VICARIOUS CONSUMPTION IN INTERNET FORUMS

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by

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Chapter 1: Introduction

"The Internet has the illusion of familiarity; that it is like a billboard ad or a mail-order catalog. Consequently, the temptation to apply traditional marketing strategies to the Internet is strong. Yet, in doing so, there is the risk that the Internet's more unique features — and the opportunities and challenges they pose — will be ignored." -- Anne Schlosser

From its inception, the Internet has been a social technology designed to bring geographically disparate individuals together. In many cases, this technology has been used to aggregate individuals around a variety of consumer products. Worldwide, consumers use Internet venues to both learn about and socialize around their favorite products and brands. Virtually any product that generates consumer interest will also have a social space in the Internet domain.

Marketers have embraced this Internet-based product interaction. In fact, the fastest growing segment of marketing spending is directed toward Internet applications (VanBoskirk et al. 2009). Practitioner-based publications commonly espouse the virtues of engaging consumers socially with the product or brand online (i.e. Baker and Green 2008; Evans 2010; Kane et al. 2009). Many of these articles are prescriptive; describing how to get consumers involved online even though the results of online social engagement with the product have not been studied.

The basis for this thinking is clear. In the offline world, it has been shown that engaging consumers around a product generates positive outcomes for the firm. For example, interest or enthusiasm for a product has been linked to increases in purchasing (Bloch et al. 1986; Tigert et al. 1976). Interacting with a product is certain to keep its salience and top of mind awareness high, concepts that have also been linked to positive outcomes for the firm (Alba and Chattopadhyay 1986; Hoyer and Brown 1990). Several works have linked social interaction around a product with physical consumption (i.e. Schouten and McAlexander 1995). Others see the concept of product-focused socializing as "an explicitly commercial act" (Muniz and O'Guinn 2001 p. 415). This research seeks to establish whether the results of socially-focused product activity that have been documented in the offline world extend to the online world. Specifically, does online engagement have the same positive outcomes for the firm that offline engagement has shown?

The Internet has endured two revolutions that have had major impacts on our current forms of society and civilization. The first impact came when the number of individuals with access to the technology reached a tipping point in the mid 1990's. This first revolution used the technology primarily as a substitute for existing technologies where the information flow went in only one direction. The second revolution was termed Web 2.0, and this is differentiated from the first revolution by the degree of interactivity and collaboration involved.

The current research will explore the new construct of product-focused Internet behavior (PFIB). PFIB is comprised of two elements, the consumption and creation of Internet content in Internet space devoted to a product. The primary significance of the

Web 2.0 environment lies in user's ability to switch between these two activities repeatedly and effortlessly. *Content consumption* represents activity where a consumer reads, listens, or views product-related content that is created by others. Information may originate with marketers, media outlets, or from peer users. This communication usually follows the *one-to-many* model most commonly associated with mass media. An individual or an organization publishes content that is then consumed by many individuals through public web pages. This content can be offered strictly for other's consumption or to spur additional discussion by individuals who are intrigued by the product.

Content consumption is a 21st century incarnation of traditional product search. The most commonly studied driver of product search is the need for information prior to purchase. For example, when a consumer identifies a need for a digital camera s/he may go online to search for specifications and the opinions of other product users in blogs, forums or commercial websites. Content consumption can also be used for ongoing product search. In ongoing search, an individual seeks out information on a product even when a purchase is not imminent (Bloch et al. 1986). In the present context, product search leads to the Internet venue and content consumption is the primary outcome.

User-initiated *content creation*, the focus of the Web 2.0 revolution, represents the act of creating and publishing content designated for consumption by other users. No longer is the individual simply searching or passively reading information provided by others. In content creation, the individual becomes an active participant in the exchange, providing information and opinions to other users. Examples of user-generated content creation include posts on forums comparing rival brands, uploading photos of one's home

theater setup to a social networking site, or creating cosmetic application tutorial videos on YouTube. Content creation requires more activity and effort on the part of the subject than content consumption. As early research in word of mouth (WOM) activity has shown there are likely different benefits from engaging in a discourse about a product than there would be from actually purchasing and using the product. In his seminal work, Dichter (1966) emphasized both product level and social goals as reasons to engage in word of mouth (WOM) and the same processes will likely apply in the virtual world.

The goal of this research is to examine the relationships that exist between three types of variables: (1) content consumption and content creation as elements of PFIB, (2) functional and psychological benefits derived from PFIB, and (3) the consequences for both the consumer and the firm that arise from acquiring these benefits through PFIB. The hypotheses proposed in this dissertation will center on an explanation of how these variables impact each other.

The distinction between product-focused content consumption and content creation is under-researched, and there is no extant empirical research that suggests that engaging in product-focused Internet behaviors will be either beneficial or detrimental to the firm. The current research will outline existing theory that offers a basis to suggest that product engagement online may not enhance product usage and product sales. In fact, the opposite may occur.

Nearly three decades ago, the marketing and consumer behavior literatures addressed the topics of experiential and hedonic consumption (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982). These works argued that a large portion of our

consumption behavior is aimed not at meeting instrumental or utilitarian goals, but at the experiences and fun encountered through the consumption process. Other research has suggested that subjects might engage in vicarious consumption in certain situations (MacInnis and Price 1987). This construct refers to consuming information about the product through others without the act of physically consuming or using the product. In the right situation, physical consumption of the product may not be needed if a subject can experience the desired benefits of consumption without physical purchase or use.

The current research is designed to test whether individuals are engaging in vicarious consumption by interacting around a product online, and whether this vicarious consumption might supplant or reduce the need to physically purchase and use the product at the consumer level. In addition, several variables related to the consumer's psychological well-being will also be tested. This is the first known study to test both the potentially negative firm level impacts from online product interaction, as well as testing the psychological outcomes of these behaviors on the consumer.

The concept of product-focused Internet behaviors is new, but there have been related studies in the past. The next section outlines several constructs which are relevant to the study of these behaviors and their outcomes.

Chapter 2: Literature Review

The Internet is increasingly used for product activities such as search, discussion, advice, complaining, and general recreation. Although there is a long history of the study of product search behavior in an offline setting, there has been little study of search behavior on the Internet. Although vicarious consumption as well as the distinction between hedonic/utilitarian, experiential/goal-directed shopping motivations have been explored in the marketing and leisure literatures (i.e. Bellenger and Korgaonkar 1980; Cotte 1997; Csikszentmihalyi 2000a), these concepts have not been applied to Internet research in terms of outcomes for the firm.

The focus of the current research is on how engagement in product-focused activities online impacts attitudes and behaviors in the offline world. Although several researchers have addressed these issues separately, few have addressed the impact of online behavior on offline behaviors. The ultimate result of this review is that the marketing and consumer behavior disciplines know very little about product-focused Internet behaviors in the Web 2.0 world.

Online Research

The following sections outline several relevant constructs that have been addressed in recent years with respect to Internet behaviors.

Internet Consumption

Because Internet technology is a relatively new phenomenon, it is best to present previous work on Internet consumption in three different phases based on chronological

order. The first period covers marketing and consumer behaviors literature dedicated to the Internet ranging from the mid 1990's to the early 2000's. The second phase explores the role of "flow" in consumer behavior Internet research. The final grouping outlines the most recent research focused on Internet consumption.

The Internet did not become a viable social movement until a significant portion of society acquired access to the technology. Most consider the mid 1990's to be the beginning of the Internet age. Consequently, the first works in marketing to deal with the Internet and its consumption appeared at about the same time (Hoffman and Novak 1996a; Hoffman and Novak 1996b). These works introduced the concept of computer mediated environments (CME) to marketers and managers, and they shed some light on how to leverage the technology. Other authors highlighted the differences between the Internet and real life (McKenna and Bargh 2000), how the Internet has changed business to business purchasing (Avionitis and Karayanni 2000), as well as how greater internet use was associated with the creation of a digital divides and decreases in sociality (Kraut et al. 1998). Other work (Katz et al. 2001), found no evidence of a digital divide and found that people who are socially engaged online are also more connected and involved in real life.

Additional works addressed how to attract consumers to a website (Hoffman and Novak 2000), and others attempted to predict Internet use and behaviors (Emmanouilides and Hammond 2000). Some research from this area addressed online purchasing, but not the effects of Internet use on overall purchasing (Goldsmith 2002). Additional research indicated that consumers do not trust the Internet or the people who do business there (Hoffman et al. 1999b), and other research suggested that trust would become a

bottleneck to the advancement of Internet consumption (Hoffman et al. 1999a). Luo (2002) addressed this issue by suggesting measures that firms can take to create trust in Internet environments.

The present day value of Internet research conducted roughly a decade ago is questionable. The interfaces that individuals use to interact with the Internet have changed drastically over this time. With the increasing presence of smart phones, iPads and Tablet PC's, the Internet is no longer restricted to time sitting in front of a computer. In addition to changes associated with Web 2.0 that alter online behaviors, the consumers have changed both physically and mentally. Younger consumers in today's marketplace have grown up with this technology, and, based on their often risky behavior online, trust seems to be the least of their concerns (Milne et al. 2009). They understand virtual environments more completely and are more comfortable with interacting in cyberspace. There are several anecdotal examples where Internet use has changed thinking patterns (i.e. Carr 2008) and there is even some empirical evidence that exposure to the internet changes the way that a person processes information (Small et al. 2009). Research that was conducted only a decade ago may no longer accurately explain a phenomenon in the rapidly evolving Internet world.

The second grouping of extant marketing research on Internet activity is the influence of *flow* on Internet consumption. Flow refers to the optimal experience of engaging in a challenging task which is suited to one's high level of skill (Csikszentmihalyi 2000b). For example, an Internet user who is engaged in a flow experience would be so focused on their activity that they would not be conscious of the passing of time. Hoffman and Novak (1996a; 1996b) injected the concept of flow into

the analysis of the Internet phenomenon from the beginning. They furthered the impact of this variable when they attempted to relate the concept of flow to measurable marketing variables (Novak et al. 2000). Flow was an integral part of a study of goal-directed vs. experiential drivers of consumption (Novak et al. 2003), a theoretical distinction that will be used heavily in the current research. Mathwick and Rigdon followed the lead of Hoffman and Novak and incorporated flow into their explanation of Internet search behavior (Mathwick and Rigdon 2004a). Finally, two more current works have attempted to justify the need for flow in studies of the online experience (Hoffman and Novak 2009; Moore et al. 2005).

The final grouping of literature on Internet consumption is more recent and focused on various outcomes derived from Internet engagement. Ratchford and colleagues (2007) addressed the impact of the Internet on the way that individuals used information sources. Other papers have looked at the implications of moving customers from a face-to-face context to a virtual context (Boehm 2008), and Internet use by the elderly and its impacts on online purchasing (Iyer and Eastman 2006). Hyokjin and colleagues (2008)showed that Internet use did not impact the use of traditional media sources, nor did it affect attitudes toward advertising . Jepsen (2007) found that Internet search has become a desirable activity in and of itself. In another recent study, Kozinets and colleagues (2008) reported that collective innovation is a byproduct of everyday interaction in cyberspace.

Internet and shopping

A significant amount of research has compared shoppers who are predisposed to purchasing either online or offline. For example, Goode and Harris (2007) addressed antecedents of behavioral intentions for online consumers, but they did not address what these online behavioral intentions might do to offline behaviors. Other researchers have found that Internet shoppers were fashion conscious, variety seekers who were more likely to comparison shop, and to have a positive attitude toward shopping than do individuals who don't purchase online (Eastman et al. 2009). In a comparison of *purchasers* vs. *browsers*, one researcher found that browsers were more focused on "avoidance" or "prevention" where those who purchase on the web are more "approach" or "promotion" focused (Lepkowska-White 2004). Browsers were more concerned with security, customer service and functional product factors than those who actually consummated purchases online.

Internet and Purchasing

There are literally hundreds of scholarly and practitioner articles that have been written about how the Internet will impact marketing exchanges and the consumption process. The majority of these articles dealt with electronic retailing and how to manage a shift from face-to-face, brick and mortar retailing to selling on the web. While this is related to the premise of the current research, the extant research is different because it focuses on sales generated or consummated through the Internet, not on how non-purchase behavior online impacts overall purchasing. For this reason, articles that treat online purchasing as just another channel to complete a sale will not be addressed.

Other research has addressed how innovativeness drives online purchasing (Goldsmith 2002). Again, this research focused on online buying behaviors, not on how online behaviors shape offline behaviors. Internet purchasing was seen as simply another channel for transactions to occur. A similar case can be made for impulse purchasing and the web. Several articles (i.e. Madhavaram and Laverie 2004; Xiaoni et al. 2007) sought to uncover antecedents and consequences surrounding impulse purchases in a virtual setting. Again, these studies were simply aimed at studying a phenomenon that can occur online. They did not address offline behavior that is driven or impacted by online behavior.

Internet and Product Type

One common theme present in the existing literature is the impact that product type has on purchasing online. For example, one study focused on consumption values and showed that experiential consumption values motivate online purchases (Andrews et al. 2007). The study found differences based on gender and purchase decision (consummate or not), functional, social, and conditional (risk) consumption values. Similarly, Weathers et al. (2007) found different online purchase outcomes for search and experience goods. Another study made the case for a need to better understand the differences between search goods and experience goods in the virtual environment (Grant et al. 2007). This is echoed by an article that explained that Internet technology has blurred the line between search and experience goods (Huang et al. 2009). The flood of information and the fact that some individuals may be "experiencing" products vicariously is a primary focus of the current work. The above authors hinted at the ability of some to vicariously consume a product without actual purchase or use. This assertion

has been reinforced by the finding that utilitarian value was more closely linked to online purchasing than hedonic value (Overby and Lee 2006). People actually need to purchase and use utilitarian products to gain benefits where hedonic or experiential products may be virtually experienced in an online environment.

Internet and Purchase Intention

With few exceptions, little research has focused on the impact of Internet use on an individual's physical purchasing behavior. The exceptions include research by Schlosser (2003) who addressed interactivity in the virtual world and how this impacted attitudes and purchase intentions. Through a series of experiments, the author showed that purchase intentions increased as subjects interacted virtually with products. It should be noted that this research predated the explosive growth in product-focused user generated content associated with Web 2.0. In addition, the experimental manipulations and short time frame allowed would not allow for the social aspects of the Internet consumption process to become relevant. A real world scenario may yield different results.

Researchers have found that online activities may not always align with the financial interests of the firm. One study found that the loss of social interaction that accompanied a move from a face-to-face transaction to an online transaction caused consumers to consume less (Corner et al. 2005). Another study found that purchasing on the web is subject to lower purchasing volumes than purchasing in a brick and mortar location (Ansari et al. 2008). This same study found negative long term associations

between Internet usage and sales, along with less loyalty displayed by consumers in the Internet sphere.

Although the above studies are focused on Internet retailing, they are relevant in two ways. First, they show that online engagement may produce negative impacts on purchase intentions. Second, these studies suggest that an increase in Internet activity could potentially reduce positive outcomes for the firm. The results of these studies were used to explain behavior in an Internet retailing situation. The current research will extend to Internet use, outside of a retail setting that is focused on sales transactions.

Content Consumption and Content Creation

The academic marketing and consumer behavior literatures are largely silent on the difference between content consumption and content creation, even though some think that it will prove to be influential in terms of marketing-related outcomes (Ridings et al. 2006). The one exception comes from Schlosser (2005) who addressed this difference in a limited fashion. Creators and consumers of simulated Internet content were assigned to an experimental sample that did not incorporate individual differences affecting the choice to consume or create online content. Additionally, the experimental setting and short time frame were far from ideal for the cultivation of social bonds which impact consumer decision making in the online world. The findings from Schlosser's article showed that content creators were more sensitive to negative comments, and people who created content in the simulated Internet setting were more likely to be influenced by content created by others than people who inhabit the site simply to

consume content. There are several works outside the marketing arena that address the consumption and creation issue (i.e. Ridings et al. 2006).

The experimental findings outlined above are deficient for two primary reasons. First, the short time frame used in the experimental setting was unlikely to generate the social bonds that are certain to be present in a real world content creation setting. Second, trait level variables are likely to be misaligned when users are assigned to be either creators or consumers of content as they were in this study. The fact that significant effects emerged is both admirable and valuable; however, the ability of this study to inform us about differences between the populations of creators and consumers is limited.

The Impact of Virtual Experience

A few recent papers have explored virtual experience with a product and how this might impact the consumer. Daugherty (2008) found that a product trial in an Internet setting, where the subject could manipulate the product in three dimensional virtual space, was more conducive to consumer learning and had a greater impact on brand attitude and purchase intention than traditional advertising methods. In many cases, the virtual representation was more like a real life experience than it was like a traditional product advertisement. Similarly, Holzwarth and colleagues showed that using avatars as online salespeople allowed websites to be perceived as more social and improved attitudes towards the site, satisfaction with the site and purchase intentions when compared to sites with no avatars (Holzwarth et al. 2006). Other research showed that

virtual interaction is more important when shopping for experience, as opposed to search products (Huang et al. 2009).

The more a subject views their online experience as real, the more likely this experience will impact both attitude toward an advertisement and attitude towards a brand (Hopkins et al. 2004). Others have shown that perceptions of virtual reality influence attitude towards and chances of adopting a new technology (Dash and Saji 2007). Still others have shown that the design and atmosphere of a website, presumably through simulated reality, impact shopping outcomes and attitudes (Eroglu et al. 2003). Fiore and colleagues (2005) showed that interactive technologies influenced attitude and that perceptions of reality add both experiential and instrumental value for the consumer.

Research Involving Internet Forums or Message Boards

As a final topic of this literature review, this section will outline existing marketing and consumer behaviors research that has used Internet forums as a source of data. Several qualitative research projects used information posted in online forums or bulletin boards in the late 1990's. For example, Kozinets and Handelman (1998) used information gleaned from Usenet groups to study boycotting behavior where consumers choose not to consume to make a point. They use an iterative process of qualitative analysis to code primary themes evident in the data set. These qualitative exercises culminated in the well-known description of Netnography which refers to ethnographic techniques applied to Internet research (Kozinets 2002).

The first published paper in marketing that used forum members as respondents for a quantitative research project addressed the degree to which social activities

motivated behaviors in virtual communities (Bagozzi and Dholakia 2002). Though it did not take into account the activities engaged in online (posting vs. lurking) or explore the consequences for the firm (purchase or use of the product), this research does exhibit some similarities to the current project. These same authors published a follow up paper that added even more insight into why individuals engaged in interaction on Internet forums (Dholakia et al. 2004b). Again, the DV's in this study were focused on use of the forum, not on outcomes for the firm or the consumer as a result of their Internet behaviors. The study used a broad range of virtual communities as subjects, a technique that was also applied to the current research. The authors also made a distinction between small-group based virtual communities (which can also meet face-to-face) and network based communities which do not. They find that small-group based communities are more relationally committed than network based communities, and that the different types of communities behave differently based on their nature.

The management literature was the source of a paper that looked at forum postings as a source of online product reviews (Yubo and Jinhong 2008). This paper suggested that firms monitor online communications and base their actions on the themes and currents visible in extant online discourse. The paper labels online consumer reviews as a new element in the marketing mix and suggests that firms should manage and manipulate online elements in a manner consistent with the way that marketers treat pricing or promotion.

Another paper was the first to focus on negative outcomes for the firm resulting from online WOM (Bailey 2004). This study is notable because it is one of very few studies to focus on the possibility that negative outcomes could arise from online

interaction between consumers, where prior studies have focused primarily on positives for the firm. Another study used an experimental approach to show that online forum information does impact the purchase choices made by forum users (Senecal and Nantel 2004). In light of the social dimension that accompanies forum activities and motivations, the experimental approach and findings derived should be viewed with scrutiny. It would be impossible to develop the social ties incorporated in online virtual communities based on the timeframe used for the experiment. A more credible study was also published in the same year that generally extended the findings of Senecal and Nantel. This study used forum evaluations of television shows to predict ratings of these shows in the future (Godes and Mayzlin 2004). In essence, this study showed that online communication can be extended to explain offline behaviors, though it could not take purchasing into account due to the nature of the available data.

The above finding can be seen as a springboard for the next phase of research involving Internet forums and marketing. Three studies, recognizing that online communication translates to offline behaviors, focused on activities that can be undertaken by firms in order to manipulate and capitalize on Internet forum activity. Godes and colleagues addressed different activities that the firm can take in a forum context that were predicted to result in benefits for the firm (Godes et al. 2005). The focus in this study was on word of mouth, and they suggested that the firm can take one of four different roles in the forum: observer, moderator, mediator or participant. The management literature offered another study which conceptualized Internet forums as a potential tool for the firm to promote itself (Dellarocas 2006). This paper is unique in that it focused on both the positives and negatives that accompany online WOM. The next

study took this a step further and addressed ways that the firm can disguise itself on a forum to appear and post as if the firm was simply a consumer providing information for other consumers (Mayzlin 2006). At the same time, a firm can impact its competition by posting negative information about a competing product in these forums. The most in-depth study along this line of questioning involves different forum manipulation strategies that firms can take in diverse situations to improve their outcomes (Miller et al. 2009). This paper points to dynamic changes in key parameters which indicate when one forum manipulation strategy should be chosen over another. The final paper that plays on this theme was another qualitative example that focused on the loss of control that firms encounter when their messages are placed in a manipulable, co-created environment like these virtual communities (Kozinets et al. 2010). Firms have a very low degree of control over their messages in these environments, a concept that has been repeatedly addressed in the literature (i.e. Thompson et al. 2006).

Another study that in some ways mirrors the intentions of the current research involved forum users and the linkage between psychological characteristics, intentions and behaviors (Bagozzi and Dholakia 2006). These authors used two different groups for this analysis; one group uses the well-established Harley Owners Group virtual community and the other group inhabits less formalized forums dedicated to other brands of motorcycles. They found that there was no linkage between the degree to which they felt that they were a member of the group and their overall purchases for the Harley group, but there is a linkage for the less established groups focused on a range of other motorcycles. This paper concludes with the statement that firms should encourage consumers to interact online because it will increase loyalty and purchasing. This last

statement, seemingly contradicted by the author's own data, will be disputed and hopefully clarified in the current research.

Another paper addressed the psychological processes that accompany forum usage (Weiss et al. 2008). This paper focused on individuals who use these forums for information, and how individual personalities in the online world are formed. Individuals built social personas for the people who use the forum, even though they have very limited information on which to base these evaluations. Three aspects made a difference in these evaluations: response speed, evaluations of past responses, and the breadth of past responses. Importantly, these authors show that the orientation of the information seeker moderates this process. Those with a decision-making orientation had one set of goals while those with a learning orientation had another. This can be viewed as a very rough analog for the distinction made in the current research based on informational benefits (decision making) and relational benefits (learning).

The final papers reviewed in this section were, again, qualitative pieces. O'Sullivan's (2010) paper is important in that it suggested different reasoning and motivations between non-members and members. It suggested that non-members lurk because they lack time, won't accept the social risks of posting, or that they lack the required experience to contribute to the forum. Members post because they are looking to solidify and define their identities, be intimate socially with others, or are look for and use information that can be found in the forum. These contentions will be tested in the current research. Jayanti and Singh's (2010) paper was aimed at exploring how individuals learn in these forum environments. This paper is not necessarily relevant to

this research based on its findings, but is included in this review because it is extremely recent and uses a method similar to the content analysis that will be presented as Study 3.

Summary of Online Constructs

A foundational topic for the current research revolves around the way that the information revolution brought about by Internet technologies has impacted consumer behavior. Engaged users/content creators produce and consume more information in a day than mass media creates in a year. The sheer availability of information is fundamentally changing the landscape of consumption in many unique ways. The consumer behavior and marketing literature do little to address the creation and consumption of content along with the potential impacts that these activities may have on purchasing.

There is little existing research that addresses the characteristics and motivations that compel one individual to consume and lurk while another individual posts content and engages in two-way communication with the group. As noted above, several extant articles address purchasing. However, these articles address online purchasing only and are aimed at discerning when a person will and won't purchase a product electronically. Two papers addressed the role of Internet technology in behavioral loyalty and purchase intentions, but they stop short of measuring actual purchase or usage (Mathwick 2002; Schlosser 2003). These authors do not address the content consumption/creation difference which may prove to be an important distinction.

Marketing articles are almost uniformly positive on the expected firm outcomes from engaging the consumer in the virtual world. The present research will address the

possibility of negative outcomes for the firm in the form of reduced usage and purchase. At the same time, this research will track attitudinal and behavioral commitment in an attempt to profile how engagement with products in virtual worlds actually impacts the firm.

Offline Constructs

The following sections cover relevant literature applicable to this dissertation that has been studied in an offline setting.

Search

Product search has long been demonstrated to be a key consumer behavior construct (Howard and Sheth 1969). Work on product search has identified two distinct types of search that have different motivations and outcomes (Bloch et al. 1986). *Prepurchase search* is motivated by utilitarian or goal-directed aims and has been most commonly studied. The purpose of this type of search is to make a better purchase decision for a buying event that will arrive in the near future. *Ongoing search* can often be attributed to more hedonic or experiential motivations. The goal of this type of search is either to accumulate a store of information that may be used well into the future, or it may be simply because subjects enjoy the search process due to strong product interest.

Both of the search types outlined above may apply to content consumption on the Internet. In some cases, a consumer seeks content to assist with short run purchasing needs. In other cases, a consumer may frequent online information sources on a long-term basis for hedonic or recreational reasons. Is this ongoing search that may not be directly tied to a purchase decision that could evolve into content creation?

Experiential Consumption

Ongoing search is a part of the larger domain of experiential consumption. Holbrook and Hirschman (1982) emphasized the importance of the experiential aspects of consumption which they characterized as pertaining to the symbolic, hedonic and esthetic nature of consumption. The consumption experience is driven by a desire for fantasy, feelings and fun. The authors suggested that the science of marketing is too focused on the instrumental or utilitarian aspects of consumption, and there is much to be learned through a focus on elements of consumption that are not primarily linked to the physical consumption of a material thing.

Another relevant study is Holt's (1995) effort at creating a typology of consumption. Holt proposed a two dimensional typology where one dimension is autotellic or instrumental, and the other dimension is self-focused or other focused. The autotellic dimension is an extension of Holbrook and Hirschman's work and Holt labels the two dimensions under the autotellic typology "experience" and "play". Experience describes a situation where a subject is dealing with a consumption object as an end in and of itself and for the subject's own enjoyment. They are not using the process or the object as a means to fulfill another sort of goal. Play, in Holt's concept, is also considered an end in itself, however, it is not based on a consumption object, it is based on relationships with other people. It is clear that both *experience* and *play* can be a product of engagement in online environments. More specifically, engaging in product-focused Internet behaviors may provide an avenue toward fulfilling the benefits associated with experiential consumption without the need to physically purchase or consume the product.

Product Involvement

Product involvement has been an important marketing and consumer behavior construct for decades (i.e. Bloch 1981; Celsi and Olson 1988; Zaichkowsky 1985). Though there are hundreds of articles that have used product involvement as a central construct (i.e. Bloch et al. 2009; Bloch et al. 1986; Holzwarth et al. 2006; Richins and Bloch 1986; Richins et al. 1992), there are few empirical studies that actually demonstrate a link between product involvement and product purchase or use.

Two studies have been identified where the link between product involvement and purchasing has been made empirically. The first is a conference paper written about the apparel industry (Tigert et al. 1976). The authors of this study measured a construct termed "Fashion Involvement" which consists of five dimensions: innovativeness, communication, interest, knowledgability and awareness. Subjects were categorized as high, medium or low fashion involvement and these categories did significantly predict subject's frequency of purchase over the past year.

There are two caveats that readily come to mind when viewing this finding. The first relates to the time that this study was conducted. In the mid 1970's, the currently accepted definitions and measures of product involvement did not yet exist. The definition and measures of the product involvement construct have since been revised and tested many times. Though still an abstract construct, product involvement is a much more accessible entity now than it was in 1976.

The second caveat regarding this study deals with the industry that the authors chose to demonstrate the link between involvement and purchasing. Apparel is a

culturally accepted medium of self-expression in western culture. A common maxim in the business world is "you dress for the job that you want to get, not the job you have". Research has shown that individuals who are less qualified for a position will be more concerned with apparel in an effort to show that they truly belong in a specific group (Wicklund and Gollwitzer 1982). It is nearly impossible for many to overlook apparel faux pas in aspects of everyday life. One places oneself into social categories simply by the way that one dresses. Social mobility can be restricted in either direction if one does not alter their apparel choices. While all product involvement is related to the self, apparel is culturally mandated to be a direct path to the socially accepted self.

The second study that links consumer spending to product involvement was published in the leisure literature (Bloch et al. 1989). This study presented a model that included an individual's experience, psychological and behavioral commitment to a brand, product involvement, product knowledge, spending levels and opinion leadership. The relationship that is relevant to the current research involves the found positive link between product involvement and spending level. Closer analysis reveals that the spending level is characterized by the "average and overall highest prices willing to pay for running shoes" (Bloch et al. 1989 p. 195). This variable does not measure the overall money spent on the product nor does it account for frequency of purchase. Highly involved runners may have several different shoes designed for different running surfaces and running distances. There is also a great deal of variance in when running shoes are replaced. Some individuals replace their shoes after a couple of months where others do so only once a year. At the firm level, it will be important to understand the link between

overall expenditure and product involvement if involvement is to be directly linked to bottom line firm outcomes.

It is also important to note that this article used running shoes as the product for which involvement was measured. Although they serve a functional purpose that is distinctly different from the formal attire analyzed in Tigert, Ring and King's (1976) study, running shoes are still a form of apparel. This calls into question the generalizability of the finding to other types of products. The current research will acknowledge this by recording involvement levels and product expenditure with respect to several different types of products.

The current research deals with product involvement embedded within a virtual environment where participants may never meet face to face. This virtual context may be conducive to the incubation of product involvement, but does this lead to positive outcomes for the firm? Prior research has suggested that environmental context is key to generating this involvement, though little empirical work has addressed positive outcomes for the firm (Bloch and Richins 1983; Celsi et al. 1993).

Much of the current practitioner level marketing literature suggests that virtual social spaces are ideal for the implementation of relationship marketing efforts. Some research has shown that product involvement level can have a direct effect on the successful implementation of three types of relationship marketing efforts (Gordon et al. 1998). This finding is reinforced by other research that finds that relationship marketing success hinges on a consumer's level of product involvement, among other things (Wulf et al. 2001). If virtual environments are good places to conduct relationship marketing

efforts, then it seems likely that the link between engagement in the virtual world and product usage and purchase will be moderated by product involvement level.

Though there are many articles addressing the product involvement construct and the Internet, few articles appear in top level marketing or consumer behavior journals. In terms of this research, the most useful top level article comes from Mathwick and Rigdon (2004b). This article shows that a construct called "play" is moderated by a consumer's level of product involvement. Play is calculated as the sum of intrinsic enjoyment and escapism and it is an important construct because it serves as a link between online behaviors and the formation of attitudes toward online resources. The current research will be aimed at how different forms of Internet behaviors will impact individual's attitudes and behaviors. As such, it is likely that Mathwick and Rigdon's findings will inform us about the moderating influence of product involvement in this area.

The other article in a top level marketing journal that addresses these two constructs is focused on the potential of using robotic avatars to sell products in virtual spaces (Holzwarth et al. 2006). The main findings with respect to our focal constructs centered on product involvement's moderating role in subjects' preference for different avatars as salespeople. Individuals who are low in product involvement preferred robotic salespeople who were attractive while those high in product involvement preferred salespeople who were product experts. While this finding is not directly relevant to the current research, it does help to establish a pattern of product involvement as a moderator of a link to consumer's attitudes.

Outside of the top level marketing journals there are several articles that deal with product involvement in an Internet setting. Most of these articles propose that product involvement has a main effect relationship with a number of different DV's. The most common dependent variable for these relationships is the evaluation of advertisements. Several authors show that individuals who are high in product involvement are more likely to click on Internet advertisements (Chan Yun et al. 2004; Chang-Hoan 2003; Cho 2003; Shwu-Ing 2008; Shwu-Ing and Ping-Liang 2007). Others show a main effect for product involvement on advertising evaluation (Chang-Hoan 1999), flow(Wei et al. 2006), elaboration (Macias 2003), and the effectiveness of advertising in all media including the Internet (Dijkstra and van Raaj 2001).

Several other articles show that product involvement can have a main effect on a consumer's emotions. One study shows that product involvement can lead to feelings of empowerment and enjoyment in collaborative virtual space (Faller et al. 2009). Another study shows that product involvement is associated with enjoyment and concentration (Koufaris 2002). Yet another shows that product involvement is linked to enjoyment which predicts a customer's return to the website (Koufaris et al. 2001). A final main effects study shows that product involvement level impacts a consumer's evaluation of the site itself (Chen et al. 2009).

Along with the two top level marketing articles mentioned at the beginning of this section, there are several lower tier works that show product involvement as a moderating influence. Research has shown that product involvement level moderates the influence of message mode on the effectiveness of certain advertising messages in the virtual world (Jin 2009). Other work shows that product involvement moderates the influence of

message mode on evaluation of the ad (Seung 2009), a finding that contradicts Macias' (2003) finding of product involvement's direct impact on evaluation. Elliot and Speck (2005) show product involvement as a moderator between website design and an individual's attitude toward the site, a finding that meshes well with the top tier articles mentioned above.

For the purposes of this research, the most significant existing literature concerns product involvements moderating relationship between behaviors and attitudes (Elliott and Speck 2005; Mathwick and Rigdon 2004b). One primary goal of the current research is to show how different online behaviors lead to different online attitudes, and then extend this back to behaviors. As such, it seems logical to propose that product involvement will prove to moderate the link between online behaviors and online attitudes.

Brand Community

Brand community is a marketing concept that describes the way that individuals relate to each other in a way that is structured around a brand (Muniz and O'Guinn 2001). These communities are usually not bound by geography which means that virtual communities and brand communities often overlap. There are three primary characteristics of brand communities that must be displayed for their classification (O'Guinn and Muniz 2005). Consciousness of kind refers to a sense of belonging to a group that is homogeneous in one important way (usually commitment to the brand). The brand community must also display rituals or traditions that assist in-group/out-group distinctions as well and bring the group together on salient points. Finally,

members of a true brand community will display a sense of moral obligation to other members through both attitudes and behaviors.

The seminal research on the topic of brand community focused on the social nature displayed in interactions with certain brands (Muniz and O'Guinn 2001). This research used two different forms of qualitative techniques as data: one based on face-to-face interviews with known members of brand communities and the other from the analysis of personal web pages generated by devotees of a brand. The primary outcome of this research was an explication of the fact that brands are socially constructed and that the social component is often as important as the brand or product itself.

The authors also extend their findings to benefits for the firm by exploring the impact of brand community on brand equity. Aaker (1991) identifies four components of brand equity (perceived quality, brand loyalty, brand awareness, brand associations) and brand communities can impact all four. The authors also tie brand community to relationship marketing. Relationship marketing takes a long-term view of customer relationships and stresses the relationship over the discrete transaction (Berry 1995). These long term relationships should be viewed as a resource of the firm (Webster 1992). In the author's view "a brand with a powerful sense of community would generally have greater value to a marketer than a brand with a weak sense of community."

Another article that must be addressed to understand the brand community construct was written by McAlexander, Schouten and Koenig (2002). This article took a broader, more consumer-centric view of the brand community relationship. Where Muniz and O'Guinn (2001) perceived a triad between the focal consumer, other

consumers and the brand, this research saw the focal consumer at the center with the brand, the product, the marketer and other consumers all relating to the focal consumer. They then used a combination of ethnographic field work and a quantitative survey to explore and test brand community relationships.

The primary finding of this research is that the four hypothesized components of brand community do converge to form a single brand community construct. Secondary findings included the confirmation that participation in brand centric activities with other community members increased the participant's sense of brand community. Importantly, these changes occurred even if the community was only temporary. The multi-method approach found support for these hypotheses with both qualitative and quantitative data.

Another article used survey methodology and structural equation modeling to address how brand community impacts the intentions and behaviors of its members (Algesheimer et al. 2005). They point out that many leading firms are making considerable investments in facilitating and building brand communities, but there is no clear evidence that these have positive benefits for the firm. The most intriguing finding, in terms of the current research, was that brand community identification was linked to purchase behaviors through community engagement, membership continuance intentions and brand loyalty intentions. Other findings of interest included the fact that this relationship was stronger for longer-term customers suggesting that brand communities should be seen as a customer retention device, not a customer acquisition tool.

This research also showed longitudinally that brand community member's that the four different behavioral intentions that were measured all were significantly and

positively related to actual behaviors exhibited in the future. This means that brand community members actually follow through on their responses in a meaningful way when responding to questions about their intentions in the future. Finally, they found that both community size and brand knowledge moderated the influence of the brand community on its members. The article closes by echoing the prescription of the two articles outlined above in terms of the benefits of the firm's engagement in brand community cultivation.

A more recent *Journal of Marketing* article notes that "there is little research directly linking brand community membership to actual adoption behavior" (Thompson and Sinha 2008). Using product adoption data from profiles created by the users of online forums, this research showed that both participation and tenure in a product-focused online forum positively impact adoption of both the firm's product and competing firms' products. Counter-intuitively, higher levels of participation in a forum actually increased the potential to adopt a competing firm's offering of the focal product. Unfortunately, the generalizability of the findings of this study may be limited. The research utilized data from six different forums, however, all six forums were dedicated to computer hardware components (either video cards or computer chips).

Based on their findings, the authors propose several ways that building brand communities can create value for the firm. As mentioned above, community participation level was linked to adoption rates so the firm that can generate more participation will likely have higher rates of adoption. This can insulate the firm from competitive pressure by ensuring repeat purchases and keeping the consumer away from competing products. The paper closes with a prescription for firms to "convince their

members to join and participate freely in their community,"a prescription that will be tested in the current research.

The most recent and final brand community research that will be covered in this review was focused on explicating the way that brand community creates value for the firm (Schau et al. 2009). This qualitative research project used in-depth interviews, naturalistic observation and netnographic research techniques to provide data for analysis. In addition, these authors tested their findings against findings documented in prior research using a meta-analytical process.

The primary outcome of this research was to unearth 12 practices that were common to the nine brand communities analyzed. These practices included: welcoming, empathizing, governing, evangelizing, justifying, staking, milestoning, badging, documenting, grooming, customizing and commoditizing. Additionally, these authors grouped these practices creating a taxonomy of common collective actions. The authors reached three conclusions with respect to emerging perspectives in marketing: value is manifest in the networks where consumers interact in the brand community, ceding control to these consumers increases engagement and brand equity, and firms can derive added value by using willing customers as resources. These authors roundly support the idea of firms cultivating and encouraging their consumers to interact and contribute to their brand communities.

Vicarious Consumption

The primary focus of the current research relates to the construct of vicarious consumption. Vicarious consumption is based on literature that addressed the

experiential pleasures of browsing and shopping (i.e. Bloch et al. 1986; Holbrook and Hirschman 1982). Although the term has not been widely used in the literature, there are several extant examples where the construct has been used to describe various elements of consumer behavior. The seminal article for this construct described the role of imagery in the purchase and consumption process (MacInnis and Price 1987). MacInnis and Price (1987) posited that the key to vicarious consumption was the elaboration of the imagery used. Highly realistic situations are more likely to foster vicarious consumption than less realistic ones. They also suggested that the process of vicarious consumption will be viewed differently by different groups. Those who have the means and the ability to physically engage in consumption will have a negative view of vicarious consumption while those who are blocked from consuming will have a more favorable view. Basically, individuals who consume vicariously can gain many of the benefits of consumption without incurring the costs.

The concept of vicarious consumption has been seen sporadically in the consumer behavior literature since it was first mentioned by MacInnis and Price. Holt and Thompson (2004) used the term to describe the way that an individual adheres to a "Man-of-action hero" persona through watching action movies. Belk (1988) conceptualized vicarious consumption in terms of Veblen's (1898) conspicuous consumption. He sees little difference between decorating one's house and decorating one's wife or children. In this sense, Belk conceptualized the act of consuming through a cherished other as being just one more step towards self-definition. Obviously, this concept is far different from that put forward by MacInnis and Price (1987) which will be the accepted definition for the current research.

Babin and colleagues (1994) used the *vicarious consumption* term as it was intended by MacInnis and Price. Their study of hedonic and utilitarian shopping value suggested that vicarious consumption may relay some of the same experiential benefits as a purchase. Specifically, vicarious consumption can provide hedonic gains while utilitarian goals may remain unfulfilled. Vicarious consumption is important because interactions with products should be viewed as a complete experience, not simply a means to an end.

Another recent work addressed the concept of vicarious consumption as a precursor to physical evaluation (Daugherty et al. 2008). This study looked at the impact of learning and manipulating the product virtually, prior to a physical product trial. The interesting finding of this research, in terms of virtual consumption, is the exposition that consumer learning in a virtual environment is more similar to direct manipulation of the product than it is to reading about the product. This finding is analogous to telepresence theory being applied to the product world. The virtual world and virtual consumption is a viable venue for consumers to manipulate and learn about real world products.

To conclude, the idea of vicarious consumption is present in the literature, but has been under researched. When one considers the impact that Internet technologies are having on the way that we shop, the way that we communicate and how we spend our free-time, it becomes clear that vicarious consumption may be a driver of many human behaviors. Specifically, virtual consumption may be replacing some physical consumption in the marketplace. Uncovering this relationship is a primary goal of the current research.

Summary of Related Constructs

Much of the existing work on the Internet and attitudes has been positive in nature with regard to outcomes for the firm. This work often dealt with the Internet as simply another channel for the firm to complete a sale. There is evidence of potentially both positive and negative outcomes for the firm when Internet activity is added to the e-commerce equation.

The marketing literature has largely ignored the distinction between content creation and content consumption. It seems that many researchers may not address content consumption as it may not fit with traditional concepts of consumables and consumption. These concepts must be expanded to include informational consumption to incorporate the increasing influence of the Internet in the 21st century world.

Several extant articles have used data from Internet forums and many of these include efforts designed to evaluate brand communities. It is notable that the articles evaluating brand community are uniformly positive and enthusiastic in prescribing that firms should cultivate brand community and the technologies associated with the concept.

The key take away from this review of related constructs is that this is an under researched area, and that there are several gaps in the extant literature. In addition, the Internet environment has evolved so quickly, from both a technological perspective as well as the mindset of the individuals inhabiting these virtual spaces, that research conducted only a decade ago may no longer be relevant. The above section also outlined extant research on several offline constructs that will be used in this dissertation.

Chapter 3: Hypothesis Development

The literature review in Chapter 2 outlined extant research streams that are either tangentially or closely related to product-focused Internet behaviors. It is clear from this review that academic research on this concept has been sparse, so depth interviews with heavy forum users were utilized to further illuminate this under-researched topic. This process is consistent with techniques both suggested and applied in past research (Deshpande 1983; Parasuraman et al. 1985). The following paragraphs document depth interviews conducted with consumers who spend a large portion of their time with products in an online setting. These interviews along with the literature reviewed in Chapter 2 will provide a framework for the exposure and explanation of vicarious consumption in product-focused Internet forums. This chapter proposes relationships between product-focused Internet behaviors (PFIB's) and several variables that are of interest to marketers and consumer behavior researchers.

Depth Interviews

> *"Women in high heels are hot. End of discussion."*
> (Post from a forum dedicated to running and running products).

The above quote was taken from a forum dedicated to running and running products (i.e. shoes, apparel, technology, training groups, etc.). This quotation is notable because it is not related to the topic of the forum in any way, shape or form. The thread that contained this post was not hidden in some obscure subsection of the forum, this thread was created on the home page of the forum so that everyone who accessed the site

would see and hopefully respond to the question "Do you find women in high heels attractive?" Analysis of virtually any product-focused Internet forum will reveal a large percentage of threads and postings that are unrelated to the focal product or activity. Though the common governance structure for the typical forum includes multiple layers of administrators and moderators, their focus seems to be primarily on etiquette issues or offensive language and behaviors, not on keeping the discussion "on topic" in terms of discussing the focal product or activity. The governance structures in most forums appear to be most concerned about keeping people interested in and using their forum.

The research questions addressed in the current research are equally applicable to the people governing the forums as they are to those marketing the products to which the forums are dedicated. What exactly is driving forum use in terms of content consumption and content creation? Why do individuals frequent these product-focused Internet forums? What is the motivation for becoming involved with the online community of individuals who frequent a discussion forum dedicated to a particular product? Because personal interviews have been shown to provide a greater depth of response (Charters and Pettigrew 2006), and because of the exploratory nature of this research, depth interviews were conducted to inform theory development.

Theoretical Grounding

Internet forums collectively boast hundreds of millions of members (Gouedard 2011). Forum usage is a behavior that is displayed by a wide range of individuals. For example, forum users are slightly more likely to be male, but they were generally gender balanced (Hausner et al. 2008). While the oldest generations are generally excluded from

forum use due to a lack of familiarity with the technology (Clark 2009), forum usage is engaged in by individuals from a wide spectrum of ages.

Internet forum usage is comprised of both observable and unobservable components. When an individual reads the forum or "lurks" in the background, the average user is unaware that the lurker is accessing the forum. The passive behavior of lurking may be recorded as a site visit, but other members are not aware of what the member did on the site, why s/he chose to inhabit the site on that occasion, or how much time s/he devoted to different elements of the site.

On the other hand, posting is an observable behavior that can usually be accessed by site members and non-members alike. In most forums, posting is associated with membership as individuals are not allowed to post content without registering first. An individual who posts is creating content for the public to consume. It should be noted that members must also consume, they cannot realistically limit their behaviors to posting. A certain level of consumption behavior is needed for the poster to relate his/her posts to the ongoing conversation.

Why are people choosing to inhabit these virtual environments? Though several marketing works have used product-focused Internet forums as a source of data (i.e. Dholakia et al. 2004a; Kozinets 2001), no marketing study has looked directly at the motivations for engaging in content consumption and content creation on this type of site.

Method

In attempting to study product-focused Internet behaviors, it would not be efficient to sort through a generic pool of subjects in search of those who use these

product-focused Internet forums. As an exploratory study, qualitative methods were chosen as a means of gathering data about informant's past forum usage. These qualitative methods will shed light on how "the psychological, sociological and cultural entities that influence informant's lives have influenced, or continue to influence, interactions with marketplace-related phenomena" (Otnes et al. 2006 p.387). Depth interviews were chosen as a data collection technique because this would provide to new information about the subject while allowing for the investigation of additional questions that emerged through the process. Although depth interviews were used, the involvement of the researchers was geared toward the narrative. Questions were phrased in a way that encouraged the informant to provide context as to how the Internet behaviors in question impacted their lives and the lives of those around them. This context allowed for additional insights and paved the way for other research on this topic.

Data Gathering

Identifying potential informants as product-focused Internet forum users posed several unique challenges. First, forum usage activity is typically unobservable from a person-to-person perspective. A researcher can be surrounded by people who are interacting on Internet forums and not know it unless s/he reads the display on each person's computer or mobile computing device. Forum use is generally a private activity that is separated from an individual's face-to-face life. Using Internet resources for face-to-face meetings poses problems as well. Forum members are often geographically dispersed across the globe. Some forums display some level of geographic information for their users but it is usually optional and no more detailed than the state or country in which the user resides. Most forum users use a coded naming convention or have avatars

associated with them so finding the actual person behind the activity can be exceptionally challenging.

Over two years prior to this research, casual conversations and assistance from researchers uninvolved in this project resulted in the identification of two individuals who frequented product-focused Internet forums, and who agreed to submit to an interview in exchange for a free meal.

Interview One

The first interview was conducted with a man in his mid-thirties who will be referred to as Sam. He is married and has two children. The forum that this individual inhabits is dedicated to the online video game *World of Warcraft*.

Though the subject quit playing the game, he continued to inhabit Internet forums dedicated both to the game itself and to his "Clan" or the group of individuals who were his teammates in the game. The subject explained that use of the game dominated his schedule. After he quit playing the game, he was able to fill some of this time and keep up with his team members by monitoring the forum.

> The more I played WOW the less I did anything physically challenging. The game takes up more and more of your discretionary time. For people with a problem (implying that this did not include him), it takes up more and more of their non-discretionary time as well.
>
> The forum allows me to keep my social ties and I get to see what is going on with the clan.

As time went on, the subject became more mentally involved in the lives of the people in his old clan, even though he no longer played the game. Reflecting back on his

forum involvement, the subject mentions an overlap in the mental challenges that are encountered in the game and the challenges that are presented in the forum setting. While the forum is dedicated to the game, and many of the posts revolved around game play, the forum has relational and personal components as well. Over time, the subject became more interested in the social and personal angles than he was in the game itself.

When asked to describe how he became involved with the game and the forum, Sam commented:

> If I wasn't challenged enough, basically with my job, I would need to find something to fill my time that took effort. In order to be good at the game you need to think about the game dynamics which can be very complex and require a lot of coordination. Talking to people in the forum allowed us to discuss what went right, what went wrong and how should address situations like this in the future. The challenge of it, the accomplishment, meeting goals as a team and social interaction were all drivers.

The above statement fits a pattern that can be explained by optimal arousal theory (Hebb 1955). This theory suggests that individuals have a specific level of arousal that they are motivated to attain. If the level of arousal is too low, then an individual will seek out activities that will raise his/her arousal level. If the arousal level is too high, then s/he will seek ways to reduce arousal. Therefore, when arousal level is graphed against a variable like satisfaction or well-being, the graph will form an inverted U with the highest satisfaction or "optimal arousal" at the apex of this inverted U.

Before becoming engaged in the game and forum, this subject encountered low levels of arousal. He saw his work-a-day life as an arduous march toward inevitable death. In his mind there was little for him to get excited about in the offline world. Once

he discovered the game he found a completely new world fraught with challenges, accomplishments, teamwork and responsibilities. These online activities were arousing enough to push him into a higher level of life satisfaction.

However, as time went on and more time and resources were put into online activity, the subject pushed past the apex of the inverted U and life satisfaction decreased. Increased real world pressures from spousal relationships and changes at work pushed him so far past the apex that the only viable option was to quit playing the game entirely. He did not, however, stop his monitoring of the clan's forum and remained an active participant in this venue.

Through the course of the interview it became apparent that the subject saw the game itself as a compulsion and used the forum as a way to keep in contact with the virtual world while not engaging in the compulsive activity.

> When I got a new job I quit playing for a while because I thought that I would be better off focusing all of my energy on work. But then I got disgruntled with my new job and started playing again. I quit again after my next promotion, but I started playing again shortly thereafter. I quit a third time because I didn't think that it was a good thing to play video games with a young child and a failing marriage, but I saw it as an escape from reality.
>
> I still check the boards every day but this is a fraction of how often I would think about it when I was playing. I would probably think about it 10 times a day when I was still playing. Now I check the boards every morning and I don't think about it until the next morning as part of my routine.

Though the subject was obviously compelled to use both the game and the forum in a way that many would view as psychologically unhealthy, he did not see his activity as an addiction. In fact, any mention of addiction or compulsion would bring on

defensive speech patterns and observable side effects of anger (i.e. flushing, fist clenching). For example, Sam talked about the game overwhelming his free-time.

> You end up sleep deprived for sure. You try to arrange your schedule so you have more time for WOW. Did it take time away from other activities, absolutely. I used 90% of my discretionary time to play WOW. I still played with my son (offline), I went to work every day. I just used most of my free time to play the game.

After several years of engaging in this, and with mounting pressures from work and personal relationships, the subject decided that he would stop using the game altogether. When asked why he stopped instead of simply cutting back, Sam stated that cutting back was not an option. He would either dedicate his current level of time to the game or he had to quit playing entirely.

> Part of what makes it easy to stay away after you quit, in order to succeed and prosper in the game itself, it requires so many hours of investment. In other words, it's no fun to be a part time player.

At the time of the interview Sam had not played the online game in over three years, but the first thing that he does when he gets to his computer in the morning is to check his clan's Internet forum. The subject has decided that he can no longer allocate 8-10 hours to playing a session of the game, but he seems to be getting some of the same benefits from forum use that he got from using the product itself. These benefits come in the neatly packaged form of the forum that can be fully consumed daily in a matter of minutes, not hours.

Sam talked in depth about the relationships that were formed in the game. Choosing to spend eight hours a day with specific individuals is certain to result in some level of affection for your peers.

> A lot of people that I know actively seek out personal contact through the game and the forum. There are all kinds of stories about marriages and long-term relationships beginning with WOW. That is not something that was ever my primary goal with this thing.

The informant became aware of his need for the relationships formed in the game after he stopped playing. Through the clan's forum, the subject even arranged face-to-face meetings with two of his fellow players. These meetings were disappointing so no further meetings are planned. Though Sam has no plans to interact with these people offline and has no intention of playing the game in the future, he has no plans to end his monitoring and posting on the clan's forum either.

Near the end of the interview, the informant mentioned that he had never really thought about many of the questions that were asked in this interview. Both game playing and forum use could be examples of *mindless behavior* (Langer 1989) that becomes routinized and is commonly executed without cognitive thought or evaluation. He commented that he is somewhat embarrassed by the extent of his online behaviors and he commented that he may decide to alter his behavior based on his revelations in the interview.

The interview concluded with a question about what he would do if his hypothetical 16 year old daughter was playing this game or engaged in his forum behaviors. The subject said that he would get her to stop by offering alternative activities

for her. While still not open to considering his own behavior as a product of addiction or compulsion, the subject seemed to understand the potential negative consequences that these behaviors might have on the consumer.

Though this individual may seem like an extreme user of Internet forums, he does not see it that way. The unobservable nature of the activity has led him to believe that millions of people are engaged in much the same way, but we don't know who they are and wouldn't know unless they told us. This perspective will inform many of the hypotheses that appear later in this chapter.

Interview Two

The second subject was a man in his early forties who will be referred to as Tom. Tom is also married and has a three year old child with another on the way. He engages in many different Internet activities that are related to this research, but the interview focused on Internet forum use related to craft beer and home brewing. The subject maintains a home brewing blog as well as following other bloggers and home brewing forums. Spurred by the first depth interview, this interview was more focused on vicarious consumption and the possibility that online consumption might displace some level of offline consumption.

Tom was asked to describe how he got involved with beer-related Internet forums. He discovered these forums and began consuming them as a source of information more than 15 years ago. He described some of the difficulties in using the original web browsers and how far the technology has come today. Tom began creating content for a very instrumental purpose shortly after he discovered these forums.

> The forum is a place where I can think out, sketch out what I am thinking about in a public manner. Other people can read it and comment on it and share ideas with me. Other people can read it, think about it and comment in a way that could be productive.

He also used his forum posts as a log to help him to keep track of the different beers that he had consumed as well as his impressions of the beers. He was fully aware that others were reading his comments and potentially using his critiques, but his initial motivation was purely instrumental and self-focused.

The feedback provided by the forums made Tom understand that others appreciated and valued his posting in the forum. Craft beers are predicated on a culture of giving. A great brew master wants to brew a great beer and share it with others. A great beer doesn't mean much if it is hoarded and enjoyed by only a few people. True greatness comes when it is appreciated by individuals who understand the process and have the skill to create and appreciate a great beer themselves. Beer aficionados in the forum routinely brew or buy local beers and ship them to other users around the world. In this way, the subject's activity in the forum evolved from the personal activities of information provision and categorization to that of sharing and comparing great beers.

Tom indicated that his time and effort consuming content decreased as his time posting increased. He became more selective in the threads that he would read based both on the title of the thread and on the individual who started the thread. Certain individuals became known to the subject for specific rants or posting material that the subject did not wish to consume, and these postings usually were excluded from consideration for consumption.

> I have developed personalities in my mind for about 20 individuals in the forum. People are always posting about what they like and what they don't like. When you are thinking about going to a movie you are going to look at the reviews, maybe check out Rotten Tomatoes. What are people saying about this, maybe then I will decide if I will really go see it or not. They feel like they are doing people a service by directing the drinkers one way or another. I am going to show you what I like about this beer. Why do I care? Why do they want me to know what they like and what they don't? In a way it's about wanting a tribe that is alike in a certain way. There is nothing in it for me if you like something or don't like something. It is a very crowd based mentality.

When asked why people consume content in a beer forum, Tom immediately linked content consumption to physical consumption.

> Like Dark Lord Day. Every year this company releases this one beer for just one day. They set it up so thousands of beer lovers can congregate in this small town in Indiana. 3000 people at least. I stand in line to buy this beer, and I am going to go to it. I understand my desire to be creative, I understand hyperbole, I don't really need to go stand in line, but I want to go and be a (physical) consumer.

In these forums, people tell you what they like and what they don't like about a beer. More specifically, they tell you why they *like/don't like* a beer in a language that is specific to the craft beer world. Content consumers look to these reviews as indicators as to whether they should arrange to sample a certain brew. Many of these individuals go to great expense to sample these beers, often traveling across the country. Content consumption provides the information needed to plan and execute these physical consumption excursions with maximum utility.

On the other hand, content creation has evolved into a means of social discourse for this individual. The subject sees relationships in broad terms, not just an affiliation between two individuals.

> Another thing about relationships, you can think about these in terms of people, or you can think in the broader concept of relationship which means that I don't really care who you are as a person, I am interested in information exchange. Ideas, image, text and what not. That is more interesting to me. This is very different from social networking because it (social networking) is focused on the friends first. The friend update is really metaphorical for "I am exchanging information with another". Everything you do is embedded in a relationship. That's what social networking and using technology is all about; making the information exchange at the base level easy and efficient.

He doesn't care who the individual is in real life, but gets benefits simply from using the forum as a way to interact with others. The forum allows these people to exchange information in an understood and sometimes technical manner. When it comes down to it, the beer is simply a conduit used to interact with people. He doesn't care about the person. He doesn't really care about the beer. He is meeting his need to interact and express his thoughts through his online activity. Along these lines, the subject mentioned that both the offline and the online world are filled with too much information and way too many stimuli. He rarely uses online forums for information but he is reliant on them for interaction with the product and other users. The forum format allows him to communicate with others in a unique way.

The subject also commented that posting in and of itself will not happen perpetually. Individuals who post need comments from other members or they will not see a purpose for their actions and the activity will quickly die off.

> When people don't have that feedback they tend to disappear. When no one cares they don't have any incentive to participate. We recognize this quite clearly in pedagogy, that you need to give people information about their projects and activity. The feedback is really a connection to others through the forum. Even the people who aren't giving you feedback right away, you are part of an elite group by simply making a post that isn't rejected by the other people in the thread. Much of this activity is simply a way to group yourself.

Negative comments or disagreements are welcomed in contrast to receiving no feedback at all. Belonging and identification is an important driver that is begun with content creation and sealed with the feedback that results.

In contrast to many of the comments above, Tom views his own involvement with content creation as an intrinsic drive.

> I don't really care if no one posts on my comments. I am doing this for me and I use these venues as a place for my private thoughts. I don't feel an obligation to either the community or my readers when I post.

He does not personally track who reads his comments or how many hits one of his threads gets. He is happy to provide his comments so that others can read them either privately or publicly. Though he does not state this, it appears that he sees his involvement somewhat differently from how he views other's involvement with the forum. He goes on to state that half of the feedback that he receives comes from private messages or through conventional email, not through people posting or continuing a conversation in a public thread.

Tom frequently cited the "community of craft beer drinkers and brewers". He knows what these people like and what they don't like and he knows how their preferences overlap with his own. Numerous forum members have shared their home brews with him through the mail. The forum that he uses most provides location information so he knows some local individuals as well as people in the state, but he rarely sees them in an offline setting.

> I feel like I know people more intimately online than I do in an offline sense. There are several events in Kansas City or St. Louis or even here in Columbia and I feel little camaraderie when I meet these people in person.

Though the forum is often used to communicate about offline events, it is rare for the subject to meet an online acquaintance in offline venues. Loose plans are often made to meet at one festival or another, but these meetings seldom materialize. Using the Dark Lord Day example mentioned above, while the focus of the event is to purchase and consume the Dark Lord special beer, the event has become a way for craft beer brew masters to share their own concoctions with others who appreciate it. This event is a common topic on craft beer forums but in our subject's experience the event rarely brings online "friends" together offline. This could be because these individuals are engaging in the actions of social interaction and are not interested in the more salient aspects of a relationship.

Near the end of the interview, the subject was asked how content creation and content consumption impact purchasing of craft beers. In his opinion, both activities elevate both awareness of the product and the desire for that product. This statement is in line with his above comments on consumption but it could be interpreted as conflicting with the evolution of his own creation activities. He explains that he routinely makes trips spanning hundreds of miles to sample different craft beers and he credits his online activity with keeping craft beer top of mind. The subject's lay theory is that creating content keeps you in touch with the product. The more you feel a part of the community by your contributions, the more you will want to purchase and physically experience the

product. Again, this could be construed to contradict his motives for creation discussed above.

Finally, the topic of Internet addiction was addressed in the interview. Unlike Sam who became defensive and visibly angry at the mention of addiction, Tom is proud of the degree to which Internet activities are enmeshed in his life. He explained that he and his wife are both active in content creation and that his three year old daughter is already familiar with the computer. Tom does not view his activities on the Internet as an intrusion; they are a part of his life that he cherishes. Even with a second child on the way, Tom does not see his time online changing. He views his online activity as a harmonious passion (Vallerand et al. 2003) that improves his life, not an obsession. He explained that every person needs to have a passion outside of work and the home. His wife is passionate about running and is engaged in several running forums. For him, the passion is craft beer and interacting around it online.

Summary of Depth Interviews

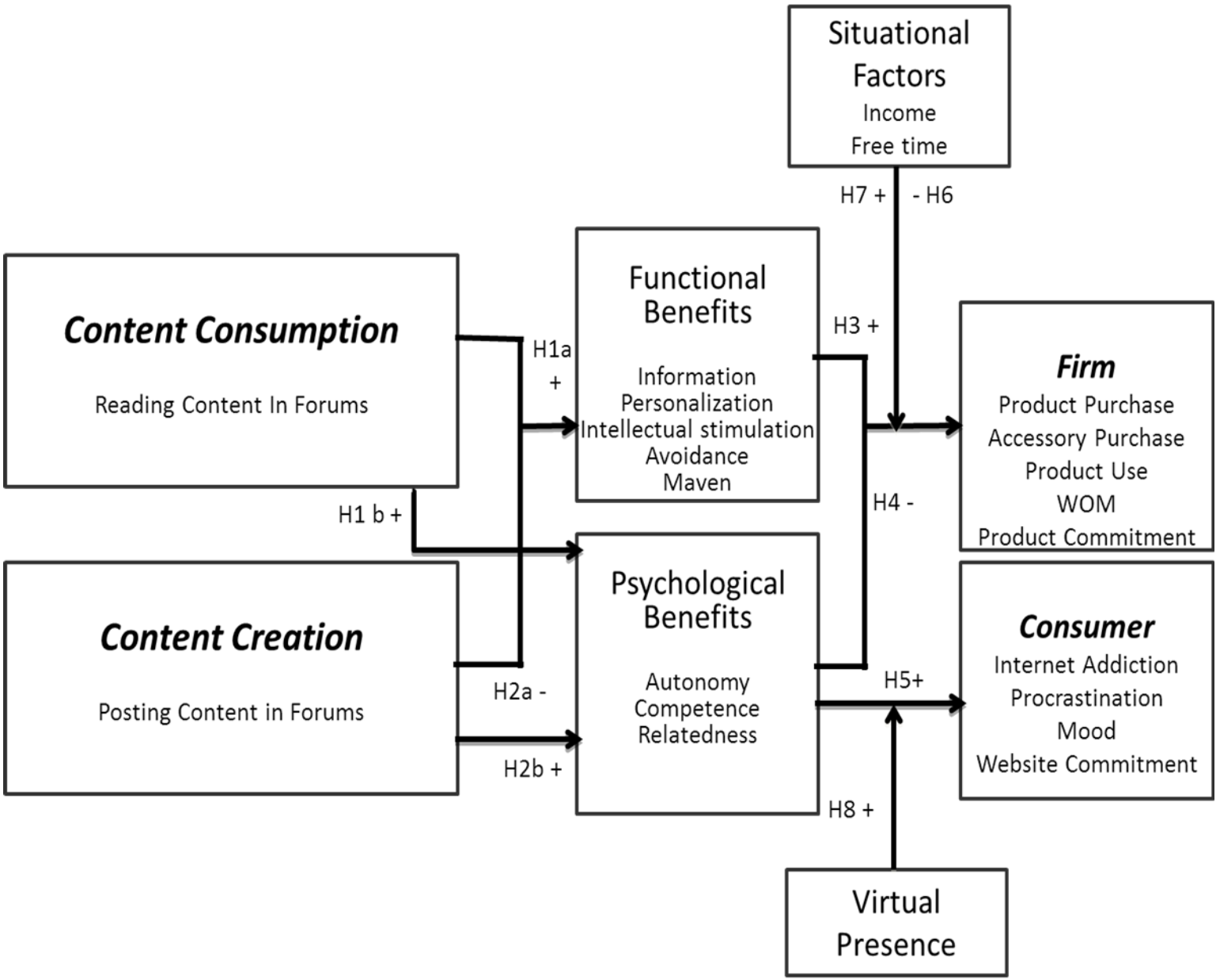
Both of the informants were individuals who began their forum experience with a mix of content creation and content consumption. The idea that content creation is an escalation of content consumption activities does not hold for either of these subjects. Both informants were as dedicated to content creation as they were to content consumption, and they both cited benefits totally unrelated to the product or product use as motivation for engaging in forum behaviors. Where Sam uses the forum specifically to avoid using the product, Tom sees the forum as enhancing his product consumption

experience. While Tom linked functional benefits to his content consumption behavior, neither informant mentioned functional benefits in relation to content creation.

The above interviews explored Internet-based consumption behaviors in two very different contexts. The subjects described in these two interviews view their online experiences very differently. Where one is embarrassed and ashamed of his online behaviors when he is forced to cognitively evaluate them, the other is proud of his online involvement and contributions.

The next section will expand on these interviews and synthesize their findings with the literature review provided in chapter two. These components will be used as justification for the hypotheses tested as the basis for this dissertation and the exposure of vicarious consumption in Internet forums.

Figure 1 Hypothesized Model



The Genesis of the Hypothesized Model

Vicarious consumption proposes that individuals can replace their physical consumption behaviors with virtual interaction in Internet venues. Counter to both the brand community and popular practitioner level literature, this theory suggests that interaction in the virtual world may negatively impact actual consumption of the product if these individuals are able to meet their needs in the virtual world.

MacInnis and Price (1987) are credited with the origination of the term *vicarious consumption.* The current research will challenge two contentions made by these authors. First, the current research will show that vicarious consumption is engaged in by both those who can consume physically as well as those who cannot. Second, the current research will challenge the idea that imagery determines vicarious consumption. As documented by the depth interviews, social forces play an increasingly important role in the switch to consuming virtually. This social factor is helping to drive both physical consumers as well as those who are blocked from physical consumption to the online environment.

Although MacInnis and Price derived the concept of vicarious consumption, work by Babin and colleagues (1994) is most consistent with the theory as proposed here. These authors focused on hedonic or experiential benefits that result from the purchase or use of a product, but they made reference to the possibility that these benefits might accrue even when an individual has not purchased or used the product. It seems logical in this framework that hedonic/experiential benefits are more likely to be transferred in this manner as utilitarian outcomes are often more concrete. Babin and colleagues study

of hedonic and utilitarian shopping value suggested that vicarious consumption may relay some of the same experiential benefits as purchase or use of the product. Specifically, vicarious consumption can provide hedonic gains while utilitarian goals may remain unfulfilled. Interactions with products should be viewed as a complete experience that is defined by the benefits derived by the consumer, not simply a means to an end. Other recent marketing works have encouraged the field to view products as a function of the benefits that they provide to the consumer (i.e. Vargo and Lusch 2004).

In the current research, the two forms of PFIB (content consumption and content creation) are likely to produce different benefits for subjects. Functional benefits are associated with positive instrumental product outcomes and include improved information gathering, avoidance of other stimuli, intellectual stimulation, and personalization of the product. For example, it is quite common for consumers to turn to the Internet to find information about where to get the best price on a product.

Content consumption is expected to be positively related to the receipt of functional benefits at the consumer level. In the depth interviews Tom implied that intellectual stimulation is a reason for his content consumption when he said that he needed something to fill some of the time that he had allocated to game play in the past.

Several existing works have also linked offline prepurchase search with functional benefits. For example, Punj and Staelin (1983) showed that search is positively related to cost savings. Similarly, it has been shown that rational consumers, who would be more likely to embrace functional benefits, are more likely to engage in verbal information search (Venkatraman and MacInnis 1985). Since content

consumption is roughly the Internet equivalent of offline product search, content consumption will also be positively related to functional benefits.

> *H1a: Content consumption level is positively related to a consumer's level of functional benefits derived from the forum.*

Content consumption may include ongoing search as well as prepurchase search. For example, a content consumer may browse a travel forum when either planning a trip or out of simple curiosity. Bloch, Sherrell and Ridgway (1986) found that a primary motivation of ongoing search is the experience of pleasure. These experiential outcomes are more in line with psychological benefits. Therefore, a subject's level of content consumption will be positively related to psychological benefits like autonomy, competence and relatedness.

> *H1b: Content consumption level is positively related to a consumer's level of psychological benefits derived from the forum.*

Whereas content consumption is positively associated with functional benefits, content creation is expected to have a negative association. The interpersonal, social nature of content creation will steer the individual's focus away from functional benefits. Recall that the subjects in both depth interviews listed psychological benefits as drivers of their content creation behaviors while neither mentioned functional benefits. While the content creator may acquire some functional benefit from the exchange, this benefit will be clearly secondary producing a negative relationship (or potentially no relationship) between content creation and functional benefits. The interactive nature of content creation will build off and feed the need to belong and relate to others. These

behaviors are driven by deeply social and psychological forces, and they will be negatively related to more cognitive, functional benefits.

H2a: Content Creation level is negatively related to functional benefits.

Consistent with the above paragraphs, the interactive nature of the content creation activity will be geared toward the fulfillment of psychological, not functional needs. These psychological needs include social needs like the relatedness or belonging, a relative measure of competence which requires social activity for evaluation, and the need for feelings of control or autonomy. Content creation is an incarnation of online word of mouth (WOM). Past research has shown that functional benefits explain little of the motivation behind engaging in WOM while interpersonal/social motivations explain more than half of the variance (Dichter 1966). Following Dichter, this dissertation proposes that subjects will engage in content creation in an effort to acquire social and psychological benefits.

H2b: Content Creation level is positively related to psychological benefits.

Although content creation and content consumption can differ in character, motivational driver, and implications for marketers, individuals often engage in both activities at the same online site. Though some research exists on product reviews (i.e. Chevalier and Mayzlin 2006; Wallace et al. 2009; Ward and Ostrom 2006), little research has explored these product-related phenomena or the differing impact that these behaviors may have on important marketing variables. The current research explores the benefits acquired by the individual through PFIB, not on the impact of product reviews on the overall market or demand for a product.

The Consequences Sector

Two general types of consequences will result from an individual using PFIB to acquire functional and psychological benefits. First, there are consequences for the firm as a whole. As discussed in the introduction, the common belief among both practitioners and academics is that engaging consumers around a product online will result in positive outcomes for the firm. These positive outcomes would be most visible in the frequency or amount of product purchase and in the frequency and amount of product usage. The frequency and amount spent on accessories or activities required to use the product will be another indicator of positive outcomes for the firm which produces the product.

Other firm level consequences include the propensity to engage in word of mouth (WOM) about the product, the degree to which subjects are loyal to a particular brand of the product, and the individual's commitment to the product. The concept for product commitment comes from the recreational specialization literature (Scott and Shafer 2001). This literature suggests that a subject's intensity of involvement with a product follows a progression that can be observed through changes in behaviors, skills and commitment. As a subject becomes more engaged in using the product or discussing a product, the degree of product commitment will increase.

In line with extant research on offline product search, it is proposed here that functional benefits are positively related to positive consequences for the firm.

> *H3: Functional benefits derived from a forum will be positively related to firm level consequences.*

The relationship between psychological benefits and consequences becomes more interesting when one considers the dominant view that positive firm level consequences will result from PFIB. Recall that in the depth interview with Sam, he explained that he used the forum as a way to avoid using the actual product. Tom, on the other hand, linked his forum usage to actual physical consumption, but using the time displacement hypothesis (Katz et al. 2001) it is clear that forum usage might displace physical consumption as there are a fixed number of hours in the day. Using experiential consumption along with extant work on vicarious consumption, this research suggests that individuals who manage to acquire psychological benefits through PFIB may not need to purchase or use the product at the same level as those who primarily receive functional benefits from PFIB. For example, a sailing enthusiast may become swayed by the ease and availability of interacting with sailors in the online setting that the forum can dominate and replace the actual sailing activity. Therefore, the relationship between psychological benefits and positive firm level consequences will be negative.

H4: Psychological benefits derived from forum interaction are negatively related to firm level consequences

There are several potential consequences from displaying these online behaviors that may also have a significant impact on the consumer. Lay theories in the practitioner level and brand community literatures propose that product-focused Internet activity will result in commitment to the product. But, it is also possible that the consumer may become committed to the Internet site or the forum activity itself. Extreme examples of this commitment may manifest itself in an Internet addiction.

Individuals who get different types of benefits from PFIB may be differentially more likely to procrastinate as well. Consistent with the relationships outlined above, this research proposes that psychological benefits will be positively related to negative consumer level consequences.

H5: Psychological benefits derived from forum interaction are directly related to negative consumer level consequences

Potential Moderators

Several variables may moderate the main effects proposed above. The first of these potential moderators comes in the form of situational variables. Certain situational variables manifest themselves as barriers to physical consumption. In studying vicarious consumption, MacInnis and Price proposed that barriers to physical consumption will increase the probability that an individual will consume a product vicariously. As such, increases in disposable income and free-time serve to reduce consumption barriers. This will have an enhancing effect on the positive relationship between functional benefits and positive firm outcomes. At a lower level of disposable income, the opportunity cost of a purchase decision is significantly more important. The subject's income level poses a barrier to physical consumption which could force them to consume the product vicariously online. Disposable income would have no impact at higher levels as the opportunity cost of consumption would be inconsequential. At the same time, reducing the barriers to physical consumption has a suppressing effect on the expected negative relationship between psychological benefits and positive consequences for the firm.

H6: The situational factors of disposable income and free-time will enhance the positive relationship between functional benefits and firm level consequences.

H7: The situational factors of disposable income and free-time will suppress the negative relationship between psychological benefits and firm level consequences.

The second of these potential moderators is virtual presence. Virtual presence reflects the subject's perception of whether interaction on the site as "real" or not. The term "real" can mean many different things in the virtual world. For the purposes of this research, those high in presence will view online interactions as organic, non-manufactured, authentic and valid. This variable will likely impact the link between the psychological benefits derived from PFIB and consumer level consequences. As the degree to which the subject views online interactions as real and face-to-face interactions become fungible, the positive relationship between psychological benefits and consumer outcomes will be enhanced.

H8: Virtual presence enhances the positive relationship between psychological benefits and consumer level consequences.

Chapter 4: Testing Hypotheses

The proposed model incorporated eight hypotheses regarding the impact of content consumption and content creation on both firm level and consumer level variables. The path from the consumption/creation behaviors to the firm and consumer variables was hypothesized to be mediated by the benefits that the individuals sought through their activity. These benefits were roughly broken into two categories: functional benefits and psychological benefits. The details of the research design were outlined in Chapter 3, and this chapter will present three studies that were used to explore the proposed model. Study 1 surveyed the users of Internet forums dedicated to eight different products. Study 2 used student subjects who used Internet forums for a variety of different products. The difference in recruitment between the two studies was intended to validate the findings of this research. Study 3 returned to qualitative methods in an effort to further validate the findings of Study 1 and Study 2. This final study downloaded the content created by the forum members who responded to Study 1 and analyzed this content in an attempt to identify resonant themes. These themes were consistent with the findings from the earlier studies.

Methodology Overview

The research plan used here was designed to address the hypotheses outlined in Figure 1. There were several important criteria for this research plan in order to adequately address the Figure 1 hypotheses. A primary requirement was a sample of real forum users who would submit responses to the research instrument. Forum users were needed because the relationships, social pressures, and motivations associated with the focus of this research cannot be "role-played" or adequately reproduced in a laboratory setting.

Another requirement was diversity among the products addressed by the forums in order to enhance the generalizability of the findings. The samples used included forums dedicated to both consumable/durable, low cost/high cost, and tangible/service dominant products.

The hypotheses were tested through online surveys of two different samples of Internet forum content consumers and content creators. Respondents to Study 1 were recruited by posting a link to the online survey on several product-focused Internet forums. These subjects were given the incentive of a chance at winning a $50 Amazon gift card for taking part in the survey. Respondents for Study 2 were prescreened from a sample of students based on their involvement with product-focused Internet forums. These subjects were given class credit to complete the survey.

Multiple regression analysis was selected to test the hypotheses proposed by this research. Since most of the variables studied were continuous, multiple regression provided the most straightforward approach to prediction of both firm level and consumer

level dependent variables. In addition, regression analysis has a long history in survey research (Bearden et al. 2001; Berger and Ward 2010; Burroughs and Rindfleisch 2002; Mitchell and Dacin 1996).

The first study entailed a survey of 307 individuals who inhabited forums dedicated to specific consumer products. The objectives for this study included testing all eight hypotheses outlined in Figure 1 in an exploration of how online behaviors impact outcomes for both the consumer and the firm. This study incorporated a wide range of products to increase the generalizability of findings. These products included video games, running equipment, wine, cycling equipment, professional baseball, professional hockey, personal computers, and cosmetics. Access to forum members was attained by contacting forum administrators with a proposition of benefits for both respondents and the administrators. A $50 Amazon gift card would be randomly awarded to a single respondent from the forum and, if 50 responses were generated from the forum, a second $50 gift card would be given to the administrator. Only one of the eight forums generated more than 50 responses resulting in the reward for the administrator. The administrators who agreed to participate in this research then created a thread on their forum's home page with instructions and a link to the online survey.

Measures

The following section outlines the measures used in this research. The items are listed in tables following each section. A full list of items in the survey format as well as a correlation matrix for both studies is included in the Appendix.

Internet Usage

Forum Content Consumption: To measure content consumption, a formative, behavioral index of forum consumption behaviors was developed. The domain of this construct was defined as the frequency of visit and time that the individual spent in the focal forum as well as the frequency of visit and time spent on other sites related to the specific product. The key components of this index were (A-1) the number of visits that individuals made to the forum along with (A-2) the amount of time spent in the forum. These items were framed to query the individual's behavior exhibited "in the last two weeks". This time frame was chosen because it was short enough that behaviors would be fairly easily recalled for this time period, but long enough that fluctuations which may occur on a weekly basis would not inject much error into the responses.

The second component of the content consumption index referred to an individual's consumption of other sites related to the product. Content consumption cannot be limited to consumption of a single site. The passive behaviors associated with content consumption are similar regardless of which website is actually inhabited. To accommodate this, the current research employed measures of (A-3) the number of visits to other sites focused on the product as well as (A-4) time spent on these sites. Multicollinearity was not deemed to be an issue with this data as none of the variables registered a variance inflation factor above 2.1.

Though the measure was marginally reliable (Cronbach's alpha=.65 Study 1, .89 Study 2), the independent nature of the items suggests that this should be measured formatively. For example, if any one of the indicators increased, content consumption

would also increase, but, an increase in content consumption does not indicate a necessary increase in the other three items.

Forum Content Creation: The measure of content creation was also constructed as a formative, behavioral index. The domain of this construct was defined as the frequency, magnitude, and time spent initiating discussion and posting content in the focal forum. The two-week timeframe and wording was used to measure (A-5) the frequency of forum posts along with (A-6) the overall time spent creating forum content. Additional components of this index included (A-7) the number of times that the subject has started a discussion topic thread in the past two weeks as well as (A-8) the length of the subject's average post. Again, multicollinearity was not deemed to be an issue with this data as none of the variables registered a variance inflation factor above 2.2. Similar to content consumption, this item is reliable if perceived as a reflective measure (Cronbach's alpha = .75 for both studies) but it is viewed formatively in this research for the reasons discussed above.

Benefits

Functional and psychological benefits are expected to be outcomes of forum content consumption and forum content creation. These behaviors are motivated by desires for benefits that will be measured through this research. Informed by limited prior research, the depth interviews presented above, and observation of posting in several product focused Internet forums, five functional benefits were posited as motives for forum behaviors.

Functional Benefits

Intellectual Stimulation (B-1) was measured using a scale developed for the measurement of leisure motivation (Beard and Ragheb 1983). Three items that were thought to best describe the benefit of intellectual stimulation were selected and slightly modified to fit the context. Reliability analysis showed that these items were sufficiently related to each other to indicate a unidimensional construct (Nunnally and Bernstein 1994) with a Cronbach's alpha of .84.

Stimulus Avoidance benefits (B-2) were measured using items adapted from the same leisure motivation scale outlined above. See Table 1 for the items used in this measure. Again, these items were shown to be predictably reliable with a Cronbach's alpha of .87.

Informational benefits (B-3) were measured with three items generated to probe for benefits that are precursors of product purchase or product usage. The first item was a base level measure of the construct "I acquire information about _____ product" while the second was aimed at information for product usage "I improve my utilization of _____ product" and the third was aimed at information for product purchase "I improve my _____ purchases". Even though these items seem to be tapping distinctly different elements of information, the items hang together at an acceptable level (alpha = .81).

Personalization benefits (B-4) were measured using two items that were specific to the individual's relationship with the product. Even though this measure had only two items, the reliability exceeded the necessary threshold with Cronbach's alpha of .86.

Psychological Benefits:

Self-determination theory (SDT) proposes that individuals are motivated to fulfill three types of psychological needs: the need for autonomy, the need for competence, and the need for relatedness (Deci and Ryan 1985; Deci and Ryan 2000). Past research on these needs has focused on many ways of measuring the fulfillment of these needs, but extant research has not addressed need fulfillment as benefits that are derived from specific activities. Beard and Ragheb's (1983) measure of leisure motivation was adapted to capture both competence and social/relatedness benefit. This measure was used because it is unique in that it was specifically designed to measure the benefits gained from engaging in leisure activities (like Internet forums). Autonomy measures were constructed by modifying a traditional SDT scale to conform to the context and tone of the Beard and Ragheb (1983) benefits measure.

Three items were used to measure *competence benefits* (B-5). The items were prefaced with "What do you get from visiting the _____ forum?" and the items were: "I improve my skills", "I challenge my abilities", and "I feel achievement". These items produced a Cronbach's alpha of .88.

For relatedness benefits (B-6), a different set of three items was adapted from Beard and Ragheb (1983). Relatedness items were: "I feel like I belong", "I interact with others", and "I meet new and different people". Reliability testing of this scale produced a Cronbach's alpha of .88.

Autonomy benefits (B-7) were measured with items adapted from existing works utilizing the SDT framework (Ryan and Connell 1989; Sheldon and Gunz 2009). These

items tapped the degree to which the forum was seen as a place where the individual can go to act under his/her own volition. In this space, the individual is not controlled by outside forces, but is a decision maker who is ultimately responsible for his/her own actions. The items were prefaced with the same language as the competence and relatedness scales, and the items were: "I can be myself", "I do what I want", and "I pursue my interests". Reliability tests produced a Cronbach's alpha of .83.

Table 1: Measures of Forum Usage and Benefits

Internet Usage

Forum Content Consumption

1. How often did you visit the _____ forum on average?
2. In the last two weeks, how much time did you spent altogether in the _____ forum?
3. In the last two weeks, how many visits did you make to sites related to (the focal product)_____ other than _____ forum.
4. In the last two weeks, how much time did you spend on sites related to (the focal product)_____ other than _____ forum.

Forum Content Creation

1. In the last two weeks, how often did you post a message in the _____ forum?
2. In the last two weeks, how much time did you spend posting messages in _____ forum?
3. In the last two weeks, how often did you start a thread or begin a discussion in _____ forum?
4. In the last two weeks, most of my posts in _____ forum were:
   Short (5 words or less) Medium (a line or two) Long (more than 2 lines)

Benefits (phrased as "What do you get from _____ forum?", 5pt Likert scale (not at all - extremely)

Intellectual Stimulation

1. It satisfies my curiosity.
2. I explore new ideas.
3. I discover new things.

Stimulus Avoidance

1. I relieve stress and tension.
2. I can relax.
3. I avoid the bustle of daily life.

Informational Benefits

1. I acquire information about _____ (the product and activity)
2. I improve my utilization of _____ (the product)
3. I improve my _____ purchases.

Personalization Benefits

1. I find improvements for my _____ (product usage) experience.
2. I can personalize my _____ (product) experience.

Competence Benefits

1. I improve my skills.
2. I challenge my abilities.
3. I feel achievement.

Relatedness Benefits

1. I feel like I belong.
2. I interact with others.
3. I meet new and different people.

Autonomy Benefits

1. I can be myself.
2. I do what I want.
3. I pursue my interests.

Firm Level Consequences

Product Purchase: Product purchase level (C-1) was assessed using several measures. Past purchasing level was captured by asking an open-ended question about how much the respondent had spent on the product in the last six months. A similar item was used to determine past accessory and travel expenses related to the product (C-2). Purchase frequency (C-3) of the specific product was determined by asking the respondent to supply the number of times that s/he made a purchase of the product or product related accessories in the last six months. Due to the expected differences associated with each of these measures, they will be evaluated individually instead of including them in an index.

Product usage was recorded as two items. The first item recorded the total amount of time with which the product was used "in an average week" (C-4). The second item recorded the percentage of the user's time that was dedicated to physically using the product in the last six months as a ratio of all time spent with the product.

Purchase Intention (C-5) was recorded with the single item "Over the next 12 months, approximately how much in total do you plan to spend on _____ product?"

Offline and Online Word of Mouth (WOM) (C-6)*:* Consistent with existing research (i.e. Park and Kim 2006), offline and online word of mouth were assessed using single item measures. The measure was prefaced with "How likely is it that you will exhibit the following behaviors in the next two weeks?" and the items were "Tell someone in person about _____ product" and "Tell someone in an online setting about _____ product".

Brand Loyalty (C-7)*:* A modified version of Beatty and Kahle's (1988) brand loyalty scale was employed. This scale features three items that are answered using a seven point Likert response format. The items were modified to properly reflect the products to which the forums are devoted.

Product commitment (C-8): This research employed scales developed to record behavioral and personal commitment to the product (Lee and Scott 2006; Scott and Shafer 2001). Two items were used to measure each type of commitment in accordance with prior research (Lee and Scott 2006). The behavioral commitment scale used the items "If I couldn't use _____ product, I am not sure what I would do" and "If I stopped using _____ product, I would probably lose touch with a lot of my friends." Personal commitment was measured with the items "Other leisure activities don't interest me as much as using _____ product*"* and "I would rather use _____ product than do most anything else." The four commitment items hung together closely enough to be used as a single product commitment variable (Cronbach's alpha = .78).

Table 2: Measures of Firm Level Consequences

Firm Level Consequences

Past Product Purchase

Over the last 12 months, approximately how much have you spent on _____ (product)?

Accessory Purchase

Over the last 12 months, how much have you spent on travel, accessories or other expenses associated with _____ (activity)?

Purchase Frequency

Over the last 12 months, approximately how many times have you purchased _____ (the product) or an accessory?

Product Usage

1. In an average week, how much time do you spend _____ (activity)?
2. Please indicate the % of time that you spend _____ (in the activity) and the % of time you research the activity both online and off

Purchase Intention

Over the next 12 months, approximately how much in total do you plan to spend on _____ (product) and _____ (activity)?

WOM (phrased as "How likely is it that you will exhibit the following behaviors in the next two weeks?", 5pt Likert, Very unlikely - Very Likely)

Tell someone in person about _____.

Tell someone online about _____.

Brand Loyalty (phrased as "Please rate your agreement with the following statements", 5 pt Likers, Strongly Disagree - Strongly Agree)

1. I consider myself to be loyal to a specific brand of _____.
2. If my brand of ____ is not available where I am shopping, I will shop somewhere else.
3. If I can get a good deal on another brand of ___, I will probably switch brands.

Product Commitment (phrased as "Please rate your agreement with the following statements", 5 pt Likers, Strongly Disagree - Strongly Agree)

1. If I couldn't _____ (activity), I don't know what I would do.
2. If I stopped _____(activity), I would probably lose touch with many of my friends.
3. Other leisure activities don't interest me like _____ (activity).
4. I would rather _____(activity) than do most anything else.

Consumer Level Consequences

Internet Addiction (C-9)*:* The Internet Addiction Test was used to measure Internet addiction (Widyanto and McMurran 2004; Young 1998). This test uses a 1 (never) to 7 (always) format and is comprised of six subscales, each containing between two and five items. The six dimensions are salience, excessive use, neglecting work, anticipation, lack of control and neglecting social life. Care was taken to include at least one item from each of the scale dimensions and a total of eight items was chosen. The 6 subscales were aggregated into a global *Internet addiction score* which is supported as the 8 items hung together at an acceptable level (Cronbach's alpha = .89).

Subjective Well-Being: To measure positive and negative mood this research used the 10 item short version of the Positive Affect Negative Affect Schedule (C-10)

(PANAS; Watson, Tellegen, & Clark, 1988), using a 1 (very slightly or not at all) to 5 (extremely) scale, and phrased, at each measurement occasion, with reference to "how much you have felt this way in the last 48 hours." Reliability was satisfactory with the alpha for positive mood at .78 and a negative mood alpha of .82. Participant's current life-satisfaction was assessed using the five item Satisfaction with Life Scale (C-11) (Diener, Larsen, Emmons, & Griffin, 1985) using a 1 (strongly disagree) to 7 (strongly agree) scale (alpha = .86).

Procrastination (C-12)*:* This research used the five item procrastination measure taken from the Melbourne Decision Making Questionnaire (Mann et al. 1997). The measure was prefaced with "How true are the following statements for you." Sample items are "I delayed acting on a decision even after I made it" and "I put off making decisions." These items hung together acceptably with a Cronbach's alpha of .89.

Site Commitment (C-13)*:* This research assessed behavioral and personal commitment to the site which is the focus of the subject's virtual interaction with the product (Lee and Scott 2006; Scott and Shafer 2001). Two items were used to measure each type of commitment in accordance with prior research (Lee and Scott 2006). The behavioral commitment scale used the items "If I couldn't use *the focal forum*, I am not sure what I would do" and "If I stopped using *the forum*, I would probably lose touch with a lot of my friends." Personal commitment was measured with the items "Other leisure activities don't interest me as much as *using this forum"* and "I would rather *use this forum* than do most anything else." Actual survey items were tailored to each site and product explored. In this way, both behavioral and personal commitment were recorded for the site as well as the product as outlined above. Collapsing both behavioral

and personal commitment into one category was acceptable as these items displayed an overall Cronbach's alpha of .86.

Table 3: Measures of Consumer Level Consequences

Consumer Level Consequences

Internet Addiction (phrased as "Do you agree with the following statements?", 5pt Likert, Strongly Disagree - Strongly Disagree)

1. **I feel anxious if I haven't accessed _____ forum for sometime.**
2. **I find myself accessing ____ forum for longer periods of time than I intended.**
3. **I have used ____ forum to make me feel better when I was down.**
4. **I have used the ___ forum to talk to others when I was feeling isolatd.**
5. **My productivity at work or at school has suffered in the past from my involvement in ____ forum.**
6. **I am the kind of person who feels more comfortable with objects than with other people.**
7. **I have tried unsuccessfully to cut down my use of ____ forum.**
8. **The amount of information that I get from ____ forum is never enough.**

Mood (phrased as"Indicatd the extent to which you have felt this way during the past week", 5pt Likert, Very slightly or not at all - Extremely

Positive

1. **Determined**
2. **Active**
3. **Alert**
4. **Inspired**
5. **Attentive**

Negative

1. **Afraid**
2. **Upset**
3. **Ashamed**
4. **Hostile**
5. **Nervous**

Life Satisfaction (phrased as"please complete the following statements", 7pt Likert, Strongly Agree - Strongly Disagree)

1. **My Life is ideal.**
2. **I engage in activities that are important to me.**
3. **If I could live my life over, I would change almost nothing.**
4. **The conditions of my life are better than normal.**
5. **My satisfaction with my life is better than normal.**

Procrastination (phrased as (How true are the following statements for you?, 5pt Likert, Strongly Disagree - Strongly Agree)

1. **I wast a lot of time on trivial matters before getting to a final decision.**
2. **I delay acting on a decision even after I made it.**
3. **When I had to make a dicision I waited a long time before starting to think about it.**
4. **I delay making decisions until it is too late.**
5. **I put off making decisions.**

Site Commitment (phrased as"please rate your agreement with the following statements", 5pt Likert, Strongly Disagree - Strongly Agree

1. **If I couldn't use ____ forum I don't know what I would do.**
2. **If I stopped using _____ forum, I would probably lose tough with many of my friends.**
3. **Other leisure activities don't interest me like using the ____ forum.**
4. **I would rather use ____ forum than do most anything else.**

Virtual Presence (phrased as "rate your agreement with the following statements", 5pt Likert, Never - Always)

1. **When using the forum, I feel transported to another time and place.**
2. **Exploring the forum feels like taking an actual trip to a new place.**
3. **When navigating through the forum, I feel as if I am actually there.**
4. **I am impacted emotionally by events in the forum.**
5. **The forum is emotionally engaging.**
6. **I experience feelings as deeply in the forum as I do face-to-face.**
7. **When using the forum, I feel as if I am part of the story.**
8. **When I accomplish something in the forum, I experience genuine pride.**
9. **I react to events and people in the forum as if I know them personally.**

Moderators

Situational Factors: The situational factors of income and free-time were recorded as potential moderators. These were both measured as single items.

Forum Presence (C-14)*:* This construct was measured using the narrative and emotional presence modules of the *Player Enjoyment Need Satisfaction* scale (Przybylski et al. 2009). There are three items for each of the components, and these are measured in a 7 point Likert format. The items were modified from their current form aimed at video game players to coincide with the targeted forum users. Sample items were "Exploring the forum feels like taking an actual trip to a new place" and "The forum is emotionally engaging". These 9 items hung together extremely well with a Cronbach's alpha of .95.

Survey Pretest

Before administering the survey, a pretest was run to ensure adequate clarity and flow. Three undergraduate students who had experience in Internet forums were identified through acquaintances at the university. Though all three were male, these subjects had diverse backgrounds. The subject's majors ranged from international business, to chemical engineering to psychology, and the subjects agreed to take the survey in the presence of the principal investigator in exchange for a free meal.

A number of minor changes were suggested by the pretest subjects. The wording was changed on two items to more closely reflect the actual product under study. The range of the number of primary contacts was extended at the suggestion of one subject, and the order of item listings was changed to help with the mental calculations as

suggested by another subject. Finally, additional instructions were included on questions with sliders to assist with subject's understanding of their function.

Study 1 Methodology and Analysis

Within Internet forums, content consumption level and content creation level are conceptually linked. All creators must consume to some extent, but the reverse does not necessarily hold. Since these behaviors generally complement each other, the decision was made to run the analyses in this section involving either content creation level or content consumption level with the other variable included as a control.

H1a: Content consumption level will be positively related to functional benefits

Based on offline research focused on the impacts of product search, this hypothesis proposed a positive relationship between content consumption and functional benefits. Controlling for content creation level to isolate the effects of consumption, individual regressions between the five functional benefits and content consumption level showed support for all possible relationships. The variance explained by these variables was low, however, indicating rather weak effects. This analysis indicates that greater levels of content consumption increase the experience of functional benefits received from online interactions. These relationships are outlined in *Table 1* with significance levels and variance explained.

Table 4: Content Consumption Level to Functional Benefits

IV	DV	β	p	R Square
Consumption	Information	0.194	0.001	0.039
	Personalization	0.187	0.001	0.056
	Intellectual Stimulation	0.297	0.000	0.100
	Stimulus Avoidance	0.206	0.000	0.042

H1b: Content consumption level positively impacts psychological benefits.

Also based in the extant literature on offline search, H1b proposed that a subject's level of content consumption would positively impact psychological benefits as well as the functional benefits proposed in H1a. Regressing the psychological benefits on consumption level while controlling for content creation level showed a significant relationship in all cases. Across the board, the results indicated that more consumption led to increased psychological benefits.

Table 5: Consumption Level to Psychological Benefits

IV	DV	β	p	R Square
Consumption	Autonomy	0.181	0.001	0.102
	Competence	0.202	0.000	0.154
	Relatedness	0.117	0.019	0.281

H2a: Content creation level negatively impacts functional benefits.

Utilizing a time displacement hypothesis, it was expected that the level of content creation would be negatively linked to functional benefits. Because content creation was not expected to fulfill these functional needs, the negative relationship was hypothesized because the time required to engage in creation would steal time often dedicated to activities that would create functional benefits. No significant relationships emerged when functional benefits were regressed on content creation level while controlling for content consumption level. Although a negative relationship was hypothesized, only one relationship displayed a negative valence and no relationships approached significance. This hypothesis was not supported by the study data. Upon reflection, the time displacement hypothesis appears to be a rather weak theory upon which to base the hypothesis. The fact that these variables are unrelated fits with the theory even though the null effect provides very, very weak support.

Table 6: Content Creation to Functional Benefits

IV	DV	β	p	R Square
Creation	Information	0.012	0.835	0.039
	Personalization	0.097	0.087	0.056
	Intellectual Stimulation	0.048	0.391	0.100
	Stimulus Avoidance	-0.004	0.943	0.042

H2b: Content creation level positively impacts psychological benefits

This hypothesis proposed that when controlling for content consumption, content creation level would be related to psychological benefits. H2b was uniformly and strongly supported by the Study 1 data. Those who created content in this sample received the benefits of autonomy, competence and relatedness (ACR). The more content subjects created; the more psychological benefits they received. Therefore, it appears that the subjects are motivated to create content, at least in part, to fulfill the basic human needs represented by the psychological benefits.

Table 7: Creation Level to Psychological Benefits

IV	DV	β	p	R Square
Creation	Autonomy	0.210	0.000	0.102
	Competence	0.278	0.000	0.154
	Relatedness	0.481	0.000	0.281

H3: Functional benefits are positively related to positive product/firm outcomes.

To test H3, the four functional benefits were regressed upon each of eight firm level outcomes. With the exception of accessory buying, the equations for all of the proposed outcomes were significant, but with a relatively small amount of variance explained.

The more an individual received informational benefits from the site, the more likely s/he is to have purchased the product in the past. Informational benefits were also linked to the amount of time spent using the product. When addressing time physically using the product as a percentage of all time with the product, we see that informational benefits positively influence this outcome while stimulus avoidance benefits negatively influence it. Strangely, both informational benefits and stimulus avoidance benefits positively impact future purchase intentions. Both online and offline word of mouth (WOM) were positively impacted by receiving intellectual stimulation from the site. See *Table 5* for a complete outline of the above relationships. Brand loyalty was negatively predicted by informational benefits and positively predicted by stimulus avoidance benefits. Overall, H3 was supported in the Study 1 data indicating that an individual who gained functional benefits through the use of the forum would also display behaviors that have a positive impact on the firm.

Table 8: Functional Benefits to Firm Outcomes

DV	R Square	Overall p	Information β	p	Personalization β	p	Intellectual Stimulation β	p	Stimulus Avoidance β	p
Past Purchase	0.075	***0.000***	0.252	***0.002***	-0.002	0.977	-0.058	0.387	0.114	0.065
Accessory Purchase	0.007	0.646	0.053	0.525	0.015	0.867	0.008	0.904	0.031	0.634
Time Using Product	0.039	***0.008***	0.250	***0.002***	-0.125	0.137	-0.009	0.894	-0.106	0.092
% of Time Using Product	0.094	***0.000***	0.280	***0.000***	-0.107	0.188	-0.101	0.124	-0.220	***0.000***
Purchase Intention	0.040	***0.008***	0.175	***0.033***	-0.020	0.818	-0.071	0.298	0.133	***0.036***
Offline WOM	0.066	***0.000***	0.025	0.749	0.001	0.993	0.254	***0.000***	-0.023	0.709
Online WOM	0.072	***0.000***	0.046	0.563	0.057	0.491	0.219	***0.001***	-0.028	0.652
Product Commitment	0.029	***0.041***	0.093	0.252	-0.027	0.750	0.110	0.107	0.024	0.705
Brand Loyalty	0.041	***0.006***	-0.166	***0.040***	0.079	0.344	0.024	0.728	0.169	***0.007***

H4: Psychological benefits are negatively related to product/firm outcomes

Regressing the three psychological benefits on the eight firm level outcomes resulted in a general refutation of H4. Contrary to the hypothesis, past purchases, purchase intention, offline WOM and online WOM were all significantly and *positively* predicted by the psychological benefits. Both past purchase and future purchase intention were predicted by relatedness benefits. Offline WOM was predicted by the level of autonomy benefits derived from the site and offline WOM was predicted by both autonomy and relatedness benefits. In line with the original hypothesis, the more that an individual gets psychological benefits from the site, the lower the percentage of time s/he spends actually using the product as a ratio of all time with the product. The percentage of an individual's time physically using the product was negatively predicted by their level of both autonomy and relatedness benefits derived from the site. Though not as strong as the link between content consumption and firm level outcomes, the psychological benefits were significantly and positively linked to almost half of the firm level outcomes. See *Table 6* for a breakdown of the significant findings.

Table 9: Psychological Benefits to Firm Outcomes

DV	R Square	Overall p	Autonomy β	p	Competence β	p	Relatedness β	p
Past Purchase	0.045	***0.001***	0.035	0.581	0.068	0.354	0.139	***0.058***
Accessory Purchase	0.007	0.472	0.012	0.851	0.029	0.699	0.056	0.452
Time Using Product	0.004	0.681	-0.040	0.534	-0.045	0.550	0.011	0.878
% of Time Using Product	0.044	***0.002***	-0.129	***0.042***	0.067	0.359	-0.156	***0.033***
Purchase Intention	0.031	***0.013***	-0.039	0.545	0.022	0.763	0.178	***0.017***
Offline WOM	0.043	***0.002***	0.232	***0.000***	0.025	0.728	-0.104	0.157
Online WOM	0.102	***0.000***	0.135	***0.028***	-0.030	0.669	0.250	***0.000***
Product Commitment	0.014	0.179	0.124	***0.054***	0.040	0.591	-0.074	0.318
Brand Loyalty	0.009	0.359	0.050	0.435	-0.087	0.243	0.100	0.180

H5: Psychological benefits are related to negative consumer level outcomes

There was significant support for this hypothesis. With all psychological benefit IV's run separately, autonomy, competence, and relatedness were all strongly and positively linked to addiction (p's < .001, $R^{2:}$ .096, .235, .226) and site commitment (p's < .001, $R^{2:}$ .094, .158, .188). Procrastination was also linked to all three psychological variables (p < .002, R^2: .03-.06). Relatedness and competence were weakly linked to negative mood (p < .001, R^2: .023, .033) while autonomy was linked to positive mood (p=.000, R^2=.039). Individual regressions displayed no significant relationships between the psychological benefits and life satisfaction.

Regressing all three psychological variables on the six consumer outcomes resulted in consistent support for all but life satisfaction as well. This indicates that, regardless of the activity that generated the benefits, higher levels of psychological benefits gained from forum activities led to greater levels of negative consumer outcomes. See *Table 7* for a breakdown of these relationships.

Table 10: Psychological benefits to Consumer Outcomes

DV	R Square	Overall p	Autonomy β	p	Competence β	p	Relatedness β	p
Internet Addiction	0.281	***0.000***	0.046	0.424	0.293	***0.000***	0.264	***0.000***
Life Satisfaction	0.002	0.919	0.039	0.567	-0.025	0.764	-0.023	0.767
Positive Mood	0.053	***0.001***	0.269	***0.000***	-0.095	0.208	-0.056	0.465
Negative Mood	0.035	***0.013***	0.011	0.862	0.138	0.070	0.057	0.463
Procrastination	0.073	***0.000***	0.047	0.466	0.124	0.098	0.143	0.060
Site Commitment	0.218	***0.000***	0.093	0.107	0.177	***0.007***	0.275	***0.000***

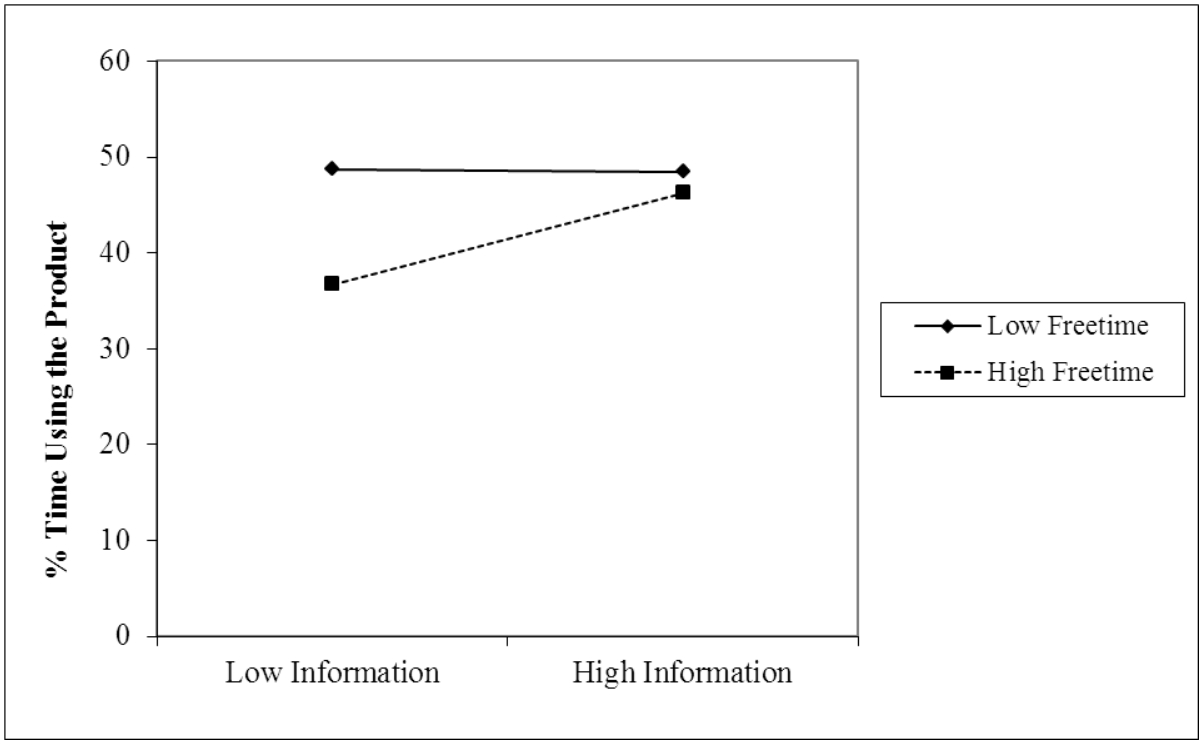
H6: Free-time moderates the relationship between functional benefits and firm outcomes.

It was hypothesized that the release of free-time as a constraint would allow the impact of generating benefits through the forum to result in benefits for the firm. The released constraint would enhance the positive links predicted to exist between the benefits and the firm outcomes. This hypothesis was tested using the following regression equation:

$$\%\ Time\ Using\ Product = \beta_1\ Information + \beta_2\ Freetime + \beta_3\ InformationXFreetime$$

With free-time as a moderator, the only interactions that approached significance involved the percentage of time spent using the product. For those with little free-time, the percentage of free-time spent using the product stayed constant in terms of whether they used the forum for informational benefits. Those with high levels of free-time spent significantly more of their time using the product if they received information benefits from the forum (p=.036). Though this is in the hypothesized direction, overall, this hypothesis was not supported.

Figure 2: Information, Free-time and the % of Time Using the Product



H7: Disposable income moderates the relationship between psychological benefits and firm outcomes.

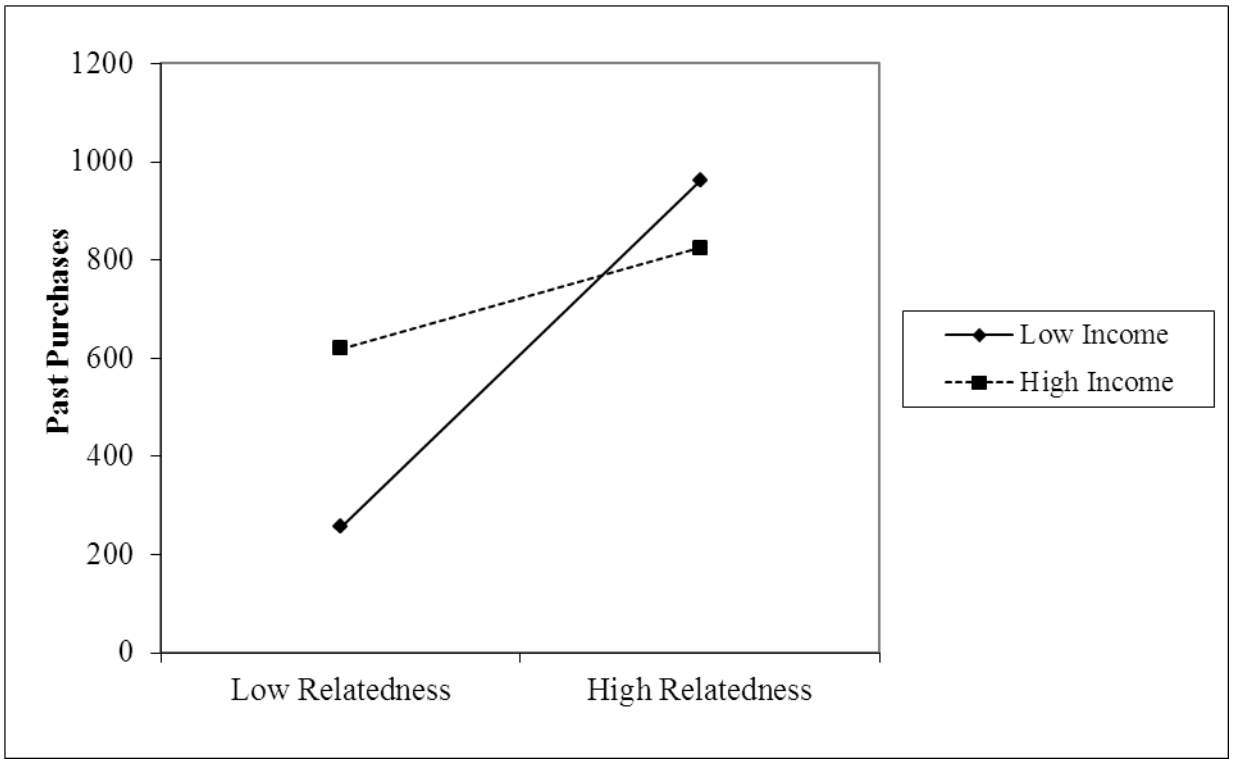
It was expected that income would also represent a constraint on the purchasing variables. With income released as a constraint, an enhanced relationship would be evident. In the full sample, there was little evidence of a moderating relationship involving autonomy or competence level for most of the product/firm outcome variables. This hypothesis was tested using the following regression equation:

$$Past\ Purchase = \beta_1\ Relatendess + \beta_2\ Income + \beta_3\ RelatednessXIncome.$$

There was evidence of income moderating the relationship between relatedness level and several of these variables, however. For example, though the overall trend was for past purchases to increase with relatedness benefits, relatedness level was associated

with much steeper spending level increases for those with low incomes than for those with high incomes (p=.045). This is the opposite of the hypothesized relationship.

Figure 3: Relatedness, Income and Past Purchase Level



This research also addressed differences caused by the interaction between income and the psychological variables. These relationships were explored using the following equations:

$$Brand\ Loyalty = \beta_1\, Autonomy + \beta_2\, Income + \beta_3\, AutonomyXIncome.$$

$$Brand\ Loyalty = \beta_1\, Competence + \beta_2\, Income + \beta_3\, CompetenceXIncome.$$

$$Brand\ Loyalty = \beta_1\, Relatedness + \beta_2\, Income + \beta_3\, RelatednessXIncome.$$

The interaction of all three of the psychological variables with income was at least marginally significant in terms of brand loyalty. (ACR p=.096, .001, .063 respectively). Where high levels of all three psychological benefits were linked to increases in brand loyalty for low income individuals, they were associated with decreases in brand loyalty for those with high incomes. From a share of wallet perspective, this is not a desirable pattern from the firm's perspective.

Figure 4: Autonomy, Income and Brand Loyalty

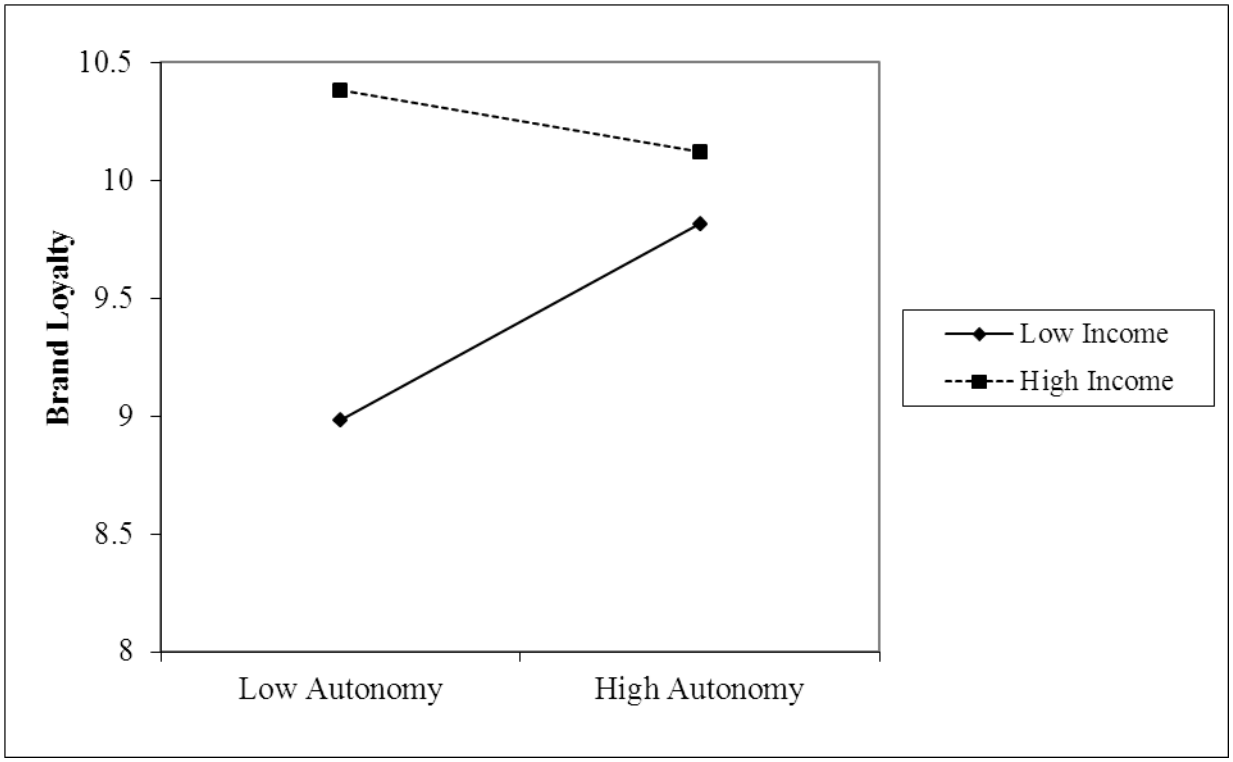


Figure 5: Competence, Income and Brand Loyalty

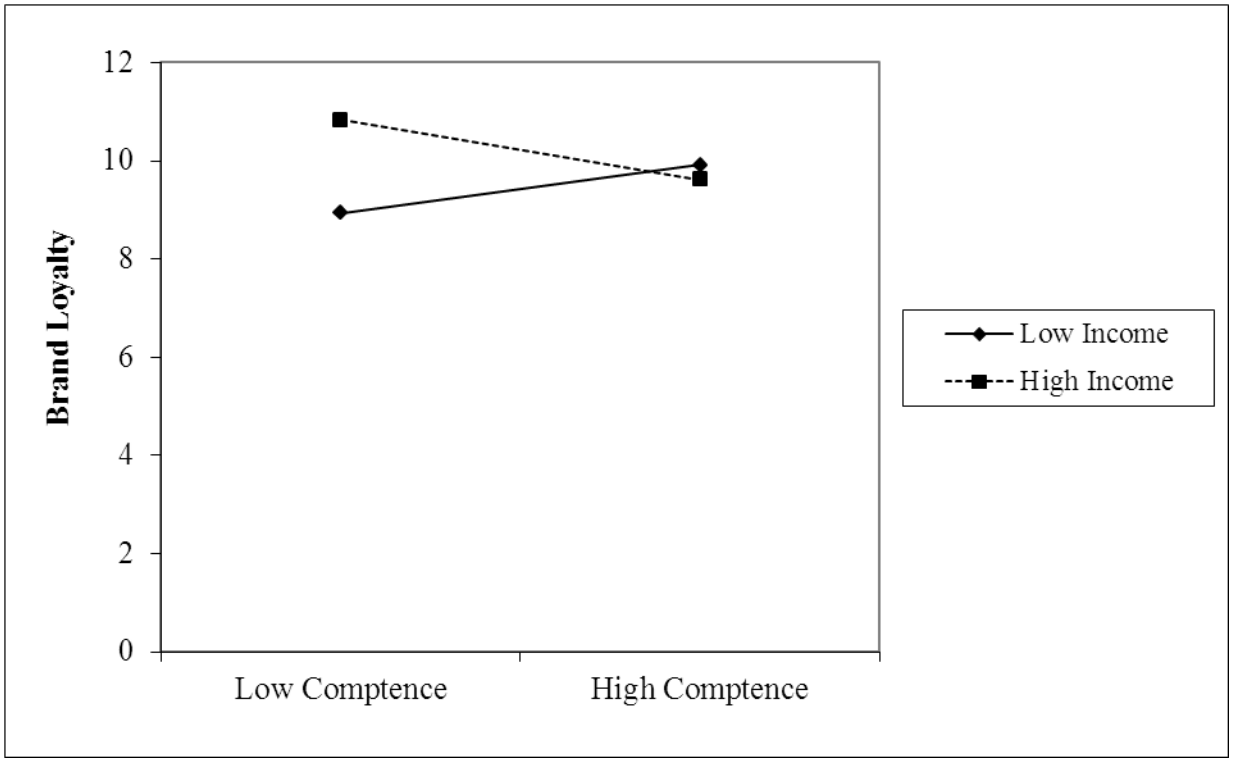
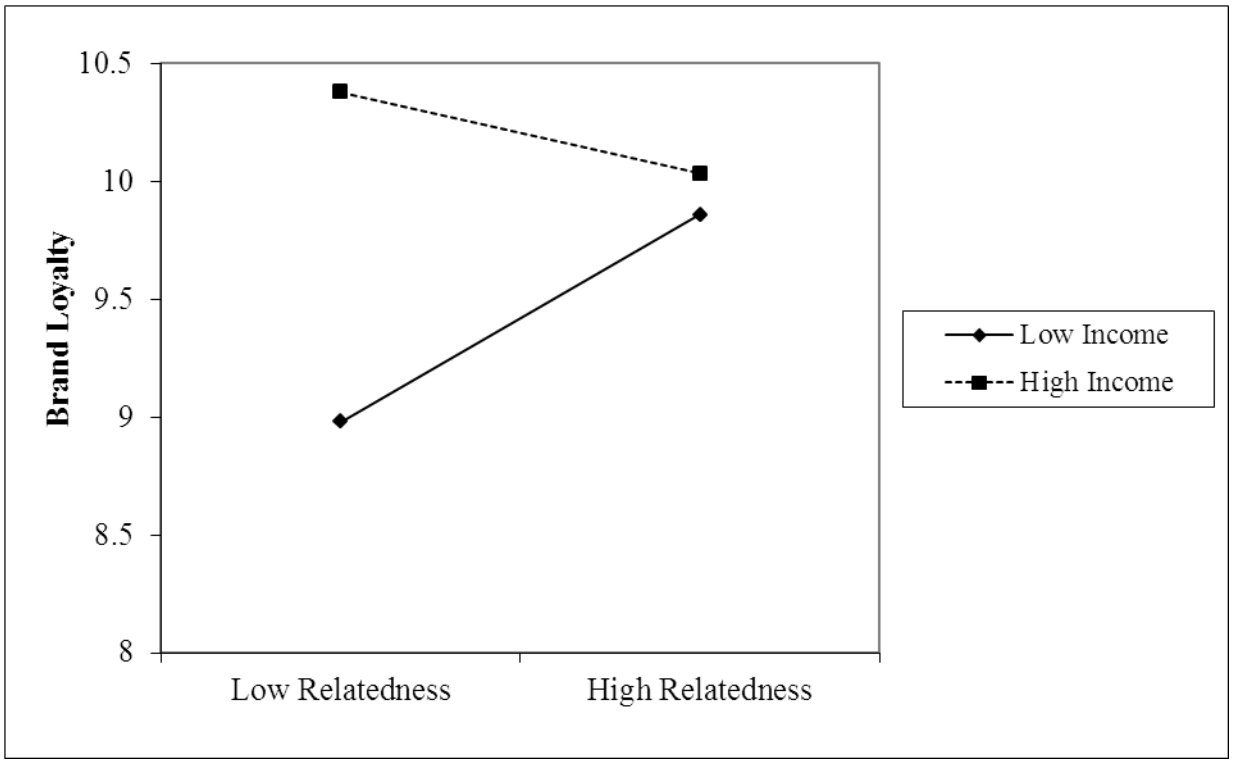


Figure 6: Relatedness, Income and Brand Loyalty



It is interesting to note that getting psychological benefits from the forum was associated with decreased brand loyalty for those with high incomes. For individuals with low incomes, increases in brand loyalty were associated with higher levels of psychological benefits. This moderating relationship may explain some of the mixed results emanating from the brand community literature. These benefits work in the favor of the firm for those with low incomes, but they generally run counter to brand community hypotheses for high income individuals. Relationships with product commitment, WOM, purchase frequency and percent of physical product use were not impacted by this moderator.

The potential of an interaction effect of income with the functional benefits was explored using the following equations:

$$Brand\ Loyalty = \beta_1\ Personalization + \beta_2\ Income + \beta_3\ PersonalizationXIncome.$$

$$Brand\ Loyalty = \beta_1\ Information + \beta_2\ Income + \beta_3\ InformationXIncome.$$

The link between functional benefits and product/firm outcomes was moderated by income level only for brand loyalty. The relationships between both informational benefit level and personalization benefit level and brand loyalty were moderated by the subject's level of income (p's= .018, .007, R^2= .041, .043). Following the pattern identified for the psychological benefits, individuals with high incomes showed decreases in brand loyalty with higher benefit levels while low income individuals displayed increases in brand loyalty. Again, this pattern supports the lay theory that interaction around a product results in benefits for the firm only for those with low incomes. For

individuals with higher incomes, the firm benefit of brand loyalty was decreased through the acquisition of these benefits.

Figure 7: Personalization, Income and Brand Loyalty

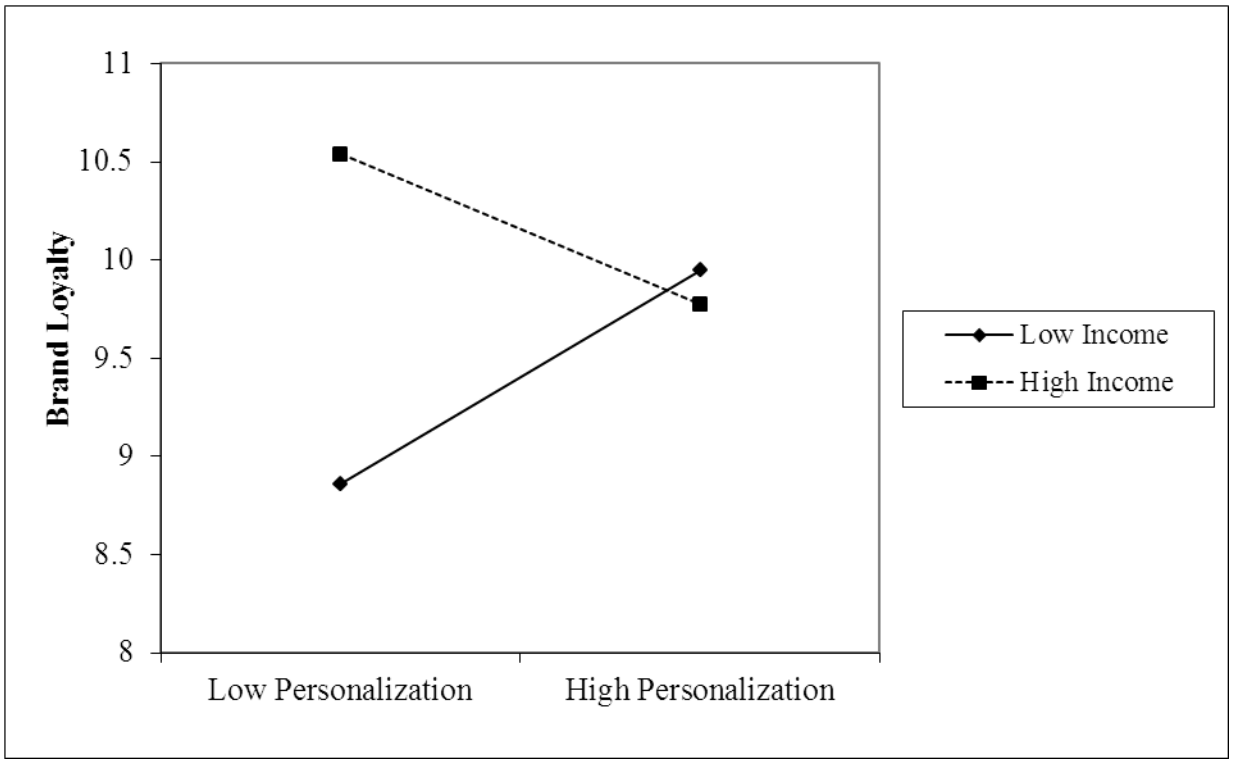
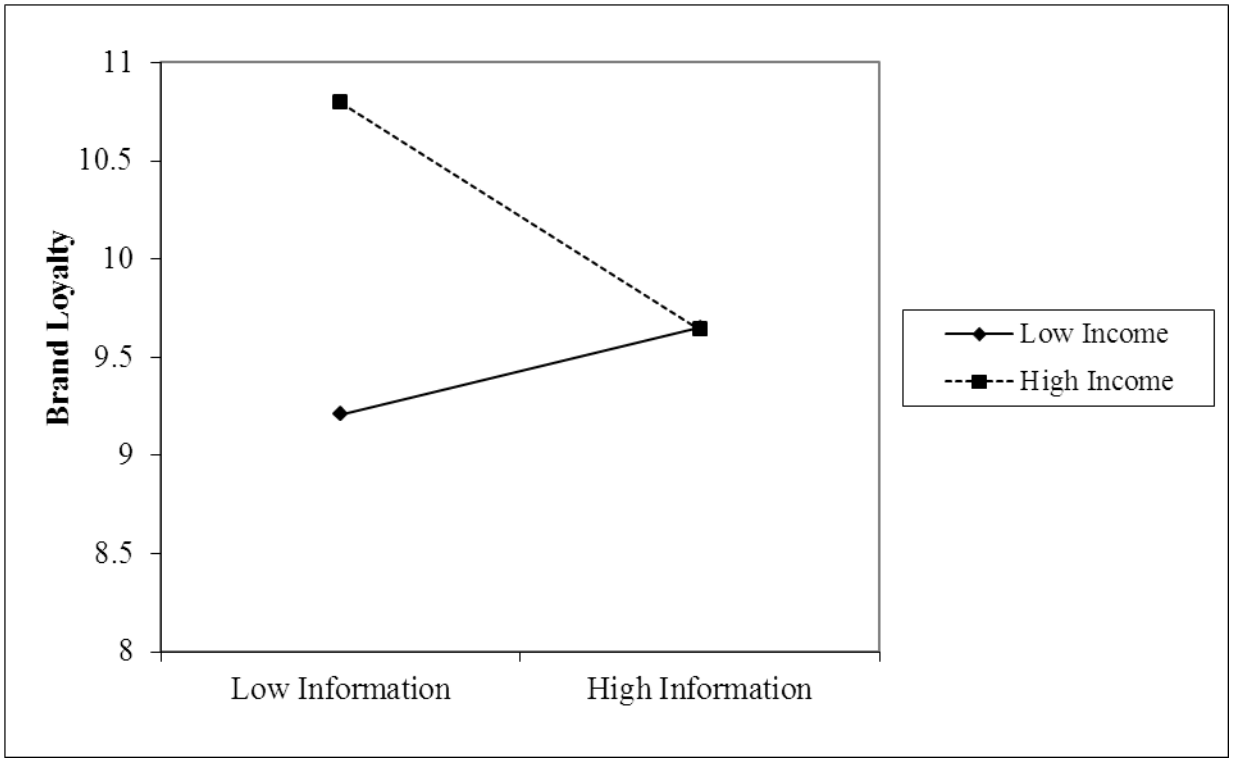


Figure 8: Information, Income and Brand Loyalty

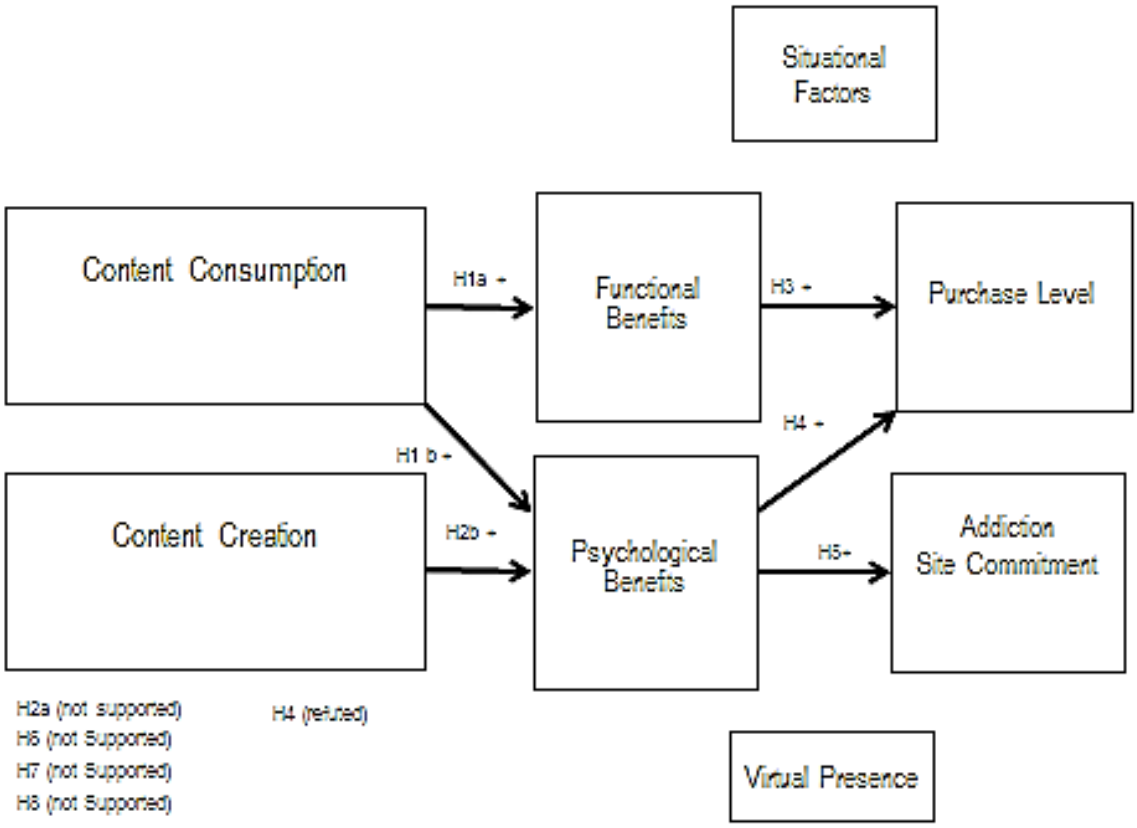


The above pattern was remarkably similar to the pattern uncovered where income level moderated the relationship between the psychological benefits (ACR) and brand loyalty. It should concern proponents of online engagement that brand loyalty decreased sharply for more affluent consumers when they received both psychological and functional benefits from the forum.

H8: Presence and the relationship between psych benefits and consumer outcomes.

It was expected that higher levels of presence would magnify the positive link between psychological benefits and consumer level outcomes. Although virtual presence was found to have a strong main effect on the subject's addiction and site commitment, with the full sample there were no significant moderating effects between the psychological benefits and consumer outcomes. This hypothesis was not supported.

Figure 9 Study 1 Significant Relationships



Evaluation of Mediation Effects

The above analyses outlined multiple significant relationships between consumption/creation levels, functional/psychological benefits, and consumer/firm level outcomes. The model driving this research hypothesized that psychological and functional benefits would mediate the relationships between consumption/creation levels and consumer/firm level outcomes. These benefits are the link between the individual's online behaviors and the consequences for both the consumer and the firm. To verify that true mediation existed with these relationships, Preacher and Hayes (2008) bootstrap mediation analyses were conducted as outlined by Zhao et al. (2010). The Preacher and

Hayes method is preferable to the more widely used Baron and Kenny (Baron and Kenny 1986) approach for several reasons. First, the Baron and Kenny method (Sobel test) has been portrayed as a conservative test of mediation. The bootstrap test is more sensitive and therefore more likely to find mediations if they exist in the data. Second, where the Baron and Kenny method is designed to only detect complementary mediations where a main effect relationship is either partially of fully mediated, the bootstrap test also detects pure indirect effects (with no main effect relationship) and competitive mediations (where the main effect runs counter to the mediation). Neither of these effects can be detected with the Sobel test.

Mediation of Consumption Level to Product/Firm Variables

One of the primary purposes of this research was to establish whether there is a link between behaviors in these forums and positive outcomes for the firm. The bootstrap method requires the evaluation of all possible relationships, not just relationships displaying a significant main effect between X and Y, due to its ability to detect competitive (where the main effect runs counter to the mediation) and indirect-only mediations (with no main effect relationship). As a first step, all potential mediations were run singly with all of the hypothesized firm level outcomes. From the mediation tests that were conducted on the relationship between content consumption and firm level variables, 21 returned significant results. These significant mediations can be categorized as complementary mediations (10), a competitive mediation situation where the main effect runs counter to the indirect effect (3), or an indirect-only situation where there is no significant main effect (8).

Notice that the individual mediation test showed indirect only mediations between content consumption level and past purchases for the benefits of information, personalization, stimulus avoidance, autonomy, competence and relatedness. There was no main effect for the relationship between content consumption level and past purchase level. The vicarious consumption model (*Figure 1*) hypothesized a link between content consumption and purchasing that this analysis clearly shows.

To further clarify these mediated relationships, the mediators were grouped and run through the bootstrap test together using the following equation:

$$Past\ Purchase = \beta_1\ Consumption\ Level + \beta_2\ Information + \beta_3\ Personalization + \beta_4\ Stimulus\ Avoidance.$$

Taken as a set, the functional benefits did mediate the relationship between content consumption level and purchase level. Closer inspection revealed that, when controlling for the other functional benefits, only informational benefits served as a significant mediator of this relationship. This indicates that, when accounting for shared variance with the other functional benefits, informational benefits are the primary link between content consumption and purchase.

Table 11: Consumption to Purchase Mediation

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediatior Sig
Consumption Level	Past Purchase Level	Information	0.139	0.000	83.544	0.003	18.422	0.157	Indirect	0.018
		Personalization	0.105	0.000	-5.470	0.893				0.893
		Stimulus Avoidance	0.133	0.000	34.570	0.109				0.137
		Mean Indirect Effect	15.680							
		Sig	0.001							

The same process was used with the psychological benefits using the following equation:

$$Past\ Purchase = \beta_1\ Consumption\ Level + \beta_2\ Autonomy + \beta_3\ Competence + \beta_4\ Relatedness.$$

Analyses revealed that these three benefits also mediated the relationship between content consumption level and past purchases when taken as a set. Closer inspection indicated that no individual psychological benefit explained enough of the relationship to be classified as a mediator by itself when controlling for the other two. Relatedness marginally mediated this relationship with the included controls.

Table 12: Consumption to Purchase Mediation

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediatior Sig
Consumption Level	Past Purchase Level	Autonomy	0.153	0.000	13.240	0.590	18.420	0.157	Indirect	0.591
		Competence	0.201	0.000	25.030	0.320				0.322
		Relatedness	0.195	0.000	42.960	0.080				0.095
		Mean Indirect Effect	15.443							
		Sig	0.003							

When all of these benefits were loaded into the bootstrap procedure, informational benefits emerged as the sole significant mediator between consumption level and past purchases.

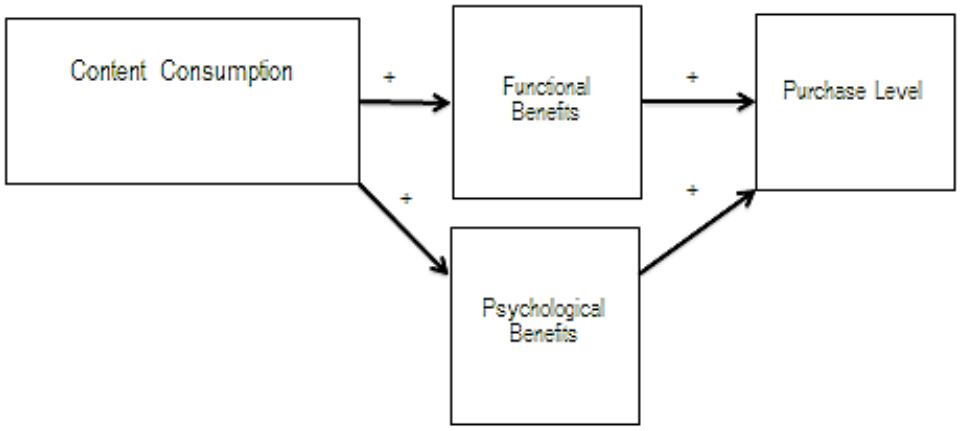
Table 13: Consumption to Purchase Mediation

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediatior Sig
Consumption Level	Past Purchase Level	Information	0.139	0.000	82.650	0.004	18.420	0.157	Indirect	0.020
		Personalization	0.105	0.000	-7.010	0.870				0.869
		Stimulus Avoidance	0.133	0.001	26.240	0.250				0.265
		Autonomy	0.153	0.000	-7.610	0.769				0.869
		Competence	0.201	0.000	-15.030	0.583				0.581
		Relatedness	0.195	0.000	47.660	0.051				0.064
		Mean Indirect Effect	19.360							
		Sig	0.001							

These analyses clearly show that the relationship between content consumption level and past purchases was mediated by the benefits that the subject's receive from the site. Running multiple mediation analyses showed that informational benefits were the primary driver of this indirect relationship. Though no direct relationship existed, the more a subject received these benefits, the more they had purchased the product in the past.

The fact that there was no direct effect between content consumption and purchasing conflicts with the lay theory that engaging your customers online results in positive outcomes for the firm. However, the fact that both functional and psychological benefits positively mediated this relationship (when run through the bootstrap test individually) clarified this connection. While content consumption behavior itself does not lead to purchase, the benefits that are gained through the behavior do lead to product purchase. The fact that relatedness benefits are a significant moderator when run independently may be seen as validation for brand community theorists.

Figure 10 Mediated Relationship Between Consumption and Purchase



Mediation of Consumption Level to Consumer Level Variables

Where true moderation effects were sprinkled throughout the possible relationships identified between content consumption level and product/firm outcomes, they were almost universal in terms of the relationships between consumption level and the consumer level variables. Main effects were discovered between content consumption level and the consumer level variables of addiction, life satisfaction and site commitment.

Because of the power of the bootstrap method (Preacher and Hayes 2004), along with the fact that all possible relationships were analyzed (not just relationships with existing main effects), many significant mediating relationships were uncovered with this analysis. There were two primary contributions to this group of relationships as analyzed

using Preacher and Hayes' method. First, because this method can detect indirect-only mediations, it becomes evident that content consumption level is linked to positive mood through both intellectual stimulation and autonomy benefits. Also, the increased power of this method exposed the full mediation of consumption level on both negative mood and procrastination through all seven of the measured benefits included in the research. This is firm evidence that high-level content consumers are worse off psychologically based on their Internet behaviors.

This relationship was not hypothesized in Figure 1, but it does provide crucial information about the mechanisms through which Internet behaviors impact the individual.

It is remarkable that all seven benefits were found to mediate the relationship between content consumption level and both addiction and site commitment. These relationships were further explored with multiple mediation analyses. The four functional benefits were run together in the same analysis using the following equation:

$$Addiction = \beta_1 Consumption\ Level + \beta_2 Information + \beta_3 Personalization + \beta_4 Intellectual\ Stimulation + \beta_5 Stimulus\ Avoidance.$$

Stimulus avoidance emerged as the primary mediator when controlling for the other three functional benefits.

Table 14: Consumption to Addiction Mediation

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediatior Sig
Consumption Level	Addiction	Information	0.146	0.001	0.330	0.048	0.555	0.000	Complementary	0.075
		Personalization	0.118	0.000	0.163	0.499				0.500
		Intellectual Stimulation	0.163	0.000	-0.251	0.182				0.189
		Stimulus Avoidance	0.138	0.001	0.963	0.000				0.001
		Mean Indirect Effect	0.160							
		Sig	0.001							

The psychological variables were grouped into the same multiple mediator analysis using the following equation:

$$Addiction = \beta_1 Consumption\ Level + \beta_2 Autonomy + \beta_3 Competence + \beta_4 Relatedness.$$

This analysis showed that both relatedness and competence mediated this relationship when controlling for shared variance.

Table 15: Consumption to Addiction Mediation

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediatior Sig
Consumption Level	Addiction	Autonomy	0.151	0.000	0.052	0.713	0.555	0.000	Complementary	0.715
		Competence	0.202	0.000	0.579	0.001				0.001
		Relatedness	0.190	0.000	0.534	0.001				0.003
		Mean Indirect Effect	0.226							
		Sig	0.000							

Running all seven potential mediators in the same analysis exposed an interesting result. Consistent with the analyses above, all of the established mediators remained (competence, relatedness, and stimulus avoidance). However, a competitive mediation was exposed in intellectual stimulation.

Table 16: Consumption to Addiction all Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediatior Sig
Consumption Level	Addiction	Autonomy	0.152	0.000	-0.134	0.360	0.555	0.000		0.360
		Competence	0.202	0.000	0.392	0.013			Complementary	0.022
		Relatedness	0.190	0.000	0.501	0.000			Complementary	0.003
		Information	0.146	0.001	0.234	0.146				0.167
		Personalization	0.118	0.000	-0.046	0.840				0.845
		Intellectual Stimulation	0.162	0.000	-0.372	0.040			Competitive	0.049
		Stimulus Avoidance	0.138	0.001	0.778	0.000			Complementary	0.001
		Mean Indirect Effect	0.226							
		Sig	0.000							

The same procedure was used to analyze the other relationships using multiple mediator techniques. Site commitment was primarily driven by stimulus avoidance, personalization, and relatedness benefits as predicted by the following equation:

$$Site\ Commitment = \beta_1\, Consumption\ Level + \beta_2\, Autonomy + \beta_3\, Competence + \beta_4\, Relatedness + \beta_5\, Information + \beta_6\, Personalization + \beta_7\, Intellectual\ Stimulation + \beta_8\, Stimulus\ Avoidance.$$

Table 17: Consumption to Site Commitment all Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Site Commitment	Autonomy	0.153	0.000	-0.016	0.829	0.128	0.001	Complementary	0.827
		Competence	0.201	0.000	0.033	0.676				0.672
		Relatedness	0.193	0.000	0.293	0.000				0.001
		Information	0.133	0.000	0.046	0.581				0.581
		Personalization	0.105	0.000	0.278	0.026				0.048
		Intellectual Stimulation	0.159	0.000	-0.106	0.265				0.267
		Stimulus Avoidance	0.131	0.000	0.197	0.005				0.022
		Mean Indirect Effect	0.105							
		Sig	0.000							

The link between consumption level and negative mood was mediated by all seven benefits when run separately. When run together, stimulus avoidance benefit was the only variable to emerge when using the following regression equation:

Negative Mood = β_1 Consumption Level+ β_2 Autonomy + β_3 Competence+ β_4 Relatedness +β_5 Information+ β_6 Personalization+ β_7 Intellectual Stimulation + β_8 Stimulus Avoidance.

Table 18: Consumption to Negative Mood all Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Negative Mood	Autonomy	0.152	0.000	-0.089	0.376	0.078	0.136	Full	0.379
		Competence	0.202	0.000	0.021	0.845				0.844
		Relatedness	0.190	0.000	0.056	0.586				0.555
		Information	0.146	0.000	0.221	0.049				0.074
		Personalization	0.118	0.000	-0.029	0.862				0.859
		Intellectual Stimulation	0.163	0.000	-0.058	0.644				0.641
		Stimulus Avoidance	0.138	0.000	0.242	0.011				0.031
		Mean Indirect Effect	0.054							
		Sig	0.018							

The same pattern emerged for the full moderation of the link between content consumption level and procrastination using the following equation:

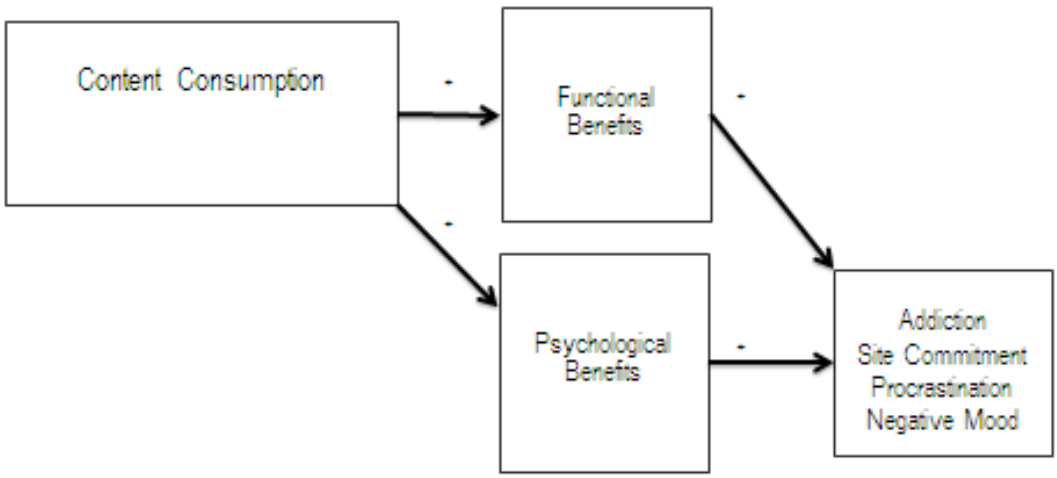
Procrastination = β_1 Consumption Level+ β_2 Autonomy + β_3 Competence+ β_4 Relatedness +β_5 Information+ β_6 Personalization+ β_7 Intellectual Stimulation + β_8 Stimulus Avoidance.

Table 19: Consumption to Procrastination all Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Procrastination	Autonomy	0.152	0.000	-0.053	0.621	0.000	0.997	Full	0.618
		Competence	0.202	0.000	0.020	0.863				0.861
		Relatedness	0.190	0.000	0.168	0.103				0.117
		Information	0.146	0.001	0.184	0.124				0.146
		Personalization	0.118	0.000	-0.004	0.983				0.983
		Intellectual Stimulation	0.163	0.000	0.068	0.611				0.607
		Stimulus Avoidance	0.138	0.000	0.283	0.006				0.022
		Mean Indirect Effect	0.104							
		Sig	0.000							

Content consumption level was positively linked to site commitment, addiction, negative mood and procrastination. This linkage operated through the benefits that the individual derived from the use of the forum. The paths from consumption level to both negative mood and procrastination were fully mediated by these benefits, primarily by stimulus avoidance. These Internet venues were seen as a safe haven for an individual to escape the pressures of everyday life, however, this escape appeared to have some negative psychological consequences.

Figure 11 Mediated Relationship between Consumption and Consumer Outcomes



Mediation of Creation Level to Product/Firm Level Variables

Content creation level was only significantly linked to the product/firm level outcomes of purchase intention, offline WOM and product commitment. Creation level

was also significantly linked to the three psychological benefits (ACR). Analysis using the bootstrap test revealed two indirect-only mediations, a competitive mediation, and a complementary mediation. In general, this finding does not fit with the hypothesized model which suggested a competitive mediation situation.

Table 20: Creation to Product/Firm Variables

IV	Mediator	DV	Mean Indirect effect (a x b)	sig	a	sig	b	sig	c	sig	Type	Full
Creation	Autonomy											
		Offline WOM	0.020	0.009	0.145	0.002	0.136	0.000	0.008	0.686	Indirect Only	
		Online WOM	0.015	0.020	0.145	0.002	0.106	0.001	0.112	0.000	Complementary	
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Creation	Competence											
		Purchase Frequency	0.035	0.009	0.264	0.000	0.134	0.001	0.027	0.415	Indirect Only	
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Creation	Relatedness											
		Brand Loyalty	0.055	0.041	0.360	0.000	0.152	0.036	-0.012	0.816	Competitive	

Mediation of Creation Level to Consumer Level Variables

Content creation level was significantly related to both level of addiction and level of site commitment. Recall that the psychological benefits of autonomy, competence and relatedness were found to be positively linked to content creation level as well. This can be viewed as strong support for the initial model which predicted that psychological benefits would be the link between creation level and consumer level outcomes.

The bootstrap test uncovered fully mediated relationships between content creation and both addiction and site commitment for all three psychological benefits. Several other mediating relationships were exposed as well. An indirect-only mediation was discovered where autonomy mediated the relationship between content creation and

positive mood. Competitive mediations were found where both competence and relatedness mediated the relationships between creation level and negative mood. Relatedness also competitively mediated the relationship between creation level and procrastination.

Table 21: Creation to Consumer Mediation

IV	Mediator	DV	Mean Indirect effect (a x b)	sig	a	sig	b	sig	c	sig	Type	Full
Creation	Autonomy											
		Internet Addiction	0.081	0.031	0.148	0.002	0.547	0.004	0.290	0.020	Complementary	*
		Positive Mood	0.046	0.023	0.148	0.002	0.314	0.001	-0.054	0.404	Indirect only	
		Site Commitment	0.047	0.019	0.145	0.002	0.325	0.001	0.194	0.002	Complementary	
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Creation	Competence											
		Internet Addiction	0.218	0.001	0.225	0.000	0.970	0.000	0.290	0.020	Complementary	*
		Negative Mood	0.045	0.048	0.225	0.000	0.202	0.025	-0.081	0.245	Competitive	
		Site Commitment	0.100	0.001	0.222	0.000	0.450	0.000	0.194	0.002	Complementary	*
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Creation	Relatedness											
		Internet Addiction	0.341	0.000	0.354	0.000	0.964	0.000	0.290	0.020	Complementary	*
		Negative Mood	0.092	0.013	0.354	0.000	0.260	0.009	-0.081	0.245	Competitive	
		Procrastination	0.127	0.003	0.354	0.000	0.357	0.002	-0.030	0.711	Competitive	
		Site Commitment	0.191	0.000	0.360	0.000	0.530	0.000	0.194	0.002	Complementary	*

A multiple mediator analysis was run using the following equation:

$$Addiction = \beta_1 Autonomy + \beta_2 Competence + \beta_3 Relatedness.$$

This analysis revealed that the psychological benefits (as a group) fully mediated the relationship between content creation and addiction. This relationship was driven by both competence and relatedness.

Table 22: Creation to Addiction Mediation

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Creation Level	Addiction	Autonomy	0.148	0.002	0.017	0.923	0.289	0.020	Full	0.924
		Competence	0.225	0.001	0.702	0.001				0.004
		Relatedness	0.354	0.000	0.556	0.004				0.006
		Stimulus Avoidance								
		Mean Indirect Effect	0.358							
		Sig	0.000							

A similar situation existed with the relationship between content creation and site commitment. This relationship was explored using the following equation:

$$Site\ Commitment = \beta_1 Autonomy + \beta_2 Competence + \beta_3 Relatedness.$$

Table 23: Creation to Site Commitment Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Creation Level	Site Commitment	Autonomy	0.145	0.002	0.007	0.491	0.194	0.002	Full	0.496
		Competence	0.222	0.000	0.260	0.004				0.017
		Relatedness	0.360	0.000	0.354	0.000				0.012
		Mean Indirect Effect	0.195							
		Sig	0.000							

The multiple mediator test was run with negative mood as the dependent variable and the psychological benefits as mediators using the following equation:

$$Negative\ Mood = \beta_1 Autonomy + \beta_2 Competence + \beta_3 Relatedness.$$

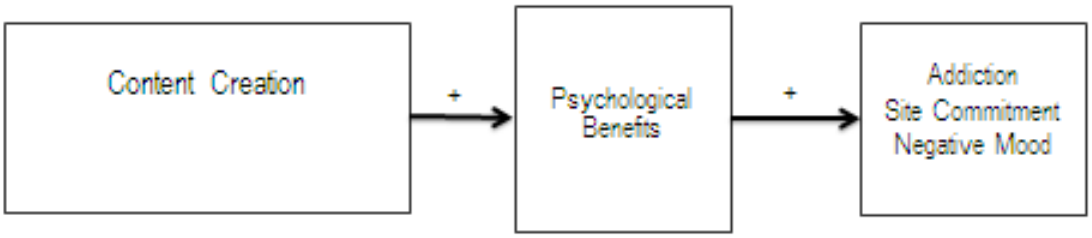
As a set, this group of variables did competitively mediate the relationship between creation level and negative mood (p=.013), but no individual mediator was significant. Receiving the benefits of competence and relatedness from the forum is

associated with higher levels of negative mood. Creating content in the forum is associated with lower levels of this DV.

Table 24: Creation to Negative Mood Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Creation Level	Negative Mood	Autonomy	0.148	0.002	-0.065	0.577	-0.081	0.245	Competitive	0.578
		Competence	0.225	0.000	0.122	0.256				0.268
		Relatedness	0.354	0.000	0.213	0.073				0.077
		Mean Indirect Effect	0.093							
		Sig	0.013							

Figure 12 Mediated Relationship between Creation and Consumer Outcomes



Brief Summary

Study 1 confirmed five of the seven hypothesized main effect relationships. It is clear that individuals are engaging in these Internet forum behaviors to fulfill both functional and psychological benefits. It is also clear that acquiring these benefits through forum activities has impact for both the firm and the consumer. Mediation analysis revealed that these benefits did, in fact, mediate the relationships between forum activity and firm and consumer outcomes. The following section outlines a second study that was designed to replicate and extend the findings of Study 1 to a different population of Internet forum users.

Study 2 Methodology and Analysis

The purpose of Study 2 was to replicate and extend the Study 1 findings to a different population of subjects. Quality journals usually require multiple studies with replicating results in manuscripts accepted for publication, and the studies outlined here utilized two diverse subject pools. The replications found using these diverse groups allows for greater confidence in the findings. Where Study 1 participants clicked on a link posted on their forum to take part in the survey, Study 2 participants were student Internet users who were motivated by class credit. Where response rates are unknown with Study 1's sampling technique, more than 80% of the individuals who qualified to respond to Study 2 completed the survey. Where the responses for Study 1 were pulled from forums dedicated to eight different products, there were at least 20 product classes present in the Study 2 data. Many of these product classes overlapped with those of Study 1. For example, at least 10% of the Study 2 subjects inhabited forums dedicated to

each of the following: video games, fashion, and computers and technology. Products unique to Study 2 included fitness products, music and automobile-focused forums.

Study 2 involved a survey of 80 Internet forum users who completed the survey in exchange for class credit. More than 700 marketing students responded to a mass pretest survey with 107 subjects indicating that they have "Viewed or posted on an Internet forum dedicated to a consumer product or service at least two times in the last six months". The table of means below shows that the participants in the two studies differed greatly in terms of age, Internet experience, and forum experience.

Figure 13 Means for Respondents to Both Studies

		Study Two Student Sample	Study One Forum Sample
Age	*Mean*	2.030	2.870
	SD	0.225	1.142
	Years	19-25	26-30
Internet Tenure	*Mean*	4.620	6.140
	SD	1.314	1.942
	Years	5-8	8-12
Forum Tenure	*Mean*	2.430	4.760
	SD	1.402	2.048
	Years	1-4	6-8

These individuals were given a survey virtually identical to the one used in Study 1 and were asked to identify the product to which their focal forum was dedicated. Twenty seven individuals failed to follow the survey instructions and entered some type of social networking site as their product of choice. These subjects were deleted from the

analysis. The responses from the remaining 80 subjects were retained with 32 subjects indicating that they were members of the forum while 48 simply lurk and consume content. The measures used for Study 2 were identical to those used in Study 1. Consistent with Study 1, analyses involving either content consumption level or content creation level included the other construct as a control.

H1a: Content consumption level will be positively related to functional benefits

The functional benefits of information, personalization, intellectual stimulation and stimulus avoidance were regressed on content consumption level. The relationships with personalization and information benefits were not significant while intellectual stimulation and stimulus avoidance were highly significant. These significant effects are replications of Study 1 findings.

Table 25: Content Consumption to Functional Benefits

IV	DV	β	p	R Square
Consumption	Information	0.178	0.131	0.068
	Personalization	0.164	0.162	0.063
	Intellectual Stimulation	0.435	0.000	0.222
	Stimulus Avoidance	0.399	0.000	0.227

H1b: Content consumption level positively impacts psychological benefits.

In a direct replication of Study 1 findings, all three benefits displayed positive and significant relationships.

Table 26: Consumption to Psychological Benefits

IV	DV	β	p	R Square
Consumption	Autonomy	0.256	0.025	0.139
	Competence	0.236	0.045	0.069
	Relatedness	0.279	0.008	0.281

H2a: Content creation level negatively impacts functional benefits.

Similar to Study 1, none of these relationships approached significance. The non-findings exhibited here can be considered to be a replication of the non-findings from Study 1.

Table 27: Creation to Functional Benefits

IV	DV	β	p	R Square
Creation	Information	0.141	0.228	0.068
	Personalization	0.144	0.221	0.063
	Intellectual Stimulation	0.088	0.408	0.222
	Stimulus Avoidance	0.163	0.126	0.227

H2b: Content creation level positively impacts psychological benefits

Recall that in Study 1, content creation level was strongly and positively related to all three psychological benefits. In Study 2, content creation was strongly linked to relatedness benefits, marginally linked to autonomy benefits, and not significantly linked to competence benefits. The lack of a relationship with competence benefits is puzzling based on both extant theory and the findings from Study 1. It is possible that this difference is due to a demographic difference in the population. Perhaps younger users don't acquire competence from the activity while older users do. Even without the significant link to competence benefits, this will be considered a replication supporting the hypothesis.

Table 28: Creation to Psychological Benefits

IV	DV	β	p	R Square
Creation	Autonomy	0.201	0.075	0.139
	Competence	0.063	0.591	0.069
	Relatedness	0.370	0.001	0.281

H3: Functional benefits are positively related to positive product/firm outcomes.

Once again, equations with the four functional benefits were regressed upon the eight firm level outcomes. Because of the reduced number of subjects who supplied data for study two, marginal effects were noted. Where Study 1 found weak but consistent support for H3, the results were more mixed for Study 2. Only the equations for online WOM, offline WOM and product commitment were significant in the data. Offline

WOM was marginally linked to stimulus avoidance benefits from the forum. Online WOM was positively linked to informational benefits, intellectual stimulation benefits and stimulus avoidance benefits while being negatively linked to personalization benefits. Product commitment was positively linked to personalization benefits and negatively linked to informational benefits. See *Table 23* for a full breakdown of these relationships.

Table 29: Functional Benefits to Firm Outcomes

DV	R Square	Overall p	Information β	p	Personalization β	p	Intellectual Stimulation β	p	Stimulus Avoidance β	p
Past Purchase	0.040	0.788	0.133	0.644	0.077	0.787	0.019	0.876	-0.368	0.714
Accessory Purchase	0.030	0.675	-0.161	0.577	0.313	0.280	-0.025	0.841	-0.038	0.766
Time Using Product	0.055	0.367	-0.096	0.738	0.116	0.684	0.001	0.991	0.224	**0.078**
% of Time Using Product	0.030	0.674	0.060	0.835	0.035	0.903	0.011	0.930	-0.178	0.166
Purchase Intention	0.046	0.582	-0.136	0.668	0.234	0.459	0.115	0.421	0.068	0.643
Offline WOM	0.105	**0.076**	-0.134	0.629	0.188	0.498	0.145	0.225	0.214	**0.084**
Online WOM	0.227	***0.001***	0.450	**0.084**	-0.479	**0.066**	0.317	***0.005***	0.207	**0.072**
Product Commitment	0.106	**0.074**	-0.496	**0.077**	0.537	**0.056**	0.106	0.374	0.177	0.150

It is notable that there is no significant relationship between the psychological benefits and past purchase. This relationship was established in Study 1.

H4: Psychological benefits are negatively related to product/firm outcomes

In Study 2, past purchase of the product was positively predicted by autonomy benefits but negatively predicted by the level of relatedness derived from the site. Commitment to the product was predicted by the level of autonomy benefits and online WOM was predicted by the amount of relatedness benefits that the individual gained from forum interaction. See *Table 24* for a breakdown of these relationships.

Table 30: Psychological Benefits to Firm Outcomes

DV	R Square	Overall p	Autonomy β	p	Competence β	p	Relatedness β	p
Past Purchase	0.099	***0.046***	0.320	***0.012***	-0.057	0.633	-0.264	***0.044***
Accessory Purchase	0.011	0.846	0.058	0.658	-0.045	0.723	-0.092	0.497
Time Using Product	0.080	***0.095***	0.182	0.149	0.174	0.153	-0.008	0.953
% of Time Using Product	0.015	0.769	0.123	0.346	-0.063	0.615	-0.066	0.625
Purchase Intention	0.036	0.516	0.202	0.156	0.066	0.636	-0.104	0.498
Offline WOM	0.077	0.104	0.200	0.115	0.026	0.832	0.108	0.408
Online WOM	0.202	***0.001***	0.006	0.958	0.094	0.407	0.402	***0.001***
Product Commitment	0.169	***0.003***	0.317	***0.009***	0.181	0.118	0.004	0.972

The relationship between relatedness and past purchase was as predicted in Figure 1, but it differs from what was found in Study 1.

H5: Psychological benefits are related to negative consumer level outcomes

Running individual IV's and consistent with Study 1, addiction and site commitment were both strongly and positively linked to all three psychological benefits. Procrastination was linked to both relatedness and autonomy which also mirrors Study 1. Running all three psychological variables together as IV's produced similar results (see *Table 28* for a breakdown of these relationships). This hypothesis was supported in both studies with universal support for the relationships between the psychological benefits (ACR) and both addiction and site commitment.

Table 31: Psychological Benefits to Consumer Outcomes

DV	R Square	Overall p	Autonomy β	p	Competence β	p	Relatedness β	p
Internet Addiction	0.274	***0.000***	0.222	***0.050***	0.136	0.209	0.307	***0.010***
Life Satisfaction	0.078	0.106	0.064	0.613	0.243	0.049	0.022	0.865
Positive Mood	0.030	0.509	-0.051	0.693	0.188	0.134	-0.044	0.742
Negative Mood	0.007	0.915	0.008	0.950	-0.031	0.809	0.086	0.529
Procrastination	0.107	***0.036***	0.193	0.123	-0.151	0.208	0.224	***0.085***
Site Commitment	0.341	***0.000***	0.184	***0.086***	0.171	***0.098***	0.380	***0.001***

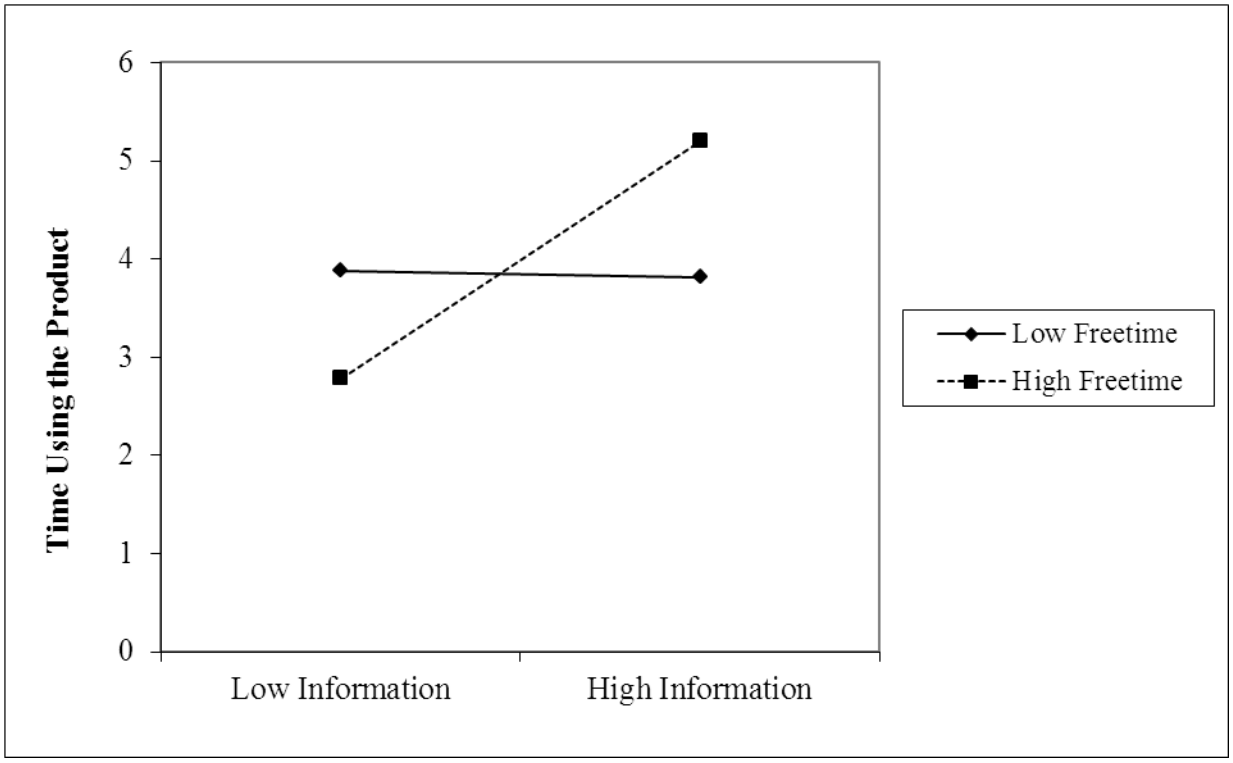
H6: Free-time moderates the relationship between functional benefits and firm outcomes.

Recall that low free-time was hypothesized to be a constraint that would suppress the positive relationship between functional benefits and firm outcomes. An interaction was detected between free-time and avoidance benefits in terms of time spent using the product (p=.038). Using the following equation:

$$Time\ Using\ Product = \beta_1\ Information + \beta_2\ Freetime + \beta_3\ InformationXFreetime.$$

For those with little free-time, time spent using the product did not vary based on the level of informational benefits derived from the forum. Usage did vary for those with high levels of free-time. For these people, as informational benefits increased, so did their time using the product. This is an exaggerated replication of one of the findings in Study 1 that fits nicely with vicarious consumption theory. Using the forum for informational benefits led to higher levels of product usage unless low levels of free-time did not allow it.

Figure 14: Information, Free-Time and Time Using the Product

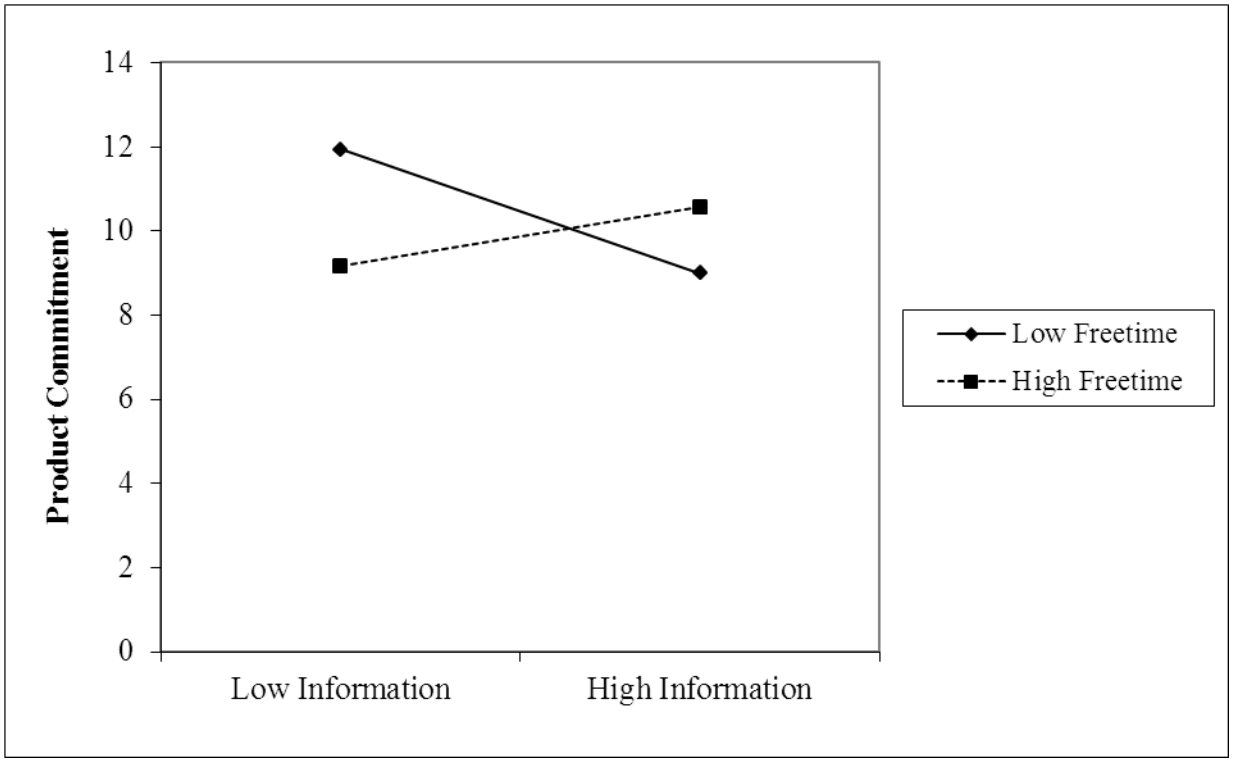


The following equation explored the moderating effect of free-time and informational benefits:

$$Product\ Commitment = \beta_1\ Information + \beta_2\ Freetime + \beta_3\ InformationXFreetime.$$

Individuals with high levels of free-time exhibited increases in product commitment when they got informational benefits from the site while those with little free-time displayed decreases. This finding mirrors a finding from Study 1. The decreases exhibited by those with low levels of free-time may be explained by the speed with which these forums deliver information. Low free-time users may use these sites for quick answers. When they received high levels of information from the forum they did not become more committed to the product.

Figure 15: Information, Free-Time and Product Commitment



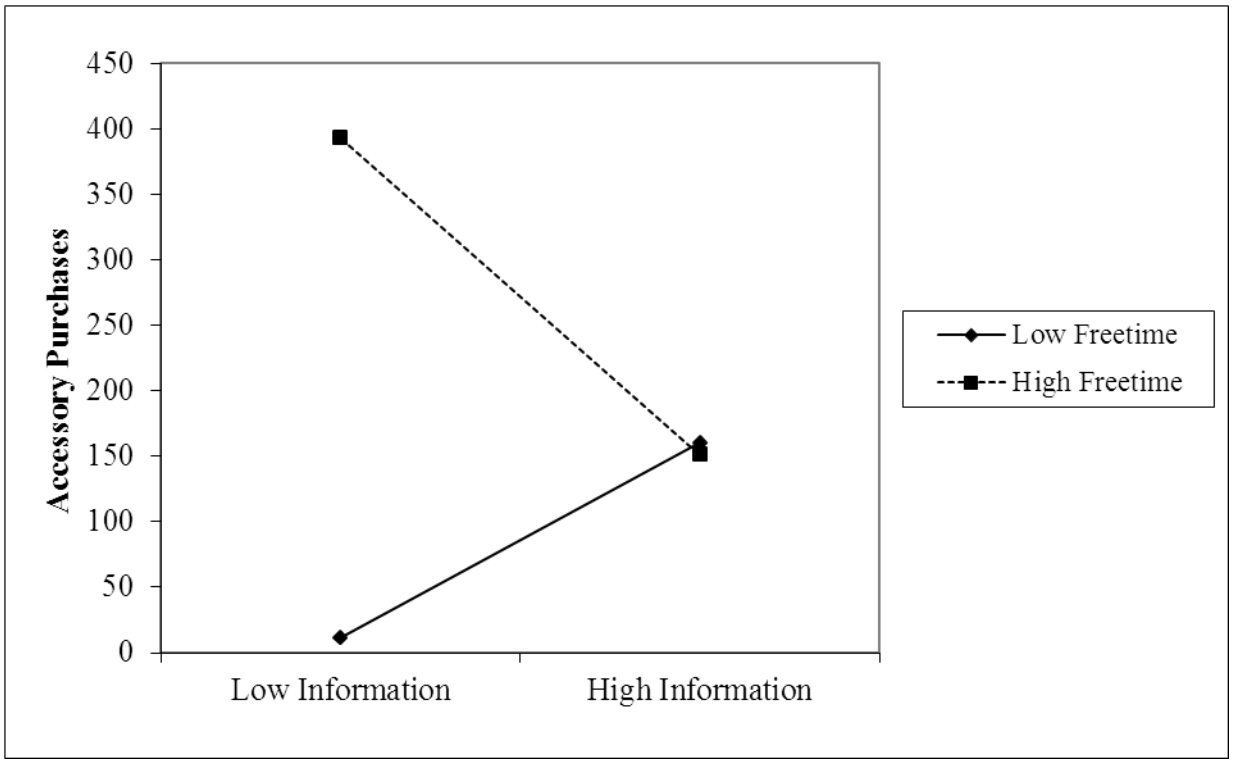
The opposite interaction was found with regard to free-time and informational benefits when predicting accessory purchases (p=.038) using the following equation:

$$Accessory\ Purchase = \beta_1\ Information + \beta_2\ Freetime + \beta_3\ InformationXFreetime.$$

Individuals with high levels of free-time spent less on accessory purchases when informational benefits increased. Those with low levels of free-time displayed the opposite relationship. Although the dollar changes were quite drastic, this could be a function of these individuals using forum technologies as a way of saving money or making more efficient purchases. Low free-time respondents buy more accessories with increases in informational benefits from the site. It is possible that high free-time individuals were using the forum to purchase similar accessories, but finding lower costs through the functional benefits of the forum. This could be because they were simply

using the site for information about the best and cheapest products to purchase as accessories.

Figure 16: Information, Free-Time and Accessory Purchases



H7: Disposable income moderates the relationship between psychological benefits and firm outcomes.

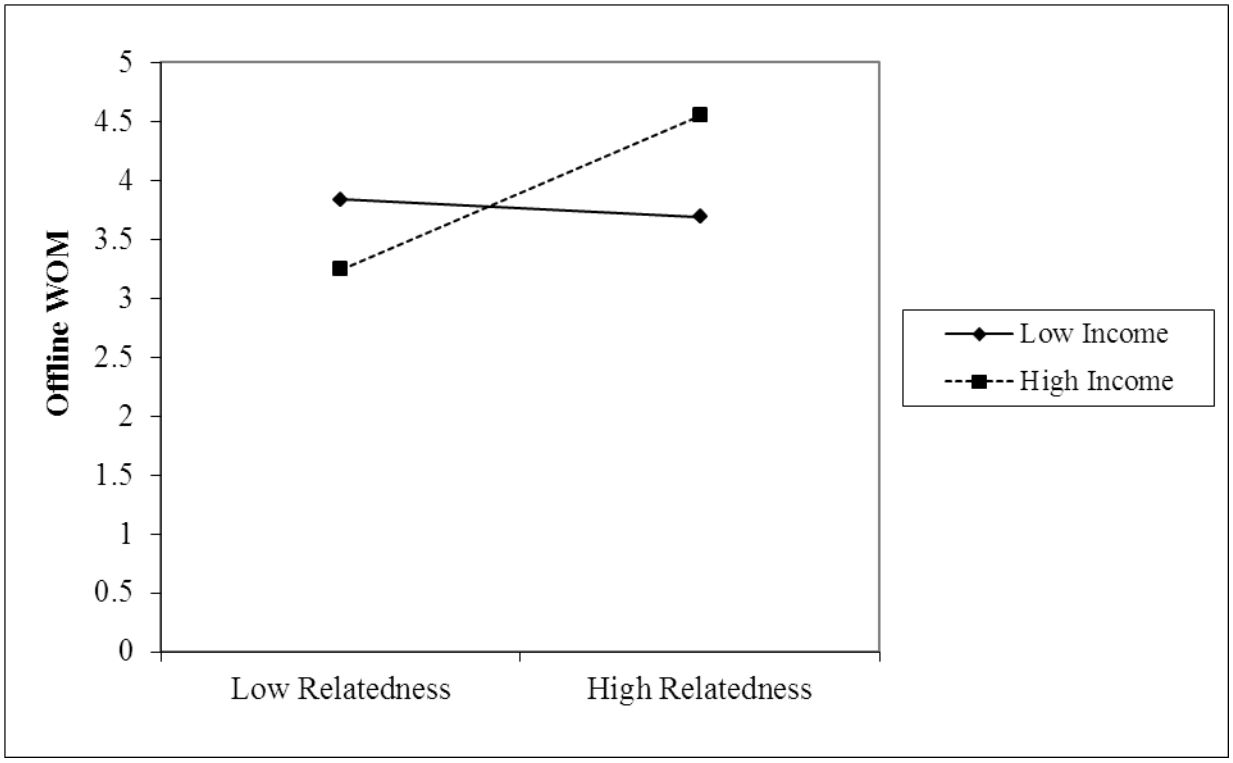
Low levels of income were expected to be a constraint that would limit the detection of relationships between psychological benefits and firm outcomes, and this was explored using the following equation:

$$Offline\ WOM = \beta_1\ Relatedness + \beta_2\ Income + \beta_3\ RelatednessXIncome.$$

Disposable income was found to interact with relatedness benefits when predicting offline WOM (p=.023). Where offline WOM did not vary based on

relatedness benefits derived from the site for those with low incomes, individuals with higher incomes did talk about the products more offline when they received high levels of relatedness benefits from the forum.

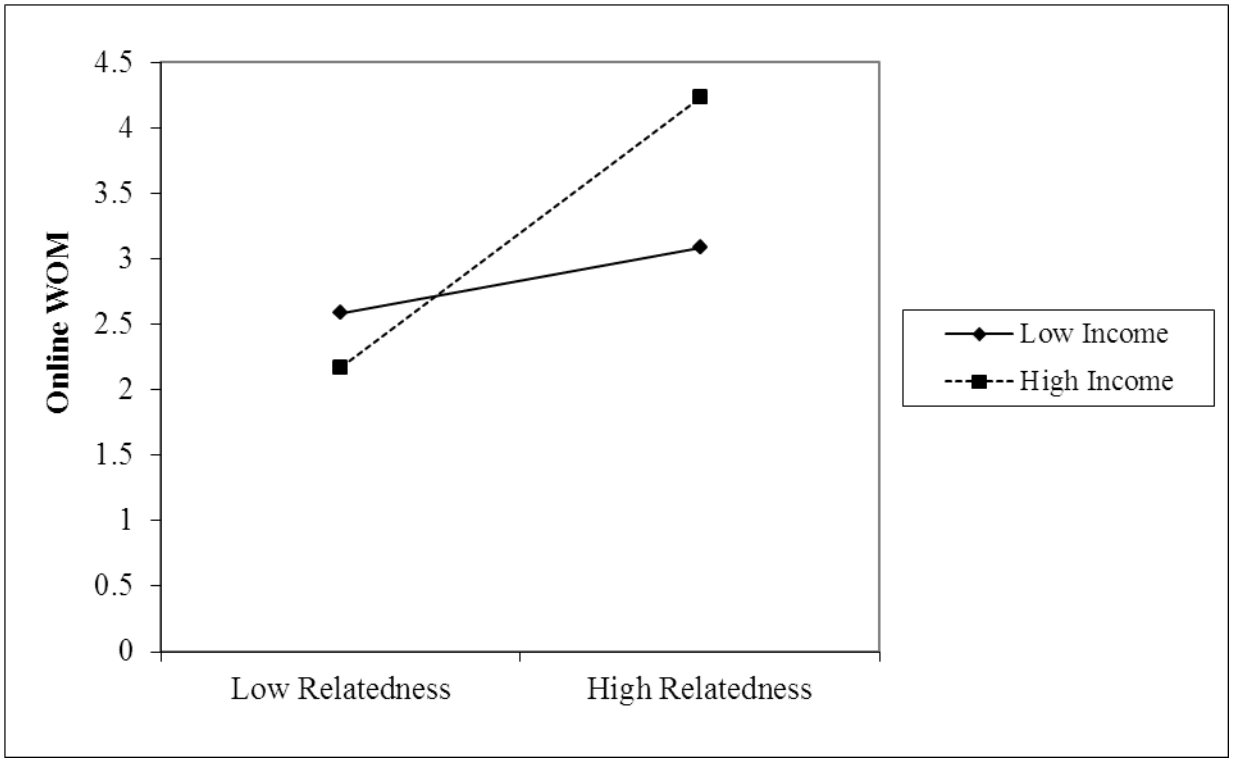
Figure 17: Relatedness, Income and Offline WOM



A similar relationship was uncovered for the interaction of income and relatedness in terms of online WOM (p=.021) using this equation:

$$Online\ WOM = \beta_1\ Relatedness + \beta_2\ Income + \beta_3\ RelatednessXIncome.$$

Figure 18: Relatedness, Income and Online WOM

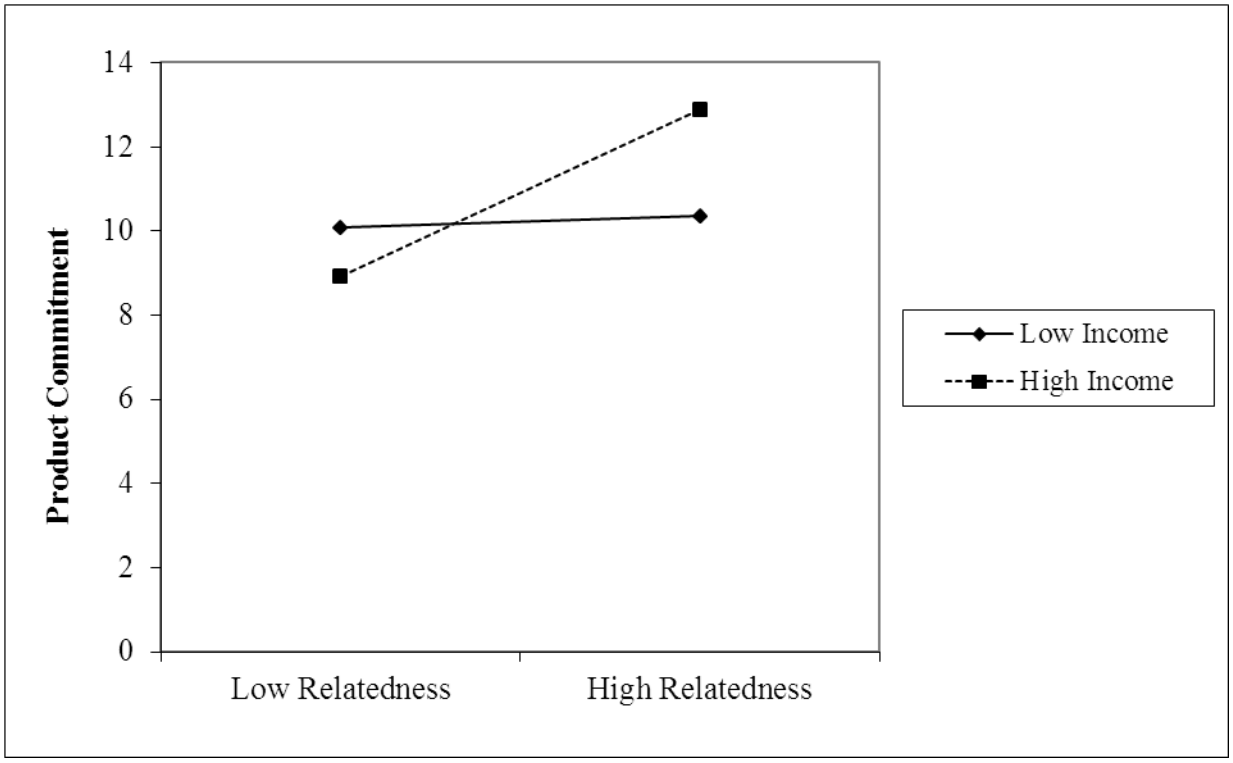


Relatedness and income also interacted in the same pattern with product commitment (p=.068) using the following equation:

$$Product\ Commitment = \beta_1\ Relatedness + \beta_2\ Income + \beta_3\ RelatednessXIncome.$$

Product commitment did not vary based on relatedness level for those with low incomes, but product commitment increased with relatedness level for respondents with high incomes.

Figure 19: Relatedness, Income and Product Commitment



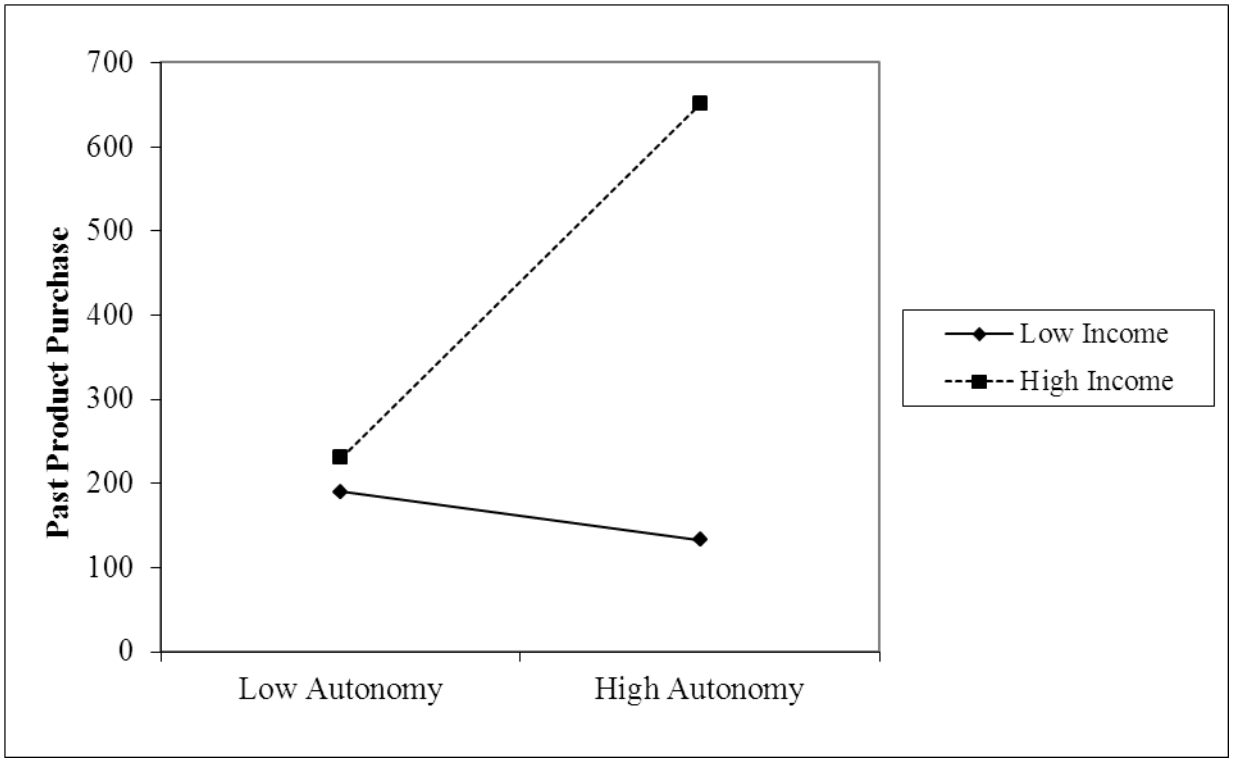
In the three cases above, relatedness benefits derived from the forum had little impact on the firm-centric dependent variables for those with low incomes. On the other hand, relatedness benefits did have a positive impact on these DV's for high income respondents.

Disposable income interacted with autonomy benefits when predicting past spending on the product using the following equation:

$$Past\ Purchase = \beta_1 Autonomy + \beta_2 Income + \beta_3 AutonomyXIncome.$$

Autonomy benefits do not impact the level of past purchases for low income individuals, but high income individuals purchased more if they got autonomy benefits from the site (p=.022).

Figure 20: Autonomy, Income and Past Purchases



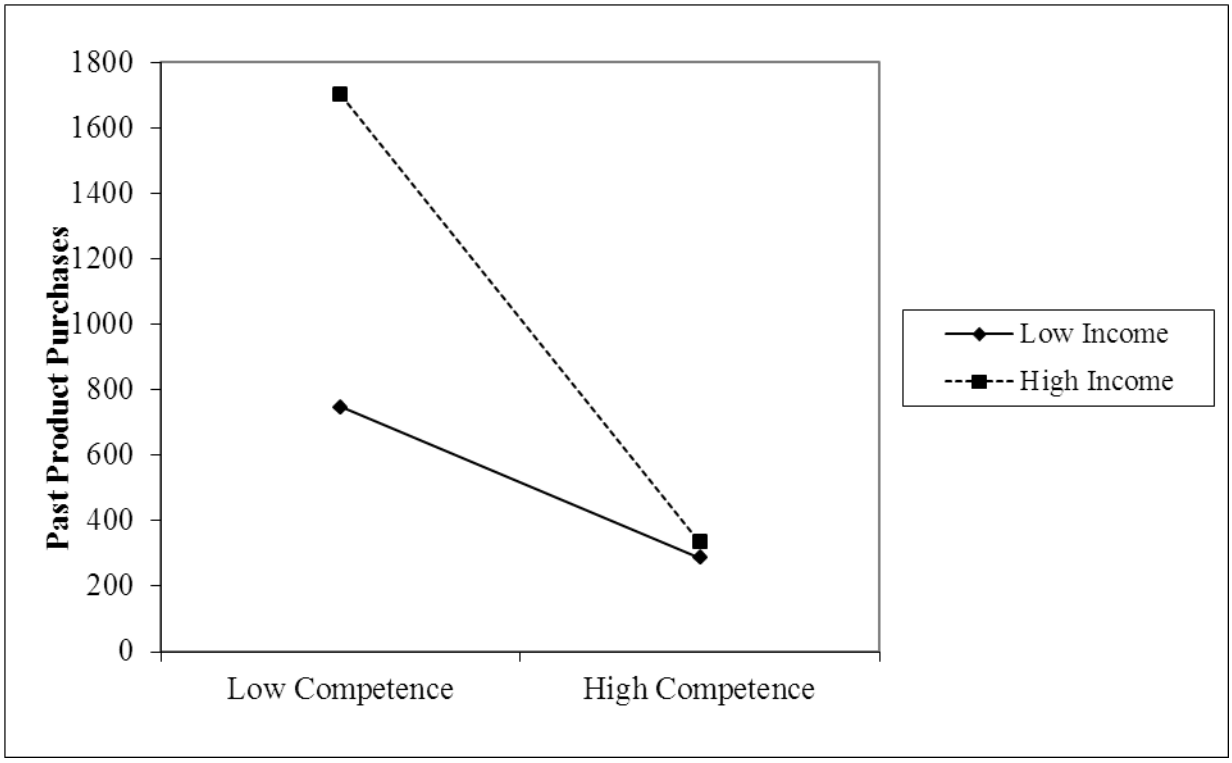
Competence benefits interacted with disposable income in the opposite way as evidenced by this equation:

$$Past\ Purchase = \beta_1\ Competence + \beta_2\ Income + \beta_3\ CompetenceXIncome.$$

The overall trend was for past product purchases to decrease when individuals acquired more competence benefits from these forums. There was a large main effect where high income individuals spent much more on the product when competence benefits were low. This main effect disappeared when competence benefits were high and the high income individuals displayed low product consumption, in-line with low income users (p=.002). A considerable component of competence in terms of consumption may be based on value (benefits-costs). Individuals who attain higher levels of competence from the forum may be able to make better purchases (in terms of

both what is purchased and the cost of what is purchased) leading to a decrease in overall spending. This could also be a vicarious consumption effect where these users experience the product through others online so there is no need to physically purchase.

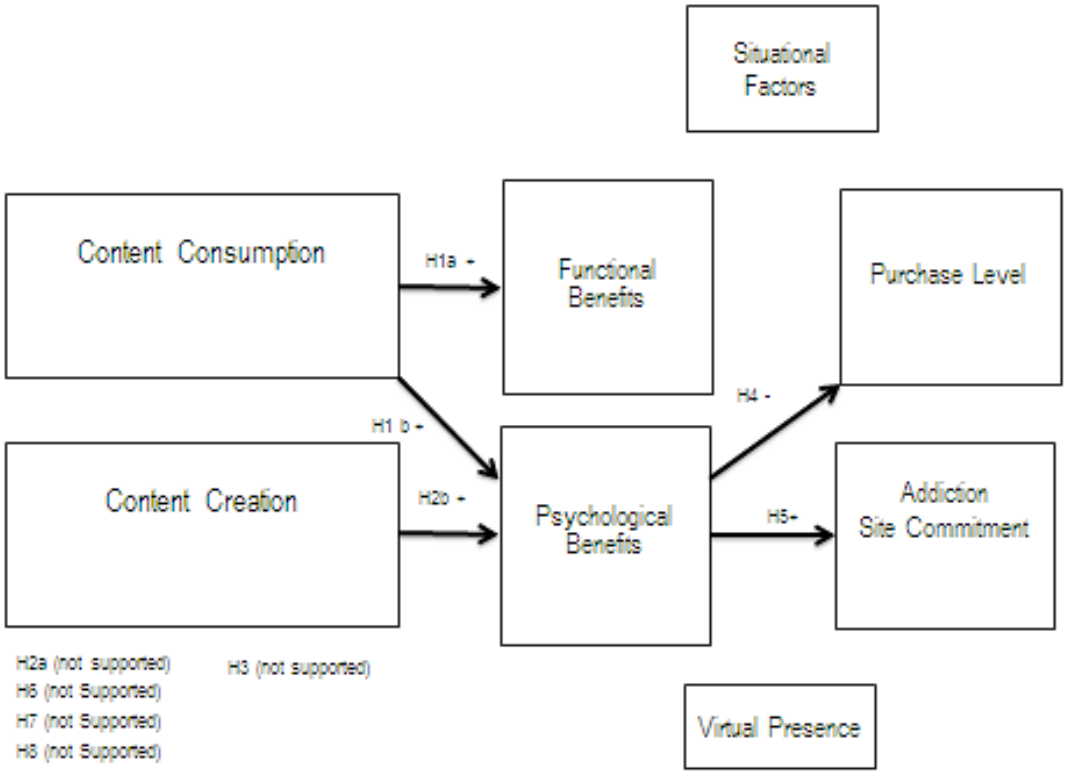
Figure 21: Competence, Income and Past Purchases



H8: Presence moderates the relationship between psych benefits and consumer outcomes.

Consistent with the results from Study 1, few moderating relationships emerged from analysis of the full sample in Study 2. Marginal effects for the impact of relatedness benefits and presence along with competence benefits and presence were detected in their relationship to procrastination. This hypothesis was not supported.

Figure 22 Study 2 Significant Relationships



Evaluation of Mediation Effects

Similar to Study 1, the bootstrap test was conducted to determine statistical mediation.

Mediation of Consumption Level to Product/Firm Variables

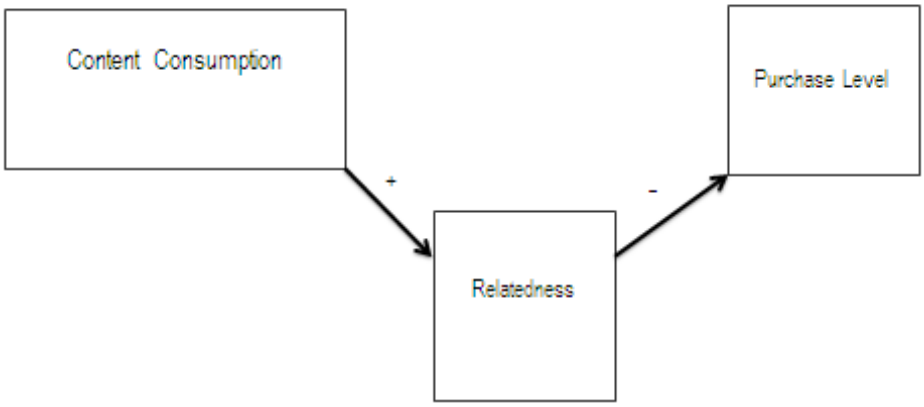
Though several significant mediating effects were found with these variables in Study 1, Study 2 displayed only four. Only one of these relationships overlapped with those outlined in Study 1. A competitive mediation existed where relatedness benefits mediated the link between content consumption level and past purchases. This was predicted by *Figure 1*, but conflicts with the findings of Study 1.

Table 32: Mediation of Consumption to Firm Variables

IV	Mediator	DV	Mean Indirect effect (a x b)	sig	a	sig	b	sig	c	sig	Type	Full
Consumption	Intellectual Stimulation											
		Online WOM	0.024	0.066	0.185	0.000	0.131	0.052	0.119	0.000	Complementary	
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Consumption	Autonomy											
		Product Commitment	0.058	0.050	0.168	0.004	0.347	0.013	0.273	0.000	Complementary	
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Consumption	Relatedness											
		Past Purchase	-9.222	0.106	0.236	0.000	-39.060	0.082	11.004	0.372	Competitive	
		Online WOM	0.028	0.021	0.236	0.000	0.119	0.006	0.119	0.000	Complementary	

Running combinations of these mediators through the multiple mediation test did not result in significant results.

Figure 23 Mediation of Consumption to Purchases



Mediation of Content Consumption Level to Consumer Level Variables

Where Study 1 found many mediators between consumption level and consumer level variables, Study 2 found thirteen using individual mediation tests. All three psychological benefits were loaded into the same analysis using the following equation:

$$Addiction = \beta_1 Consumption\ Level + \beta_2 Autonomy\ \beta_3 Competence + \beta_4 Relatedness.$$

This analysis confirmed that the set did mediate the relationship between consumption level and addiction, and it showed that this mediation was driven by relatedness benefits. Neither competence nor autonomy benefits remained significant while controlling for relatedness.

Table 33: Consumption to Addiction Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Addiction	Autonomy	0.167	0.004	0.357	0.121	0.584	0.000	Complementary	0.157
		Competence	0.151	0.025	0.192	0.320				0.344
		Relatedness	0.234	0.001	0.395	0.069				0.005
		Stimulus Avoidance								
		Mean Indirect Effect	0.181							
		Sig	0.005							

A similar pattern was evident with respect to the content consumption level/site commitment relationship using the following equation:

$$Site\ Commitment = \beta_1\, Consumption\ Level + \beta_2\, Autonomy + \beta_3\, Competence + \beta_4\, Relatedness.$$

Controlling for all psychological mediators revealed that relatedness was driving the mediation of the relationship.

Table 34: Consumption to Site Commitment Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Site Commitment	Autonomy	0.168	0.004	0.144	0.230	0.401	0.000	Complementary	0.251
		Competence	0.155	0.022	0.141	0.156				0.215
		Relatedness	0.236	0.000	0.285	0.013				0.036
		Mean Indirect Effect	0.113							
		Sig	0.002							

The mediation of the link between consumption level and procrastination was explored using the following equation:

$$Procrastination = \beta_1\, Consumption\ Level + \beta_2\, Autonomy + \beta_3\, Relatedness.$$

An indirect only mediation existed between content consumption level and the user's level of procrastination for the benefits of autonomy and relatedness.

Table 35: Consumption to Procrastination Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Procrastination	Autonomy	0.167	0.004	0.252	0.185	0.018	0.851	Indirect Only	0.215
		Relatedness	0.234	0.000	0.224	0.198				0.211
		Mean Indirect Effect	0.094							
		Sig	0.041							

The mediated relationship between consumption level and life satisfaction in terms of the psychological benefits was explored using the following equation:

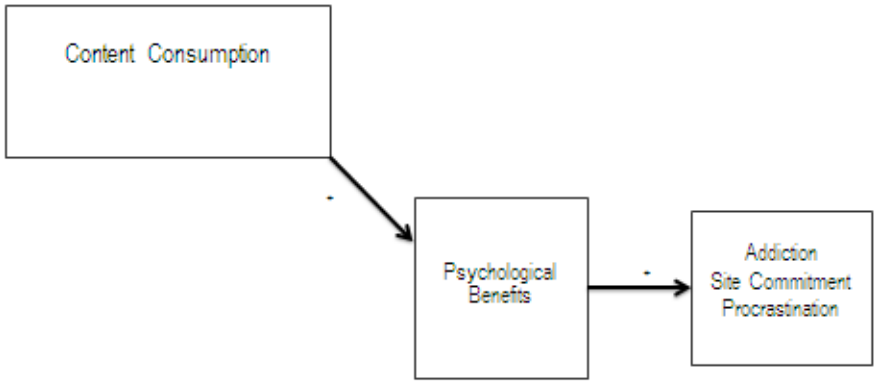
$$Life\ Satisfaction = \beta_1\, Consumption\ Level + \beta_2\, Competence + \beta_4\, Relatedness.$$

A competitive mediation was exposed for the relationship between content consumption level and life satisfaction. The more the individuals received the benefits of competence and relatedness from the site, the more satisfied they were with their lives; however, the more they consumed content, the less their life satisfaction. Combined, relatedness and satisfaction competitively mediated this relationship, but neither of these variables emerged as a significant mediator by itself when controlling for the other.

Table 36: Consumption to Life Satisfaction Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Consumption Level	Life Satisfaction	Relatedness	0.234	0.000	0.185	0.269	-0.204	0.033	Competitive	0.277
		Competence	0.151	0.025	0.372	0.019				0.094
		Mean Indirect Effect	0.099							
		Sig	0.039							

Figure 24 Mediation of Consumption to Consumer Outcomes



Mediation of Creation Level to Product/Firm Level Variables

The only significant link found in Study 2 between creation level and product/firm variables involved online WOM. Testing the three psychological benefits as mediators of this relationship revealed no significant effects with the Baron and Kenny method. The bootstrap test revealed that relatedness partially mediated the link between creation level and online WOM. In addition, an indirect-only mediation was found where competence benefits mediated the link between creation level and product commitment.

Mediation of Creation Level to Consumer Level Variables

Bootstrap tests were run to determine whether the three psychological benefits (ACR) mediated these relationships in a way that would be consistent with the findings of

Study 1. Unlike Study 1, autonomy was not significantly linked to creation level in Study 2. The psychological benefits of competence and relatedness were significant and they displayed a meditational pattern similar to the results of Study 1, though not strongly significant. The relationship between creation level and site commitment was moderated by both relatedness and competence (Z's = 1.76, 1.71, p's=.077, .088 respectively) while the addiction relationship was even more tenuous in this data (Z's = 1.42, 1.51, p's=.154, .131 respectively). While these statistics are far from convincing by themselves, the fact that they mirror the findings of Study 1 is important. In all four cases, the relationship between creation level and the DV became insignificant with the addition of the moderator signifying that these are fully mediated relationships in line with the findings of Study 1.

The increased power of the bootstrap test both confirmed the above findings and reduced the p-values associated with the creation->addiction and the creation->site commitment links. While still not significant at the .05 level, given the sample size and the subject group, these should be considered replications of the Study 1 findings. In a replication of a Study 1 finding, the main effect of creation level on negative mood was negative, but the effect through relatedness benefits was positive signifying a competitive mediation.

Table 37: Creation to Consumer Variables Mediators

IV	Mediator	DV	Mean Indirect effect (a x b)	sig	a	sig	b	sig	c	sig	Type	Full
Creation	Competence											
		Internet Addiction	0.462	0.088	0.624	0.009	0.740	0.047	0.807	0.092	Complementary	*
		Life Satisfaction	0.327	0.074	0.624	0.009	0.524	0.034	-0.086	0.782	Competitive	
		Site Commitment	0.355	0.053	0.624	0.009	0.569	0.015	0.778	0.014	Complementary	*
IV	**Mediator**	**DV**	**Mean Indirect effect (a x b)**	**sig**	**a**	**sig**	**b**	**sig**	**c**	**sig**	**Type**	**Full**
Creation	Relatedness											
		Internet Addiction	0.405	0.125	0.617	0.008	0.656	0.090	0.807	0.092	Complementary	*
		Negative Mood	0.244	0.095	0.617	0.008	0.395	0.057	-0.186	0.463	Competitive	
		Site Commitment	0.341	0.060	0.617	0.008	0.553	0.023	0.778	0.014	Complementary	*

Running multiple mediation tests on the relationship between content creation level and the significant DV's exposed above resulted in several significant relationships. Using the following equation:

$$Addiction = \beta_1 Creation\ Level + \beta_2 Autonomy + \beta_3 Competence + \beta_4 Relatedness.$$

the three psychological benefits fully mediated the link between content creation level and addiction as a group. When addressed individually and while controlling for the other two psychological benefits, none of the benefits were significant by themselves though relatedness was marginally significant.

Table 35 Creation to Addiction with Psychological Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Creation Level	Addiction	Autonomy	0.249	0.013	0.434	0.072	0.419	0.051	Full	0.130
		Competence	0.133	0.255	0.284	0.159				0.365
		Relatedness	0.460	0.000	0.408	0.088				0.098
		Mean Indirect Effect	0.333							
		Sig	0.010							

Multiple mediator analysis using the following equation:

$$Site\ Commitment = \beta_1\, Creation\ Level + \beta_2\, Autonomy + \beta_3\, Competence + \beta_4\, Relatedness.$$

Resulted in a similar pattern in terms of site commitment; however, relatedness clearly emerged as the psychological benefit driving the mediation.

Table 38: Creation to Site Commitment Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Creation Level	Site Commitment	Autonomy	0.254	0.011	0.199	0.128	0.514	0.000	Complementary	0.176
		Competence	0.142	0.221	0.206	0.061				0.295
		Relatedness	0.465	0.000	0.295	0.024				0.036
		Mean Indirect Effect	0.217							
		Sig	0.004							

To be consistent with Study 1, multiple mediation analysis was also run for the relationship between content creation level and negative mood using the following equation:

$$Negative\ Mood = \beta_1\, Creation\ Level + \beta_2\, Competence + \beta_3\, Relatedness.$$

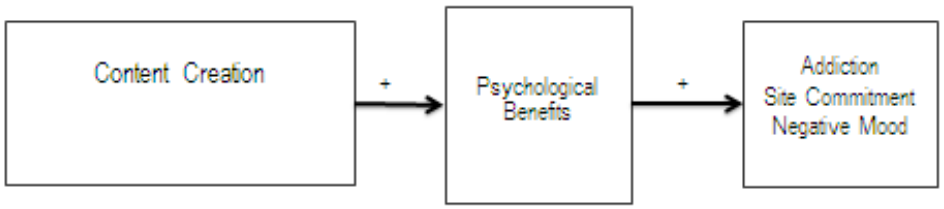
Analysis with all three psychological variables did not produce a mediation effect, but recall that autonomy was not linked to content creation in study two. Running the analysis with just competence and relatedness benefits revealed a significant mediation effect that was again driven by relatedness benefits

Table 39: Creation to Negative Mood Mediators

IV	DV	Mediator	a	sig	b	sig	c	sig	Type	Mediator Sig
Creation Level	Negative Mood	Competence	0.133	0.255	0.335	0.099	0.752	0.000	Complementary	0.340
		Relatedness	0.460	0.000	0.547	0.018				0.031
		Mean Indirect Effect	0.296							
		Sig	0.017							

Where this relationship was competitive in Study 1 (content creation had a negative impact on negative mood) it was a complementary mediation in Study 2. The mediation effect operated the same way in both studies but the main effect was reversed. It is likely that the student group viewed content creation differently from the dedicated forum users who were the subjects in Study 1. Study 2 respondents may perceive content creation as an obligation that must be fulfilled. Instead of forum activity comprising a way for the individual to establish his/her own identity and self-directed action, they may feel a social responsibility to create content in these forums. This change would explain both the lack of a significant relationship between content creation and autonomy as well as the positive main effect between content creation and the negative consumer outcomes discussed here.

Figure 25 Mediation of Creation to Consumer Outcomes



Brief Summary

Four of the seven hypothesized main effect relationships were supported in Study 2. Both of the unsupported relationships overlapped with the unsupported relationships identified in Study 1. With a few minor changes, the mediation effects uncovered in Study 1 were generally replicated in Study 2. The next section will compare the two studies and identify replications and areas of inconsistent results. Theoretical reasoning will also be presented in an attempt to identify potential explanations of these differences.

Comparison of the Quantitative Studies

The above studies report the first known research addressing motivations for engaging in product-focused Internet forums, and the impact that this engagement has on both the consumer and the firm. The approach taken in this research was also unique in that it addressed both the consumption of Internet content as well as its creation. This section will both outline and attempt to justify the results of these two studies with respect to the hypotheses proposed in *Figure 1*. Study 1 will be used as the baseline in this section for two reasons. First, there was less ambiguity in this study as respondents were not asked to "type in" the products to which their forums were dedicated. Second, the number of respondents in Study 1 was nearly four times the number in Study 2. The remaining paragraphs in this section explain why the results of the two studies may not directly align along with differences in the sample populations. This section concludes with the critical contributions that this research has made to efforts to understand Internet consumption and creation.

Hypotheses

H1 involved the relationship between consumption level and functional benefits. There was consistent support for this hypothesis in the Study 1 data. The findings were replicated in Study 2 for intellectual stimulation and stimulus avoidance. Based on the variance explained, it appears that information and personalization may have been significant with a higher number of subjects in Study 2. This hypothesis was supported by both studies.

Table 40: Consumption to Functional Benefits

		Study One			Study Two		
IV	**DV**	**β**	**p**	**R Square**	**β**	**p**	**R Square**
Consumption	Information	0.194	***0.001***	0.039	0.178	0.131	0.068
	Personalization	0.187	***0.001***	0.056	0.164	0.162	0.063
	Intellectual Stimulation	0.297	***0.000***	0.100	0.435	***0.000***	0.222
	Stimulus Avoidance	0.206	***0.000***	0.042	0.399	***0.000***	0.227

The second part of this hypothesis proposed that consumption level would be linked to the psychological benefits of autonomy, competence and relatedness. This hypothesis was strongly supported in both studies.

Table 41: Consumption to Psychological Benefits

		Study One			Study Two		
IV	**DV**	**β**	**p**	**R Square**	**β**	**p**	**R Square**
Consumption	Autonomy	0.181	***0.001***	0.102	0.256	***0.025***	0.139
	Competence	0.202	***0.000***	0.154	0.236	***0.045***	0.069
	Relatedness	0.117	***0.019***	0.281	0.279	***0.008***	0.281

The first part of H2 suggested that content creation would be negatively linked to functional benefits. Few significant effects were found in either study and the majority of the effects that were found were opposite the direction of the hypothesis. This hypothesis was not supported and there were no significant replicating findings between the two studies. The overall non-finding of no relationship was repeated in both studies.

The second part of H2 found support in both studies. The idea that creation level would be linked to the psychological benefits of autonomy, competence and relatedness was fully supported in Study 1. Study 2 found links between creation level and both relatedness and autonomy. Competence was conspicuously absent from the findings of Study 2, though competence benefits were associated with content consumption as noted in H1b.

Table 42: Creation to Psychological Benefits

		Study One			Study Two		
IV	**DV**	**β**	**p**	**R Square**	**β**	**p**	**R Square**
Creation	Autonomy	0.210	***0.000***	0.102	0.201	***0.075***	0.139
	Competence	0.278	***0.000***	0.154	0.063	0.591	0.069
	Relatedness	0.481	***0.000***	0.281	0.370	***0.001***	0.281

H3 stated that functional benefits would be linked to past purchase level. While this hypothesis generated fairly consistent support in Study 1, support in Study 2 can best be characterized as inconsistent. Focusing on the relationship between the functional benefits and past purchase level, in Study 1, informational benefits drive a significant relationship. There is no relationship between these variables in Study 2.

Table 43: Functional IV's to Past Purchase

		Study One			Study Two		
DV	**IV's**	**β**	**p**	**Overall p**	**β**	**p**	**Overall p**
Past Purchase	Information	0.252	***0.002***	0.000	0.133	0.644	0.788
	Personalization	-0.002	0.978		0.077	0.787	
	Intellectual Stimulation	-0.058	0.387		0.018	0.876	
	Stimulus Avoidance	0.114	0.065		-0.368	0.714	

H4 stated that the psychological benefits would be negatively related to past purchase level. There were few significant relationships when analyzing the Study 1 data and most of the significant relationships refuted the hypothesis. Specifically, in Study 1, past purchase level was positively associated with relatedness benefits, though this result

was just outside of the .05 level of significance. In study two, past purchase level was positively associated with autonomy benefits, but negatively associated with relatedness benefits. This conflicting finding needs to be addressed in further research.

Table 44: Psychological IV's to Past Purchase

		Study One		Study Two	
DV	**IV's**	**β**	**p**	**β**	**p**
Past Purchase	Autonomy	0.036	0.581	0.320	***0.012***
	Competence	0.068	0.354	-0.057	0.633
	Relatedness	0.139	***0.058***	-0.264	***0.044***

H5 suggested that psychological benefits would be related to negative outcomes for the consumer. Both studies found strong and consistent support for this hypothesis, especially in terms of addiction and site commitment. Replication was universal for these two outcomes.

Table 45: Psychological IV's to Consumer Outcomes

		Study One		Study Two	
DV	**IV's**	**β**	**p**	**β**	**p**
Addiction	Autonomy	0.046	0.424	0.222	***0.050***
	Competence	0.293	***0.000***	0.136	0.209
	Relatedness	0.264	***0.000***	0.307	***0.010***
Site Commit	Autonomy	0.093	0.107	0.184	***0.086***
	Competence	0.177	***0.007***	0.171	***0.098***
	Relatedness	0.275	***0.000***	0.380	***0.000***

H6 proposed that free-time would moderate the relationship between functional benefits and product/firm outcomes. Little support for this hypothesis was found in either study. The only finding that was replicated in both studies involved informational benefits and the time using the product. The time using the product did not change based on informational benefits for those with little free-time. Individuals with high levels of free-time saw increases in their time using the product with increases in informational benefits.

H7 predicted that disposable income would moderate the relationships between psychological benefits and past purchase level. Several moderating relationships were found to exist, especially with respect to the psychological benefit of relatedness. Unfortunately, none of the observed relationships were evident in both studies.

Unfortunately, the brand loyalty measure was dropped from Study 2 because of difficulties encountered with respondents entering their products/product classes. This is unfortunate because several of the benefits interacted with income in the prediction of brand loyalty. More importantly, those with high incomes were less likely to display brand loyalty if they received these benefits from the forum.

H8 suggested that virtual presence would moderate the relationships between the psychological benefits and consumer level outcomes. No moderating relationships were observed in either data set.

Mediator Effects

Figure 1 proposed a relationship between consumption level and product/firm level variables that was mediated by functional benefits. Product purchase was chosen as the variable that would impact the firm the most. Recall that in Study 1, the relationship between content consumption and product purchase did not exist as a main effect, but the relationship was mediated by three of the functional benefits and all three of the psychological benefits. This mediation effect was not replicated in the Study 2 data.

Though the mediation was not replicated, Study 2 did reinforce the finding that there is no direct relationship between consuming content and purchasing the product. This is likely an unwelcome finding for those advocating the use of online engagement to drive product purchase.

The second group of mediated relationships involved content consumption level's relationship with consumer level outcomes. Running multiple mediation analysis revealed that the psychological variables mediated the relationship between content consumption level and addiction. In both studies, relatedness seemed to be driving this mediation.

Table 46: Consumption to Addiction with Mediators

			Study One			Study Two		
IV	**Mediators**	**DV**	**β**	**p**	**Overall p**	**β**	**p**	**Overall p**
Consumption	Autonomy	Addiction	0.008	0.715	0.000	0.059	0.157	0.005
	Competence		0.117	***0.001***		0.029	0.344	
	Relatedness		0.101	***0.003***		0.092	***0.090***	

A similar pattern emerged for the mediation of the relationship between content consumption and site commitment.

Table 47: Consumption to Site Commitment with Mediators

			Study One			Study Two		
IV	**Mediators**	**DV**	**β**	**p**	**Overall p**	**β**	**p**	**Overall p**
Consumption	Autonomy	Site Commit	0.014	0.217	0.000	0.024	0.251	0.002
	Competence		0.034	***0.034***		0.022	0.215	
	Relatedness		0.054	***0.000***		0.067	***0.031***	

Autonomy and relatedness also mediated the relationship between content consumption and procrastination in both studies.

Table 48: Consumption to Procrastination with Mediators

			Study One			Study Two		
IV	**Mediators**	**DV**	**β**	**p**	**Overall p**	**β**	**p**	**Overall p**
Consumption	Autonomy	Procrastination	0.016	0.315	0.001	0.042	0.215	0.000
	Relatedness		0.052	***0.008***		0.052	0.211	

The third mediating relationship involved content creation level and product/firm variables. Little support was found for this hypothesis in either study and there were no replicating mediations.

The final mediating relationship involved content creation level and consumer level variables. These relationships were hypothesized to be mediated by psychological benefits. Strong and consistent support for these mediating relationships was found in both studies for the dependent variables of addiction and site commitment using multiple

mediator analysis. These mediations are considered to be full as a significant main effect disappears with their addition.

Table 49: Creation to Site Commitment with Mediators

			Study One			Study Two		
IV	**Mediators**	**DV**	**β**	**p**	**Overall p**	**β**	**p**	**Overall p**
Creation	Autonomy	Site Commit	0.010	0.497	0.000	0.050	0.176	0.004
	Competence		0.058	***0.017***		0.029	0.295	
	Relatedness		0.127	***0.001***		0.137	***0.036***	

Table 50: Creation to Addiction with Mediators

			Study One			Study Two		
IV	**Mediators**	**DV**	**β**	**p**	**Overall p**	**β**	**p**	**Overall p**
Creation	Autonomy	Addiction	0.003	0.925	0.000	0.108	0.130	0.010
	Competence		0.158	***0.004***		0.038	0.365	
	Relatedness		0.197	***0.006***		0.188	***0.098***	

Sample Differences

Although there were several significant and interesting finding in each of the two empirical studies reported here, perhaps the most conspicuous anomaly in this research involves the moderate degree of overlap in the findings of the two studies. This may be due in part to the differences between the populations which were outlined at the beginning of Study 2. This section will highlight some of these differences, and attempt to explain why these differences in the study's respondents might generate different outcomes.

Study 1 posted a link to an Internet based survey on the home pages of several forums dedicated to consumer products while Study 2 used a sample of students who responded to a disguised pretest that they have "visited a particular product-focused Internet forum at least twice in the last six months." The result, and in fact the goal, of these two sampling methods was to get groups of users who engaged in different levels of Internet forum and product usage.

Recall that there were fewer interaction effects found in the second study which utilized student subjects. The reduced power derived from a smaller number of subjects in this study, when compared to Study 1, was mentioned as one possible explanation for this observed phenomenon. Another possible explanation has to do with the reduced variance that commonly plaques studies utilizing a homogenous group of student subjects. Analyses of the mean and dispersion of the three moderating variables did reveal a universal decrease in dispersion for the student group when compared to the subjects utilized in Study 1.

Table 51: Means and Standard Deviations

		Study Two Student Sample	Study One Forum Sample
Presence	*Mean*	17.825	19.152
	SD	8.310	8.750
Freetime	*Mean*	5.950	5.620
	SD	1.985	2.390
Income	*Mean*	2.320	4.900
	SD	1.354	2.661
	Dollars	$1,000-14,999	$25,000-39,999

Looking at other characteristics that differ between the two samples shows that when it comes to the age of the respondent and the respondents experience with both the Internet and Internet forums, the non-student sample displays both more experience and more variance.

Table 52: Means and Standard Deviations

		Study Two Student Sample	Study One Forum Sample
Age	*Mean*	2.030	2.870
	SD	0.225	1.142
	Years	19-25	26-30
Internet Tenure	*Mean*	4.620	6.140
	SD	1.314	1.942
	Years	5-8	8-12
Forum Tenure	*Mean*	2.430	4.760
	SD	1.402	2.048
	Years	1-4	6-8

As expected, the sample generated by posting links on forum home pages resulted in higher levels of product usage, forum usage and product spending though the variance for the student product and forum usage was marginally higher.

Table 53: Means and Standard Deviations

		Study Two Student Sample	Study One Forum Sample
Product Usage	*Mean*	3.900	5.220
	SD	2.259	2.046
	Hours	3-5	5-8
Forum Usage	*Mean*	3.530	5.010
	SD	1.909	1.797
	Hours	.5-2	3-5
Product Purchase	*Mean*	$293.90	$652.68
	SD	$600.88	$1,086.77

These differences between the two samples signify two things with respect to the results of the studies. First, many of the differences that did not replicate may be explained by the differences outlined above. Specifically, the student subject pool used both the product and the forum less than the other sample. We can infer that the decreased usage may indicate decreases in product involvement that may impact the way that they view their forums and the impact that these activities have on their lives.

Second, the fact that many of the findings did replicate in spite of the vast differences in the populations indicates the generalizability of the findings. Two different recruiting techniques using both a homogeneous group of students and a random group of forum users resulted in similar results in many cases.

Brief Summary

The above section highlighted many similarities and a few differences between Studies 1 and 2. Overall, the main effects were consistently upheld with the exception of a predicted negative relationship between content creation and functional benefits. No significant effect was found here for either study. Two other main effects differed between the studies. The hypothesized positive link between functional benefits and purchase level was supported in Study 1, but no relationship was found in Study 2. A positive link between psychological benefits and purchase level refuted H4 in the Study 1 data, but a negative relationship found here in Study 2 supported the hypothesis. The mediation effects replicated (2 of the 4) with the exception of the two mediations utilizing the H3 and H4 main effects. The following section returns to qualitative methods to find support for the quantitative findings outlined above.

Study 3 Analysis of Forum Posts

The theoretical grounding for this dissertation began with the observation of activity in Internet forums and qualitative interviews with forum participants. These qualitative activities provided the basis for the hypotheses that were tested with the two quantitative surveys presented above. Following the pattern outlined by McAlexander, Schouten and Koenig (2002), the current research returned to qualitative methods after the quantitative study to confirm the survey findings. This final analysis involved the analysis of content posted by individuals who took part in Study 1. Five of the eight forums included in Study 1 were also included in this phase of the research. The three excluded forums either had filters that prevented the downloading of forum information, or they were primarily written in a language other than English. The five forums outlined below were dedicated to Major League Baseball, the National Hockey League, personal computers, video games, and running products. There were 190 completed responses from these forums in Study 1 with about one third of the responses coming from non-members who cannot post. The following pages outline the qualitative approach taken in the analysis of these posts along with several themes that were repeatedly encountered in the data.

Data Description

The above forums were sorted by user name and each user's postings for the two weeks prior to survey completion were compiled. Of the 125 members who both filled out survey one and were registered (i.e. members), only 77 recorded forum postings in the two weeks leading up to survey completion. This means that 60% of the subjects who had the ability to post actually posted in the analyzed period. When compiled into a single document, the postings for the 75 subjects totaled just over 22,000 words. In other words, the average member who was active posted about 150 words over the two week period. A cursory perusal of this document revealed wide variance in user activity. While 40% of members did not post at all in the analyzed period, the most frequent member compiled 106 postings over this time (almost 8 posts per day). Variance was also evident in the style of posting displayed. Some users' posts were simple phrases of five words or less while others used the forum as more of a blog. These individuals posted in well-constructed paragraphs that would be better suited to a formal letter than an online forum where the rules of English are often abused. The 77 users who posted in the two weeks before the survey recorded a total of 849 total posts which results in an average of 25 words per post for the entire group. Although the current research utilized a completely different qualitative approach, the scale of the content analyzed was more than 1.5 times the volume analyzed in a recent *Journal of Consumer Research* article which analyzed forum data (Jayanti and Singh 2010).

Research Questions

According to Dey (1993), there are five primary questions that must be answered when engaging in a content analysis. The first question deals with "who" you are analyzing. The contributors in the current research are individuals who have posted in these forums and who also completed the survey which comprised Study 1. The second question pertains to where the data originated or where the individuals submitted the content to be analyzed. In this case, all content was submitted in cyberspace as these people posted to their specific Internet forum. The third question refers to when the data was generated. This data was generated in the two weeks leading up to the distribution of the quantitative survey used in Study 1. In this case, all data was generated in October or November of 2010, depending on the forum. The fourth question pertains to what happened in the transcripts. Informed by the quantitative survey as well as by a cursory review of the qualitative data, it seems safe to say that the individuals were engaging in both social interaction and information provision with respect to specific consumer products. However, this question will be further explored in the analyses that follow.

The final question that must be addressed in the content analysis is why these individuals are engaging in this behavior (Dey 1993). This is the primary research question that was addressed by this content analysis. The quantitative surveys showed that users gain several benefits from forum usage, and this research attempted to shed additional light on the reasons and motives for posting content in these forums. The primary tension came from the distinction between discussions about the product activity verses discussion solely dedicated to interpersonal interaction.

Unit of analysis

The unit of analysis for this research was the focus or primary themes of the recorded communications. The functional and psychological benefits addressed in Studies 1 and 2 hinged on two primary themes: social interaction and product-focused information provision. This is roughly analogous to findings from the extant research recapped in the literature review. This content analysis will work to uncover the degree to which each of these themes and others took place in these virtual spheres.

Qualitative Approach

The inductive approach to content analysis was used (Schamber 2000) in this research because there is currently a low degree of consensus as to what is really taking place in these virtual environments. This approach identified a number of specific instances in the data and used the number of instances to abstract response categories from the data (Elo and Kyngäs 2008). The data pulled from forums is, by nature, a stripped down version of conventional human communications. As such, much of the latent content that accompanies normal human communication is stripped away in the formatting process (i.e. body language, sighs, pauses, etc.). However, virtual communication has its own forms of latent communication including symbols, emoticons, punctuation and acronyms. For simplicity, this research focused on the manifest communication only with minor exceptions when a form of latent communication was so frequent that it demanded interpretation.

Because the text used for this research has been purposely removed from its surrounding context, this should not be confused with techniques that have been used in

the consumer behavior field in the past (i.e. Kozinets 1998). Specifically, this research differs from most netnographic approaches because it was entirely passive. No attempts were made to join in or influence the activities that took place in the virtual domain. Observation was asynchronous as public postings were simply downloaded at a point in time after the posting was generated.

Analysis

This section outlines the data and the analyses that were conducted in this research. First, a broad description of the entire data set is given to help the reader to better understand the dynamics of forum communication. The data were then grouped into several different response categories based on the frequency that the response category was encountered. Finally, these response categories were grouped together using linkages that existed in the text. The two themes that emerged were then compared to the results of Studies 1 and 2 in order to determine their consistency or differences.

The document containing the postings was loaded into NVivo 9 in order to further identify patterns in the data. As an initial step, word frequency reports were run on the data using three different classification criteria. First, a report was run counting the frequency of each word looking only at exact matches. Second, a report was run counting the frequency of each word and combining all words with similar meanings. Finally, a report was run with the filter at the midpoint that combined several words with similar meanings but not all potentially similar meanings.

The results of the "similar" report were inconclusive since it aggregated many words into one category that were not truly similar meanings. The "exact" and the

"middle" filters did return the same result in terms of most frequent words. The most frequently used word in these forums was "I", and it was used more than twice as often as any other word (3.1% for the exact, 3.16% for the middle filter). Numerous examples can be pulled from the transcript:

> *"I don't actually remember the old layout much" "I used it way back, but it was not as good as Freehand and not user-friendly. That said, it was better than any Corel product" "I think that's step one on their How to lose season ticket holders database, actually" "I amend my prediction to say Della Rovere will be in his first NHL fight" "I'm going to be on pins and needles until an extension gets done" "I played it when it came out,,,Just a little; But I did! It was awesome" "I would like to hear from the author of that piece"*

Not surprisingly, the next most common word was "you" with 1.39% of the total for the exact filter and 1.40% for the middle classification.

> *"Even if you accept this rather dubious derivation, I'm still well short if you do it off of purely minutes" "I hear you, Sagarin. Certainly the financial world is shuddering. Like a bad driver struggling with a manual transmission – will the car stall or accelerate away?" "Dude! You deserve a big bear hug! Heck, even a kiss! I'm part of BVB (Bahrain's Voluteer Bank), I've been a volunteer worker and supporter for 6 years now, I never expect anything in return" "I am worried, if you look at the Cardinals trend they have been in the WS in the '20s, '30s, '40s, '60s, '80s and '00s" "you pansies, that burnt rice comment was $$$" "I had no idea you had to be scanned after getting off the plane too"*

No other words comprised more than .8% of the total. This can be seen as some support for the results derived from the quantitative survey where content creation level explained more than 20% of the variance in relatedness benefits derived from the forum. The use of "I" and "you" would be needed frequently for an individual to describe or discuss relationships. These two words are used repeatedly as individuals socially locate themselves and other forum members in the virtual world.

It is not necessarily surprising that none of the products to which the forums are dedicated came up as a most frequent word. Recall that the data set is comprised of postings coming from five forums that are dedicated to five different products. Product references would be limited to $1/5^{th}$ the value that would be expected to accrue if all forums dealt with the same product. Even so, no product references comprised even $1/10^{th}$ of one percent of the analyzed text.

Response Categories

Coding forum postings is very different from coding the sources that have been traditionally used for content analysis. Most text has a narrative that provides context for the words that are spoken or recorded. This project downloaded only the text that was physically created by the user so there is little context from which to draw assumptions. The decision not to download the entire thread and the context surrounding a forum posting was based on a tradeoff. This research disregarded context evident in the surrounding threads in order to focus on the individual's posting habits as well as the style and tone of the posts that s/he generated. While the surrounding posts would provide context, they would also cloud our view of the motivations behind these behaviors. NVivo 9 was used to code the forum postings and several response categories emerged from open coding of the data. The following section outlines nine response categories that were consistently displayed in the postings made by Study 1 respondents.

Judgment or Opinion

Coding individual posts revealed that the underlying purpose of many posts was to make a judgment or to voice one's opinion. These posts can be either positive or

negative in valence, and they don't have to concern themselves with the product to which the forum is dedicated. For example, the sports-focused forums were replete with examples of inhabitants who discuss the quality of a team's or player's effort over the last week. These inhabitants would stress very strong opinions about players, coaches, and entire teams. For example, comments like "*Janssen is a joke. Unfortunately he's the least of this team's problems"* or "*Eric Brewer: weak shot from the blue line, or weakest shot?*" or "*Bernie Miklaz is a complete tool*" are quite common in these forums. While not dealing with the tangible product which can be purchased or manipulated, these communications were focused on the extended product.

Inhabitants of other forums, like the forums dedicated to running or personal computers, also frequently displayed judgments in their posts, but in a totally different way. These members were more likely to make judgments or voice their opinions on topics unrelated to the product or firm. Selected comments included

> "*Men's basketball talent pool = Olympic diving pool, women's basketball talent pool = kiddy pool*" or "*Well if that happens I guess the vegans win*" or "*What I dislike about the "traditional values" folks is their estimation that no one else is living a moral life…and it's all black and white unless it's hypocritical*".

The essence of the judgment response category is that almost 90% of the posts were coded as an individual stating an opinion or judgment in these forums. They make a distinction between good or bad, right or wrong, agree or disagree, etc. In fact, the majority of questions posed in the data were rhetorical in nature and can better be viewed as jaded comments. If the primary motivation for an activity can be deduced by the frequency of the activity, passing judgment was by far the most frequent activity that was displayed in these forums.

Status

Closely related to the judgment response category is the idea that a posting is asserting one's status in the virtual environment. As shown above, the foremost activity in these virtual worlds is making a judgment or sharing one's opinion. In order for one's opinion to be meaningful to another, an individual must usually establish his/her credentials with the other party. These credentials can take many forms like experience or knowledge. An inhabitant's actual credentials are impossible to verify in these forums as they are currently arranged. In the posts that were downloaded for this analysis there are multiple examples of individuals defending their credentials or giving readers arguments as to why their opinion matters more than that of someone else. For example, in a thread discussing the financial crisis this thread was found: *"That's what I do actually – I am a financial advisor" and "As for hedge funds – I used to work for one*". Another conversation where a member's credentials were being disputed included: *"Oh, you knew a guy who knew a guy. N=1, nice. What? No, he was on my team. What are you talking about?"* The running forum is replete with examples of recent distances run like "*I was runnable until an 18 miler last Saturday"* or simply posting their running distances for the week *"Saturday: 17 total, 3 mile w/u, Half Marathon in 1:09:28 (1st overall), 1 mile c/d. Sunday: 8 easy".* It is quite common for individuals to highlight their credentials in their posts *"I've been an gamer for about 20 years now. Currently playing through Fallout New Vegas and Fable III."*

The entire concept of making a judgment or stating an opinion is based on the assumption that those consuming the posting can benefit from your judgment in some way. The judgments in the postings analyzed for this research are most often made in the

context of other judgments. These judgments will either contradict or concur with existing judgments which becomes an issue of status because the member is saying "Ignore that other opinion and listen to me" if s/he contradicts or "The other guy is right because I said so" if he concurs. For example, the post *"I usually don't agree with the death penalty, but Matty is right"* expresses status in two ways. First, this member presents his/her base position as an opponent to the death penalty but the argument made by "Matty" was convincing enough to change his/her mind. When viewing these postings through this lens, the forum is saturated with attempts at establishing credentials in a virtual world as a prerequisite to passing judgment.

Relationships

Judgment and status both require the context of a shared social reality to be meaningful. Relationships between individuals can provide a basis for this mutually understood actuality. It is very common for one member to mention another member by name.

> *"Jerry, our sweet, loving Jerry, saying something directly??!! Surely you jest." "I agree with Gooch about Bert Blyleven, too." "Excellent Don, I pray for his long term health" "Lurking always pays off in the long run. Thanks GaMeR, It was informative" "@Shawn, Jacobs Ladder is my favorite movie but it's more psychological thriller than horror" "What kind of Harley do you have Glen?" "Pablo – Awesome job.""Blaznbison24 – Awesome is all I have to say about that" "Marmite, glad to see you post again"*

Most posts are created in response to a question or a statement made by another forum user. A significant number of posts are providing information and advice to readers, which is a perfect example of status embedded in a relationship: the advisee

listens while the advisor dispenses useful information. Like other machinations of human society, each individual must fulfill a role for the system to function properly.

Focal Activity

One result from forum observation that might be surprising to some is the degree to which discussion revolved around the focal product or activity. There was a wide dispersion in the degree to which the conversations in these forums concerned the product or activity which had been predicted by past research. Past research (Dholakia et al. 2004b) showed that the type of community (networked or small group) determines the degree to which the communicated information centers on the product or activity of the forum. Networked communities rarely if ever meet face-to-face so communication tends to focus on the common bond that brings users to the forum, the product or activity itself. Small group communities, on the other hand, are extensions of offline relationships into the online realm and topics were found to be more diverse. All of the communities used in this research would be classified as networked communities based on the fact that users are generally separated by vast distances. Due to these distances, the assumption was made that users rarely if ever meet face-to-face. Accounting for this factor, one would expect the focal product or activity to dominate the conversations in these forums. In many cases, this was true (i.e. hockey, baseball, gaming) but this was conspicuously not the case with others (personal computers, cycling, running). Judging by the locations of these users, it is unlikely that they meet regularly in a face-to-face setting which rules out the explanation offered by Dholakia and colleagues.

While the discussion about the activity was a common response category, there was little actual talk about the product or its merits and faults. Many of the posts that were coded as "product activity" seemed to imply that the focal product was involved, but there were literally only a handful of times that a product name was actually typed into a posting. This could be because it is a given that others would understand that the product is the focus, in line with the findings from the quantitative surveys, the focal product may not be relevant to the psychological benefits that these users are seeking in the forum.

Personal Experience

Personal experience is another response category that was observed frequently in these virtual environments. Posts like *"I have been a fan for 21 years"* or *"I had another breakthrough at my half marathon yesterday morning. I'm thinking his high mileage thing I've been doing for 2 years or so is really paying off now."* Quite often, the individual spoke of his/her experience to justify or place into context their reasoning for making a judgment or qualifying their status. Personal experience, especially personal experience with the product, can be seen as a credential which is required for intercourse in these domains. Other research in Internet realms has highlighted the fact that the anonymity of the virtual sphere along with the near impossibility of verifying claims made therein should cause researchers to proceed with caution when analyzing this type of data (Kozinets 2002).

The focus on whether the experiential postings made in these forums actually reflect the real life experiences of the individuals involved becomes something of a non

sequitur when considering network based groups. Since these groups have no way to verify whether the discussed experiences really transpired, the reality becomes the conversations themselves. With this understanding, it becomes clear that many users are using the virtual domain as a way of expressing their experiences (or the experiences that they wish they had) to others. In many cases, it seems that getting others to see an individual's personal experience through the individual's perspective allows these members to relive or crystalize their experience.

Forum Rules or Syntax

A common response category that emerged from all forums involved forum rules or the proper syntax and behavior that should be used when posting in the forum. There was a wide variance in both the tone and the actual messages included in these posts. Most commonly, posts generated in this vein used straightforward and direct language to point out the rule that was broken or to redirect the post to the proper thread. Other posts, which usually came from different individuals altogether, used much more invective and chastising language in pointing out the faux pas made by other members. For example, one member in responding to a post made by a new forum member wrote "*That was pretty ballsy for a first post. You should watch and learn for a while before you say something that stupid*". Another comment in the same thread stated "*Yeah…been a fan for around 28 years now… and a die-hard fan for probably the last 25 or so. I'm guessing he's a "one and done" kind of guy (implying that there will be no future posts from this individual)"*

The focus on rules is not necessarily surprising given that there are often at least two layers of regulators tasked with monitoring the content and discourse in most forums. Administrators generally have overall control of the forum and it is clear that in some forums the populace resents the administrator's power over the definition of acceptable forum content. One member in the NHL forum commented that a section of the forum was deleted because someone didn't agree with the commentary on a political basis. The member then said that he wouldn't name any names, but the name of the person responsible rhymes with "burnt rice". The administrator's name rhymed very closely with "burnt rice" and this post generated several posts congratulating the original member on his ingenuity (i.e. "*that burnt rice comment was $$$*").

From the postings analyzed for this project, it appears that most of the rules violations were not addressed by the forum administrators or moderators who are given this responsibility; rather, ordinary users took it upon themselves to vocalize their interpretation of the rules and chastise the individuals who did not conform. This was especially evident in terms of the tone of the posting. Moderator and administrator comments were usually straight forward (though potentially authoritarian) while peers were more likely to inject ad hominem or other emotionally focused attacks into their posts when correcting a rules violation.

The most interesting and thorough discussion of a rules violation involved the use of a veiled racial term. One of the teams related to the hockey forum added a player named "A. Nigro" which generated a flurry of activity. Initially, most of the comments referring to this player had to do with racial stereotypes and lowbrow jokes. As this went on, forum members along with moderators and administrators began to comment on the

potential inappropriate nature of these postings and their potential to alienate black forum members or simply black non-members who pull up the forum for some reason. The fact that this topic generated attention created a flurry of new posts both for and against the use of "A. Nigro" jokes. The timeframe designated for this research did not allow for closure on how the forum finally chose to deal with this issue but it may be a topic that can be addressed in future research.

Humor

The A. Nigro comments mentioned above are an example of the (inappropriate) use of humor in these forums. Humor can be seen as a consistent response category running through these forums such that the analyst might be pleasantly surprised by the wit and self-deprecation exhibited in these virtual settings. There is no need to take yourself or your online persona too seriously in these networked forums as there is little chance that your behavior here will transfer to your offline life. Participants are generally frank about their shortcomings and this allows them to address them freely and easily without fear of being truly judged.

The number of truly funny and witty postings included in the data was a remarkable aspect of this research that is likely to have one of two potential explanations. First, the people who inhabit these forums might have little else going on in their external social lives. The thought and preparation that they put into their postings could reflect this and, as humor is generally accepted as a positive attribute in a social environment, postings could be constructed like the opening monologue for a late night comedian. The second possibility has to do with the sheer number of viewers who view and monitor

these forums. In some cases, there are tens of thousands of individuals who view the content but rarely post. In much the same way that 1,000 monkeys hammering away at typewriters will eventually reproduce the complete works of Shakespeare, thousands of individuals may simply bide their time and only comment when they have something that they view as truly funny to post.

Related Products

A common response category mentioned above involved discussion of the activity associated with using the product that is focal to the forum. Surprisingly, in 78 pages of forum postings there were only a handful of times where a member mentioned the actual product in a post. It was common, however, to discuss related products whether they be competing products or accessories to improve the use of the focal product.

> *"MarioKart 64 was better than any racing game, before or after(posted in running forum)" "The Bluenote at Scottrade still sells them I believe" "You know zippo about hockey video games(posted in NHL forum)" "I had the GB lamp as well, I used a keychain flashlight before I got that lol" "bought a universal remote from Best Buy on Sunday (harmony 650). A lot of people were shopping but no lines at the checkout, so it was a quick trip. I think it was a fair price, $50" "New Trailer (link posted)""Hi guys. Having trouble with my TF2. It crashes when I want to choose the class"*

World events/Politics/Religion

All of the response categories addressed earlier can be quickly traced back to a product (judgment, status, relationships, activity, experience, rules, humor, and related products) as they are all one degree of separation from the product or forum itself. A number of individuals represented in the data show the inclination to post and discuss events or philosophies that are conspicuously far-removed from the product. Most

forums are setup to accommodate this activity and have threads specifically devoted to this type of conversation.

For example, some of the diverse topics covered in these forums included *the death penalty, H1N1, TARP, tax policy, global warming, driving a stick, gender, IQ tests, the Fed, women's basketball, dog attacks, how to succeed in school, music, movies* and many more.

A unique benefit of analyzing the forum posts in the manner used for this research was to identify common response categories that were pursued by the same member. This research compiled only text generated by a specific member and organized these posts chronologically. Arranged in this way, consistent responses made by individual members were made clear. It was clear that certain individuals pursued non-product oriented themes more than others.

Themes

The nine categories outlined above are presented based on their frequency within the data set. Each of the categories identified here were searched linkages to the other established categories and two primary themes emerged from this analysis. The two broad themes identified were relationships and the focal activity.

Relationship as a Theme

When discussing relationships as a response category, this research referred primarily to relationships between individual forum users. This phenomenon is easily visible in almost any product-focused forum where long term relationships are evident

between individuals who have probably never met face-to-face. Taking a broader view of the relationship is necessary to understand the true nature of Internet forum communication. These individuals are not only relating to each other as outlined above, they are relating themselves to the product, to the product's competition, to the population of product users, and even to the people who don't use the product at all.

Many of the response categories that emerged from this analysis clearly reinforce the relationship concept. For example, status means nothing unless it is embedded in a relationship. Status is by nature a rank order construct. In order to establish a status level, it is necessary that others are ranked on a different level (either higher or lower). In these forums, status is often determined by an individual's experience either with the product or with the forum itself. These experiences are often a topic of conversation in these forums and the participants may use this information to mentally rank each other to establish their status among the forum membership. The simplest status calculations could involve product users who don't use the forum, those who don't use the product at all, or the users of a competitor's product (i.e. Muniz Jr and Hamer 2001).

The most common response category in the data dealt with passing judgment on either an individual, a product or an activity. Judgment between individuals involves both a relationship and a sense of superiority by the judging party. This superiority may stem from an internal status perception or it may stem from the individual's consciousness of a differential in experience either with the product or the forum. Judgment also allows an individual to relate himself/herself to one group over another. Often, taking a position on an issue is used to identify one's self with one group or another. It is not surprising that several topics that are taboo in polite conversation were

identified as response categories in these forums. Specifically, an individual's position on politics and religion are often used heuristically to classify a relationship partner. The polarization associated with these topics and the probability of offending conversation participants makes the anonymity of the forum an ideal place to discuss these topics. The anonymity of the forum allows individuals to create ingroups and outgroups based on the judgments observed in the forum.

The final two response categories that fit with the relationship theme are rules and humor. Humor is often used as a way to facilitate greater and more intimate interactions. Similarly, any interaction between agentic individuals will have rules that facilitate information exchange and interaction, and the forum venue is no different. As marketers, we know that cultural differences are one of the greatest obstacles to international expansion. These cultural differences often revolve around rules for interpersonal interaction. It has been hypothesized that the large size of the human brain is a function of the number of relationships that need to be categorized and managed in our societies. A focus on interaction rules would certainly fit with the relationship theme.

Focal Activity as a Theme

Though very little activity in these forums revolved around the consumption of the product itself, a number of posts were focused on the activities associated with using the products. Many of these posts explained the poster's experiences when engaging in the focal activity. These experiences were generally not limited to the focal product but often included explanations of encounters with related or even competitor's products.

Posts about engaging in the focal activity also allows the poster to make judgments about any of a number of aspects involving the focal activity.

Conclusion

The coding of the forum posts from a diverse set of product-focused Internet forums revealed several response categories that may be useful in further study of these virtual social spaces. The overwhelming majority of the posts stated the member's judgment or opinion on some topic. There is a clear path from the statement of opinion to the need to establish one's status in the forum. Status and opinions become important because long term relationships are formed and consummated in these domains, often built around individuals' experiences with a focal product, or just as likely, in an unrelated domain.

There was surprisingly little discussion of actual, physical consumption of the product in these forums. Depending on the forum, there was often considerable discussion focused on the activities associated with the focal product. Past research has hypothesized differences in forum types (Dholakia et al. 2004), but the forums in this research were homogeneous on the previously identified critical dimension (were individuals able to meet in person or not). Therefore, other factors must be responsible for this difference.

It is notable that the forums where a great deal of activity discussion took place were dedicated to less tangible products like sporting events and Internet gaming. These are also more communal activities where consumption of the product is often tied to social interaction. The individuals who consume these products might meet their

psychological needs through their actual consumption of the product so there is little need for interaction unrelated to the product online. In this case, the product and activity associated with the product would remain the focus of forum discourse. This explanation would support the vicarious consumption hypothesis and the results found in Studies 1 and 2. When individuals become content creators in product-focused forums, the focus often shifts from the product to other topics.

The postings in these forums were primarily focused on establishing their social locations in the virtual world. Once relationships are formed and status is established, the forum gives them a platform to expound on their personal experience and to state their opinions on topics both related and unrelated to the focal product. The great majority of posts did not address the focal product or activity which is consistent with Studies 1 and 2. Content consumers are likely to be focused on functional benefits like product information, but the content creators are more likely to be seeking psychological benefits like relatedness.

Chapter 5: Conclusion

Many Internet activities, including Internet forum use, should be perceived as social activities. Because so much of society is moving into the Internet sphere, the fastest growing segment of marketing spending is aimed at the social aspects of Internet interaction (VanBoskirk et al. 2009). Both practitioner theories and existing offline research suggest that individuals interacting around a product in online environments will produce benefits for the firm. The primary purpose of this research was to test whether these lay theories are correct; i.e. that engaging in product-focused Internet behaviors results in positive outcomes for the firm.

Extant consumer behavior theory drove the hypotheses generated in this research. First, experiential consumption suggests that people seek benefits from consumption other than the benefits that can be gleaned from physical ownership or use. The act of consumption may be just as important as or even more important than the benefits derived from product ownership. This research hypothesized that individuals may gain these product-related benefits from interaction in the forum. The second theoretical driver for this research was vicarious consumption theory. Vicarious consumption suggests that individuals can get the benefits of consumption through simply interacting with others who have consumed or are consuming the product. The forum acts as a way for these individuals to consolidate and discuss virtually anything. Though interaction in the forum probably begins with the product for most users, the content analysis clearly showed that the product is often not the focus of conversation.

Through the observation of conversations and behaviors in these virtual worlds along with in-depth interviews with inhabitants, questions arose about whether existing models of consumer behavior in offline brand communities would hold in the virtual realm. A model was developed (Figure 1) based on these observations and interviews which extended extant consumer behavior theory into the virtual world. This model was then tested using two distinctly different samples of Internet forum users. This is the first known study to address both content consumption and content creation with respect to commercial products.

Motivations for engaging in PFIB

This research viewed Content consumption as the 21st century equivalent of traditional product search. Past research on product search has shown that product search is primarily linked to functional benefits. Though ongoing search does not meet this standard, most search activity is instrumental in nature. The search activity is a means to an end. Both studies showed clear evidence that content consumption is positively related to functional benefits which are, in turn, a means to achieving some other goal. There was strong support in both quantitative studies for H1a linking content consumption to functional benefits.

Consistent with the ongoing search explanation above, content consumption was also predicted to be linked to base level human needs. Ongoing search provides the individual with pleasure and many non-instrumental benefits, and this research proposed that content consumption helps to fulfill basic human needs. This research approached base level human needs from the Self-Determination Theory perspective and measured

the needs of autonomy, competence and relatedness. Both studies clearly supported H1b which stated that consuming content can fulfill these base level psychological needs.

In the depth interviews outlined at the beginning of this dissertation, the informants both discussed how their consumption and creation habits evolved. Both informants commented that over time, their consumption of content decreased as their creation of content increased. They also mentioned that they became more focused on the social aspects of the forum than they were on functional benefits like information or personalization. It seems clear that content creation is not likely to positively impact the functional benefits outlined in this research, so a negative relationship between content creation and functional benefits was hypothesized as H2a. Though no relationship was found to exist between these variables in either of the quantitative studies, this may be viewed as mild validation for the theory outlined above.

In many ways, content creation can be viewed as online word of mouth (WOM). Word of mouth has been shown to be loosely tied to functional benefits, but more closely tied to interpersonal/social benefits (Dichter 1966). Even though one informant described the vast differences between online relationships and offline relationships, this research hypothesized that base level needs, like relatedness, would be fulfilled through the creation of content. H2b was strongly supported in both studies, especially with respect to the benefit of relatedness.

Perhaps the best way to look at the motivation for an action or activity is to look at the benefits that the actor is attempting to acquire. This research addressed the activities of content consumption and content creation and their relations to both

functional benefits and psychological benefits. There was strong support in both studies for all of the hypotheses with the exception of H2a (negative relationship between content creation and functional benefits). The finding of no relationship for H2a fits with the grounding for the hypothesis that those engaging in content creation are looking for something other than functional benefits. The content analysis validated the link hypothesized as H2b between content creation and base level needs. "I" and "You" were the most common terms used in these domains signifying the importance of the relationship in these forums.

Consequences

This research also addressed how achieving benefits through the forum activity impacted both the consumer and the firm. For the firm impact, the variable of purchase level was selected as this is ultimately of the greatest concern. For consumer outcomes, the variables of addiction, site commitment, negative mood, and procrastination were addressed.

H3 stated that the more functional benefits that an individual derives from the forum, the more this individual will purchase the product. These functional benefits not only facilitate purchase, but they are often tied to increasing product involvement and the subject's mental ties or endowment to the product. It seems natural that actually purchasing the product would follow from attaining these benefits. This hypothesis was strongly supported in Study 1, but it did not receive support in the study using student subjects.

H4 proposed that psychological benefits would be negatively related to product purchase. In one of the depth interviews, the subject explained how he replaced actually playing the game with use of the forum. The forum acted as a link to the individuals which actually allowed him to end his use of the actual product. Through vicarious consumption, the informant was meeting his psychological needs through the forum, not through product consumption. This hypothesis was refuted in Study 1 which can be perceived as a win for brand community theorists. The more the individual got psychological benefits from the forum, the more of the product was purchases.

On the other hand, this hypothesis was supported in Study 2 with respect to relatedness and competence but refuted for autonomy. Specifically, the more relatedness benefit that was derived from the forum, the less money the individual spent on the product. The split findings on this hypothesis suggest that further research is needed.

H5 proposed that psychological benefits derived from forum activity would be related to negative outcomes for the consumer. The levels of addiction, site commitment, procrastination and negative mood were all found to be positively linked to the psychological benefits, and this finding was replicated in both quantitative studies. The depth informants discussed the relationships that were formed online and the vacancy that is detected when forum use was constrained. One of the informants discussed the compulsion and addiction to the forum and offered several factors that motivated him to quit. The most salient comment made by both informants involved their discomfort in meeting online friends or acquaintances in an offline setting. It is possible that these forums become a source of basic human needs for these individuals and users become dependent on the source. Perhaps the use of these forums facilitates the degradation of

the skills needed to relate to others offline. When the skills have deteriorated to a certain level, the users may become totally reliant on the forum technology to fulfill some of their basic human needs.

These analyses clearly show that psychological benefits lead to negative consumer outcomes. The more a subject uses the forum to gain psychological benefits, the more s/he becomes addicted or committed to the site. It doesn't matter if these psychological benefits stem from consumption or creation as will be clarified in the mediator analysis.

Mediation

The model presented as *Figure 1* outlined four possible mediation situations. The first mediation concerned the relationship between content consumption and product purchase. In both studies, no main effect relationship was found to exist between these variables. However, in Study 1, an indirect only mediation was discovered for nearly all of the benefits recorded in this research (both functional and psychological). Even though content consumption does not directly lead to product purchase, this research establishes a path from content consumption to product purchase through these benefits. In other words, just getting people to engage online does not predict purchase unless they also receive some benefits from their online interaction. This finding offers a prescription for firms hosting or supporting these forums. Pains should be taken to be certain that forum users are given the opportunity to attain these benefits from their online interactions.

The second mediation that was tested involved the relationship between content consumption and the negative consumer level outcomes of addiction, site commitment, procrastination and negative mood. This relationship was found to be mediated by both functional and psychological benefits in Study 1. In Study 2, only psychological benefits acted as mediators to this relationship. Although main effects were found to exist for these relationships, content consumption's links to both procrastination and negative mood were found to be fully mediated in the Study 1 data. We can feel confident that these benefits are the mechanism through which these variables are linked. Not surprisingly, the more the individual receives these benefits from the forum, the more likely s/he is to become addicted or committed to the site.

The third mediation relationship involved a potential link between content creation and purchase level. No evidence for a relationship mediated by the measured benefits was discovered in either study.

The final mediation relationship involved the link between content creation and consumer level outcomes. Both studies found that the relationships between creation and both site commitment and addiction were fully mediated by the psychological benefits. These psychological benefits are the mechanism that links content creation to these negative consumer outcomes. As these individuals received more psychological benefits from their online activities, they become more dependent on the activity as a source of basic human needs. The fact that this dependence extended to the prediction of both procrastination and negative mood only reinforces the idea that this dependence may be psychologically unhealthy. Several theorists have voiced concerns about aspects of

offline life moving online (i.e. Putnam 2000). This finding can be interpreted as validation for these concerns.

The content analysis provides corroborating evidence about this mediated relationship. Far and away, the most common activity in these forums involved passing judgment or stating an opinion. It is easy to see how an individual can receive the benefits of Autonomy, Competence and Relatedness from these activities. You exhibit your independence by stating an opinion that doesn't fit with your perception of the main stream. You reinforce your competence by providing information that is needed to others, or by exhibiting your status with respect to the topic of conversation. Relatedness can be impacted by making a judgment consistent with one group over another or by simply interacting through the technology as explained in the depth interviews. Individuals who engage in content creation behaviors to reap the psychological benefits are more addicted and committed to the site, and they suffer from increased procrastination and negative mood.

Vicarious consumption theory suggests that different individuals are motivated to engage in either content consumption or content creation by the pursuit of different benefits. Different outcomes are likely to result from these different pursuits. It was initially hypothesized that content creation would be driven by the quest for psychological benefits which would then lead to unhealthy outcomes for the consumer. Content consumption was hypothesized to be driven by functional benefits that result in positive outcomes for the firm. No relationship was proposed between content consumption and unhealthy outcomes for the consumer. This assumption proved to be incorrect. Main effect relationships were found to exist between content consumption

level and site addiction, site commitment, negative mood and procrastination. These relationships would be similar to what one would expect from similar passive activities like watching television (McIlwraith Robert 1991).

Sample

Though valid arguments to the contrary can be made, the samples used for this research are one of its strengths. In neither quantitative study did the researchers approach a group of students and ask them to role-play or imagine that they were in a certain situation or that they display certain behaviors. While one study was comprised of students, the students were prescreened to be users of Internet forums and therefore capable of supplying valid responses. Though there are sampling concerns with the other study, this study generated responses through postings made by forum administrators on populated Internet forums dedicated to a wide range of products. Advantages of this method include reductions in the probability for restricted range on variables like age or income, and the potential to obtain responses from individuals displaying a wide range of different Internet and forum related behaviors. In total, these studies compiled almost 400 responses from forum users with a broad range of experience concerning both the technology and their respective products.

Limitations

Many of the limitations with this work revolve around the choice of instrument, the online survey. For Study 1, the link to this survey was simply posted by the site administrator for anyone who logged on to see. All surveys deal with a self-selection bias and this was magnified with this method of distribution. Many forums employ a

counter that tracks the number of views that a post has generated. With most forums, the number of post views was tens to hundreds of times the number of surveys initiated/completed. This could potentially influence the generalizability of the findings from this study. Fortunately, many of these issues were ameliorated by Study 2 which used a sample of students. In this study, over 80% of those who were invited to the study actually completed the survey. Self-selection bias is not a concern with those findings which were replicated in both of the studies.

Another limitation is that both studies outlined in this dissertation use cross sectional self-reports. Since some evidence supporting vicarious consumption theory was found in this research, a prospective next step would include an experimental manipulation that would show changes in purchasing or purchase intention with different types of online behaviors. One idea might be to track purchase intention over time as the subject engages in forced Internet interactions with the product. If the findings are consistent with a study like this, it would lend credence to the findings generated by the current dissertation.

The types of products used in this research might be another potential weakness of this research. Above, this research outlined differences in responses based on the overall cost of the product. Unexpected difficulties in gaining the cooperation of forum administrators severely limited the forums that were utilized for Study 1. In all, forums dedicated to eight different products provided respondents to this study, but administrators from over 100 forums were approached as potential sources of respondents. Though less likely to impact responses, this could be seen as a non-random factor that could impact the generalizability of the study.

The study design that was used for this project cannot absolutely explain how Internet forums alter an individual's attitudes and behaviors. No acceptable method of recruiting controls could be identified to determine the exact impact of engaging in these online behaviors. This research addressed changes in content consumption and creation levels and the conclusions drawn are a result of these changes. Interested observers will need to assume linear or near linear effects back to the zero point in order to draw conclusions about the impact of engaging in these behaviors vs. not engaging in them. Since there was variance in the levels of content consumption and content creation, it may be logical to project backwards, but this is still an assumption. Because this activity would have little theoretical basis, this procedure was not undertaken. Looking forward, it is believed that all consumers in the future will have at least rudimentary interactions in the virtual realm. If this is true, the impact of no Internet activities compared to light Internet activities becomes insignificant. This study provides information on the differences between light and heavy activity levels of both content creation and content consumption.

Theoretical Implications

The greatest of the theoretical implications generated by this research results from an understanding of the dynamics of virtual activity. Existing work in marketing in the fields of brand community or product involvement imply that interaction around a product will result in positive outcomes for the firm. This research found no direct path between the different types of PFIB and purchase level, but there were mediators to this relationship involving both functional and psychological benefits.

It was hypothesized at the outset of this research that the creation of content in Internet forums represented an escalation over and above simple content consumption. This presumed escalation was hypothesized to result in negative outcomes for the consumer like addiction and an unhealthy commitment to the site. In reality, this research found that content consumption is also linked to addiction and site commitment. Watching, observing, reading and consuming content was more closely linked to negative outcomes for the consumer than content creation. In hindsight, this finding makes sense. Few other addictions are exacerbated by socially interacting with others. It is the actual consumption of the product/experience that leads to the addiction. The individuals who create content to fulfill psychological needs are using the venue as an instrument for psychological need satisfaction. While this was linked to addiction and site commitment, the relationship was weaker than relationships involving content consumption.

The well-being of the individuals who are engaging in these behaviors is of value to marketers and consumer behavior researchers. Firms who encourage participation in certain activities are likely to be held accountable for the impact of these activities on the consumer. If these impacts are negative, the firm would be advised to identify these negative impacts in order to take measures to mitigate the effects. This research identified several less than desirable outcomes for the consumer that stem from engaging in Internet forum behaviors. A greater understanding of how these negative effects emerge may allow the firm to steer consumers to more constructive or positive activities.

Practical Implications

The greatest practical implication of this research has to do with the seemingly incessant call in the practitioner level literature for firms to engage their customers online. Neither content consumption level nor content creation level was significantly linked to spending on the product. This research discovered that several benefits mediate the relationship between content consumption and past purchase. Firms that control forums focused on their products may be able to influence purchases by facilitating the generation of these benefits for forum users.

The above course of action is tempered by the finding in Study 1 involving the interaction of different benefits and income on brand loyalty. This research showed that receiving these benefits from the forum increased brand loyalty for those with low incomes but it decreased brand loyalty for those with higher incomes. This is not a desirable pattern from a share of wallet perspective as high income customers are generally more desirable.

The link between content creation and purchasing is not clarified by this research. Study 1 found a positive relationship through the psychological variables and Study 2 found a negative relationship mediated by the psychological variables. Practitioners need clarification here because they may be able to influence how individuals engage with the technology. Obviously, if creating content results in fewer sales then they should attempt to facilitate other forms of Internet engagement.

Future Research

As a final component to this dissertation, some potential future research directions have been identified. As outlined above, the survey methodology is very good at describing variable association, but it cannot identify the causation of the effect. Finding a way to employ an experimental manipulation that will replicate the effects found in this study will be a priority moving forward.

Another priority will be to justify the conflicting finding with respect to relatedness benefits and product purchase. Recall that Study 1 found a positive relationship while Study 2 found a negative relationship. This conflicting finding also impacted the mediations linking content creation to product purchase. The extant data will be re-analyzed in a search for possible mediators that may help to explain this conflict.

Only Study 1 recorded brand loyalty and the interaction of income and the benefits derived from the forum in the prediction of this variable. The obvious practitioner level implications of this finding dictate that a replication should be attempted.

Another direction of future research involves the subject's ownership of the product of focus. In the analysis of the data, the distinction between prepurchase search and ongoing search was made repeatedly. Future research should address whether the respondent currently owns the product or not as a potential moderator. As noted, prepurchase search activities would likely differ from ongoing search in many ways and controlling for ownership may impact the results of analysis.

One question that can be answered from the current data involves the difference between members and non-members of the forum. Since only members can post content on the site, it seems likely that forum usage may have different motivations that may result in different outcomes for these individuals. Several analyses show differences here which may be informative in future research on the impact of Internet behaviors.

From an academic perspective, the greatest contribution made by this research involved the exposure of the psychological benefits as mediators between both types of forum behaviors and Internet addiction. The most controversial element of the recent release of the DSM V involved the addition of a new class of behavioral addictions, but the exclusion of a classification for Internet addiction. The most commonly cited reason for the exclusion of Internet addiction involves the lack of a clear negative impact of the behavior on the individual. Future research may show that dependence on the Internet environment for psychological need satisfaction may limit the individual's motivation or even their ability to fulfill these needs in other settings.

Future studies should be designed to detect the mediation between Internet behaviors and addiction in other Internet venues. For example, do Facebook users or multi-player Internet gamers display the same patterns with respect to their content consumption and content creation behaviors? Determining this answer will be the next step towards unraveling both the motivations and the true impact of 21st century Internet use.

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APPENDIX

Appendix A: Online Survey Instrument

(FORUM FREQUENCY, # of visits, (A-1))
How often did you visit the Bike Forums on average?

- Never
- Less than Once a Week
- Once a Week
- 2- 3 Times a week
- 4 - 5 times a Week
- Once or twice a day
- More than twice a day

(FORUM TIME (A-2))
In the last two weeks, how much time do you spend altogether in the Bike Forums?

- Less than 15 minutes
- 16 - 29 minutes
- 30 minutes to 1 hour
- 1- 2 hours
- 3- 5 hours
- 6- 8 hours
- 9- 12 hours
- More than 12 hours

(OTHER SITE FREQUENCY (A-3))
In the **last two weeks**, how many visits did you make to sites related to bikes or cycling **other than the** Bike Forums?

- None
- 1- 3
- 4- 9
- 10- 19
- 20- 30
- 30- 40
- More than 40

(OTHER SITE TIME (A-4))
In the **last two weeks**, how much time did you spend on sites related to bikes or cycling **other than the** Bike Forums?

- None
- Less than 1/ 2 hour
- 1/ 2 hour to 1.5 hours
- More than 1.5 hours but less than 3 hours
- More than 3 hours but less than 5 hours
- More than 5 hours but less than 7 hours
- More than 7 hours but less than 10 hours
- More than 10 hours

(POSTING FREQUENCY (A-5))
In the last two weeks, how often did you **post a message** in the Bike Forums ?

- Never
- Less than Once a Week
- Once a Week
- 2- 3 Times a week
- 4 - 5 times a Week
- Once or twice a day
- More than twice a day

(TIME POSTING (A-6))
In the last two weeks, about how much time did you **spend posting messages** in the Bike Forums?

- Less than 10 minutes
- 10 - 29 minutes
- 30-59 minutes
- 1 to 2 hours
- More than 2 but less than 5 hours
- More than 5 hours

(START THREAD (A-7))
In the last two weeks, how often did you **start a thread** or begin a discussion in the Bike Forums?

- Never
- Once
- Once a Week
- 2-3 Times a week
- 4 - 5 times a Week
- Once or twice a day
- More than twice a day

(POST LENGTH (A-8))
In the last two weeks, most of my posts in the Bike Forums were:

Short --5 words or less	Medium -- a line or two	Long -- More than two lines
○	○	○

(INTELLECTUAL STIMULATION (B-1, 1-3), RELATEDNESS (B-6, 4-6), COMPETENCE (B-5, 6-9), STIMULUS AVOIDANCE (B-2, 10-12), INFORMATION (B-3, 13-15), PERSONALIZATION (B-4, 16-17), AUTONOMY (B-7, 18-20))

What do you get from visiting the Bike Forums?

	Not at all				Extremely
It satisfies my curiosity	○	○	○	○	○
I explore new ideas	○	○	○	○	○
I discover new things	○	○	○	○	○
I feel like I belong	○	○	○	○	○
I interact with others	○	○	○	○	○
I meet new and different people	○	○	○	○	○
I improve my skills	○	○	○	○	○
I challenge my abilities	○	○	○	○	○
I feel achievement	○	○	○	○	○
I relieve stress and tension	○	○	○	○	○
I can relax	○	○	○	○	○
I avoid the bustle of daily life	○	○	○	○	○
I acquire information about bikes and cycling	○	○	○	○	○
I improve my utilization of my bikes	○	○	○	○	○
I improve my cycling purchases	○	○	○	○	○
I find improvements for my cycling experience	○	○	○	○	○
I can personalize my cycling experience	○	○	○	○	○
I can be myself	○	○	○	○	○
I do what I want	○	○	○	○	○
I pursue my interests	○	○	○	○	○

(PAST PRODUCT PURCHASE (C-1))

Over the last 12 months, approximately how much have you spent on bikes?

Enter zero if you have not purchased a bike in the last year.

(ACCESSORY PURCHASES (C-2))

Over the last 12 months, approximately how much have you spent on travel, accessories, or other expenses associated with cycling?

(PURCHASE FREQUENCY (C-3))

Over the last 12 months, approximately how many times have you purchased a bike or a cycling accessory?

(TIME USING THE PRODUCT, PRODUCT USAGE (C-4))

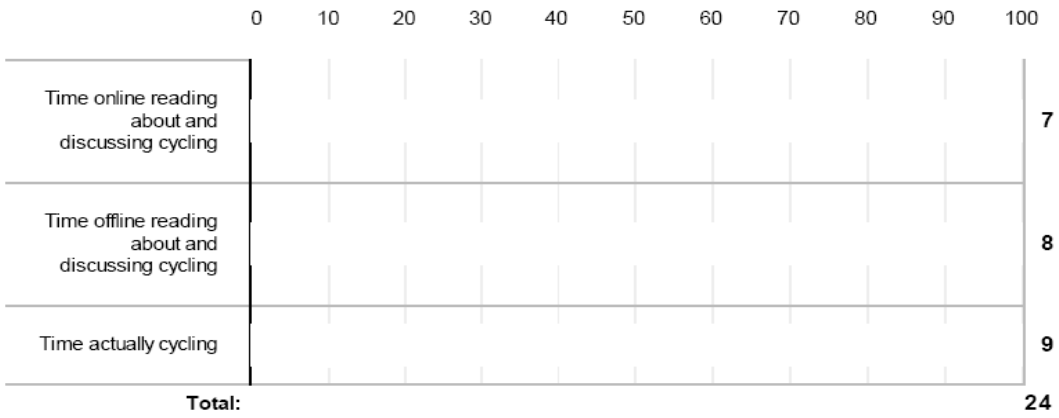
In the average week, how much time do you spend cycling?

- Less than 1 hour
- More than 1 but less than 2 hours
- More than 2 but less than 3 hours
- More than 3 but less than 5 hours
- More than 5 but less than 8 hours
- More than 8 but less than 12 hours
- More than 12 but less than 15 hours
- More than 15 hours

(% of TIME USING THE PRODUCT, PRODUCT USAGE (S))

In the last 12 months, Of all time spent on the topic of cycling, please indicate the percentage of your time spent on cycling websites versus actually riding a bike.

Your answer must total 100. (The program won't let you exceed 100%)



(PURCHASE INTENTION (C-5))

Over the **next 12 months**, approximately how much in total do you plan to spend on bikes, cycling merchandise and cycling focused travel?

(OFFLINE AND ONLINE WOM (C-6))
How likely is it that you will exhibit the following behaviors in the next two weeks?

	Very Unlikely				Very Likely
Tell someone in person about bikes or cycling					
Tell someone in an online setting about bikes or cycling					

(BRAND LOYALTY (C-7))

Please rate your agreement with the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I consider myself loyal to a specific brand of bike					
If my brand of bike is not available where I am shopping, I will shop somewhere else					
If I can get a good deal on another brand of bike, I will probably switch brands					

(PRODUCT COMMITMENT (C-8))

Please rate your agreement with the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
If I couldn't ride bicycles, I don't know what I would do					
If I stopped riding bicycles, I would probably lose touch with many of my friends					
Other leisure activities don't interest me like riding bicycles					
I would rather ride bicycles than do most anything else					

(FORUM ADDICTION (C-9))

Do you agree with the following statements?

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I feel anxious if I haven't accessed the Bike Forums for sometime.					
I find myself accessing the Bike Forums for longer periods of time than I intended.					
I have used the Bike Forums to make me feel better when I was down.					
I have used the Bike Forums to talk to others when I was feeling isolated.					
My productivity at work or at school has suffered in the past from my involvement in the Bike Forums.					
I am the kind of person who feels more comfortable with objects than with other people.					
I have tried unsuccessfully to cut down my use of the Bike Forums.					
The amount of information that I get from the Bike Forums is never enough.					

(PANAS (C-10))

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word.

Indicate the extent to which you have felt this way during the past week.

	Very slightly or not at all				Extremely
Determined					
Afraid					
Upset					
Active					
Ashamed					
Alert					
Hostile					
Inspired					
Nervous					
Attentive					

(LIFE SATISFACTION (C-11))

Please complete the following statements.

	Much worse than normal	Worse than normal	Slightly worse than normal	Normal	Slightly better than normal	Better than normal	Much better than normal
The conditions of my life are…							
My satisfaction with my life is…							

(LIFE SATISFACTION (C-11))

Please indicate the degree to which you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
My life is ideal.							
I engage in activities that are important to me							
If I could live my life over, I would change almost nothing.							

(PROCRASTINATION (C-12))

How true are the following statements for you ?

	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
I waste a lot of time on trivial matters before getting to a final decision.					
I delay acting on a decision even after I made it.					
When I had to make a decision I wait a long time before starting to think about it.					
I delay making decisions until it is too late.					
I put off making decisions.					

(SITE COMMITMENT (C-13))

Please rate your agreement with the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
If I couldn't use the Bike Forums, I don't know what I would do					
If I stopped using the Bike Forums, I would probably lose touch with many of my friends					
Other leisure activities don't interest me like using the Bike Forums					
I would rather use the Bike Forums than do most anything else					

(VIRTUAL PRESENCE (C-14))

Reflect on your experiences in the Bike Forums and rate your agreement with the following statements:

	Never				Always
When using the forum, I feel transported to another time and place.					
Exploring the forum feels like taking an actual trip to a new place.					
When navigating through the forum I feel as if I am actually there.					
I am impacted emotionally by events in the forum.					
The forum is emotionally engaging.					
I experience feelings as deeply in the forum as I do face to face.					
When using the forum I feel as if I am part of the story					
When I accomplish something in the forum I experience genuine pride.					
I react to events and people in the forum as if I know them personally.					

(MEMBER STATUS)

Do you have a user name in this forum?

- ☐ Yes
- ☐ No, I have not registered for this forum

Appendix B: Correlation Matrices

Study One Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Consumption	Correlatio	1																		
	Sig																			
2. Creation	Correlatio	.324	1																	
	Sig	***.000***																		
3. Informational Benefits	Correlatio	.198	.075	1																
	Sig	***.000***	.175																	
4. Personalization Benefits	Correlatio	.219	.158	.738	1															
	Sig	***.000***	***.004***	***.000***																
5. Autonomy Benefits	Correlatio	.250	.269	.371	.501	1														
	Sig	***.000***	***.000***	***.000***	***.000***															
6. Competence Benefits	Correlatio	.292	.343	.519	.582	.499	1													
	Sig	***.000***	***.000***	***.000***	***.000***	***.000***														
7. Relatedness Benefits	Correlatio	.273	.518	.327	.390	.506	.663	1												
	Sig	***.000***	***.000***	***.000***	***.000***	***.000***	***.000***													
8. Past Purchase	Correlatio	.078	.220	.255	.204	.139	.178	.202	1											
	Sig	.157	***.000***	***.000***	***.000***	***.010***	***.001***	***.000***												
9. Past Accessory Purchase	Correlatio	.178	.102	.077	.071	.055	.072	.082	.304	1										
	Sig	***.001***	.065	.155	.187	.309	.181	.130	***.000***											
10. Purchase Intention	Correlatio	.098	.186	.164	.130	.063	.121	.173	.735	.508	1									
	Sig	.077	***.001***	***.002***	***.016***	.243	***.025***	***.001***	***.000***	***.000***										
11. Product Usage	Correlatio	.061	-.032	.123	.010	-.057	-.057	-.038	.097	.145	.127	1								
	Sig	.273	.563	***.022***	.852	.293	.290	.477	.067	***.006***	***.017***									
12. Brand Loyalty	Correlatio	-.036	-.065	-.047	.040	.058	.005	.068	.056	-.005	.082	.058	1							
	Sig	.511	.238	.378	.456	.283	.929	.205	.293	.922	.122	.276								
13. Product Commitment	Correlatio	.119	-.100	.134	.108	.106	.052	.015	.040	.169	.071	.245	.008	1						
	Sig	***.030***	.071	***.013***	***.043***	***.048***	.330	.782	.454	***.001***	.183	***.000***	.875							
14. Site Commitment	Correlatio	.302	.218	.297	.374	.307	.398	.434	.172	.036	.118	-.129	.004	.192	1					
	Sig	***.000***	***.000***	***.000***	***.000***	***.000***	***.000***	***.000***	***.002***	.522	***.033***	***.020***	.936	***.000***						
15. Addiction	Correlatio	.358	.166	.304	.335	.309	.485	.475	.157	.090	.154	.028	-.025	.163	.562	1				
	Sig	***.000***	***.003***	***.000***	***.000***	***.000***	***.000***	***.000***	***.006***	.115	***.007***	.626	.667	***.004***	***.000***					
16. Life Satisfaction	Correlatio	-.083	-.115	-.051	-.018	.016	-.022	-.021	.000	.142	.068	.086	.133	.057	-.104	-.128	1			
	Sig	.148	***.045***	.371	.749	.785	.697	.715	.997	***.013***	.239	.133	***.020***	.321	.068	***.025***				
17. Positive Mood	Correlatio	.069	-.075	.025	.073	.198	-.007	.013	.012	.050	.018	.203	.177	.161	-.039	-.073	.415	1		
	Sig	.230	.191	.667	.205	***.000***	.910	.824	.840	.387	.757	***.000***	***.002***	***.005***	.499	.201	***.000***			
18. Negative Mood	Correlatio	.151	-.101	.210	.180	.103	.180	.152	-.008	-.007	-.006	.116	-.009	.079	.217	.418	-.245	.055	1	
	Sig	***.008***	.076	***.000***	***.002***	.071	***.001***	***.008***	.883	.904	.914	***.042***	.876	.170	***.000***	***.000***	***.000***	.336		
19. Procrastination	Correlatio	.109	-.022	.231	.225	.174	.238	.246	.063	-.063	.045	.014	-.062	.126	.186	.471	-.185	-.180	.484	1
	Sig	.056	.699	***.000***	***.000***	***.002***	***.000***	***.000***	.273	.274	.429	.812	.280	***.027***	***.001***	***.000***	***.001***	***.002***	***.000***	

		Study Two Correlations																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Consumption	Correlatio	1																	
	Sig.																		
2. Creation	Correlatio	.320	1																
	Sig.	***.004***																	
3. Informational Benefits	Correlatio	.223	.198	1															
	Sig.	***.047***	.078																
4. Personalization	Correlatio	.210	.196	.918	1														
	Sig.	.061	.081	***.000***															
5. Autonomy Benefits	Correlatio	.320	.283	.159	.253	1													
	Sig.	***.004***	***.011***	.158	***.024***														
6. Competence Benefits	Correlatio	.256	.138	-.077	-.014	.291	1												
	Sig.	***.022***	.221	.496	.899	***.009***													
7. Relatedness Benefits	Correlatio	.398	.459	-.010	.064	.460	.392	1											
	Sig.	***.000***	***.000***	.929	.573	***.000***	***.000***												
8. Past Purchase	Correlatio	.101	-.124	.194	.190	.182	-.068	-.139	1										
	Sig.	.372	.274	.084	.092	.106	.551	.218											
9. Past Travel Purchase	Correlatio	-.091	-.106	.113	.152	.002	-.064	-.083	.034	1									
	Sig.	.424	.348	.318	.178	.983	.574	.465	.765										
10. Purchase Intention	Correlatio	.209	-.042	.111	.141	.168	.061	.015	.693	.177	1								
	Sig.	.095	.742	.380	.263	.180	.628	.909	***.000***	.159									
11. Product Usage	Correlatio	.376	.043	.070	.087	.230	.224	.145	.150	.023	.140	1							
	Sig.	***.001***	.707	.535	.441	***.040***	.045	.201	.184	.839	.265								
12. Product Commitment	Correlatio	.404	.173	.058	.141	.372	.275	.221	.069	.070	.169	.428	1						
	Sig.	***.000***	.125	.608	.211	***.001***	***.013***	***.049***	.541	.537	.178	***.000***							
13. Site Commitment	Correlatio	.606	.456	.133	.178	.409	.374	.532	-.052	-.018	-.025	.272	.466	1					
	Sig.	***.000***	***.000***	.241	.113	***.000***	***.001***	***.000***	.647	.876	.844	***.015***	***.000***						
14. Addiction	Correlatio	.516	.389	.082	.061	.401	.318	.461	.018	-.011	.024	.095	.295	.697	1				
	Sig.	***.000***	***.000***	.471	.596	***.000***	***.004***	***.000***	.873	.924	.851	.404	***.008***	***.000***					
15. Life Satisfaction	Correlatio	-.131	.040	.126	.250	.143	.270	.145	-.172	.059	-.170	.089	.172	.024	-.027	1			
	Sig.	.249	.729	.268	***.026***	.208	***.016***	.203	.130	.606	.180	.438	.130	.836	.816				
16. Positive Mood	Correlatio	-.237	-.127	-.010	.028	-.018	.157	.005	-.178	.011	-.065	-.065	-.117	-.178	-.120	.290	1		
	Sig.	***.035***	.264	.931	.804	.878	.167	.965	.116	.921	.612	.567	.303	.117	.292	***.009***			
17. Negative Mood	Correlatio	.095	.171	-.003	-.147	.039	.005	.078	-.094	-.099	.011	.131	-.134	.099	.141	-.199	-.071	1	
	Sig.	.405	.133	.982	.196	.735	.967	.496	.409	.387	.930	.250	.240	.385	.217	.078	.536		
18. Procrastination	Correlatio	.143	.153	-.005	-.006	.252	-.010	.254	.063	-.145	-.017	.013	-.012	.244	.342	-.259	-.175	.323	1
	Sig.	.209	.179	.963	.957	***.025***	.930	***.024***	.583	.201	.896	.912	.920	***.030***	***.002***	***.021***	.123	***.004***	

VITA

Andrew Christian Hinsch was born on September 26th, 1973 in Framingham Massachusetts. After completing high school at Oakville Senior High School in 1992, he attended St. Louis Community College, the University of Missouri, and the University of Missouri-St. Louis. His first undergraduate degree in Business Administration was granted from the University of Missouri-St. Louis in 1999. He added an undergraduate degree in Management Information Systems in 2001 and a Masters of Business Administration in 2006, both from the University of Missouri-St. Louis.

Chris had two primary careers while earning these degrees. He worked for Roadway Package Systems (RPS), now known as Fedex Ground for over five years and left the company as the morning sort dock coordinator at the St. Charles facility. He also worked in the printing industry for over ten years for Plus Communications, MailWell and Cenveo. He left Cenveo in 2007 as Estimating Manager to pursue his Ph.D. in Marketing at the University of Missouri.

While at the University of Missouri, Chris taught classes in Services Marketing and Marketing Management. Chris' teaching evaluations were consistently in the top half of all evaluations, and Chris won the outstanding teaching assistant award at Mizzou for the 2010-2011 school year.