IS THE TIME RIPE FOR BRANDING OF SOFTWARE PRODUCTS

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ABSTRACT

Branding of products provides many benefits to the users as well as providers of products. However, unlike other products not much research and industry efforts have been expended into building strong software brands. In this study we identify the reasons for this state of affairs using a multi-disciplinary review of literature as well as anecdotal and empirical evidences. The results of the study show that software industry and products have so far followed a trajectory similar to that of other industries and products in its evolutionary path but with a time lag. In line with this observation we expect increasing relevance of abstract benefits to the users of software products, such as hedonic and social benefits. Also, the significant impacts of these abstracts benefits in building successful software brands as measured by brand loyalty indicates that the time is now ripe for branding of software products.

Keywords

Software Branding

INTRODUCTION

Although brands are diverse and offer different benefits to different users/consumers in different ways, “at the root of all branding activity is the human desire to be someone of consequence, to create a personal and social identity, to present oneself as both like other people (e.g. to belong) and unlike other people (e.g. to stand out), and to have a good reputation” (Bastos and Levy, 2012, p. 349). However, in this study we find that IS (Information Systems) literature has largely focused on the functional and hedonic benefits of software products but ignored these symbolic benefits. As a result literature on software branding and strong software brands are conspicuous by their absence.

The few software organizations that have successfully exploited the symbolic or social needs of users have produced strong brands. Companies like Apple have altered the look, form and feel of their products, including software products, thereby converting traditional technological tools into objects that are personally meaningful, and with which the consumers like to identify with and show off to others (Ravasi and Rindova, 2008).

In this study, we conduct a multi-disciplinary review of literature to first understand why branding of software products have not come of age compared to other products and services. We then examine empirically based on concepts gleaned from the review findings whether the time is ripe for branding of software products. The results of the study show that the relevance of abstract benefits such as the hedonic and social benefits to users of even utilitarian software products indicate that software development organizations can now creatively brand their products to provide new value propositions to their users and differentiate them from competition.

LITERATURE REVIEW

A brand is traditionally defined as a name, term, sign, symbol, or design, or combination of them which is intended to identify the goods and service of one seller or group of sellers and differentiate them from those of competitors” (Kotler, 1991; p. 442). However, brands also take on metaphorical forms in addition to the material form. Beyond tangibles such logo, name and design, brands also incorporate intangibles such as identity associations and personality (Bastos and Levy, 2012).

Before the advent of branding as a business practice, products were sold in bulk. Typically, for example, general stores would sell commodities stored in sacks of grains and coffee beans, barrels of pickles, and slabs of cheese for consumers’ consumption. However, in the late nineteenth century products for sale were packaged and labelled, with the producers’ name and reputation becoming associated with additional value. However, with producers making similar claims about their products, it was suggested that a greater awareness should be created on the social and psychological nature of the products (Gardner and Levy, 1955, p. 34). And with the advent of TV, radio, print advertising and e-marketing in the twentieth century, branding evolved from relying solely on producers’ reputation to projecting brand image, fantasy and symbolic values (Moore and Reid, 2008, p. 429).
Brands today have become means of communicating our values (Schulz and Stout, 2010) and devices for associating ourselves with some groups and disassociating ourselves from others (Han et al., 2010; White and Dahl, 2007). They have become increasingly anthropomorphized and are imbued with distinctive personalities that consumers or users would like to identify with (Aggarwal and McGill, 2010; Swaminathan et al., 2009; Yorkston et al., 2010). For example, baby carrots were earlier sold like commodities. However, now “baby-carrot farmers are launching a campaign that pitches the little, orange, crunchy snacks as daring, fun and naughty – just like junk food. . . .The goal is to get people to think of baby carrots as a brand they can get excited about.” (Fredrix, 2000).

Just as sophisticated brands evolved from over time from commodities which had functional/ material benefits as the focus, the IS discipline had earlier focused largely on utilitarian aspects of software products and technologies. The reason may lie in the computing disciplines’ origins in disciplines that emphasize hard science, efficiency, and utility (Tractinsky, 2006). Practitioners in general took a narrow view of users’ experience by considering only user requirements for work related activities (Stelmaszewska, Fields, and Blanford, 2004).

However, today, employees desire a fun workplace. A majority of workers under the age of 30 list having coworkers who “make work fun” as an important factor in their job search (Belkin, 2007). It has also been suggested that people who have fun at work experience less stress (McGhee, 2000; Miller, 1996), demonstrate lower turnover and absenteeism (Mariotti, 1999; Zbar, 1999), and are more energized and motivated (Stern and Borcia, 1999). People who have enjoyment at work get along with others better (Meyer, 1999) and provide better customer service (Berg, 2001).

In line with these expectations organizations have made numerous attempts to hedonize the work place from the omnipresent college-campus feel of the Googleplex (Schoeneman, 2006) to the free gourmet bistro and cafes onsite (“There’s always a free lunch”, 2007), Google embodies a fun workplace. In a similar vein, Southwest Airlines’ “corporate culture of fun” encourages employees to engage in outrageous behaviors with the goal of fostering a friendly and fun work environment (Sunoo, 1995). The Kodak headquarters office in New York allows employees to go to a “humor room” to take a “fun break” (Caudron, 1992).

The IS (Information Systems) literature perhaps as a reflection of these trends recognized the need to introduce perceived enjoyment in the core TAM (Technology Acceptance Model) as one of the determinants of behavioral intention of users to use the system in addition to perceived usefulness (Venkatesh, 1999). In fact, a recent meta-analysis of TAM studies by Gerow, Ayyagari, Thatcher and Roth, (2013) showed that both perceived usefulness and perceived enjoyment are equally important in behavioral intention of users to use a system.

Yet, although the HV and the UV are well researched in Human Computer Interaction and Information Systems literature, less attention has been focused on symbolic or social value (SV) provided by software products. Symbolic value fulfills intrinsic consumer need for personal and group identity (Smith and Colgate, 2007). Users are known to identify themselves in relation to other users or group of users (Bagozzi, 2007; Kelman, 1974). One can expect software products will also provide self-esteem and status benefits to its users. By sharing their knowledge and expertise users can enhance their own self esteem as well as status within the desired community of users. Self-esteem and status can provide immense psychological and emotional benefits to the user. Status is often pursued by users as an ego reward (Emerson, 1962), or a source of gratifying social contract (Homans, 1950) and serves as a psychological asset (Fornbrun, 2001).

Therefore, all three values – UV, SV and HV - are likely to be influential user loyalty (UL) of software products. Brand attachment literature reveals that as in inter-personal relationships between people, consumers seek a total experience with brands, an experience not limited to the functional but also but also emotional and social (Fornbrun, 2001; Brakus, Schmitt and Zaramonello, 2009; Iglesias, Singh and Batista-Foguet, 2011). The stronger and more varied the dimensions of experience the more will be the strength of brand attachment and greater will be its impacts on user outcomes such as the intention to use and continue to use a hoping outlet for making purchases.

THEORY DEVELOPMENT

In the consumer behavior literature the value provided by the product is suggested to lead directly to favorable outcomes such as behavioral intentions (BI) to purchase, use or remain loyal to a product or service (e.g., Chang and Wildt, 1994; Cronin et al., 1997; Gale, 1994; Sirohi, McLaughlin and Wittink, 1998; Sweeney, Soutar, and Johnson, 1999; Wakefield and Barnes, 1996; Holbrook, 1994; Yang and Peterson, 2004). Sirdeshmukh, Singh and Sabol (2002) argue that customer value is a superordinate goal and behavioral intention is a subordinate goal. According to
goal and action identity theories, a superordinate goal is likely to regulate subordinate goals. Thus, “customer value regulates behavioral intentions toward the service provider as long as a product or service provides superior value” (Sirdeshmukh et al., 2002, p. 21). Further, loyalty is the result of the individual’s belief that the value received from consuming a product or service is greater than the value of non-consuming (Hallowell, 1996). In response to this greater value obtained, the individual is motivated to remain loyal to the product, and also promote it by, for instance, positive WOM behaviors (Luis, Carlos and Migue, 2008).

The UV that the user derives from the utilitarian attributes of a software product is the degree to which it helps her achieve functional and practical goals. The HV that the user derives from hedonic attributes of a software product is the degree to which it gives her pleasure, enjoyment or fun. The SV that users derive from the use of the software product is the extent to which it provides both self-esteem and status benefits to the users. Thus, UV, SV and HV are antecedents of UL. The greater the UV, SV and HV derived by the user of the software product the greater will be their impact on UL. All three values provided by the software product, SV, UV and HV, will therefore significantly and positively impact UL, leading us to the following hypothesis:

Hypothesis 1: The UL for a software product will be positively influenced by the perceived UV, HV and SV of the software product to the user

Studies have shown that utilitarian product features are like Herzberg’s (1959) Hygiene factors and hedonic product features are like Herzberg’s (1959) Motivators (Zhang and von Dran, 2002; Hassenzahl, Diefenbach and Göritz, 2010). We can therefore expect that once products provide the basic level of functionality (UV) HV (and SV) will have a higher impact on UL than UV.

Norman (1998) suggested that once software meets the functional requirements of the users, considerations of convenience and reliability, and, later, of appearance and symbolic ownership will become more important. The watch industry today, Norman (1998) noted, after having met the consumer needs of accurate time keeping and durability is focusing on styling and exclusivity e.g. Rolex watches are purchased as a symbol of status, image and prestige. Aaker (2001) in the article “Beyond Functional Benefits” noted that successful brands are those which focus beyond providing functional benefits to providing emotional (HV) and self-expressive and social benefits(SV). For example, not only are Apple products aesthetically pleasing (HV) but using Apple product creates the impression to users of being “creative” (Aaker, 2009). Thus, the SV and HV (motivators) derived from the use of even utilitarian software products may become more important to users than UV, once these products provide a satisfactory level of UV (hygiene factor).

Hypothesis 2: UV will moderate the impact of HV and SV on UL such that at high level of UV the impact will be higher than their impacts on UL at low level of UV

**METHOD**

**Study Setting and Design**

Two task planning applications, Trelio and Easynote.io, were chosen for testing the proposed hypothesis. Choosing these two products with different features for our study is expected to provide the variation necessary to comprehensively investigate the impact of change in value provided by the software product on brand loyalty. Actual users of Trelio and Easynote.io were involved in the study. To mitigate alternative explanation of the results due to extraneous variables such as segmental differences in user preferences, a representative young user group of 19-24 year olds were recruited as subjects. Users in this age group are recognized as innovators and early adopters of the latest technologies (Ehrenberg, Juckes, White and Walsh, 2008). Both Trelio and Easynote.io are popular task planning softwares used by youngsters such as college students.

**Subjects**

The subjects were recruited from a large public university. The college of business of this university encourages research exposure by awarding junior and senior students extra credit in identified course for research exposure. An email was sent to all junior students of the college of business, who were users of Trelio and Easynote.io, inviting them to participate in the study. We received 188 responses from Trelio users and 176 responses from Easynote.io users. Based on this response we invited all 198 Easynote.io students and 176 Trelio users to participate in the study. Among the 188 users of Trelio and Easynote.io who participated in April 2014 169 Easynote.io users and179 Trelio users were administered the test in April 2015. The remaining either did not turn up or were not administered the test.
because they were no longer users of task planning softwares or had switched to a software different from the one they were using earlier.

**Measures Used**

Tested measures were used to capture data. Rintamaki et al. (2006) scales were used for SV, the Babin, Darden and Griffin (1994) scale was used for HV and the Venkatesh and Davis (2006) scale was used for UV. The UV scale represented by items U1 to U5, the HV scale represented by items H1 to H5, the SV scale represented by items S1 to S6, and the SL scale represented by items S1 to SL4 (see Appendix B). The Yoo and Donthu (2001) was used for measuring Brand Loyalty with items L1 to L3. All measures used a 9-point Likert scale with anchors of 9 (strongly agree) and 1 (strongly disagree) in line with the recommendation that increasing the number of choice-points increases scale sensitivity without damaging scale reliability (Cummins and Gullone, 2000). Responses were coded such that high levels of the constructs are represented by high values. Some items were reverse coded. The overall value for each construct was created by averaging the user responses.

**Control Procedures**

Extraneous variables such as age, gender and length of use experience were controlled for in the analysis of subject responses. Studies have shown that HV impacts females and males differently (Gefen and Straub, 1997; Venkatesh, Morris and Ackerman, 2000; Wu and Lu, 2013). Further, younger men tend to seek greater novelty and innovativeness in the early stages of using a new technology (e.g., Chau and Hui, 1998) such as a software product. Thus age and gender may impact the assessment of HV derived from the use of software. Additionally, length of use experience may impact UL. If the user derives value from using a software product it becomes increasingly important to him due to habitual use behavior. When a behavior has been performed many times in the past, subsequent behavior increasingly becomes under the control of an automated cognitive process (Aarts, Verplanken and van Knippenberg, 1998). Users form favorable intentions about acts they have frequently performed in the past (Ouellette and Wood, 1998), such as repeated use of software, making them increasing dependent on the habit (Gefen, 2003) thereby enhancing their loyalty to the brand.

**Method of Analyses**

Factor analysis was performed on the combined data set obtained from the two user groups in April 2014 to establish that validity and reliability of the measures used in the study. Further, the correlation matrix and internal reliabilities of the measures were also examined. The widely recommended Moderated Hierarchical Multiple Regression (MHMR) was used for testing the direct and interaction effects of independent variables (Cortina, 1993; Cohen, 1978; Dunlap and Kemery, 1987; Stone and Hollenbeck, 1989). MHMR reveals how well each independent variable predicts the dependent variable, after extracting variance due to other independent and control variables in the regression equation and interaction effects after extracting variance due to independent and control variables.

**RESULTS AND ANALYSES**

The results of the factor analysis using IBM© SPSS© Statistics Version 19 show that the factors extracted using Varimax rotation represented the scales used in the study (the UV scale represented by items U1 to U5, the HV scale represented by items H1 to H6, the SV scale represented by items S1 to S6, the UL scale represented by items L1 to L3 (see Appendix A and B).

<table>
<thead>
<tr>
<th>Name of the scale</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilitarian Value (UV)</td>
<td>0.960</td>
<td>5</td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>0.941</td>
<td>5</td>
</tr>
<tr>
<td>Social Value (SV)</td>
<td>0.888</td>
<td>6</td>
</tr>
<tr>
<td>User Loyalty (UL)</td>
<td>0.860</td>
<td>3</td>
</tr>
</tbody>
</table>

*Table 1. Internal Reliability of Scales*

The high loadings (> .50) within factors demonstrated convergent validity of items within scales, and the no cross loadings (> .40) between factors demonstrated discriminant validity between scales. The internal reliabilities of all the scales used in the study were greater than .70 (see Table 1). Further none of the inter-correlations between the scales were greater than .65 (Tables 2 and 3).
Tables 2 and 3 provide the means and standard deviations of UV, V, and SV provided by both products to the users. Although different, the means of SV, HV, and UV were significantly greater than 0 for both products.

We next conducted a MHMR analysis for assessing the impacts of change in impact of HV, UV or HV on UL over time after controlling for age, gender, use experience and users’ psychological needs. The results of the MHMR analyses (Table 5) for both Trelio and Easynote.io show that UV, HV and SV significantly impacted UL, thus supporting Hypothesis 1.

The results for the interaction e shows that the interaction impacts of UV*HV and UV*SV were found to be significant but the interaction impact of HV*SV was not found to be significant. Further, hedonic benefits (HV) and social benefits (SV) had a significantly (at p<0.05) higher impact on brand loyalty when utilitarian benefits (UV) is high (1 Standard Deviation above mean) but not when utilitarian benefits (UV) is low (1 Standard Deviation below mean). The Beta (B=0.245, 0.271) for hedonic benefits (HV) is significantly (p<=0.05) greater at high utilitarian benefits (UV) for both software products that at low utilitarian benefits (UV), Beta (B=-0.021, -0.019). The Beta (B=0.222, 0.253) for social benefits (SV) is significantly (p<=0.05) greater at high utilitarian benefits (UV) for both software products.
software products that at low utilitarian benefits (UV), Beta (B=0.026,-0.007). Thus Hypothesis 2 was also fully supported.

<table>
<thead>
<tr>
<th>Step</th>
<th>Variables added in each step</th>
<th>Change in R-Square - Trello</th>
<th>Change in R-Square - EasyNote.io</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control: Gender, Age, Experience, Needs</td>
<td>0.119**</td>
<td>0.112**</td>
</tr>
<tr>
<td>2</td>
<td>Main Effect: UV</td>
<td>0.122*</td>
<td>0.139*</td>
</tr>
<tr>
<td>3</td>
<td>Main Effect: HV</td>
<td>0.082*</td>
<td>0.091*</td>
</tr>
<tr>
<td>4</td>
<td>Main Effect: SV</td>
<td>0.076*</td>
<td>0.058*</td>
</tr>
<tr>
<td>5</td>
<td>Interaction Effects UB<em>HB, UB</em>SB, SB*HB</td>
<td>0.102** (0.112*, .121*, 0.047)</td>
<td>0.103** (0.119*, 0.118, 0.02)</td>
</tr>
</tbody>
</table>

*p < .05, ** P < .01 ***p<.001

Table 5. MHMR for impacts of UV, HV and SV on UL

CONCLUSION

Successful brands are symbol intensive. However, the symbolic value of software products has never been investigated. This study, perhaps for the first time shows that today symbolic value is relevant even for software products. Users derive significant SV from the use of software products and SV significantly influence the success of brands as measured by their user loyalty. These findings indicate that IS researchers and practitioners need to focus on enhancing abstract values (HV and SV) of even utilitarian products to develop them into successful brands in future. While both industry and practitioners have realized the importance of HV of software products, they still need to turn attention to SV. With the focus on SV researchers and practitioners can usher in a hitherto unexplored era of branding of software products.

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