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The Impact of In-Group Membership on e-Loyalty of Women Online Shoppers: An Application of the Social Identity Approach to Website Design

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ABSTRACT

The objective of this study is to propose and test the Social Identity Approach to Website Design research model, which considers the role of Social Identity in the development of e-Loyalty. Using an online survey instrument comprised of existing Information Systems and Social Identity measures, data were collected from 322 women online shoppers who were members of the salient ingroup. The results of this study indicate that, in women online shoppers, the perception of social presence in an online retail store positively influences their enjoyment of the online shopping experience. The results also suggest that women online shoppers’ enjoyment of an online shopping experience positively influences their intention to revisit the website or recommend the website to other online shoppers, which are e-Loyal behaviors. In addition, this study extends related studies by proposing and testing the psychographic nature of human-computer interaction as a possible catalyst for e-Commerce Success.

Keywords: e-Commerce, e-Loyalty, Enjoyment, Gender, Information Systems Success, Online Shopping, Social Identity, Women

1. INTRODUCTION

Determining how to increase e-Loyalty by enhancing the shopping experiences for women online shoppers is a major issue faced by online retailers (Cyr, 2008). Research suggests that women online shoppers are more likely to revisit a website if the design and capabilities are appealing (Rosen & Purinton, 2004). E-Loyalty, which is an enduring psychological attachment to an online retailer, is manifested in customer attitudes and behaviors toward the e-tailer (Anderson & Srinivasan, 2003; Butcher et al., 2001) and thus, research that examines the elements that contribute to e-Loyalty should consider the impact of the psychological profile of online shoppers.

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Questions surrounding online retail environments and how the effects of traditional in-store cues impact the shopper’s experience continue to emerge as the number of transactions increase (Eroglu, Machleit, & Davis, 2003). Emotions plan an important role in creating a positive online shopping experience as presented in previous research findings. This is particularly significant in relation to women online shoppers. Research suggests that they perceive websites differently than men and that women are generally more receptive to emotive or hedonic design elements embedded in the online experience (Cyr & Bonanni, 2005; Rodgers & Harris, 2003; VanSlyke, Comunale, & Belanger, 2002). Although Cyr et al. (2007) identifies this gender distinction in response to motive responses, many organizations do not currently consider these preferences in their website design.

Further, some research suggests that women are less likely to engage in transactions via the Internet and are overall less satisfied with their online shopping experiences (Garbarino & Strahilevitz, 2004; Rodgers & Harris, 2003). According to Moss and Gunn (2005), this lack of satisfaction may result from website designs that are not compatible with women’s design preferences. Thus, the inadequate emotional benefits as traditionally perceived by women may invoke less involvement in online shopping activity by women (Rodgers & Harris, 2003).

Interestingly, women’s online presence is significantly increasing so enhancing their customer satisfaction is extremely relevant for retailers. According to Phillips (2009), 106.3 million women or 51.8% of all Internet users are women, with an expected increase to 115.2 million women (52.1%) in 2013. In addition, women’s annual spending online is gradually increasing. To gain success with this target market, this data strongly suggests website designers must consider the preferences of women and examine in detail the elements that contribute to their perceptional differences (Cyr & Bonanni, 2005).

1.1. Purpose of the Study and Research Questions

This study examines the relationship between website design and e-Loyalty vis-à-vis psychographic preferences and tendencies of women online shoppers using the Social Identity Approach to Website Design (Coverdale, 2010). Applying the Social Identity Theory to the realm of e-Commerce, research suggest that online shoppers’ social identities influence their buying behaviors. The purpose is to understand the impact of these preferences and elements that influence women online shopping behavior.

The research questions that serve as the foundation for this study are as follows:

- How is e-Loyalty in women online shoppers influenced through website design?
- What role does the psychological tendencies and preferences of women online shoppers play in their inclination toward revisiting or recommending an e-Commerce website?

In the empirical examination of these research questions, it is expected that the perceived psychological presence of others as created through social presence website design elements will have a positive influence on women’s enjoyment of an online shopping experience. In addition, this research study posits that the degree of a woman’s social identification, as it relates to a particular social group made salient through website design, will have a positive impact on her enjoyment of an online shopping experience.

It is also expected that her enjoyment of a particular online shopping experience will positively influence her intention to revisit the website or recommend it to other women online shoppers, both of which are e-Loyal behaviors.
2. LITERATURE REVIEW

2.1. “Affective” Website Design

Although the importance of the online shopping enjoyment has been illustrated in previous research, website design recommendations often ignore the affective nature of online shoppers. Many design guidelines do not consider consumer emotions that may arise during an online shopping experience, although previous research has found that shoppers’ affective state impact their shopping behavior (Bagozzi & Yi, 1999; Turley & Milliman, 2000). For example, Ethier (2005) found that cognitive appraisals of website design elements such as information richness, visual aspects, and social elements influenced emotions felt by consumers during online shopping experiences.

According to Chen and Dhillon (2002), in an e-Commerce operation, the website is possibly the only mode of communication between an e-tailer and its customers, thus, its appearance and structure have the ability to influence a consumer’s purchasing intention. As such, website elements such as content, functionality, and aesthetics have a significant role in influencing e-Loyalty within online shoppers (Palmer, 2002).

2.2. E-Loyalty

Online loyalty, or e-Loyalty, extends the traditional concept of brand loyalty to the technology-mediated online shopping realm (Schultz, 2000). According to Childers, Carr, Peck, and Carson (2001), online shoppers experience both utilitarian and hedonic dimensions, which motivates them to seek additional shopping experiences. Internet vendors strive to capture the international market through the creation of positive online shopping experiences that encourage return visits and repeat purchase opportunities, resulting in e-Loyalty (Cyr, 2008).

2.3. Gender Issues in E-Loyalty

Researchers have found that there is a clear difference relating to the perception of website design between women and men, which adds an additional level of complexity for B2C e-Commerce vendors who strive to encourage e-Loyalty (Cyr & Bonanni, 2005). Prior research on gender-related Internet attitudes and activities suggest that women are less interested in the Internet, spend less time online than men, and are less likely to purchase online (Cyr & Bonanni, 2005).

According to Dittmar et al. (2004), the computer environment is generally masculine and may lead to feelings of disempowerment in women. They also found that men reported a more satisfying online experience than women. A study conducted by Jackson, Ervin, Gardner, and Schmitt (2001) confirmed that women report less computer self-efficacy and more anxiety when using a computer, which possibly contributes to the lack of satisfaction with computer use and decreases the enjoyment of online shopping.

It is believed that positive emotion towards a specific product and/or service increases cognition toward the offering or toward the company offering the product and/or service (Cyr et al., 2007). Thus, positive emotional states can encourage customers to return to a particular brand or company again in the future, creating e-Loyalty (Rodgers & Harris, 2003). In the cognitive tradition, emotions are responses to appraisals that an individual makes toward an object or experience that is relevant to his/her well-being (Bagozzi & Yi, 1999).

According to Rodgers and Harris (2003), it is feasible to believe that emotions will interact with gender to impact online shopping satisfaction, especially with women consumers. In previous examinations of the relationship between emotional connection and e-satisfaction, empirical data supports this claim and researchers have found that the perceived lack of emotional benefits for women e-shoppers are a primary reason why women are not as supportive of e-Commerce activity as their male counterparts (Cyr et al., 2007).

In their examination of gender differences in perceptions of online shopping, Van Slyke et al. (2002) indicated that women generally
view shopping more as a social activity than men. In terms of purchasing attitudes, men are more functional and women stress emotional involvement, social-experiential, and identity-related concerns (Dittmar et al., 2004). They also mention that since women seek to benefit from the social aspects of traditional shopping, it is possible that online shopping may be viewed less favorably by women because of the lack of social opportunities, thus, negatively impacting women’s perception of the advantage of online shopping. In order to reconcile women’s desire for social interaction during their shopping experiences with the convenience of online shopping, Van Slyke et al. (2002) suggest that online merchants should consider adding social features such as chat rooms and threaded discussions to build a shopping community and eliminate the perception of the solitary nature of online shopping.

Cyr et al. (2007) found that women’s e-Loyalty was more influenced by the presence of hedonic elements on an e-Commerce website than men. The enjoyment variable was found to have a significant impact on e-Loyalty for women, while this enjoyment–loyalty relationship was found to be insignificant for men. In their qualitative analysis of the comments provided for their open-ended questions, Cyr et al. (2007) noticed that women online shoppers desired to be engaged by the website content, while men online shoppers were more utilitarian in their needs. Thus, Cyr et al. (2007) concluded that women online shoppers appear to seek warmth, sociability, and enjoyment in their online shopping experiences and online vendors that embed these qualities into their e-Commerce ventures may experience a greater impact on e-Loyalty in their women online shoppers (Cyr et al., 2007).

Consistent with the above findings, the Social Identity Approach to Website Design model (Coverdale, 2010) suggests that the social identity of women online shoppers interacts with the social presence elements embedded within a website to influence and increase her enjoyment of the online shopping experience fostering an e-Loyal relationship. The Social Identity Approach, which is an umbrella term that encompasses the Social Identity Theory and the Self-Categorization Theory, has emerged in social psychology literature and attempts to explain self-definition, group-relevant behavior, and contextual influences on self-identification (Abrams & Hogg, 1990). The tenets of the Social Identity Approach are discussed below.

2.4. Social Identity Theory

Social Identity Theory is a well-researched theory of group processes and intergroup relations in the field of social psychology. Tajfel (1978) defines the social identity construct as “that part of an individual’s self-concept which derives from his [or her] knowledge of his [or her] membership of a social group (or groups) together with the value and emotional significance attached to that membership” (p. 63). Thus, social identity refers to how individuals view themselves in terms of their social group memberships that are important in the definition of their self-concept (Hogg & Abrams, 1990). An individual’s identity is linked to the characteristics of the social groups in which he/she holds membership. Therefore, the social cognitive processes that are associated with a particular group membership produce behavior that is thought to be characteristic of the group (Abrams & Hogg, 1990; Hogg & Terry, 2000).

The socio-cognitive processes of social categorization and self-enhancement determine an individual’s social identity (Hogg et al., 1995). Social categorization produces group-distinctive ideals and perceptions and creates boundaries between the in-group and the out-group. Self-enhancement serves as a guide for an individual’s social categorization processes and defines the group norm to favor members of the in-group significantly. Comparisons between a salient in-group and out-group will tend to favor an individual’s in-group and in the process, enhance one’s self-concept (Hogg & Terry, 2001).

A central concept within Social Identity Theory is that individuals exhibit significant
favoritism to members of their ingroup. Social Identity researchers propose that the adoption of social identity-based attitudes and behaviors is dependent on perceptions of support for those attitudes from other ingroup members (Johnston & White, 2003). Social group norms are intrinsically tied to membership in contextually salient social groups, thus impacting the resulting behaviors of ingroup members, because the group is behaviorally relevant (Johnston & White, 2003). This concept serves at the foundation of the current research study’s linkage between an online shopper’s social identity and encouraging loyalty to an e-Commerce website through designing the website to appeal to a specific social group by emanating communications that exhibit group promoting behaviors as if an in-group member.

2.5. Self-Categorization Theory

While the Social Identity Theory focuses on the purposes of social categorization, the Self-Categorization Theory, a subset of the Social Identity Theory, focuses on the processes by which individuals categorize themselves into specific social groups and acquire social identities (Turner et al., 1987). Specifically, the Self-Categorization Theory discusses how social categorization creates depersonalization through the use of prototypes to generate a group-based social identity (Turner et al., 1987). The process of self-categorization assimilates oneself to the prototype of a specific ingroup, which depersonalizes an individual’s self-concept (Hogg & Terry, 2000).

The responsiveness of an individual’s social identity to immediate contextual situations is the central feature of the Self-Categorization Theory. A specific social category becomes salient when one’s personal characteristics and the present situation combine to create a context strong enough to depersonalize one’s personal identity (Lantz & Loeb, 1998). The contextual strength is based on the perceived differences between an individual, ingroup members, and outgroup members, with depersonalization in favor of the salient social group occurring when the differences between an individual and ingroup members are minimized and the differences between an individual and outgroup members are maximized (Turner et al., 1987).

2.6. Social Attraction Hypothesis

The Social Attraction Hypothesis within the Self-Categorization Theory and the Social Identity Theory provides a more detailed analysis of the depersonalization and prototype-based attitude adoption process. According to the Social Attraction Hypothesis, for the social group that is made contextually salient, ingroup members who are deemed more prototypical are liked more (Hogg, 1987, 1992, 1993). That is, members who embody characteristics, attitudes, and behaviors that align closely with the shared ideals of the prototypical member are perceived more favorably. When the created group prototype is consensually created, which is the typical case, those who are more prototypical are consensually liked and in situations where all members display highly prototypical tendencies, social attraction between group members occurs (Hogg & Terry, 2000).

In sum, according to the Self-Categorization Theory and the Social Attraction Hypothesis within the Social Identity Theory, when external stimuli are present that create a fit between an individual and one of their member social groups, one’s personal identity will merge with the most contextually relevant group’s social identity. Additionally, ingroup members who are highly prototypical and display a high degree of prototypicality are sought after and liked more by other ingroup members.

3. THEORECTICAL FRAMEWORK

3.1. Social Identity Approach to Website Design

Through the consideration of the psychosocial tendencies of online shoppers, the Social Identity Approach to Website Design (Coverdale, 2010) suggests that online vendors can embed social presence elements in their website design.
to promote social group salience to ingroup members. This encourages them to develop a social attraction to the website and engage in ingroup and self-concept promoting behaviors by frequenting the website and/or recommending it to other ingroup members.

In the Social Identity Approach to Website Design model, the social presence-enjoyment relationship is hypothesized to be moderated by a social identity indicator, which measures the strength of a woman online shopper’s identification with a defined social group made salient through the context of the social presence design elements. The following sections present each variable, their definitions, and hypothesized relationships.

### 3.2. Website Social Presence

The website social presence variable explores the integration of human warmth and sociability with the user interface to positively influence consumer attitudes towards the immediate online shopping context and overall shopping experience (Dash & Saji, 2007). Extending the conventional definition of website social presence to incorporate the traditional in-store atmospherics of responsiveness and interactivity that simulate the social aspects desired by women in their shopping experiences (Van Slyke et al., 2002), website social presence is defined in this study as the extent to which a website allows consumers to experience others as being psychologically present during the online shopping experience through visual design elements, information design elements, responsiveness, and interactivity.

Social presence is believed to have positive consequences in an online context, thus the proposed hypothesis relating to the social presence variable in the current study is:

**H1:** The perception of social presence within a B2C e-Commerce website will positively influence a woman online shopper’s enjoyment of the online shopping experience.

### 3.3. Social Identity

Cyr et al. (2007) caution future e-Loyalty researchers against generalizing across genders or other demographic variables in the quest to understand the dynamics of the online shopper. As a result, the present study considers the psychographic construct of Social Identity, in which social groups are composed of members who belong to a specific demographic group, in this case women, who actively choose to identify with a particular social group.

The present study posits that the Social Identity construct moderates the relationship between the perception of social presence and the enjoyment of an online shopping experience in women online shoppers using the dimensions of social identification that were proposed by Cameron (2004): Centrality (category accessibility within one’s cognition), Ingroup Ties (perception of fit within the social group), and Ingroup Affect (perception of social group relevance to one’s self-identity).

### 3.4. Centrality

Cameron (2004) identified centrality as one of the three factors underlying the social identity construct and defined it as the accessibility of a social category within one’s cognition. In accordance with previous research, the current study views centrality as the importance of a particular social group to an online shopper’s self-definition. The hypothesis related to the centrality variable is listed below:

**H2:** A woman online shopper’s degree of centrality relating to a salient social group within a B2C e-Commerce website will positively influence the relationship between her perception of website social presence and her enjoyment of an online shopping experience.

### 3.5. Ingroup Ties

Cameron (2004) operationalizes ingroup ties as the extent to which group members feel part
of a particular social group. This definition is maintained in the current research study. The hypothesis relating to the ingroup ties variable is listed below:

**H3:** A woman online shopper’s degree of ingroup ties to a salient social group within a B2C e-Commerce website will positively influence the relationship between her perception of website social presence and her enjoyment of an online shopping experience.

### 3.6. Ingroup Affect

Pioneered by Cameron (2004), ingroup affect was validated as the evaluative facet of an individual’s social identity. Ingroup affect is believed to be an individual’s degree of positive feelings associated with a particular social group membership. In the current research, ingroup affect is defined as the degree of positive feelings that emerge when an online shopper reflects on her membership with a particular social group. The hypothesis relating to the ingroup ties variable is listed below:

**H4:** A woman online shopper’s degree of ingroup affect toward a salient social group within a B2C e-Commerce website will positively influence the relationship between her perception of website social presence and her enjoyment of an online shopping experience.

### 3.7. Enjoyment

Online shopping research has referred to the hedonic element experienced by online shoppers as enjoyment (van der Heijden, 2003). Enjoyment exists when a user is in a concentrated state of website involvement, yet maintains a sense of control (Pace, 2004).

### 3.8. Intention to Revisit / Intention to Recommend

In the e-Commerce marketplace, e-Loyalty can refer to an online shopper’s intention to revisit a website or to consider purchasing from it in the future (Cyr & Bonnani, 2005; Koernig, 2003). As in Cyr et al. (2007) and following the guidance of DeLone and McLean (2004), the focus of the current proposed study is on the consumer’s perceived loyalty to a vendor instead of actual loyalty metrics such as purchase volume and number of repeat visits in order to capture the essence of the impact of the interaction of website design and online shoppers’ human psychological profile on their decision to be e-Loyal to a website.

Online shopper recommendations also work to encourage e-Loyal behavior. Reichheld and Schefter (2000) found that e-Loyal customers mainly found websites through referrals. In using the Social Identity Approach to Website Design, the social presence elements of the website are designed to activate the social identification tendencies of members of the targeted social group who then exhibit self-enhancement through revisiting the website and recommending the website to both ingroup and outgroup members.

Reflecting the conclusions presented in previous related research in terms of enjoyment and e-Loyalty, the hypotheses presented in the current study are as follows:

**H5:** A woman online shopper’s enjoyment of an online shopping experience on a B2C e-Commerce website will positively influence her intention to revisit or recommend the website.

Following the previous discussion, the variables and corresponding hypotheses of the Social Identity Approach to Website Design Research Model are illustrated in Figure 1:

Although the relationship is not being hypothesized in the current study, it is acknowledged that there is a possible interactive relationship between the Intent to Revisit and Intent
to Recommend variables. The examination of this relationship is beyond the scope of this particular study and serves to be considered for future extensions of the research model and future related studies.

4. METHODOLOGY

4.1. An Application of the Social Identity Approach of Web Design

According to Roskos-Ewoldsen, Roskos-Ewoldsen, and Dillman-Carpentier (2002), media images are powerful cues that enable the activation of the perceptual frames that influence how individuals evaluate their social environments. When a particular social identity and its accompanying prototypical characteristics are made salient via the use of media, the extent to which an individual or an entity (in this case, a website) is perceived by an ingroup member as being highly prototypical should encourage social attraction from the ingroup member toward the target individual or entity.

The focal website for this study is divasnbabes.com. In operation since 2006, divasnbabes.com was designed with social presence design elements to render the “moms of young children” social group salient for visitors who are in-group members. The online store is designed to encourage social identification through socially rich and emotive text context, pictures of actual moms interacting with their children while modeling divasnbabes.com apparel, and Twitter tweets from the website owner.

This website was chosen for the present study for several reasons. Firstly, it uses a virtual storefront Internet business model that primarily operates in the online e-Commerce space, which provides international exposure to the online boutique and maximizes the potential consumer base. Using the Internet to connect with mothers across the globe, divasnbabes.com has built a global network of mothers throughout North America, South America, Europe, Asia, Australia, and Africa.

Also, since apparel is a product category with which many consumers are highly involved, purchasing apparel is usually a very personal task that elicits ego involvement, because of apparel’s symbolic and hedonic characteristics (Myers & Ogunc, 2008). As a result, apparel purchases involve a recognition of one’s subconscious preferences and how individuals wish to define themselves as they relate to others, creating a ripe scenario for evoking and examining the central tenets of the Social Identity Theory.

Thus, the research questions proposed by the present research study were examined using a robust and authentic e-Commerce entity...
that has been successfully operating in the virtual marketplace, instead of an experimental e-Commerce entity that may lack the overall processes and standard operating procedures that have a peripheral impact on the environment and context in which an e-Commerce business operates.

5. DATA COLLECTION AND ANALYSIS

5.1. Participants

The participants were actual women online shoppers who were first-time visitors to divasnbabes.com and members of the focal social group, which is defined as mothers with children between the ages of newborn through five years. The study was conducted entirely online and participants were able to participate from any computer using an Internet connection, which increases the realism of the online shopping experience (Cyr et al., 2007). The online survey instrument was administered via SurveyMonkey.com. The task for the study consisted of participants browsing through various areas of the divasnbabes.com website at will. There was no purchase necessary for participation.

Of the 491 moms with young children who responded to the survey, there were 322 fully completed surveys from those who were also first time visitors to divasnbabes.com. Partially completed surveys were not included to avoid the issue of missing data calculations. In final, 322 responses were included in the below analyses. An examination of the demographic profile reveals that the typical respondent was between 26–40 years old, married with 2 children, employed full-time, has completed studies for a Bachelor Degree, has a total household income of $100,000–$149,999, located in the Southern states of the United States of America, uses a wireless connection as her primary Internet connection, and are experienced online shoppers, shopping online for more than 5 years.

The survey instrument consisted of 27 previously validated items from related studies relating to website quality, Social Identity Theory, and e-Loyalty (Palmer, 2002; Cameron, 2004; Cyr & Bonanni, 2005; Cyr et al., 2007; Cyr, 2008). All items are constructed as agree-disagree statements and are measured against a 5-point Likert scale. The survey instrument has been included in Appendix C.

5.2. Non-Response Bias

Non-response bias was estimated by testing for differences in the responses of early and late respondents (Armstrong & Overton, 1977) using the collected demographic data relating to age, number of children, current employment status, level of education completed, and annual household income. In each of the tests, the χ2 value is less than the critical χ2 value at p = 0.05 (Kaynak & Hartley, 2006). Thus, no significant difference was found between the two waves of responses and there is no indication of non-response bias in the data.

5.3. Scale Reliability and Validity

5.3.1. Content Validity

Content validity is concerned with the ability of a measure to wholly represent the content of the construct as intended by related literature and is evaluated based on logic and theory (Nunnally & Bernstein, 1994). By selecting items from previous studies that have already been shown to have strong content validity in their original setting (Cronbach, 1971), content validity is established in this study.

5.3.2. Reliability

Prior to the examination of reliability, the responses to the negatively worded items in the Centrality, Ingroup Ties, and Ingroup Affect scales were recorded for consistency with the responses to the positively worded items throughout all of the scales. Each scale was examined using Cronbach’s Alpha (Cronbach, 1971) as a preliminary measure of reliability. The Alpha values for each scale ranged from 0.706 to 0.915, which is above the suggested Alpha value of 0.70 needed to establish reli-

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ability (O’Leary-Kelly & Vokurka, 1998). Thus, all scales exhibit sufficient reliability.

5.3.3. Unidimensionality

Unidimensionality was assessed using several steps (Bagozzi, 1980). First, an exploratory factor analysis using principal components extraction and the varimax rotation technique was performed (Cyr et al., 2009; Kaynak & Hartley, 2006), yielding six factors with eigenvalues greater than 1. An examination of the rotated component matrix shows that the factor loadings of the individual items exceed the recommendation of 0.50 by Hair et al. (1995). The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was also examined, yielding a KMO of .878, which indicates a good sampling adequacy for the above exploratory factor analysis (Hair et al., 1995).

The second step in accessing unidimensionality involved evaluating and refining the scales using confirmatory factor analysis (Gerbing & Anderson, 1988). For all of the construct-level and pair-level models estimated, CFI values were greater than 0.90 ranging from 0.902 to 1.00 and SRMR values were less than < 0.08 ranging from 0.000 to 0.072 (Hu & Bentler, 1995, 1998, 1999). For the estimation of the entire measurement model, the ratio of $\chi^2$ to the degree of freedom was 1.813 (< 3.0 per Hair et al., 1995), CFI = 0.950, SRMR = 0.0613, RMSEA = 0.05 (< 0.08 per Byrne, 1998), CAIC = 1047.543, which is less than that of the saturated model (2560.780) and independence model (5449.682), PGFI = 0.715, and PNFI = 0.778 (both > 0.50 per Byrne, 1998). Thus, at each estimation level, the criteria for the fit indices are exceeded indicating that the constructs are unidimensional.

5.3.4. Additional Reliability Tests

Using the values gained from the factor analyses, additional reliability tests were performed to assess the composite reliability and the average variance extracted (AVE), (Anderson & Gerbing, 1988; Fornell & Larcker, 1981). The composite reliabilities of all scales ranged from 0.717 to 0.920, which exceeds the recommended value of 0.70 (Fornell & Larcker, 1981; Kim & Son, 2009). The average variance extracted for all scales ranged from 0.55 to 0.75, which exceeded the suggested value of 0.50 (Fornell & Larcker, 1981). Thus, the scales exceeded the recommended values for all three reliability measures, Cronbach’s Alpha, composite reliability, and average variance extracted, providing sufficient evidence to support the reliability of all scales. Table 1 provides values for the three reliability measures of each scale.

5.3.5. Convergent Validity

Convergent validity was assessed through confirmatory factor analysis (Bagozzi, Yi, & Phillips, 1991). According to Bagozzi et al. (1991), if all of the factor loadings of items on their constructs are significant, convergent validity is established. Table 1 also lists the factor loadings for all indicators ranging from 0.552 to 0.934, which were all statistically significant at $p < 0.001$, indicating strong convergent validity.

5.3.6. Discriminant Validity

Discriminant validity was assessed by two methods (Bagozzi et al., 1991; Sila, 2007). Firstly, as suggested by Anderson & Gerbing (1988), a series of $\chi^2$ difference tests were performed between a constrained CFA model and an unconstrained CFA model for each pair of factors. The $\chi^2$ difference tests between all pairs of constructs are statistically significant at $p=0.0033$, indicating strong discriminant validity (Bagozzi et al., 1991).

The second test for discriminant validity involved a comparison of the square root of the average variance extracted for each factor and the correlation coefficient for each pair of factors (Kaynak & Hartley, 2006; Kim & Son, 2009). The average variance extracted for all constructs exceeded the correlation coefficients for each related construct pairs, which suggests strong discriminant validity.
Table 1. Comparison of reliability measures and CFA factor loadings

<table>
<thead>
<tr>
<th>Scale/Items</th>
<th>Cronbach's Alpha &gt; 0.70</th>
<th>Composite Reliability &gt; 0.70</th>
<th>Average Variance Extracted &gt; 0.50</th>
<th>CFA Factor Loadings</th>
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<td>E3</td>
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<td>0.754</td>
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<td>.934</td>
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<tr>
<td>IR2</td>
<td></td>
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<td>.907</td>
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<tr>
<td>IR3</td>
<td></td>
<td></td>
<td></td>
<td>.816</td>
</tr>
</tbody>
</table>
5.3.7. Criterion-Related Validity

Criterion-related validity relates to the extent to which predictions from a theoretical framework are supported (Venkatraman & Grant, 1986). As a result of theory, a criterion variable that is suggested to correlate highly with a predictor variable in the framework is identified and validity is indicated by the significance of the correlation (Nunnally & Bernstein, 1994). The bivariate correlation between Social Presence and Enjoyment was 0.655, with a significance level of 0.01 and the bivariate correlation between Enjoyment and E-Loyalty was 0.681, with a significance level of 0.01, indicating strong criterion-related validity.

6. TEST OF RESEARCH MODEL AND HYPOTHESES

The research model and hypotheses were tested via Structural Equation Modeling using MOS 18 (Arbuckle, 1997). In the structural model, Social Presence was modeled as the exogenous variable, and Enjoyment and E-Loyalty were modeled as the endogenous variables. The three Social Identity variables, Centrality, Ingroup Ties, and Ingroup Affect, were treated as independent moderating variables, moderating the relationship between Social Presence and Enjoyment. Figure 2 illustrates the original structural model with the regression weights gained from the results of Structural Equation Modeling tests.

The presence of the three moderating variables created a structural equation model with three nonlinear interaction effects. In order to properly examine the resulting model, the orthogonalizing technique presented in Little, Bovaird, and Widaman (2006) was used to estimate the nonlinear interaction effects.

6.1. Model Fit

Prior to hypothesis testing, the fit of the path model was assessed using the indices previously used in the CFA tests. The initial model estimation yielded acceptable values for the ratio of χ² to the degree of freedom, RMSEA, CAIC, PGFI, and PNFI; however, the CFI and SRMR values did not exceed the recommended values of 0.90 (Hu & Bentler, 1995) and 0.08 (Byrne, 1998), respectively.

After allowing additional error terms to correlate, the ratio of χ² to the degree of freedom = 2.130, RMSEA = 0.59, CAIC = 16071.054 (< 42110.612 for the saturated model and

Figure 2. Path model with regression weights

* p < 0.001; ** p < 0.01

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48543.376 for the independence model), PGFI = 0.577, and PNFI = 0.689, all of which indicate a satisfactory model fit. In addition, the CFI improved to 0.848, which is close to the recommended value of 0.90 (Hu & Bentler, 1995), however, the SRMR remained problematic with a value of 0.1245, which is likely related to the presence of multiple interaction effects in the structural equation model. Thus, it is concluded that the overall model fit is satisfactory in this study. Table 2 presents the results of the model fit tests for the composite nonlinear structural equation model including the three interaction effects and the three models modeling the interaction effects separately.

6.2. Hypothesis Testing

In order to test each hypothesis proposed by this study, the path coefficients between the latent variables in each of the modeled relationships were examined for statistical significance. Table 3 illustrates the test results.

6.2.1. Social Presence and Enjoyment

With a regression weight of 0.805 at p < 0.001, Hypothesis H1 is strongly supported. This finding is consistent with those of Cyr (2008), where it was found that the visual design and information design of an e-Commerce website, both social presence elements that were culturally infused to appeal to a specific culture, had a positive impact on the user’s perception of website satisfaction. Maintaining consistency with the aforementioned studies, the support of Hypothesis H1 suggests that particularly for women online shoppers, the presence of socially-infused website design elements positively influences their enjoyment of the online shopping experience.

6.2.2. Social Identity and Enjoyment

With a coefficient of -0.129 at p = 0.01, Hypothesis H2 was rejected because, although statistically significant, the suggestion of a negative relationship between the constructs is not consistent with the hypothesized positive relationship.

According to the results found by Cameron and Lalonde (2001) and Gurin and Markus (1989), cognitive centrality is a critical feature of social identity in women who seek to avoid a traditional orientation to gender roles and relations. In relation to the current study, it is possible that the negative moderating effect is a result of the research environment being enhanced with social-identity infused website design elements to appeal to the prototypical ingroup member, who represents the ideal or traditional group member.

The remaining social identity hypotheses, Hypotheses H3 and H4, were rejected because their significance values exceeded the 0.05 level. Conceptualized as a multidimensional construct with a tripartite structure (Cameron, 2004), it is possible that the examination of the relationship using a Social Identity variable as second-order construct may allow for the necessary interactions between the three variables to occur. As stand-alone variables, each of the three variables had a negative relationship with the enjoyment, but when combined, the relationship becomes positive.

### Table 2. Comparison of path model fit results

<table>
<thead>
<tr>
<th>Model</th>
<th>CFI &gt; 0.90</th>
<th>SRMR &lt; 0.08</th>
<th>$\chi^2 / df &lt; 3.0$</th>
<th>RMSEA &lt; 0.08</th>
<th>CAIC &lt; S, &lt; I</th>
<th>CAIC – S</th>
<th>CAIC – I</th>
<th>PGFI &gt; 0.50</th>
<th>PNFI &gt; 0.50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comp.</td>
<td>0.848</td>
<td>0.1245</td>
<td>2.130</td>
<td>0.059</td>
<td>16071.05</td>
<td>42110.61</td>
<td>48543.38</td>
<td>0.577</td>
<td>0.689</td>
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<td>SP_C</td>
<td>0.975</td>
<td>0.0815</td>
<td>1.374</td>
<td>0.034</td>
<td>2759.596</td>
<td>7641.694</td>
<td>15046.633</td>
<td>0.691</td>
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<tr>
<td>SP_IT</td>
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<td>1.824</td>
<td>0.051</td>
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<tr>
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<td>2940.341</td>
<td>7641.694</td>
<td>15607.493</td>
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</tr>
</tbody>
</table>

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may lack the predictive power necessary to effectively evaluate the hypothesized relationship between Social Identity and Enjoyment based on the Social Identity Theory.

A qualitative examination of responses to the open-ended questions by selected respondents who scored highly on the Enjoyment scale and either of the Social Identity scales offer support for Hypotheses 2, 3, and 4. This provides qualitative evidence that it is possible that the components of Social Identity have a positive influence on the enjoyment of an online shopping experience in women online shoppers who are members of the focal social group.

6.2.3. Enjoyment and E-Loyalty

With a coefficient of 1.055 at $p < 0.001$, Hypothesis H5 is strongly supported. Consistent with the results of the above studies, the support of Hypothesis H5 suggests that for women online shoppers, the enjoyment of an online shopping experience has a highly positive influence on their tendency to recommend or revisit an e-Commerce website.

Indirectly, the socio-cognitive process of self-enhancement that determines social identity (Hogg et al., 1995) is manifested in the present support for the positive relationship between Social Presence, Enjoyment, and E-Loyalty.
This suggests the notion that women online shoppers who are members of the ingroup seek to promote their group and encourage ingroup success by recommending the website to others and revisiting the website to show support for a fellow ingroup member. Thus, the mechanisms of the Social Identity Theory are potentially underlying factors throughout the entire framework. It is suggested that Social Identity should be examined as a potential moderating variable in the relationship between Enjoyment and E-Loyalty in future related studies.

7. CONCLUSION

The purpose of this study was to address a major challenge faced by online retailers in today’s e-Commerce marketplace: how to encourage e-Loyalty in women online shoppers (Cyr et al., 2007; Reichheld et al., 2000). Hypothesis testing revealed that in women online shoppers, the perceived social presence within an online store is a statistically significant predictor of the enjoyment of an online shopping experience. Hypothesis testing also revealed that in women shoppers, the enjoyment of an online shopping experience is a statistically significant predictor of their intention to return to or recommend the online store, which is essentially, their development of e-Loyalty (Cyr et al., 2004; Cyr et al., 2005, Gommans et al., 2001).

The results suggest that online retailers can incorporate social presence-infused website design elements to enhance the online shopping experience for women shoppers, particularly those who are members of the focal social group target market. In turn, their enjoyment of the online shopping experience positively influences their intention to revisit the online store and recommend it to others. Based on the findings of this study, it is concluded that website design elements that create social identity salience, such as pictures, social identity-infused text, Twitter tweets, and Facebook statuses, which are emotive and hedonic in nature encourage the development of e-Loyalty in women online shoppers. This conclusion is consistent with previous related literature on gender preferences in the perception of website design, where it is believed that emotions interact with gender to impact online shopping satisfaction, particularly in women online shoppers (Rodgers & Harris, 2003; Cyr et al., 2007).

The results of this study also provide theoretical support for an underlying relationship between Social Identity, Social Presence, Enjoyment, and E-Loyalty, although the hypothesized relationships were not found to be statistically significant. In this study, all of the respondents self-identified themselves as members of the focal social group, moms with young children. Thus, it was expected that when encountered by the social identity-infused website design elements, the respondents as members of the focal in-group should cognitively activate their ingroup membership and adopt self-categorization and embody the behavior of the contextually salient social group member (Fielding et al., 2008; Hogg & Hains, 2006). An examination of the causal paths in the research model shows a strongly statistically significant relationship in moms with young children between their perception of social presence and their enjoyment of an online shopping experience. Likewise, there is a strongly statistically significant relationship between their enjoyment of the online shopping experience and their intention to recommend the online store to others or revisit the online store for future shopping experiences, both of which are ingroup promoting behaviors. It is possible, as illustrated by the results of this study, that the strong inclination of the moms with young children participants to support their fellow ingroup members through revisiting or recommending the online store to both ingroup and outgroup members, is a result of their social identification. Further, the salient ingroup is made contextually relevant through the prototypically-defined social presence website design elements. Through revisiting or recommending to others, the ingroup members in this study are exhibiting the socio-cognitive process of self-enhancement (Hogg et al., 1995), where they maintain a positive social identity.
through striving for a favorable perception of their ingroup (Tajfel & Turner, 1979).

In addition, the statistical significance of the Social Presence, Enjoyment, and e-Loyalty causal path demonstrates the characteristics of social cooperation. This is a related hypothesis of the Social Identity and Self-Categorization theories, demonstrated through the strong relationship between the enjoyment of an online shopping experience by members of the moms with young children social group and their ingroup promoting behaviors of revisiting and recommending the online store. Through promoting the website to both ingroup and outgroup members, study participants are highlighting the accomplishments of the ingroup, which represents the relative success of the entire ingroup.

Therefore, although the moderating relationship between Social Identity and the Social Presence – Enjoyment relationship was not found to be statistically significant as hypothesized, it is evident through the examination of related literature and the causal paths that there is an underlying implied relationship between Social Identity, Social Presence, Enjoyment, and e-Loyalty that has yet to be properly and explicitly defined. It is possible that the Social Identity variable should be modeled in future examinations as a second-order multidimensional construct instead of three separate constructs as currently modeled. This simplification of the structural model may lead to a more precise evaluation of the overall relationship by minimizing the multicollinearity issues and revealing a more accurate evaluation of the role of the social identity variables (Jöreskog & Yang, 1996; Klein & Moosbrugger, 2000; Moosbrugger et al., 1997).

This study presents a basis for beginning to understand the complex socio-technical system in which e-Commerce operations reside and exist (Riegelsberger et al., 2003). The results imply that when catering to women online shoppers, designers of online retail outlets should consider infusing social presence elements in their website design to mirror the traditional shopping experience to influence enjoyment and encourage e-Loyalty.

Also, in the case of women online shoppers, this study suggests that their satisfaction with an online shopping experience is directly related to and influenced by their perception of social presence. Again, this supports the implication that it is important for practitioners to consider the hedonic and emotive preferences of women online shoppers and create the perception of social presence. In essence, as a result of this study’s findings, social presence-infused website design elements are highlighted as an available resource to online retailers in addition to the traditional product and service offerings to help them attract and retain the business of women online shoppers.

As the current study is an initial study examining the relationship between Social Identity and e-Loyalty in women online shoppers, there are several opportunities for future related research. Firstly, future research should explore Social Presence as a second-order construct in the Social Identity Approach to Website Design research model. In addition, future research can examine the possibility that the composite Social Identity construct may moderate the relationship between Enjoyment and E-Loyalty.

Future research should also replicate the current study using other social groups relating to women online shoppers that traditionally have less personal significance, for example, pet owners or sports enthusiasts, and examine the results for consistency and generalizability. Through this expansion, the proposed model will be subjected to testing and comparison across varying degrees of social group relevance. Positive tests for generalizability will support the theoretical relevance of the overall research model and allow its applicability to examine additional related research questions beyond those of the present study.

In considering the responses of the respondents who were not part of the focal social group of moms with young children, future research can compare the enjoyment and intended e-Loyalty of ingroup and outgroup members as they relate to a social identity-infused online
shopping experience (Hogg et al., 1995). Likewise, a future related study can conduct an intra-group comparison where the intended e-Loyalty of those with high levels of social identification is compared with that of ingroup members with low levels of social identification. Although the influence of Social Identity is suggested in this study through the manifestation of the ingroup promoting e-Loyalty behaviors in ingroup members, the exact relationship has not yet been empirically revealed. Through contrast and comparison studies where the role of Social Identity is the primary focus, additional insight on its influence may be gained.

In conclusion, this study presented an alternative approach proposing social identity as a psychographic variable that influences the creation of e-Loyalty in women online shoppers, instead of the traditionally examined demographic variables of gender and culture. Thus, this study extends existing Information Systems literature through an increased consideration for the role of the human element in the socio-technical interaction inherent in an online shopping experience and the exploration of the impact of the psychographic profile of a user, which has not traditionally been investigated in light of the traditional focus on the demographic profile. It is wholly believed that the applied focus of this study creates implications for academics and practitioners that render its findings useful and relevant in both academic literature and today’s e-Commerce marketplace.

REFERENCES


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**Anthony D. Wilbon** is an Associate Professor in the School of Business at Howard University in Washington D.C. He has several years of engineering and inrmation technology experience at organizations such as Booz-Allen and Hamilton and the Federal Reserve Board of Governors. He has published numerous papers in journals such as Technology Analysis and Strategic Management, Journal of Engineering and Technology Management, and The Journal of High Technology Management Research. Wilbon's research interests are focused on the management of science, engineering, and technology in small to medium sized enterprises.

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