Brand Value in Virtual Worlds
An Axiological Approach
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Brand Value in Virtual Worlds: An Axiological Approach

Abstract

Online virtual worlds are rapidly becoming recognized as an important new channel for marketing and brand-building. However, the nature of the channel is likely to be quite different to other channels, including the Web. To explore this new channel, this research aimed at assessing the brand value of real-life brands that have moved to the virtual world of Second Life. Using axiology, we develop a scale to measure brand value and then assess the value of eight real-life brands in Second Life. The results demonstrate both the value of the methodology and the apparent differences in consumer perceptions of brand in the virtual world.

Keywords: online game; virtual world; marketing; brand value; Second Life.
Track: New technologies and E-marketing
1. Introduction: Virtual Worlds and Implications for Marketing and Brand

Online virtual worlds have become heralded as a technology of substantial future importance for marketers (Hemp 2006). A 'virtual world' is defined as a three-dimensional, computer-generated environment that appears similar to our 'real' world, often massively multi-user and connected to the Internet, and developed to supply online entertainment and social networking for users. In our definition, virtual worlds are open-ended virtual interaction platforms or ‘experience worlds’; thus, goals are not prescribed, and virtual worlds are not games in the traditional sense. Current virtual worlds have become highly interactive, collaborative and commercial; these worlds have the potential to be new channels for marketing content and products, integrating ‘v-commerce’, or virtual e-commerce.

The best-known virtual world is Second Life, which has grown rapidly from 2 million residents in January 2006 to more than 9 million residents in August 2007. Some 1.3 million people ran the official software and logged-in to Second Life in March 2007, an increase of 46 percent in the number of active residents from January 2007 (ComScore 2007). Many of these virtual worlds have a firm basis for commercial development, including an in-world currency, customization of avatars and objects, concepts of property ownership, text and/or voice communication and many different marketplaces and communities (Castranova 2005; Good 2007; Manninen and Kujanpää 2007). Virtual worlds provide extraordinarily flexibility and potential for brand-building. Tools for promotion include, for example, product placement of 3-D objects (similar to product brands, like beverages, as seen in films), real-world analogs (such as billboards and radio), advergames (mini-games or mini-worlds, with some element of advertising), and cross-promotion (such as coupons, dancing or camping in SL) (Vedrashko 2006).

The significance of brands in virtual worlds, such as Second Life, is already apparent. This virtual world, which has more than 9 million residents (as of August 2007), has more than 100 real life brands (Kzero 2007a; b), including those in sectors such as auto (e.g., Mercedes, Mazda and Pontiac), media (e.g., AOL, Reuters and Sony BMG), travel (e.g., STA Travel), consumer electronics (e.g., Intel, Dell, Nokia and Sony Ericsson), consumer goods (e.g. Reebok and American Apparel), telecommunications (e.g. Vodafone and Telus), finance (e.g. ABN Amro and ING) and professional services (e.g., IBM and PA Consulting).

The issue of brand-building in virtual worlds is embryonic. It is likely to follow a similar learning curve to other new media, such as the Web and mobile. However, there is, as yet, no significant academic research output in this area. With this in mind, we embarked on an exploratory study into brand value in virtual worlds, focusing explicitly on the Second Life platform. The key research question for our research is: “What is the brand value of real life brands that have moved to the Second Life virtual world?”

There is a very small but growing literature examining the use of online ‘avatars’ in marketing. Avatars are graphical representations of characters – typically people – and are used in various applications including chat, instant messaging, blogs, games and virtual communities. Evidence suggests that avatars and virtual representations have an important role to play in marketing (Holzwarth et al. 2006; Li et al. 2002; Reeves 2000). Such alter-egos may not equate in attitudes, personality and/or behavior to the individual in the real world. However, no studies have extended this with empirical research into virtual world settings. Virtual worlds are a complex phenomenon because they offer many kinds of marketing experiences hitherto unseen in a single channel (Chambers 2005; Kleeberger 2002; Vedrashko 2006). Virtual worlds are not only designed to entertain users (customers), but also to engage them in an experience. The use of multiple senses in this experience can make it much more effective (Kroeber-Riel and Weinberg 1999, p. 123), and this is even more the case in emotional, new or unstructured stimulating environments of the kind seen in may virtual worlds. Taken to the extreme, virtual
worlds enable the extension of self or the creation of alter-egos that in themselves are the target of marketing (Hemp 2006, pp. 50-57).

Figures 1 and 2 demonstrate two instances of marketing and branding (product placement) in Second Life. This form of advertisement helps to build brand awareness and enables users to experience facets of the virtual or real-life product in 3-D. In these examples, the polygonal representations of a real-life car can be examined and even driven (albeit in a limited, computer controlled fashion) and a mobile phone can be examined and carried on the avatar.

2. Methodology

The approach we use to measure brand value is that of axiology (Hartman 1967); this approach has been proven to be valid and reliable in other studies (Danaher and Mattsson 1998; Lemmink and Mattsson 1996; 2002; Mattsson 1990; Ruyter et al. 1997). Briefly, the axiological value model is based on philosophical assumptions (axioms). It is multi-dimensional and stipulates three basic dimensions; emotional (E), practical (P) and logical (L). The combinations of these value dimensions gives rise to nine value types which comprise our multidimensional scale of brand value (a full account on scale construction has been described in an EMAC paper, see: Mattsson and Wetzels 2006)

A scale of nine items was developed (See Table 1) and applied to eight well-known real-life brands that have moved to Second Life. Respondents were asked to rate each item along a Likert-type scale from “strongly disagree” to “strongly agree” with position four being labeled “neutral”. The design of the surveys was to evaluate eight brands, two in each of four brand types: automotive, consumer electronics, consumer wear and media. The specific brands chosen were considered to be prominent in real life and to have a sufficient brand offering to be evaluated by respondents in Second Life. These brands were Mercedes and Mazda (automotive sector), Nokia and Sony-Ericsson (consumer electronics sector), Reebok and American Apparel (consumer wear sector) and AOL and Sony BMG (media sector). Two surveys were created in QuestionPro; each survey evaluated four brands – one from each sector. The survey randomized the survey questions to reduce ordering bias. A Second Life URL (SLURL) was also provided for each brand to teleport the avatar directly to the SL location. In addition, data was also collected on age, gender and SL experience. An incentive to answer the questionnaire was provided (LS$2500=US$10 approx.) and optionally the Second Life ID (or ‘SLID’ – an individual’s name in SL) was collected to be entered into the prize draw. The winner was selected at random and paid directly in SL.
The survey respondents were recruited via a convenience sample through five academic and professional marketing groups in Second Life. It was felt that such groups would provide the kind of informed feedback necessary for refining the survey and a comment box was provided at the end of the survey for this purpose. Instant messages (IM) inviting responses were posted to groups in SL (along with the web link) and responses collected for two weeks during July 2007. The message was repeated after one week. In total 63 responses were collected representing 252 brand assessments.

Table 1: Item scale

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Question</th>
<th>Value Tag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel great pride identifying with Mazda.</td>
<td>E-E</td>
<td>Emotional value associated with something emotional</td>
</tr>
<tr>
<td>2</td>
<td>What Mazda delivers feels right for me.</td>
<td>E-P</td>
<td>Emotional value associated with something physical</td>
</tr>
<tr>
<td>3</td>
<td>I feel I am able to trust Mazda completely.</td>
<td>E-L</td>
<td>Emotional value associated with something logical</td>
</tr>
<tr>
<td>4</td>
<td>Mazda does me good.</td>
<td>P-E</td>
<td>Physical value associated with something emotional</td>
</tr>
<tr>
<td>5</td>
<td>Mazda is a satisfying buy.</td>
<td>P-P</td>
<td>Physical value associated with something physical</td>
</tr>
<tr>
<td>6</td>
<td>What I get from Mazda is worth the cost.</td>
<td>P-L</td>
<td>Physical value associated with something logical</td>
</tr>
<tr>
<td>7</td>
<td>The uniqueness of Mazda stands out.</td>
<td>L-E</td>
<td>Logical value associated with something emotional</td>
</tr>
<tr>
<td>8</td>
<td>Mazda is a symbol of quality.</td>
<td>L-P</td>
<td>Logical value associated with something physical</td>
</tr>
<tr>
<td>9</td>
<td>Information about Mazda is always correct.</td>
<td>L-L</td>
<td>Logical value associated with something logical</td>
</tr>
<tr>
<td>10</td>
<td>Mazda is a good brand.</td>
<td>-</td>
<td>Overall measure of brand value</td>
</tr>
</tbody>
</table>

3. Results

Both the scale and the brands were statistically analyzed. The sample was 61.9% male and 38.1% female, with a median age of 35 to 44 years. Many respondents had used Second Life for less than six months (69.8%), with 30.2% using it for less than one month; only 11.1% had used SL for a year or more.

3.1 Assessing validity and reliability of the scale

Previous applications of Hartman’s axiology to brand value have variously found three dimensions (items 1-3; 5-6 and 7-9) and uni-dimensionality of the complete scale. Reliability analysis suggests strong reliability of the individual components and of the overall scale, all of which are well above the 0.7 cutoff suggested by Nunnally (1978) above the 0.8 cutoff suggested by Straub and Carlson (1989) for professional applications (range 0.83-0.97). To evaluate the dimensionality of the scale, we used exploratory factor analysis on the pooled data set (n = 252). The data suggests strong and positive correlations between all nine items at the 0.1% level of significance. The global measure of sampling adequacy is also very high (KMO = 0.96) and the null hypothesis of independence among items is rejected at the 0.1% level of significance. The MSA of all items in the anti-image correlation matrix is well above 0.9 (the lowest being 0.95). An exploratory factor analysis with Principal Components Analysis and Direct Oblimin rotation suggests a single factor explaining 79.7% of variance. Factor loadings were all high (0.83-0.94), all of which are well above the 0.5 mark suggested by Hair et al. (1998). Thus, the data supports the hypothesis of mono dimensionality. The scale displays strong convergent validity; the correlation between the scale and question 10 (overall brand value) is 0.87, which is significant at the 0.1% level.

3.2 Analysis of brand value data
Let us now consider the value of each of the eight brands in our two surveys in terms of the individual axiological items in our scale. Comparing the average scores for each brand on the nine value dimensions we can see some broad patterns in the results. For example, the value of Mazda is fairly neutral (around 4 on the 7 point scale) across the board. Mercedes is well above this for all items, with all scores above 4.5. The consumer wear brands, Reebok and American Apparel, are both near-neutral, with Reebok edging slightly positive (averaging 4.21). AOL appears to be rated lowest across all brands, averaging just 3.43. On the other hand, the other media brand evaluated, Sony BMG, rated highly and averaged 4.54. Top of all for brand value are the consumer electronics brands, Nokia and Sony-Ericsson, which averaged 4.87 and 4.72.

For a more definitive comparison based on aspects of E, P and L, we need to group the ratings. Table 2 shows total scores based on emotional, practical or logical evaluation of something (EX, PX and LX) and emotional, physical or logical characteristics (XE, XL and XP). A sum of ratings and the average if question 10, which rated the overall goodness of the brand, are also provided. Overall, question 10 ranks Mercedes highest, well above the competition (average of 5.44). In the cluster below is Sony-Ericsson in second (4.97) and Nokia in third place (4.93). This is followed in another two clusters by Sony BMG and Mazda, and then Reebok and American Apparel. AOL rates lowest at only 3.53, below the mid-point. A similar pattern is found in the overall sum of the nine ratings. There is a core group at the top, with Mercedes and Nokia exchanging places between first and third. Mazda and Reebok, closely rated, exchange ranks between five and six.

Table 2: Grouped brand value dimensions, overall rating and ranking of brands

<table>
<thead>
<tr>
<th>Brand</th>
<th>EX</th>
<th>Rank</th>
<th>PX</th>
<th>Rank</th>
<th>LX</th>
<th>Rank</th>
<th>XE</th>
<th>Rank</th>
<th>XP</th>
<th>Rank</th>
<th>XL</th>
<th>Rank</th>
<th>Sum</th>
<th>Rank</th>
<th>Q10 Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercedes</td>
<td>13.70</td>
<td>4</td>
<td>14.07</td>
<td>3</td>
<td>14.63</td>
<td>1</td>
<td>13.78</td>
<td>3</td>
<td>14.78</td>
<td>2</td>
<td>13.85</td>
<td>2</td>
<td>42.41</td>
<td>3</td>
<td>5.44 1</td>
</tr>
<tr>
<td>Sony-Ericsson</td>
<td>14.06</td>
<td>2</td>
<td>14.31</td>
<td>2</td>
<td>14.11</td>
<td>3</td>
<td>14.03</td>
<td>2</td>
<td>14.64</td>
<td>3</td>
<td>13.81</td>
<td>3</td>
<td>42.47</td>
<td>2</td>
<td>4.97 2</td>
</tr>
<tr>
<td>Nokia</td>
<td>14.44</td>
<td>1</td>
<td>14.89</td>
<td>1</td>
<td>14.52</td>
<td>2</td>
<td>14.48</td>
<td>1</td>
<td>14.89</td>
<td>1</td>
<td>14.48</td>
<td>1</td>
<td>43.85</td>
<td>1</td>
<td>4.93 3</td>
</tr>
<tr>
<td>Sony BMG</td>
<td>13.81</td>
<td>3</td>
<td>13.78</td>
<td>4</td>
<td>13.30</td>
<td>4</td>
<td>13.59</td>
<td>4</td>
<td>14.00</td>
<td>4</td>
<td>13.30</td>
<td>4</td>
<td>40.89</td>
<td>4</td>
<td>4.74 4</td>
</tr>
<tr>
<td>Mazda</td>
<td>12.17</td>
<td>6</td>
<td>12.50</td>
<td>6</td>
<td>12.47</td>
<td>6</td>
<td>11.89</td>
<td>6</td>
<td>12.86</td>
<td>5</td>
<td>12.39</td>
<td>6</td>
<td>37.14</td>
<td>6</td>
<td>4.72 5</td>
</tr>
<tr>
<td>Reebok</td>
<td>12.53</td>
<td>5</td>
<td>12.56</td>
<td>5</td>
<td>12.81</td>
<td>5</td>
<td>12.28</td>
<td>5</td>
<td>12.86</td>
<td>5</td>
<td>12.75</td>
<td>5</td>
<td>37.89</td>
<td>5</td>
<td>4.39 6</td>
</tr>
<tr>
<td>American Apparel</td>
<td>11.81</td>
<td>7</td>
<td>11.70</td>
<td>7</td>
<td>12.33</td>
<td>7</td>
<td>11.70</td>
<td>7</td>
<td>12.11</td>
<td>7</td>
<td>12.04</td>
<td>7</td>
<td>35.85</td>
<td>7</td>
<td>4.33 7</td>
</tr>
<tr>
<td>AOL</td>
<td>9.86</td>
<td>8</td>
<td>9.89</td>
<td>8</td>
<td>11.08</td>
<td>8</td>
<td>10.72</td>
<td>8</td>
<td>10.36</td>
<td>8</td>
<td>9.75</td>
<td>8</td>
<td>30.83</td>
<td>8</td>
<td>3.53 8</td>
</tr>
</tbody>
</table>

3.3 Analysis of responses by age, gender and SL experience

We were interested to see if there were any differences in responses due to demographic variables. For this purpose we used ANOVA on the data for each brand. We found no differences in the responses to items or grouped variables (EX, PX, LX, XE, XP, XL and Overall) according to gender. However, we did find significant differences in the perceptions of those that had used SL for less than three months and three months or more. Specifically, those that had used SL for longer periods of time had lower ratings for AOL, Mercedes, American Apparel, Sony BMG and Nokia. Apparently, some brands and their products and services do not port easily to SL and deteriorate in the perceptions of more experienced users.

4. Discussion

The evidence suggests a strong, valid and reliable mono-dimensional scale for measuring brand value. The application of the scale to eight well-known brands in SL suggests strong variation in brand value, both overall and within the particular elements of emotional, physical and logical value. Perhaps not surprisingly, the prestige brands of Nokia, Sony-Ericsson and Mercedes rated highest. The representation of clearly recognizable designs and image for mobile phones and
cars translates nicely to SL. AOL was a major outlier and rated very poorly in all aspects. Other brands fell in-between.

Although the rankings were similar throughout, there was also some variation in the aspects of brand value rated more highly; for example, Mercedes rated better on logical evaluation and less well on emotional aspects. To some degree this make intuitive sense, since Mercedes is all about uniqueness, quality and high specifications, but it is difficult to get emotionally excited about a car that is represented in 3-D; the emotional quality of the cars interior and attention to detail, the purr of the engine, and so on are mitigated. Similarly, American Apparel does not work well for physical aspects; the look and feel of good value and well-designed clothing does not translate easily to virtual worlds.

Perhaps most interesting are the differences in perceptions of respondent groups. While age and gender had little effect, experience with SL does and the data supports the anecdotal evidence in the business press that experienced users are not impressed with the way many RL brands have approached SL. For example, the Brand Science Institute (2007) in a survey of 200 SL users found the 72% were disappointed with the brand activities of companies in SL, with 42% citing a lack of commitment; only 7% suggested a positive brand influence. Moreover, users of SL, by nature of wearing a different persona, are likely to think differently (Hemp 2006). Nokia and Mercedes appear to be hit hardest across many aspects by the ‘SL Effect.’ AOL appears to lose its emotional value at AOL Pointe and AA is not such good value for money for digital clothes bought in a virtual world, however similar the designs may look.

5. Conclusions

Overall, the study suggests that virtual worlds are a very different area of brand research that will require considerable attention from researchers and practitioners alike in order to create perceptive value for consumers. Clearly, the issue of moving a brand from real life to Second Life is not straightforward and even big brands like AOL are having major problems making it work. Considerable effort is required in understanding the nature of the brand and repackaging, and, in some cases, reformulating this in a way that is compatible with virtual worlds, their altered reality and that of their residents. Although this parallels the initial challenges with marketing on the Web, the more absorptive, individualized and highly interactive nature of the medium imply that this is a step change of much greater magnitude. Notwithstanding, other established or entrenched new media channels have a rich set of metrics to learn from. Such metrics do not yet exist in virtual worlds, providing a compelling research issue. Many topics in this highly embryonic area of research and practice warrant future investigation. Here, we draw attention to the following questions:

- What are the determinants of consumer behavior with respect to branding in virtual worlds and what metrics can we use to measure brand effectiveness in virtual worlds?
- How effective are models of branding in virtual worlds both compared to each other and to other forms of branding on the Internet?
- What is the impact of branding in virtual worlds on other aspects of consumer behavior, including perceived utility, trust and product knowledge?
- How does branding in virtual worlds impact on various typologies of consumers?
- How do brands develop in virtual worlds and what is the role of advertising?
- What is the value and likelihood of success of real-life brands in virtual worlds and how are the aspects of brand value (e.g., emotional, physical and logical) similar or different to brands in real-life?
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