EXPLORING ATTITUDES AND PURCHASE INTENTIONS IN A BRAND-ORIENTED, HIGHLY INTERACTIVE WEB SITE SETTING

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This research investigates how Internet users are influenced by Web pages that primarily serve as advertising vehicles. Specifically, using structural equation modeling we investigate how involvement with product during a Web site visit, as well as the sensation of flow resulting from the experience, impact Web site induced mood and attitude toward the Web site as an ad (A_{Ad}). We found that product involvement during the experience is a strong antecedent of achieving flow, and the experience of flow is a strong predictor of both positive moods and more positive A_{Ad}.

INTRODUCTION

Almost $10 billion was spent in the year 2004 on online advertising vehicles such as key words, display ads, rich media and sponsorships (PriceWaterhouseCoopers 2005). The primary objective of these advertisements was to have a visitor to the World Wide Web (hereafter referred to as the "Web") select an ad and go to a designated Web site. These designated or destination sites are developed to meet specific strategic objectives such as transactions (e.g., amazon.com), provide information or content (e.g., espn.com), or build brand liking or preference (e.g., reebok.com). Our focus is on Web sites that are designed to be an integral part of the firm's overall advertising campaign, with the objective of brand building (Thorbjørnsen et al. 2002). For Web sites designed to build brand liking or preference, the Web offers an almost unlimited space in which a company can describe, espouse and promote its products (McMillan, Hwang and Lee 2003).

In an attempt to build brand image, destination Web sites will often encourage visitors to engage in a virtual direct experience with the product and its attributes (Griffith and Chen 2004). For example, the site for the manufacturer of the Mini Cooper automobile (www.miniusa.com) encourages visitors to build a robot composed of Cooper parts as its body (i.e., the seats are its feet and the hood is a shield). As the visitor builds the robot, they select from common automobile configuration options (i.e., body color, roof rack, seat material, etc.) and the appearance of their robot reflects their tastes. Once completed, the robot image can be downloaded and printed out. Similarly, the Hasbro company, a manufacturer of board games, encourages visitors to play hide and seek with the gingerbread boys of its Candy Land© game. The objective of these engaging, playful, interactive activities is to increase the duration of a visitor's experience with the brand Web site (Coyle and Thorson 2001; Raman and Leckenby 1998). Though increasing the time spent on a Web site may itself serve as a measure of site success (Hoffman and Novak 1996), for most marketers who must justify resource allocations, the effect of such interactive experiences, in terms of brand attitude and purchase intention, is likely to be paramount (McMillan, Hwang and Lee 2003).

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Understanding the effects of interactive Web site experiences on attitudes and purchase intentions is important for advertisers and researchers. If the interactive experience influences purchase intentions, advertisers need to examine if factors such as previous product usage and liking contribute to differences in purchase intentions. For researchers, much has been made regarding the perceived difference in media characteristics of Web advertising vs. traditional advertising (e.g., Macias 2003). Therefore, understanding the effect of interactive advertising on attitude toward a brand extends our knowledge of advertising theory.

In order to better understand how online activities influence behavior, flow theory (Csikszentmihalyi 1975) has been used to provide an explanation of online behavior (e.g., Hoffman and Novak 1996; Novak, Hoffman and Duhachek 2003). Flow theory allows for individuals to achieve a subjective experiences known as the "flow state," which results in a state of positive optimal experience and is defined as "…a state of deep absorption in an activity that is intrinsically enjoyable" (Shernoff, Csikszentmihalyi, Schneider and Shernoff 2003, p.4).

The present research seeks to examine the effect of flow in the context of an individual's subjective experience with a Web site. Using a Web site designed for brand building, we examine the influence of flow on traditional advertising outcomes, specifically mood (e.g., Edell and Burke 1987) and attitude. How online experiences contribute to mood and attitude is important to both our theoretical understanding of the Web-based environment and managerially to the development of Web sites.

The remainder of the paper is organized as follows. First, we discuss advertising on the Web, noting the similarities and differences between Web advertising and traditional advertising. Next, we provide a theoretical background that defines flow theory and discusses its role in the Web experience, and provides an overview of the impact of mood in advertising research. This is followed by a description and analysis of a study designed to test hypothesized relationships. Lastly we discuss future research opportunities based on our findings.

ADVERTISING ON THE WEB

Though certainly the objectives of advertising communications are the same on the Web as they are in traditional media, marketing researchers have noted that the very nature of the Web represents a unique communication environment (e.g., Hoffman and Novak 1996; Karson and Korgaonkar 2001). As a multimedia environment, an attractive feature of the Web is its multimedia (or hypermedia) environment. Hypermedia allows for the design and presentation of information using a rich environment of texts, graphics, images, sound, video and animation. Using the Web, marketers have the capability to fully engage users into a product-oriented showcase of brands, personalities and involving experiences. As a user navigates a Web site, their own tasks, likes, needs, and choices influence not only how they interact with the components of the Web site, but how the Web site adapts to them individually (Rust and Lemon 2001).

The ability to control the content and the interactive nature of that control are the distinctive characteristics that differentiate the Web from traditional media (Hoffman and Novak 1996). Research has shown that there are at least eight distinct characteristics that differentiate Web advertising from traditional mass media advertising, including flexibility, variability, accessibility, salience, usage, interactivity, complexity, and stand alone (Karson and Korgaonkar 2001, p. 54). From these perceived differences between traditional and Web advertising, researchers have begun to examine how individuals respond to different forms of Web advertising.

Investigations concerning Web advertising (excluding email) have primarily examined the effect of either advertisements placed on other Web sites such as banner ads (e.g., Danaher and Mullarkey 2003; Sherman and Deighton 2001) and pop-ups (e.g., Edwards, Li and Lee 2002), or, has viewed the Web site itself as an advertisement (e.g., Karson and Korgaonkar 2001; McAllister and Turow 2002; Nysveen and Pedersen 2004). It is the latter that is of primary interest here.

Many brand-oriented Web sites are designed to serve as "super ads" for specific brands or family of brands (McAllister and Turow 2002). These extreme hypermedia sites often present brand information encapsulated in a highly entertaining, interactive Web site. These types of sites are intended to draw individuals into the experience by piquing interest and then providing high levels of interactivity (Nysveen and Pedersen 2004). As the user experiences the Web site, research has found that both attitude toward the ad (MacKenzie, Lutz and Belch 1986) and attitude toward the site (Chen and Wells 1999) are useful indicators of the impact of the site on the user. Because the marketer maintains substantial control over what the visitor will experience while at its site, Web pages offer a tremendous opportunity to create the right mood and image for the product (Putrevu and Lord 2003).

An example of such a site is Disney Corporation's *Disney.Go.com*. On the site, visitors can interact, at no cost, with many of the branded characters associated with Disney. The site showcases the brands in an interactive manner by providing drawings that can be printed and by allowing the visitor to engage real-time with the character in a game of "*Peter Pan Pinball."* The objective of this type of site is to create a positive mood as the user interacts with the brand and transfers that feeling to the attitude toward the Web site (Chen and Wells 1999) and also serves to increase favorable evaluations toward brand personalities (Müller and Chandon 2003).

Because of extensive interactivity, these "super ad" Web sites are unlike any other form of advertising. Recent investigations suggests that interactivity and entertainment value are two of the important themes related to well-attended Web sites (Eighmey 1997; Eighmey and McCord 1998), but the research is silent as to whether "well-attended" sites are more successful in attitude change than less well-attended sites. An important void in the literature is an answer to the question: How does the interaction between the user and the Web site contribute to the formation of a positive attitude toward the advertisement? Flow theory potentially provides a framework to answer this question.

THE FLOW THEORY PERSPECTIVE

In an effort to measure the effectiveness of Web sites, marketers and researchers have sought to determine how individuals use a Web site (Luna, Peracchio and de Juan 2002), the value that a Web site provides for the individual (Mathwick, Malhotra and Ridgon 2002), and the attitude toward the Web site (Chen and Wells 1999). In one of the earliest papers discussing how consumers will use Web sites, Hoffman and Novak (1996), suggested a framework that combines flow theory with human-computer interaction (Webster, Trevino and Ryan 1993; Trevino and Webster 1992; Ghani and Deshpande 1993).

Flow theory was originally developed by Csikszentmihalyi (1975) to investigate the subjective experience of experiential activities. Online, one is likely to experience flow when the interaction between the individual and the Web site is seamless, enjoyable and self-reinforcing (Hoffman and Novak 1996). The flow state itself is viewed as the "process of optimal experience" (Csikszentmihalyi 1975; Csikszentmihalyi and LeFevre 1989). The flow state may be more likely to occur when the individual is using the Web in an intrinsic-motivation situation (e.g., experiential orientation) than in an extrinsic-motivation situation (e.g., utilization orientation).

Antecedents of the flow state have been hypothesized to include, among other constructs, site interactivity and focused attention (Hoffman and Novak 1996). On the Web, consumers choose to visit and interact with the firm's marketing communication efforts, and during the process of human-computer interaction, subjective experiences are created. Subsequent research has suggested that an important outcome of flow is a positive subjective experience of the encounter (Novak et al. 2000). The interactive game playing aspects of the Web allow users to become deeply engaged in this unique multimedia environment and in a sense loose themselves in the experience (Novak et al. 2003). Flow experienced on a Web site has been positively correlated with attention directed toward the site as well as liking of the site and likelihood to return (Huizingh and Hoekstra 2003). involvement (Zaichowski 1986) in the context of the experience is an important precursor to attaining flow because self-relevance of the material presented will influence the amount of attention directed during the interaction (Hoffman and Novak 1996).

Though much of the research concerning Web-based experiences of flow has been in examining the conditions (e.g., Ghani and Deshpande 1994) and experiences (e.g., Novak et al. 2003) which result in a state of flow, recently researchers have focused on the role that flow has in achieving site objectives. In an online shopping experiment it was found that consumers who achieved flow also expressed higher values relating to their hedonic shopping experience (Sénécal, Gharbi and Nantel 2002). Additionally, research has shown that flow experienced online can positively influence attitude toward purchasing (Korzaan 2003).

ADVERTISEMENT INDUCED MOOD

Flow by definition is a positive subjective state (Shernoff et al. 2003) associated with positive feelings. In research regarding the impact of advertising, feelings, most generally conceptualized as mood (Gardner 1985), play an important role. Numerous researchers have devoted efforts to understanding the impacts of ad-evoked mood on consumers' affective reactions, attitude change, judgment, recall and behavior (e.g., Gardner 1985; Knowles, Grove and Burroughs 1993; Batra and Stephens 1994; Erevelles 1998). Although mood is an important topic in advertising, there is no single accepted definition of the term. Gardner (1985) argues that moods, as subcategories of feeling states, are more transient than other feeling states such as personality dispositions and enduring global attitudes. Mood is defined here, as in the previous studies of Gardner (1985) and MacKenzie and Lutz (1989), as feelings that are transient and affected by environmental variables including characteristics of the ad (in this case, the interaction with the Web site itself). Mood is the consumer's affective state at the time of exposure to a stimulus (MacKenzie and Lutz 1989).

Flow's effect on mood is expected to be positive. Empirical research has shown that when one experiences flow, the experience produces a positive evaluation (Webster et al. 1993; Csikszentmihalyi 1990). Mood itself has been established as an antecedent of A_{Ad} (MacKenzie and Lutz 1989), where A_{Ad} is defined as a pre-disposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion (Lutz 1985). Mood plays an important role of affecting A_{Ad} and ad effectiveness mainly via affective components.

In general, moods reflected from advertising represent two broad dimensions: positive moods, such as cheerfulness, peacefulness, warmth and happiness; and negative moods such as boredom, unpleasantness, irritation and unhappiness (Isen 1984; Gardner 1985; Watson and Clark 1997). A number of research streams provide insight related to the influence of mood on A_{Ad}. For instance, mood is seen as an antecedent of A_{Ad} (Batra and Stephens 1994), and a positive mood is likely to directly enhance positive A_{Ad} (Batra and Ray 1986; Gardner 1985; Batra and Stephens 1994).

The Elaboration Likelihood Model (ELM) proposes a general framework in which mood's impact on attitude toward the advertisement can be analyzed (Petty and Cacioppo 1981). The ELM argues that involvement with the context moderates the dominance of central routes and peripheral routes (Petty and Cacioppo 1981, 1986; Burnkrant and Sawyer 1983; Petty, Cacioppo and Schumann 1983). In situations of high involvement, the central routes of persuasion tend to be used to form attitudes (Petty et al. 1983). People are more motivated to devote their cognitive efforts to evaluate the true merits of an issue or a product, and in doing so they receive a level of enjoyment. The process of discovering details and other information previously unknown about a product or company is intellectually rewarding. Consequently, one's mood improves.

Based on the preceding discussion of the Web site as advertisement, flow theory and mood we suggest:

Hypothesis 1: Greater involvement with the product content of an advertisement (the Web site) will correspond to a greater attainment of the flow state.

Hypothesis 2: Greater flow experienced at a Web site will correspond with a more positive subjective mood state.

Hypothesis 3: Greater involvement with the product content of an advertisement (the Web site) will correspond to more positive mood elicited by the Web experience.

Hypothesis 4: Greater positive mood elicited by the Web experience will correspond with more positive A_{Ad} (attitude toward the Web site as Ad).

METHODOLOGY

The study was conducted among 307 students at a large U.S. university, in which data were collected over several weeks as part of a larger study. To test the stated hypotheses, a between subjects experimental design was used involving online exposure to an existing extreme hypermedia Web site. Subjects arrived at a scheduled time and were seated in a computer room equipped with 40 Windows-based personal computers with high-speed Web connections. The PCs were configured to display a direct link to the target Web site using the Netscape browser. A Web site for a popular brand of chocolate candy, M&M's, was chosen (from a larger pool of 51 candidates) based on: (1) favorable pretests that indicated the candy was familiar to the sample population, (2) the Web site's use of hypermedia elements within the site, and (3) the hedonic properties of the candy product. The actual Web site and pages were used as stimuli. The contents of the Web site did not change during the duration of the study. Participants were instructed to browse through the designated part of the Web site and engage in the different activities available on the site. Following a 10-15 minute browsing period, participants were asked to stop and complete a survey, which assessed the variables of interest for this study.

Preliminary measurement models resulted in the removal of items due to cross loadings. The final measures used to assess each of the four variables of interest are shown in Table 1. Flow was assessed using four Likert measures similar to Webster et al. (1993). Involvement was measured using a four-item subset of the Zaichkowsky (1985) involvement scale, as subsets of the Zaichkowsky scale have been used successfully in the past to assess specific aspects of involvement (McQuarrie and Munson 1986). Mood was captured by three items from Yi (1990). Attitude toward the ad was measured using three semantic differential items (MacKenzie and Lutz 1989). All items were presented on seven-point scales.

ANALYSIS AND RESULTS

A two-step approach for the analysis of structural equations as suggested by Anderson and Gerbing (1988) was employed through the CALIS function of SAS version 8.0. First, the

measurement properties were assessed to ascertain that the scales used to measure each latent construct were reliable and unidimensional. Next, structural equation modeling was used to assess the relationship between latent constructs.

The re-specified model using the items shown in Table 1 exhibited convergent and discriminate validity as shown in Tables 1 and 2. For the revised measurement model, all factor loadings were significant ($p < .001$). Additionally, the standardized residuals were reasonably normally distributed although values did exceed two standard deviations. The measurement model's comparative fit index (CFI=0.96) and non-normed index (NNFI=0.96) exceeded suggested guidelines of .90 (Bentler 1990). Though the chi-square for the model was significant ($\chi^2 = 185.8$, df=71, $p<.001$), the root mean square error of approximation (RMSEA) was equal to .07. As a rule of thumb, Browne and Cudeck (1992) suggest that RMSEA values below .08 represent a reasonable fit.

Results of an assessment of convergent validity for our measures are presented in Table 1. The values indicate that each of the variables loaded strongly and significantly on its designated construct. Scale reliabilities for the constructs meet guidelines for established scales and each of the factors capture a significant amount of variance. Table 2 provides us with an assessment of discriminant validity for each of the construct pairs. The confidence interval around any two factor correlations should not include 1.00 (Anderson and Gerbing 1988) if discriminant validity is to be supported. Inspection of the Table reveals that the 95 percent confidence interval for each construct pair meets this requirement. Accordingly, the psychometric properties of the constructs and the fit of model indicate that the revised measurement model is acceptable.

The structural model was tested next. The hypothesized relationships tested in the present study are shown in Figure 1. We made modifications to our theoretical model based on the Wald tests of free parameters, which suggests which insignificant paths in our model can be dropped, and Lagrange multiplier (LM) tests, which suggest which paths should be added during iterative model calibrations.

The full model was analyzed as our next step. Fit indices indicated that the model did not fit the data well. The model's chi-square value was significant ($\chi^2 = 322.37$, df=73, $p< .001$) which is expected in models with large data sets, however the RMSEA (.10) exceeded the .08 rule-of-thumb. Additionally, the CFI (0.92) and NNFI (0.90) values were lower than our measurement model fit. Inspection of the model's paths indicated that the proposed path from Involvement to Mood was not statistically significant with a standardized estimate of 0.09 ($t = 1.35$), while all other proposed paths were significant. The Wald test suggested that the elimination of the path from Involvement to Mood would not significantly decrease the fit of the model. However, with the current poor fit of the model and the fact that this path was one of our hypothesized relationships we chose not to eliminate the path at this time. Inspection of the LM suggested another course of action. The LM indicates that adding a path between Flow and A_{Ad} would significantly improve the fit. Based on our prior reasoning concerning the effect of Flow on positive feelings when one becomes engaged with a Web site, a direct effect on attitude toward the ad is not unreasonable. Therefore we re-specified the model with a direct path between Flow and A_{Ad}.

The re-specified model's chi-square, though not significant ($\chi^2 = 185.81$, df=72, $p< .001$), did exhibit a significant improvement in chi-square over the previous model ($\Delta\chi^2 = 136.56$ df=1, $p < .001$) indicating that this model fits the data better than the first. The RMSEA (0.07) as well as the CFI (0.97) and NNFI (0.96) also indicate a good fit for the revised model. The distribution of residuals was slightly skewed to the right with some residuals that exceeded 2.0. Taken as a whole however, the re-specified

TABLE 1
Convergent Validity of Measurement Model

Item	Standardized Loading[a]	Indicator Reliability	Variance Extracted
Product Involvement		.89[b]	.85
Irrelevant-relevant	.826	0.682	
Valuable-Worthless (r)	.773	0.597	
Matters to Me-Doesn't Matter (r)	.840	0.705	
Significant-Insignificant (r)	.844	0.712	
Flow		.88 [b]	.84
Fun-Not Fun	.931	0.866	
Enjoyable-Not Enjoyable	.938	0.879	
Absorbed in Activity-Not absorbed	.723	0.522	
Focused Attention –Not Focused	.625	0.390	
Mood		.93 [b]	.92
Displeased – Pleased	.826	0.682	
Uncomfortable-Comfortable	.945	0.893	
Bad- Good	.943	0.889	
Attitude toward ad		.93 [b]	.91
Good-Bad	.915	0.837	
Pleasant-Unpleasant	.941	0.885	
Unfavorable-Favorable	.836	0.698	
[a] Standardized loadings significant at p<.001 [b] Composite reliability for construct			

TABLE 2
Discriminate Validity of Measurement Model

Construct Pair	Correlation	Standard Error	95% Confidence Interval
F1→ F2	.549	.045	(.459 - .639)
F1→ F3	.306	.056	(.194 - .418)
F1→ F4	.438	.049	(.340 - .536)
F2→ F3	.396	.053	(.290 - .502)
F2 →F4	.702	.032	(.638 - .766)
F3→F4	.362	.053	(.256. - 468)
F1 = Involvement, F2 = Flow, F3 = Mood, F4 = A_{Ad}			

structural model represents a good fit. Figure 2 provides the final revised structural model with path coefficients. The most significant change in the model is the addition of a path from flow to A_{Ad}. Parameter estimates provide statistical support for hypotheses 1 and 2, while hypotheses 3 and 4 are not supported and a new path relationship is supported.

IMPLICATIONS AND CONCLUSION

This study contributes to the literature by extending our knowledge of the effects of the online experience. By explicitly examining how user involvement with stand-alone Web site "super ads" impacts moods and attitudes, we found support for the role of involvement with the product during the advertising experience on the formation of a flow-like experience. This experience involves "give and take," with the user reacting to programmed responses that evolve into an absorbing and interactive encounter. In traditional branding strategy, firms attempt to develop such an interaction by means of building a relationship (Fournier 1998). This study suggests that a Web site that uses brands in an interactive environment, allowing users to interact with the product in a story-type way (Durgee 1988), can enhance consumer's mood and attitudes. The importance of consumer interaction with their chosen online product can deepen the relationship between consumer and product. Relationship building has extended beyond loyalty programs into an understanding of how brands become meaningful in daily lives (Fournier 1998). In our study, we found that treating involvement with the product during the Web site visit as an antecedent to flow provides us with knowledge concerning the importance of positive user and brand interaction. This implies that experiences, not just with the actual product, but with peripheral activities such as games and hypermedia, can influence how consumers feel and think about the messages directed toward them.

The hedonistic aspect of flow in which consumers lose themselves in the experience had two distinct effects in our model. First, flow influenced the mood of the individual. Mood as an effect of advertising has not been addressed extensively in the literature. Previous research either manipulates mood as a moderating variable (e.g., Knowles et al. 1993) or tests the relationships between ad-evoked mood and "individual" variables (e.g., Batra and Stayman 1990; Batra and Stephens 1994; Kamins, Marks and Skinner 1991). Even though few researchers have discussed ad-evoked mood formation and included more variables in their models, their suggestions have remained conceptual and have rarely been empirically tested (e.g., MacKenzie and Lutz 1989).

Secondly, flow in our model had an effect on A_{Ad}. Though not investigated here, previous advertising studies have shown that positive A_{Ad} does lead to higher liking of the brand (McKenzie and Lutz 1989). Flow association with A_{Ad} indicates that the Internet may offer something new in determining attitude formation during human-computer interactions and that firms should take notice of the implication of design when creating Web sites. One just has to visit any manufacturer's Web site to see that time and resources have been invested in the development of advertising-oriented Web sites. However, how the firm uses Internet technologies to involve and interact with users in attempts to build relationships does affect the attitudes that are formed.

The non-significant paths between product involvement and mood as well as mood and A_{Ad} are somewhat surprising. A possible explanation may be that the product itself is not the driving influencer of the experience, but rather, that the complexity and hypermedia aspects are what drive the interactive behavior. Coyle and Thorson (2001) found that increased levels of vividness and interactivity resulted in more positive attitude toward the Web site. However, it should not be implied that the product focus of the "super ad" is irrelevant considering that we found that product

FIGURE 1
Proposed Relationships and Hypothesis

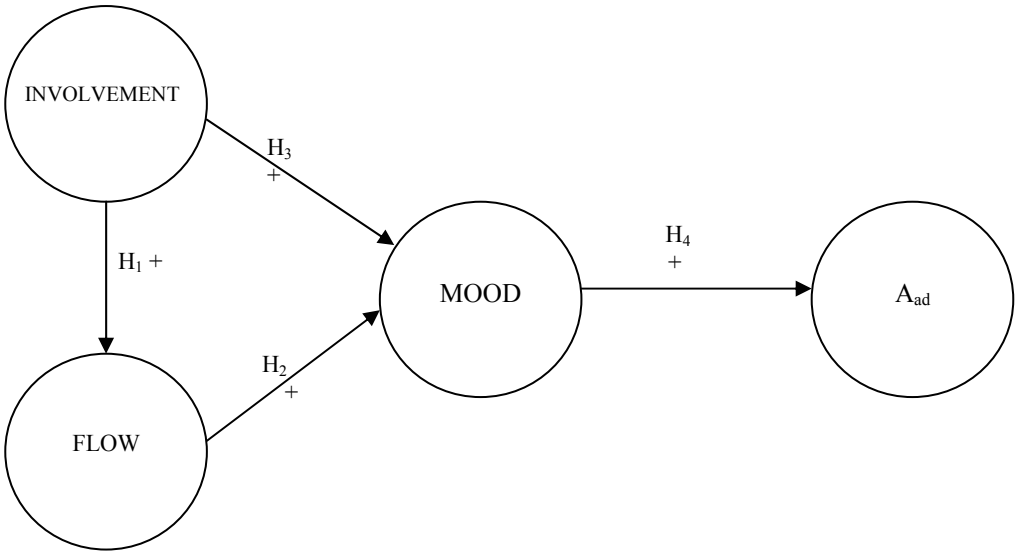
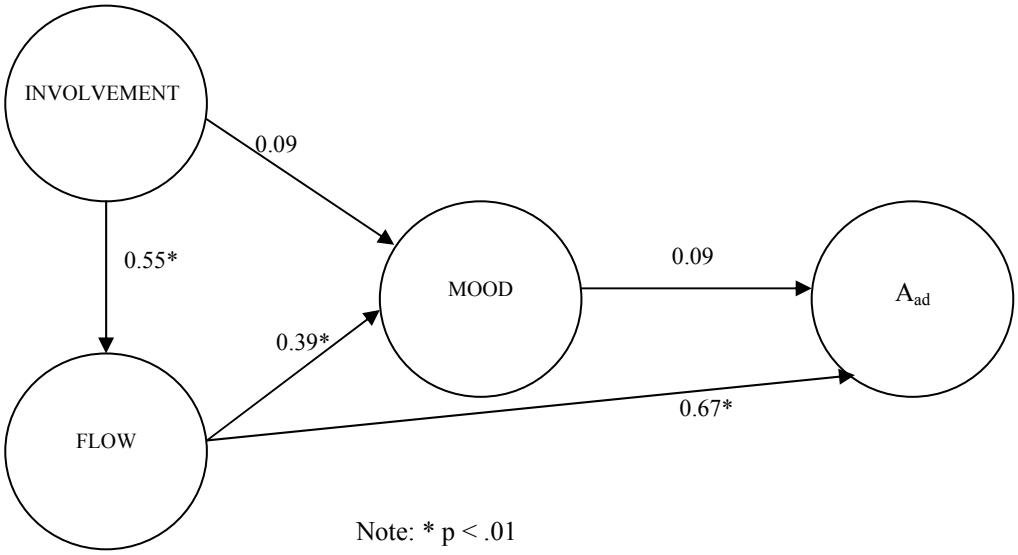


FIGURE 2
Final Structural Model with Standardized Loadings



Note: * p < .01

involvement in the experience resulted in an indirect effect on A_{Ad} and Mood. Rather, designers that wish to produce Web sites that take advantage of hypermedia have to ensure that their products or brands are prominently evident in the experience.

FUTURE RESEARCH

The hypermedia aspects of the Web now offer increased opportunities for marketers to develop Web sites that appeal to both hedonic and utilitarian motivations of consumers. Hedonic motivations in online behavior seem to be as strong as utilitarian motivations (Childers, Carr, Peck and Carson 2001), and additional research is needed to more fully explicate how hedonic motivations fully relate to the online experience. While this study found statistically significant linkage between flow and attitude to the ad, additional research is needed that examines how hedonic aspects of flow affect purchase intentions, brand recognition, brand recall and brand relationship-building on the Web. For instance, when a site visitor has the opportunity to "play" with a brand-related cartoon character through interactive games, specifically how does this play experience transfer to brand attitudes and their durability? And further, can the Web site "play" experience help improve attitudes toward non-Web elements of the firm and its marketing mix?

Research is also needed to add richness and generalizability to these findings by replicating this study using alternate sample populations, Web sites, measures, and study designs. This study used a "single" product Web page section as its frame of reference. Research is also needed that addresses product and brand interactions from Web page to Web page across an entire Web site experience.

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