Journal of
Virtual Worlds Research

Volume 3, Number 3
The Researcher's Toolbox, Part II
May 2011

Editor-in-Chief   Jeremiah Spence

Image Art   ©2007-2011 ~enchanted-stock
                                                      http://fav.me/dwquz0

Technical Staff   John Brengle
                                                      Betsy Campbell
                                                      Sil Emerson

Third Places Take First Place in Second Life:

Developing a Scale to Measure the 'Stickiness' of Virtual World Sites.

Dr Wade Halvorson
Assistant Professor, UWA Business School, University of Western Australia

Abstract

The objective of this study is to examine what drives visitor retention in successful businesses operating in online virtual world environments. The study draws motivation from increasing anecdotal evidence reporting on high profile corporate brands withdrawing from operations in Second Life - citing low visitor traffic as their motivation. Early adopter corporations that established business operations in Second Life did so anticipating benefits from the new technology akin to the quantum leap made when they embraced the World Wide Web. While disappointingly low visitor numbers left many virtual world operations looking like desolate ghost towns, there are businesses enjoying active repeat customers. Drawing on Oldenburg's Theory of Third Place, this study seeks to quantify the reasons for high customer retention in successful virtual communities. To this effect, a questionnaire is developed and administered by a team of avatar researchers who interviewed over 250 avatars in Second Life. Website stickiness measures are reviewed and applied to virtual world sites. Conclusions are drawn and future research directions proposed.

Third Places Take First Place in Second Life:

Developing a Scale to Measure the 'Stickiness' of Virtual World Sites.

Introduction

Virtual worlds (VW) such as Second Life (SL) constitute "…an electronic environment that visually mimics complex visual spaces, where people can interact with each other and with virtual objects, and where people are represented by animated characters" (Bainbridge 2007). Those characters, called avatars, are a computer user's representation of themselves or an alter ego, in the form of a three-dimensional model representing the embodiment of the user (Jordan, 1999). Avatars explore, meet other avatars, socialize, participate in individual and group activities, and create and trade virtual property and services with one another. SL has a functioning economy complete with its own currency, the Linden dollar (L$), which is used to conduct business and can be bought and sold with real currency on the "LindeX" exchange, operated by Linden Labs (LL).

Since 2003 when LL launched SL, corporations were keen to harness the virtual economy for business purposes. Enthusiastic corporations anticipated a range of benefits from conducting business in VWs akin to the quantum leap made when they embraced the World Wide Web. Many of the early adopters subsequently scaled back their operations or even closed them because they failed to deliver on expectations. America Online, Coca Cola, BMW, Mercedes Benz, ABN Amro, The Starwood Hotel Chain, Adidas, and Dell were among the early adopter brands that established substantial operations in SL only to subsequently close them. These and many other companies found simply that "if you build it, they will not necessarily come" (Riggens, 1999; Foth, 2008). Laura Thomas, an e-business consultant at Dell explained her division's decision to withdraw from SL in 2008: "Maintaining these areas requires a lot of resources. If customers had followed, there would have been no problem, but there wasn't enough usage of the space to justify the resources needed to keep it dynamic" (Cohen, 2008). The same reasoning applied for dozens of other brands that also scrambled to staunch their bleeding SL budget line items.

While many Real Life (RL) businesses have so far failed to attract viable customer numbers in SL, there are many that are building a substantial customer base of loyal repeat customers. How do they do it?

In addressing the question, this study first reviews the concept of website stickiness, applied in e-Commerce to the customer retention qualities of a website. A selection criterion based on Second Life visitor traffic scores is then discussed and a number of SL businesses

fitting the criteria, selected for the study. Then, drawing on the Theory of Third Place, a scale is developed in an attempt to measure the 'stickiness' of virtual world sites. Data is collected from the 250 selected virtual world sites through avatar-to-avatar interviews in SL. The results are presented, conclusions drawn, and implications for management and future research proposed.

Stickiness

The term stickiness is an extension of the spider web metaphor used in Internet Marketing which refers to the ability of a website to attract and retain users (Bush 1999, Nemzow 1999, Guenther 2004, Khalifa 2003, Rosen 2001). The longer a user stays at a website the more potential it has to influence their behaviour; stickiness is seen as one of the keys to profitability (Rosen, 2001). Bush (1999) sees stickiness as longer and more frequent visits to a website due to the provision of unique content and specialised services. Li, (2006) looked at why Internet users stick with a particular website and found consumers with a commitment much like brand loyalty, that were resistant to marketing efforts to switch websites. Rosen (2001) contends that considering the costs of developing e-commerce websites, a customer must stay and use it for between two and three years for the owner to realize a profit on them.

The costs of creating a virtual world site are not insignificant either and as the consultant to Dell said (in the introduction) if enough customers had followed there would have been no problem justifying the resources needed to maintain the SL site. The aim of building stickiness into a site is to promote customer loyalty and the opportunity for repeat business. Accepting that the capacity of a site to attract and retain visitors is effectively described by the concept of (Web and virtual world) site stickiness, the next step is to find a way to measure it so that it may be replicated.

Numerous methods for measuring website stickiness have been formulated based around repeat purchases (Khalifa 2003), what visitors click on while they're in a website (Nemzow, 1999), frequency of visits and average time spent browsing a website during a visit (Guenther, 2004). The metric available to business owners in SL is Traffic Score.

Stickiness in Second Life

Each parcel of "land" in SL has a published Traffic Score (TS) calculated by LL (SL's owner) which is the cumulative minutes spent on the parcel by all visitors to the parcel on the previous day (SL time). It is calculated by taking the total seconds spent on the parcel,

dividing by 60, and rounding to the nearest whole minute. For example, if your parcel has a cumulative total of 121 seconds over the course of a day, your score will be 2 (Linden Labs, 2010). The published score for a parcel is accessible in SL by selecting "World" and then "About Land" in the toolbar of the SL viewer. TS is used by marketers selling SL locations as contextual advertising opportunities in a similar fashion to traditional media (Halvorson, 2009). TS is accepted for the purposes of this study as a valid, reliable, objective and quantifiable metric reflecting customer retention.

A snapshot of five selected high traffic score SL businesses, taken at the beginning of this study, yielded the following measures:

	traffic score	*activity*
The Rock Club	100,507	rock music
Dance Island	78,666	dance
Sexy Nude Beach	74,628	aquatic
Inspire Space Park	36,658	tai chi
Blarney Stone	16,295	pub

Table 1

Observation of each operation confirmed significant customer numbers present and each promoted a different main activity or theme for their customers. Following is a brief overview of the operations of the five businesses.

The Rock Club is a dance Club founded by Deviant Zauber, an online radio entrepreneur. Avatars dance to the beat of music played by celebrity DJs and hosted by avatar hostesses whose role is to keep the customers dancing and socializing. Regulars are welcomed personally by the hostesses and dance together in synchronized animation.

Figure 1 Customers Dancing at the Rock Club

When asked why the traffic numbers for The Rock consistently "top the charts" Deviant replied "*We advertise, we generate strong word of mouth recommendations and we have been around for nearly a year and at the top for six months. Once you reach high numbers if you keep the crowd happy they stay.*"

Dance Island offers live DJ artists and live music 24x7. Winner of the 2009 Best Dance Club in Second Life for their non-stop live acts, the owners boast that *"Here are always real people and festival Dee Jay events."*

Sexy Nude Beach is an island where the entry sign reads "*Nude or swimwear please*!" A bar and sun bathing lounge chairs are available while more active avatars can surf, scuba dive, swim and ride windsurfers.

Figure 2 Beach Combers at Sexy Nude Beach

Figure 3 Customers doing Tai Chi at Inspire Space Park

Inspire Space Park is a place for avatars to 'relax' with a range of "poses," automated animations, available. Poses are small balls that, when clicked, offer to animate the avatar in a range of movements. Orbit poses fly an avatar into space, then let the lights and sound take over their animation. Groups of avatars can regularly be observed in synchronized Tai Chi classes with stunning galactic scenery in the background.

The Blarney Stone situated in Virtual Dublin, is an Irish themed bar. It claims to be a gathering place for the world, a place in virtual reality which reduces the barriers to entry for people of different backgrounds to get to know each other. According to the owner, Ham Rambler, three things make a great Irish Bar and gathering place:

"Friendly people, great events and skilled hosts to keep things moving along!"

Figure 4 Customers socializing at the Blarney Stone Irish pub in Virtual Dublin

All venues are visually interesting, colorful and active environments providing continuous sensory stimulation and plenty of activities for avatars to engage in, while the people controlling each avatar chat with each other via text or voice controls. Whether their avatars came to dance, gaze at the stars, drink, swim or check out other avatars, the main activity 'behind the scene' was conversation and socialization. Time after time, comment was made that everyone was accepted at the place and, regardless of their looks, were welcomed as equal and actively included in the venue activities. Slowly but consistently it became clear that the real drawing power of a venue was not the promoted activity but the <u>strength of the informal community</u> that it hosted. It was almost as if the venue provided a place to park one's avatar, and activities keep them busy while the people controlling them absorbed themselves in social interaction with other community members; somewhat similar to people taking their kids to play in a park so they can socialize with the other parents.

Theoretical Foundation

Lori Kendall's (2002) ethnographic study of a computer-mediated community helps to "prove the Internet can provide us with a virtual Third Place, which is the equivalent of one of Oldenburg's Third Places where a community is formed, maintained and revitalized." In fact, it is plausible that many computer-mediated environments cultivate the level of informal social interaction and community spirit as described by Oldenburg. In many respects, computer-mediated contexts and traditional Third Places share similar functions and

characteristics. Much about connectedness and community online can be learned from the concept of Third Places and their importance in real life and cyberspace (Lawson, 2004).

Some online communities resemble the types of social settings Oldenburg describes as "Third Places." Functionally, both Third Places and some computer-mediated environments are essentially social spaces outside professional and familial roles for the purpose of informal social interaction. Online communities have become virtual Third Places – they are homes away from home where users can expand possibilities and playfulness.

While the Internet may enable the creation of community environments that fit the essential characteristics of a Third Place, it has not been able to simulate the "physical" aspects of a Third Place, until now. Virtual worlds add a three-dimensional capability allowing content creators to promote a sense of co-presence, an essential element of community whereby individuals can "bump into" and initiate relationships with new people.

Virtual Community

Early studies indicate that housewives turn to the marketplace to form "commercial friendships" with retail employees (Stone, 1954; Price and Arnould, 1999). Consumers are often driven to form commercial friendships with employees or other customers in commercial establishments to deal with loneliness or other social problems (Forman and Sriram, 1991, Goodwin, 1997; Rosenbaum, 2006). These commercial establishments sometimes referred to as Brand Communities, often fit the characteristics of Oldenburg's "Third Places." Their social supportive roles, which translate into increased brand loyalty, have been well documented. In a study conducted by Rosenbaum (2006), the data revealed that "as the frequency to which consumers obtain companionship and emotional support from their commercial friends (in "Third Places") increases, so does their loyalty." Rosenbaum found that "a key benefit that regular customers may receive from patronizing a commercial Third Place is consistent access to their commercial friendships" (Rosenbaum 2006).

The participation in a virtual commercial community also has a positive influence on consumer commitment to the brand around which the community is centered (Casalo, 2008). Relationship marketing has been proposed to be the leading marketing strategy in the future to establish long-term oriented relationships with customers (Morgan and Hunt, 1994). Communication with consumers is one of the crucial aspects of relationship marketing (Andersen, 2005), and the Internet has emerged as a favorite medium to communicate with consumers (Pitta and Fowler, 2005). Online relationships are developing into online social groups referred to as "virtual brand communities" (Casalo, 2008). An important reason for

people to stick around in Second Life is the sense of belonging to a community that comes with the relationships made between avatars and the people behind them (Loureiro, 2010).

Theory of Third Place

The Theory of Third Place is the concept of community building first introduced by Ray Oldenburg in 1982. In his subsequent book "The Great Good Place" (1989), he refers to the social surroundings separate from the two usual social environments of home and the workplace. Oldenburg proposed that stable communities are comprised of the first place of home, and those that one lives with. The second is the workplace — where people may actually spend most of their time. And, "Third Places," which are the "anchors" of the individual-self with the community life. These three components make up the community, and if one component is missing it affects the stability of the community.

A Third Place is defined in terms of its function, which is to provide an informal public place where communication and dialogue are essential activities and is accessible to all members of a community. It facilitates and fosters creative interaction among its members. All societies have informal meeting places, but what is new in modern times is the intentionality of seeking them out as vital to current societal needs. Third places exist outside the home and beyond the "work lots" of modern economic production. They are places where people gather primarily to enjoy each other's company with such regularity that it's often transformed into their second home (Oldenburg 1982, 1989, 1999). Third places offer relief from the stressful demands of work and home, and provide individuals with the feeling of inclusiveness and belonging associated with participating in the social activities of their chosen groups. For the community, Third Places strengthen the community ties through social interaction, and promotes security through interaction.

However, societies are in constant change. Due to the displacement of people from traditional communities, the vast suburban infrastructure, emergence of a consumption-oriented culture, and the increasing demands placed by home and work roles, individuals are increasingly lacking time, and places, outside their work or family-based communication contexts. Furthermore, individualization and the process of privatization of leisure time – fostered by forms of electronic entertainment such as television and the internet – have been alleged to speed up the decline of social capital in our society (Blanchard and Horan, 1998). Harrison and Stephen (1999, p. 221) indicate that the new technology which enables free and easy global communication causes a distraction "from the social interaction we encounter in our geographical place of community."

The development of Third Places is being severely impeded, and even those which exist often fail to meet many of the essential criteria of Third Places (Khermouch and Veronsky, 1995). In these modern types of locations, rarely do patrons engage others in lively, extended, and informal interaction. Individuals lack the opportunity to interact in a Third Place such as a neighbourhood pub or coffee shop which creates a sense of loss of social cohesion in society. People long for these quickly disappearing public spaces because these "great good places" or "Third Places" are essential. In fact, Oldenburg suggests the lack of community poisons not only an individual's sense of well-being but also grass roots democracy and civil society (Oldenburg 1982, 1989, 1999).

In the digital world, users that seek out other users with common interests can exhibit online communications-based behaviour that is not dissimilar to relationships in real world communities. A Third Place can be digital, facilitated by online applications such as Facebook (King, 2009), Massive Multiplayer Online Games (Steinkuehler, 2005), Virtual Reality (Schwienhorst 1998), the World Wide Web (Soukup, 2006), Blogs (Igwe (2008), Online Games (Steinkuehler, 2006), and On-Line Information Systems (Baker-Eveleth 2005). The rapid expansion of Internet technology provides opportunities to address the difficulties associated with time space fragmentation and the reduction of community by extending Oldenburg's Third Place concept to an online platform. New developments in technology have brought different ways of distributing information while still maintaining and preserving aspects of traditional communications (Postmes, Spears and Lea 2000).

Research Design

Accepting that the real drawing power of the high traffic score sites observed in SL was their informal community, it was decided to base the measurement of site stickiness on Oldenburg's theory of community. In the absence of any existing scales to measure a Third Place, one was created. Item generation was extracted and interpolated from the nine attributes within the theoretical framework of Oldenburg's (1982) "Theory of the Third Place." Nineteen statements were developed and responses indicated on a five point Likert-type scale, ranging from one which indicates 'strongly disagree' through five, which indicates 'strongly agree'. Content validity was then assessed by an initial screening of the items and the nine attributes that describe a "Third Place." Expert assessment of the accuracy of the items to reflect the attributes was then conducted. Furthermore, experts were also used to assess the overall representativeness of the items to explain "The Third Place" (Bearden,

Netemeyer, and Teel, 1989). The experts chosen for this phase of assessment were PhD students and academics, none of whom had any prior involvement in this study.

Methodology

A group of students studying advanced e-commerce at a university in Australia was inducted into SL and trained to undertake consumer behavior research in SL. Stage one was an ethnographic study.

Twenty-five of the students that proved to be most capable of navigating SL were selected as avatar interviewers and given additional training focused on approaching other avatars, identifying themselves and their purpose, and obtaining cooperation to answer the nineteen items on the questionnaire. Each researcher focused on a high traffic score venue and was required to interview ten customers. To maximize credibility and enhance response rates, avatar-interviewers wore t-shirts with the university emblem and offered information about the university and the study in their SL profiles. Every resident's profile is visible in SL by right-clicking on an avatar and selecting 'Profile.'

Figure 4   Avatar interviewer
displaying university affiliation

Interviewers approached customers at their selected venue and invited them to participate in the survey 'avatar-to-avatar.' A high percentage of those approached agreed to participate. Two hundred and fifty completed questionnaires made it into the final data set.

Figure 5 Avatar interviewer detailing university affiliation
and background to the study in real life profile

Results

The single item distributions did not suggest that any item should be dropped from the scale (Caligiuri, Jacobs, and Farr 2000). However, items 4 and 18 (table 2), which had low commonalities, were deemed independent items not related to the factors.

Item	Mean	STD	Variance
1. There is no differentiation between host and guest we are all equally approachable	3.86	1.073	1.151
2. It's a place free of social hierarchy so people are connected rather than divided	4.03	0.978	0.957
3. This is a very accommodating community to everybody	4.06	0.974	0.949
4. This place is not fancy and fairly low profile in its appearance	2.84	1.327	1.762
5. This place is my escape away from my home and my workplace	3.57	1.215	1.476
6. Being here is a habit of mine in order to associate with fellow community members	3.62	1.17	1.369
7. Its mostly regulars who come here frequently	3.56	1.076	1.159
8. I mainly come here to get into conversations with others	3.72	1.042	1.085
9. I come here to be away from home and work to regenerate and restore my energy	3.55	1.136	1.291
10. I feel comfortable approaching anyone in here	3.96	0.895	0.801
11. The atmosphere is very social and almost party-like	4.04	1.056	1.116
12. We are all equal as there is no class structure in this place	3.85	1.034	1.069
13. Conversations are highly valued among members	3.97	0.819	0.67
14. An attitude of give-and-take is expected of all members	3.66	0.924	0.853
15. The community is easily accessible to anybody who wants to join	4.17	1.126	1.269
16. This place is keeping people in tune with the social world around them	3.36	0.991	0.981
17. The regulars here provide an infectious style of interaction with others	3.84	0.982	0.964
18. The place was not specifically built for our community gatherings	2.77	1.278	1.633
19. There is always a playful mood here, where joy and acceptance reign	3.82	1.025	1.051

Table 2 Survey questions with their descriptive statistics

The Kaiser-Meyer-Olkin measure of sampling adequacy was over 0.7 suggesting that factor analysis is appropriate for the data set. A Scree Plot revealed that we were dealing with two to three main factors confirmed by Eigenvalues showing that 46.6% of the variance is explained by three of the 19 factors.

Item	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	5.835	30.709	30.709	5.835	30.709	30.709	4.466
2	1.740	9.156	39.866	1.740	9.156	39.866	4.095
3	1.283	6.755	46.621	1.283	6.755	46.621	2.334
4	1.215	6.394	53.014				
5	1.066	5.609	58.623				
6	.971	5.111	63.735				
7	.847	4.456	68.190				
8	.800	4.212	72.402				
9	.733	3.857	76.259				
10	.685	3.603	79.862				
11	.562	2.959	82.821				
12	.527	2.773	85.594				
13	.515	2.710	88.304				
14	.474	2.495	90.799				
15	.438	2.306	93.105				
16	.401	2.109	95.214				
17	.358	1.885	97.099				
18	.323	1.698	98.797				
19	.229	1.203	100.000				

Table 3 Results of factor analysis

The third factor in the structure matrix only contained two items so the decision to look at the first two factors was confirmed.

Structure Matrix	Component		
	1	2	3
PLACE_3. This is a very accommodating community to everybody	0.811		
PLACE_2. It's a place free of social hierarchy so people are connected rather than divided	0.741		
PLACE_1. There is no differentiation in this venue between host and guest as we are all equally approachable	0.709		
PLACE_15. The community is easily accessible to anybody who wants to join	0.7		
PLACE_12. We are all equal as there is no class structure in this place	0.685		

PLACE_10. I feel comfortable approaching anyone in here	0.599		
PLACE_6. Being here has become a habit of mine to associate with fellow community members		-0.679	
PLACE_5. This place is my escape away from my home and my workplace		-0.667	
PLACE_7. Its mostly regulars who come here frequently		-0.663	
PLACE_9. I come here to be away from home and work to regenerate and restore my energy		-0.649	
PLACE_11. The atmosphere is very social and almost party-like		-0.638	
PLACE_19. There is always a playful mood here, where joy and acceptance reign	0.572	-0.617	
PLACE_17. The regulars here provide an infectious style of interaction with others		-0.602	
PLACE_13. Conversations are highly valued among members		-0.574	-0.562
PLACE_8. I mainly come here to get into conversations with others		-0.549	
PLACE_14. An attitude of give-and-take is expected of all members			-0.721
PLACE_16. This place is keeping people in tune with the social world around them			-0.562
PLACE_18. The place was not specifically built for our community gatherings			
PLACE_4. This place is not fancy and fairly low profile in its appearance			

Table 4 Structure Matrix

The table below details the loadings for each of the items related to those two factors.

Dimensions and items of successful virtual world community benefits	Loadings
Factor 1 People	
PLACE_3. This is a very accommodating community to <u>everybody</u>	0.711
PLACE_12. We are <u>all equal</u> as there is no class structure in this place	0.680
PLACE 1. There is no differentiation in this venue between host and guest as we are <u>all equally approachable</u>	0.675
PLACE_15. The community is easily accessible <u>to anybody</u> who wants to join	0.666
PLACE_14. An attitude of give-and-take is expected of <u>all members</u>	0.584
PLACE_2. It's a place free of social hierarchy so <u>people are connected</u> rather than divided	0.551
PLACE_10. I feel comfortable approaching <u>anyone</u> in here	0.547
PLACE_16. This place is keeping people in tune with the social world <u>around them</u>	0.528
Factor 2 Place	
PLACE_7. Its mostly regulars who come here <u>frequently</u>	-0.755
PLACE_6. Being here has become a <u>habit</u> of mine in order to associate with fellow community members	-0.695
PLACE_5. This place is my <u>escape</u> away from my home and my workplace	-0.661
PLACE_9. I come here to be away from home and work to <u>regenerate</u> and restore my energy	-0.646
PLACE_11. The atmosphere is very <u>social</u> and almost party-like	-0.607
PLACE_17. The regulars here provide an <u>infectious</u> style of interaction with others	-0.536
PLACE_8. I mainly come here to get into <u>conversations</u> with others	-0.534
PLACE_13. <u>Conversations</u> are highly valued among members	-0.506
PLACE_19. There is always a <u>playful</u> mood here, where joy and acceptance reign	-0.505

Table 5 Item Loadings

Factor 1, the People Factor, refers to the perception of connectedness and equality that customers report feeling with other customers of the business. The item with the higher loading is, "This is a very accommodating community to everybody," and is followed by, "We are all equal as there is no class structure in this place." The remaining items use terms such as equally approachable, accessible to anybody, give and take attitude, connected not divided, and approachable and social people. All terms related to the other members of what is clearly a community of customers.

Factor 2, the Place Factor, refers to the atmospherics of the location perceived by their customers. Top of the list of loadings is, "It's mostly regulars who come here frequently," followed by, "Being here has become a habit." Terms used in the items describe the venue as an escape, being away from home, party-like atmosphere, providing an infectious style of interaction, providing a venue conducive to conversation and always offering a playful and joyous mood.

The top two Place Factor items, frequency and habit are strong indicators of site stickiness and the People Factor top two items of inclusiveness and equality are strong indicators of a community with Third Place qualities.

Conclusion

Analysis of the results indicates that the elements of a virtual world location that encourage inclusiveness and free association of its customers, while their avatars engage in interesting audio and visual activities, provide a fertile base for growing an informal 'Third Place' style commercial community with attributes that foster site stickiness. As Wetsch (2008) found, organisations need to retain customers through positive interactions with the site and with other avatars. They need to be involved and brought into the group quickly.

The results point to regular customers spending significant periods of time at their designated Third Place in Second Life suggesting that sites wishing to increase site stickiness would increase their chances of success by using the top Place and People Factor items to guide site development.

Managerial Implications

This study reviewed a number of SL sites that were considered to be successful at customer retention based on their traffic scores calculated by Linden Labs. The concept of virtual community was investigated using scales developed from Oldenburg's theory. The results indicate that high customer retention rates may be due to the communities that have

developed at these sites and the nature of those communities being an alternative (virtual) place to work and home, for people to spend time, i.e. their Third Place.

The implication for virtual world businesses is that an appropriate strategy for growing a strong customer base of regular customers would be the inclusion of an informal community as part of their in-world operations. Clearly, such a strategy is not applicable to all virtual world businesses and would be more appropriate to a brand management strategy rather than, for example, a retail operation. Building and managing a robust virtual brand community could hold the key to achieving critical mass in customer numbers for a business' core operations in the virtual world. Brand managers can take the lessons learned from these successful in-world businesses to create and manage their own virtual brand communities. Focus must be on regular events, activities and communications with their users and consistently providing unique experiences only accessible in their brand Third Place.

Limitations

The study is general in nature and took a macro view of a group of SL locations. The results are based on interviews and therefore open to interpretation (and misinterpretation) by interviewees. The researchers were university students, and although they spent time being trained in SL navigation and interviewing techniques, the accuracy of their work, especially transcribing the results into spreadsheets, may be less than absolutely reliable.

All sites studied were in one virtual world, Second Life. Individual sites, individual avatars and the promoted activity of each site were not factored into the study.

Future Research

Site stickiness is a function of frequency of visits and time spent at the site. To quantify a site's stickiness individual avatars must be identified, their number of visits to and time spent during each visit to the site needs to be documented. These measures have been sought for some time by those involved in SL. Glenn and Siobhan Linden in Land Metric forums with SL land owners reveal that the metrics they are consistently asked for are avatar visits (unique), repeat visits, and time on the region (SL Wiki, 2008). Land owners and developers at the forum were requesting daily visitor tracker data feeds that provided detailed statistics and proof of traffic for feedback on success of sim (parcel of SL land) designs and for investors in SL sites. Glenn Linden reported that at that time producing aggregate data by region was easy - heat maps for example (Figure 6) are available that show where avatars

spent time in a region – but that producing data for an exact location was something Linden Labs couldn't do right then.
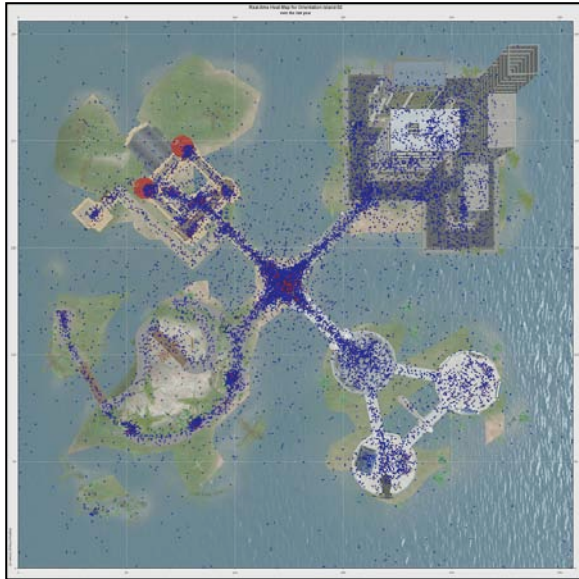

Figure 6   Heat map of SL SIM. Blue dots track avatar activity

Clearly the next phase of research into VW site stickiness could make a real contribution by focusing on individual site visitor activity over a period of time that allows for collection of frequency and time spent data by individually identified avatar. The complexity of such a detailed study may be reduced by using the services of a third party organization who offers what they call virtual world optimization services;

"The importance of understanding customer behavior is critical for a successful business. Until recently, the necessary tools have not existed for virtual world environments like Second Life. Maya Realities allows your 3-D web site based in Second Life to connect with visitors at a new level of analysis. We offer passive visitor information collection, database back-ended feedback surveys and an API to measure interaction with your existing virtual objects. As the emerging 3-D Internet takes shape, what better way is there to verify the return on your investment?" (Maya Realities, 2010)

The reference to VW sites as 3-D websites and the comment about the emerging 3-D Internet taking shape, point to the future integration of virtual world environments into the e-marketing mix.

References

Andersen, P. H. (2005) Relationship marketing and brand involvement of professionals through web-enhanced brand communities: The case of Coloplast. *Industrial Marketing Management, 34*(1), 39–51.

Bainbridge, W.S. (2007) The scientific research potential of virtual worlds. *Science 317*, (5837), 472-476. DOI: 10.1126/science.1146930 .

Baker-Eveleth, L., Eveleth, D. D. and Sarke, S. (2005). An emerging on-line Third Place for Information Systems (IS) students: Some preliminary observations. *Journal of Information Systems Education, 16*(4),. 465-475.

Bearden, W. O., Netemeyer, R. G., and Teel, J. E. (1989). Measurement of consumer susceptibility of interpersonal influence. *Journal of Consumer Research, 15*, 473−481.

Blanchard, A., and Horan, T. A. (1998). Virtual communities and social capital. *Social Science Computer Review, 16*(3), 263-298.

Bush E. (1999) Company to expand strategic alliance in key vertical markets by helping partners increase portal stickiness and community development. *Business Wire*.

Caligiuri, P. M., Jacobs, R.J. and Farr, J. L. (2000) The attitudinal and behavioral openness scale: Scale development and construct validation. *International Journal of Intercultural Relations, 24*, 27-46.

Casaló, L.V., Flavián, C., and Guinalíu, M. (2008). Promoting consumer's participation in virtual brand communities: A new paradigm in branding strategy. *Journal of Marketing Communications, 14* (1), 19-36..

Cohen, A. (2008). The second life of Second Life. *Fast Company*, 129, 58-60.

Forman, A.M., and Sriram, V. (1991). The depersonalization of retailing: Its impact on the "lonely" consumer. *Journal of Retailing, 67* (2), 226-243.

Foth, M. (2008). If you build it, they will not necessarily come: The need for online communication research into communities of place. (Doctor dissertation). Retrieved

from, Creative Industries Research and Applications Centre, Queensland University of Technology.

Goodwin, C. (1996). Communality as a dimension of service relationships. *Journal of Consumer Psychology, 5*(4), 387-415.

Guenther, K. (2004).Pull up a chair and stay awhile: Strategies to maximize site stickiness. Online. 28(6), 55-57.55-57.

Halvorson, W.S., Parent, M., and Pitt, L. (2009). Selling green dots in Second Life. London: Ivey Publishing.

Harrison, T. M., and Stephen, T. (1999). Researching and creating community networks. *In S. G. Jones (Ed.),Doing Internet Research: Critical Issues and Methods for Examining the Net* (pp. 221-241). Thousand Oaks, Calif. Sage Publications.

Igwe, F. (2008). Beyond the digital divide into computer-mediated communications: A content analysis of the role of community weblogs in building Oldenburg's virtual Third Places in black America.   Retrieved on March 11, 2011 from http://hdl.handle.net/2142/15128

Jordan, T. (1999). *Cyberpower: The Culture and Politics of Cyberspace and the Internet*. London: Routledge.

Kendall, L. (2002). Hanging out in the virtual pub: Masculinities and relationships online.. Berkeley, CA: Univ. of California Press

Khalifa, M., and Liu, V. (2003). Determinants of satisfaction at different adoption stages of internet-based services. *Journal of the Association for Information Systems*, *4*(5), 206-232.

Khermouch, G., and Veronsky, F. (1995). Third places. *Brandweek, 36*(11), 36.

King, D.L., (2009). Rethinking the 3rd Place. Retrieved on March 11, 2011 from www.davidleeking.com/category/third-place.

Lawson, K., (2004) Libraries in the USA as traditional and virtual "Third Places." *New Library World, 105*(1198/1199), 125-130.

Li, D., Browne, G.J. and Wetherbe, J.C. (2006). Why do internet users stick with a specific web site? A relationship perspective. *International Journal of Electronic Commerce, 10*(14) 105-141.

Linden Lab Official: What is traffic (n.d.). Retrieved on March 11, 2011 from: http://wiki.secondlife.com/wiki/Linden_Lab_Official:What_is_traffic

Loureiro, A. and Bettencourt, T.B. (2010). Building knowledge in the virtual world – influences of real life relationships. *Journal of Virtual Worlds Research*, 2(5).

Maya Realities (2010). What we do. Retrieved on March 11, 2011 from http://www.mayarealities.com/

Morgan, R. and Hunt, S. (1994) The commitment–trust theory of relationship marketing. *Journal of Marketing, 58*(3), 20–38.

Nemzow, M.(1999). Ecommerce Stickiness for Customer Retention. *Journal of Internet Banking and Commerce, 4*(l), 34-39.

Oldenburg, R., and Brissett, D. (1982). The Third Place. *Qualitative Sociology*, *5*(4).

Oldenburg, R. (1989). *The Great Good Place*. New York: Marlowe and Company.

Oldenburg, R. (1999). *The great good place: Cafes, coffee shops, bookstores, bars, hair salons and other hangouts at the heart of a community* (2nd ed.). New York: Marlowe and Co.

Pitta, D. A., and Fowler, D. (2005) Online consumer communities and their value to new product developers. *Journal of Product and Brand Management, 14*(5), 283–291.

Postmes, T., Spears, R. and Lea, M. (2000). The formation of group norms in computer-mediated communication. Preview. *Human Communication Research*, 26(3), 341.

Price, L.L., and Arnould, E.J. (1999). Commercial friendships: Service provider–client relationships in context. *Journal of Marketing, 63* 38-56.

Riggins, F. J. (1999). A framework for identifying web-based electronic commerce opportunities. *Journal of Organizational Computing and Electronic Commerce, 9*(4), 297–330.

Rosen, S. (2001).Sticky website is key to success*. Communication World, 18*(3).

Rosenbaum, M. S. (2006). Exploring the social supportive role of Third Places in consumers' lives*. Journal of Service Research, 9* (1), 59-72.

Schwienhorst K. (1998).The "Third Place" – virtual reality applications for second language learning. In. FBlin J. and Thompson (Eds.), *Where r*e*search and p*r*actice m*e*et*, Proceedings of *EUROCALL'97, ReCALL, 10*(1), 118–126.

SL Wiki (2008). Land metrics forum transcript. Second Life Wiki Retrieved from; http://wiki.secondlife.com/wiki/Land_Metrics_Forum_Transcript

Soukup C, (2006). Computer-mediated communication as a virtual Third Place: Building Oldenburg's great good places on the World Wide Web. *New Media Society, 8*(3), 421.

Steinkuehler, C. (2005). The new Third Place: Massively multiplayer online gaming in American youth culture. *Journal of Research in Teacher Education*, *3*.

Steinkuehler, C., and Williams, D. (2006). Where everybody knows your (screen) name: Online games as "Third Places. *Journal of Computer-Mediated Communication, 11(*4). Retrieved from http://jcmc.indiana.edu/vol11/issue4/steinkuehler.html

Stone, G., (1954). City shoppers and urban identification: Observations on the social psychology of city life. *American Journal of Sociology, 60* , 36-45.

Wetsch, L.R. (2008). The "new" virtual consumer: Exploring the experiences of new users. *Journal of Virtual Worlds Research*, 1(2).