C activity in Second Life. ECT is suitable for this purpose because of its focus on commerce, and its past use in many B2C studies. ECT theory has been used to look at numerous customer-focused business models, including the continued use of the World Wide Web (Hsu et al., 2004) and web-customer satisfaction (McKinney et al., 2002). It has also been used to analyze information system continuance (Bhattacherjee, 2001), and has been extended to examine web portals (Lin et al., 2004). This paper examines the literature for theoretical contributions or contradictions to the ECT model.

The ECT model contrasts the customer’s expectation of a product or service purchased compared with its actual perceived performance (Lin et al., 2005). This comparison yields either a confirmation of the expectations, or a disconfirmation of the expectations, depending on the disparity between the expectations and the perceived performance. A confirmation of poor expectations or a disconfirmation of high expectations results in dissatisfaction; a confirmation of high expectations or disconfirmation of low expectations results in satisfaction. Repurchase intention is affected by satisfaction (Oliver, 1977; Bhattacherjee, 2001; Lin et al., 2005). The ECT model is shown in Figure 1.

Figure 1: Expectation Confirmation Theory
(Lin et al., 2005; Bhattacherjee, 2001; Oliver, 1977)
Accordingly, the retained articles were analyzed according to whether or not they addressed the concepts given in the ECT model: Expectation, perceived performance, confirmation, satisfaction, and repurchase intention. The concept matrix illustrating this classification is given in Table 2.

<table>
<thead>
<tr>
<th>Article</th>
<th>Expectation</th>
<th>Perceived Performance</th>
<th>Confirmation or Disconfirmation</th>
<th>Satisfaction</th>
<th>Repurchase Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anonymous, (2007a), &quot;A place to stay&quot;</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Anonymous, (2007b), &quot;Finance and economics: Trouble in paradise; a credit crunch in cyberspace&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Anonymous, (2007d), &quot;Borderless marketing&quot;</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Anonymous, (2007e), &quot;Latest GMI poll reveals Second Life’s potential for virtual consumer marketing&quot;</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Enright, A., (2007), &quot;How the second half lives&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Fass, A., (2007), &quot;Sex, pranks and reality&quot;</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Hayes, F., (2007), &quot;Virtual trouble&quot;</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Kirkpatrick, D., (2007), &quot;It’s not a game&quot;</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Maddox, K., (2007), &quot;Second Life has some firms second guessing&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Metz, C., (2007), &quot;The emperor’s new web&quot;</td>
<td>X</td>
<td></td>
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<tr>
<td>Piesing, M., (2007), &quot;My avatar wants a motor&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Wallace, M., (2006), &quot;NBC Xmas tree: Largest event in SL history?&quot;</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Concept Matrix**

An article is considered to be relevant to a concept (and therefore has an ‘X’ by the concept in the matrix) if it either directly or derivatively addresses that concept in terms of business-to-consumer activity. In this context business-to-consumer activity incorporates business offerings, events, and other promotional behavior that creates interaction between the business and consumers regardless of whether funds are exchanged. The indication of contribution of an article on a particular concept does not guarantee any particular level of content or focus, just that the concept was addressed in some manner capable of being analyzed. Each concept was examined in light of what the literature offered.
ANALYSIS

The retained articles address in varying degrees the concepts of the ECT model. The expectation construct is revealed through customer expectations of virtual concerts (Andrews, 2006), virtual banking (Anonymous, 2007b), news services, and a plethora of virtual goods that mirror those in real life (Bidlake, 2007). A recurring theme is that customers are expecting something “fresh”, and not just a virtual copy of their real-world presence (Capps, 2007). According to Giff Constable, VP of a virtual-worlds consulting firm, the quickest way to become a ghost town is to set up shop “just to be there” (Capps, 2007). Simply replicating real-world products as virtual products in Second Life is also not recommended. However, putting a creative spin on something that delivers a novel or unique experience will likely be rewarded. Constable gives this example:

"Replicating a hearing aid won't really work, but could you build a community of people who are hearing-disabled and allow them to vent their frustrations and share the experience of what it's like to live in a world where you are not discriminated against because you have bad hearing? And that's got to build you some serious brand loyalty if you ask me."
(Capps, 2007).

Collectively, the literature suggests customer expectations that go beyond that of traditional e-commerce offerings. Essentially customers are looking for a B2C experience that matches their expectations of enjoyment while using Second Life.

Perceived performance is represented by second-hand accounts of customer experiences, or the completed transaction chain of a purchase which includes a measure of satisfaction, which entails at least some measure of perceived performance. Virtual t-shirts are one offering that rates low on perceived performance (Enright, 2007); another is the poor perceived performance of a virtual bank which can generate negative action (Anonymous, 2007b). Nissan, by contrast, garnered positive praise among SL residents for their performance in creatively dispensing vehicles via a giant vending machine (King, 2007). There was no indication from the literature that perceived performance for Second Life offerings is different than any other B2C offering.

Confirmation of expectation or disconfirmation of expectation is present in the literature largely through indirect measures. That is, it must be there according to ECT theory because there are expectations and satisfaction, but the actual step of confirmation or disconfirmation is not likely to appear in practitioner literature of the sort examined here. Therefore confirmation or disconfirmation is represented in a sort of “behind the scenes” manner, and is not directly referenced. There was no indication of any difference between confirmation or disconfirmation in Second Life and confirmation or disconfirmation in any other B2C offering.

Satisfaction is seen in the literature through positive sales figures, empirical data, or expert opinion. Pontiac has enjoyed the highest traffic rating of any business for its offerings in Second Life (Capps, 2007) which include vehicles and unique experiences. NBC also experienced high
customer satisfaction with their offering of a tree-lighting event that mirrored that of Rockefeller Center (Wallace, 2006). Poor customer satisfaction is not necessarily measurable in Second Life other than through a lack of sales or traffic, such as many businesses experience when they simply set up an unattended virtual storefront (Metz, 2007). The literature gave no indication, however, that customer satisfaction in Second Life was any different than other B2C offerings.

Repurchase intention is not really represented in the Second Life literature, and this is not surprising since it is not a readily available measure unless specifically targeted by research. The lone example found is an Adidas virtual shoe that can be repeatedly changed as many times as the user wants if it is returned to the shop where it was purchased, and thus creates repeat purchases according to an Adidas marketing consultant (Enright, 2007). There is no indication from the literature that repurchase intention in Second Life differs from any other B2C offering.

In addition to the five concepts from the theory, best practices and expert advice can help frame the state of practitioner knowledge on Second Life business involvement. An analysis of advice and stated best practices by veteran consultants familiar with Second Life revealed several suggestions both positive and negative for business commerce.

The following business actions are recommended by Second Life commerce experts:

- Businesses should just stay away, especially if they plan on implementing a traditional e-commerce business plan (Fass, 2007; Maddox, 2007).
- Businesses should give back to the social community in the form of service or community building (Capps, 2007).
- Business must offer something fresh, such as innovative products, experiences, methods of delivery, and/or frequent changes to any of the above (Capps, 2007).

The following actions are discouraged by Second Life commerce experts:

- Businesses should not just throw up a store front and proclaim that they are there and expect to have success (Anon, 2007d; Bidlake, 2007; Capps, 2007).
- Businesses should not undercut independent entrepreneurs with their offerings (Piesing, 2007).

**FINDINGS**

The practitioner literature reviewed suggests that there is no difference between the concepts encapsulated in the ECT model for B2C activity in Second Life and other e-commerce activities, with one exception. Experts and business consultants agree that to ensure success, business offerings in SL should be “fresh” and provide value beyond simply the utility of the offering. This indicates that SL users have enhanced expectations about their B2C options.

Because of the hedonic nature of SL and the fantastic nature of user representation and experience in the virtual world, users of SL experience virtual adventures each time they use the system. Every avatar (the virtual representation of the user) can fly through the air, teleport vast distances, and change their appearance at will. Novel and unusual experiences are a part of everyday activity in Second Life.
Marketing research has shown that there are both hedonic and utilitarian motivations for customer B2C behavior (Sit et al., 2003; Childers et al., 2001). Entertainment is becoming more of a part of retail establishments and web commerce, as companies strive to create aesthetically pleasing and enjoyable shopping experiences. It is not surprising to discover that customers in Second Life also seek those kinds of enjoyable experiences for their avatars when they shop.

Therefore, it is proposed that novel experience is a part of the expectation of a Second Life consumer in a B2C transaction. To represent this, a conceptual model is proposed based on the ECT model, and will be referred to as the novel expectation model (figure 2).

![Figure 2: Novel Expectation Model](image)

In this model, the expectation construct has been replaced by expectation of utility and expectation of novelty, and the perceived performance construct is replaced by perceived utility and perceived novelty. These changes reflect the proposal that expectation of a novel experience is a part of the appeal for a Second Life resident. The constructs and their descriptions are listed in the construct table labeled table 3).
The modified ECT model incorporates experience alongside the traditional utility of a B2C purchase. This reflects the idea that while utility does have a place in Second Life B2C offerings, it is affected by, and in some instances competes directly with novelty. An example of novelty without utility might be a service wherein the SL customer’s avatar is shot out of a virtual cannon. An example of utility without novelty might be the purchase of a virtual land mass with which to build a house. An offering combining both utility and novelty would likely have more appeal than simply one or the other. It is proposed that this modified version of the ECT better reflects B2C in Second Life because, as a hedonic information system, it is engaged to provide an enjoyable experience to the user. The novel expectation model proposes that SL customers expect novel experience, and therefore more success will be achieved by providing novel experience alongside utility rather than utility alone. Expectation Confirmation Theory predicts that failure to meet user expectations will likely result in dissatisfaction and lack of intent to repurchase (Bhattacherjee, 2001; Lin et al., 2005), and the novel expectation model predicts similar results if the expectation of novelty is ignored.

**LIMITATIONS**

There are a couple of limitations that must be disclosed. First and foremost is the use of practitioner literature. Unlike academic literature which is broadly focused and seeks gaps to fill, practitioner literature tends to have a narrower focus on short-term issues of practical impact (Gosain et al., 1997). However, for the purposes of this paper, the information on B2C transactions represents the best information on the subject that is available at this time, and therefore should be accepted for the purposes of this paper. There is also a relatively small sample of articles used in the analysis of concepts, which is problematic when assessing representativeness. In this case, however, the information derived from a particular article is

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### Table 3: Construct Table

<table>
<thead>
<tr>
<th>Construct Name</th>
<th>Description</th>
<th>Maps to Classic ECT Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectation of Utility</td>
<td>The degree of need or usefulness expected from the purchase</td>
<td>Expectation</td>
</tr>
<tr>
<td>Expectation of Novelty</td>
<td>The degree of novelty or adventure expected to be experienced either during or as a result of the purchase</td>
<td>Expectation</td>
</tr>
<tr>
<td>Perceived Utility</td>
<td>Experienced need or usefulness of the purchase</td>
<td>Perceived Performance</td>
</tr>
<tr>
<td>Perceived Novelty</td>
<td>Experienced novelty or adventure, either during the purchase, or as a result of the purchase</td>
<td>Perceived Performance</td>
</tr>
<tr>
<td>Confirmation</td>
<td>Degree to which perceptions match (confirmation) or differ from (disconfirmation) expectations</td>
<td>Confirmation</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Level of content with the purchase</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Repurchase Intention</td>
<td>Degree of likelihood of making another purchase with the vendor</td>
<td>Repurchase Intention</td>
</tr>
</tbody>
</table>
basically consistent with the other articles found, which suggests a level of agreement even though there isn’t a large collection to draw from. Therefore, the findings should be accepted for the purposes of this paper.

CONCLUSION

Second Life can be characterized as a versatile platform with many opportunities. Its multi-faceted nature has drawn merchants to it in hopes of tapping its population of early-adopters. This paper proposed that the nature of Second Life as a hedonic information system suggested the existence of an experiential component in B2C transactions. The literature review showed that customers in Second Life have higher expectations for B2C offerings than other more traditional e-commerce customers. A conceptual model has been presented that may be used in future research to predict and analyze user satisfaction and intent to repurchase. Further research and development is necessary to determine if this model will be effective in studying B2C activity in Second Life. In the meantime, businesses that decide to invest in Second Life would do well to incorporate novel, adventurous experiences into their offerings to players. If not, they risk having a short and uneventful stay in the virtual world.

FURTHER RESEARCH

The question of whether customer expectation in Second Life includes an experiential component could be asked directly to users in a survey for a more empirical study. Other virtual worlds that also fit the mold of hedonic information systems are likely to have the same experiential expectation in their users, so they should likewise be investigated. There are also other theories in marketing, such as SERVQUAL and SERVPERF, that are being used to examine customer intention to purchase, and they should be the focus of future studies.
REFERENCES


