SOCIAL E-SHOPPING FOR APPAREL USING FACEBOOK
: TESTING A META-THEORETICAL MODEL
OF MOTIVATION AND PERSONALITY


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**Abstract**

"Social e-shopping" merges shopping and social networking activities through social media online. Retailers employ social media to target teens and young adult consumers making social networking sites an essential venue to marketing practices and have begun to use Facebook commerce as it helps businesses facilitate and execute sales transactions.

The research objectives were to investigate (1) whether personality traits (i.e., openness to experience, material resource needs, arousal needs) affected psychographic characteristics (i.e., market mavenism, social browsing, value consciousness) and intentions to social e-shop apparel, (2) whether psychographic characteristics affected gratifications (i.e., socializing, information-seeking) and intentions to social e-shop apparel, (3) whether gratifications affected intentions to social e-shop apparel, and (4) whether tie strength and homophily moderated the links between gratifications and intentions to social e-shop apparel within the Meta-Theoretical Model of Motivation and Personality developed by Mowen (2000). Participants ($n = 601$) were Facebook users from 18 to 44 years of age who had social shopping experience. They were drawn from a consumer panel. Data was collected through an online self-administered survey.

Participants who were likely to social e-shop using Facebook for the purpose of information-seeking and socializing gratifications indicated that they intended to social e-shop apparel. Participants who were market mavens intended to social e-shop apparel. They were also likely to social e-shop for the purpose of socializing. Participants who were social browsers also intended to social e-shop apparel. They were also likely to social e-shop for the purposes of information-seeking and socializing. Participants who

were value conscious intended to social e-shop apparel. They were also likely to social e-shop for the purpose of information-seeking.

Participants who were open to experience were likely to be market mavens. Participants who needed arousal were likely to be social browsers. Participants who needed material resources were likely to be market mavens, social browsers, and to be value conscious. Tie strength and homophily moderated the links between both types of gratifications (socialization, information-seeking) and intentions to social e-shop apparel. Theoretical and managerial implications and suggestions for future research based on the findings were provided.

# Table of Contents

**List of Tables**

## List of Figures

# CHAPTER I

## INTRODUCTION

This chapter provides a general background on social e-shopping using social networking sites (SNSs). The sections following cover the purpose and significance of the study.

### Background

Consumers today are increasingly utilizing technology as a tool to enhance their shopping experiences (Pookulangara & Koesler, 2011). The rapid evolution of the Internet and the popularity of Web 2.0 have provided new sources for social contacts through social networks and communities, greatly diversifying communication and collaboration possibilities for consumers (Leitner & Grechenig, 2007; Pookulangara & Koesler, 2011). What is a social network? A social network is a web of social relationships that encompass individuals; these relationships between individuals may or may not provide social support and may serve other functions (Heaney & Israel, 1997). The impact of social networks is increasingly pervasive with activities encompassing economic (e.g., shopping), marketing (e.g., brand building), social (e.g., communication), and educational (e.g., distance education) activities (Teo, Chan, Weib, & Zhang, 2003). Social networking sites (SNSs) offer an effective channel for consumers to design a visible personal profile, construct a personal network, and share interpersonal commentary (Lenhart & Madden 2007). SNSs such as Facebook, MySpace, LinkedIn, and Bebo can also play a significant role as a marketing medium (Cha, 2009), allowing marketing to share and distribute product-related information and serving as an influential vehicle for electronic word-of-mouth (eWOM) (Chu & Kim, 2011).

Social commerce and social shopping are forms of Internet-based social media that enable consumers to actively participate in the marketing and selling of products and services in online communities and marketplaces (Stephen & Toubia, 2010). The term social commerce refers to the "subset of electronic commerce that involves using social networks to assist in online buying and selling of products and services" (Marsden, 2009, p. 1). The term social shopping refers to merging shopping[1] and social networking activities through online social media. Particularly applicable for business to consumer (B2C) and consumer to consumer (C2C) e-commerce, social shopping is typified as providing online spaces in which consumers collaborate, post product recommendations and reviews, post photos of themselves wearing products, acquire advice from reliable people, seek the right products, make purchases, and form social shopping communities (Leitner & Grechenig, 2007; Shen, 2008). The use of social commerce for social shopping is transforming the retail industry (Social-Network-Driven, 2009).

Social commerce and social shopping communities are growing rapidly in number and size. In 2006, an early consumer survey ($n = 1,098$) on use of social shopping communities commissioned by the American Marketing Association reported 47% of the surveyed consumers indicated they would visit SNSs to search for and chat about holiday gift ideas, 51% indicated that they would find out about store sales/product discounts, and 29% indicated that they would buy products on SNSs (Horovitz, 2006). According to an article published in the *Financial Times*, the number of visitors to social commerce and social shopping websites increased by more than 500% between early 2007 and early

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[1] Shopping refers to a number of experiences including information search, web site browsing/navigation, ordering, payment, customer service interactions, delivery, post-purchase problem resolution, and satisfaction with one's purchases (Ha & Stoel, 2008).

2008 (Palmer & Koenig-Lewis, 2009). Correspondingly, an increasing number of retailers are including social networking as part of their marketing mix (Market Watch, 2008). In 2009, 40% of e-retailers maintaining a social network page and 59% of the top U.S. retailers had a "fan page" on Facebook (Social-Network-Driven, 2009). According to Internet Retailer, a large majority of the top 100 companies had a profile on Facebook (79%), twitter (69%) or both (59%) ("What's in a retail email?," 2009).

Managers and developers of SNSs have noted the importance of online shopping and have modified their sites to offer shopping services. For example, Facebook commerce (f-commerce), a form of social commerce, refers to the buying and selling of goods or services through Facebook (Marsden, 2011). Facebook provides online space to third party applications allowing conventional vendors to reach a large number of potential customers (Cha, 2009). From a marketer' perspective, a Facebook storefront gives marketers an additional outlet to facilitate customers spreading the word about the products they are interested in purchasing (O'Neill, 2009). From a consumer's perspective, these shopping applications allow consumers to search for products and then share their opinions of those products with other Facebook users (Cha, 2009). Consumers can post items on their wish lists and ask their Facebook friends what they think before they make a purchase (HyQuality media, 2011).

Examples of retailers utilizing shopping services on Facebook include the online retailer Amazon. This retailer developed shopping applications in Facebook in order to enable consumers to share and purchase products with their friends (Ferguson, 2008). The apparel sector has also begun to adopt marketing initiatives that employ the use of online social networking and community portals (Budnarowska & Marciniak, 2010). For

instance, Levi's was one of the first key brands to integrate Facebook's social plug-in into their online shopping site, turning it into a social shopping experience (Schroeder, 2010). Other well-known retailers (e.g., Lands' End, Hallmark, Delta Airlines) have also begun to sell products on Facebook pages as well. The incorporation of social networking into a retailer's marketing strategy is clearly trending upward.

At this early stage of incorporating shopping services using SNSs (e.g., Facebook), a major limitation of existing consumer research concerning these social shopping services is that most researchers (Cha, 2009; Pookulangara & Koesler, 2011) have focused solely on the variables identified in the Technology Acceptance Model developed by Davis (1989) and others (e.g., attitude, perceived usefulness, perceived ease of use, self-efficacy, subjective norm, security, perceived fit) as their key variables to understand consumers' attitudes towards social shopping on SNSs and the impact of consumer usage of SNSs on online purchase intentions. Few researchers have addressed characteristics of social e-shoppers (e.g., personality traits, psychographic characteristics, other predictors) that may motivate their use of SNSs to shop as well as to share product information (i.e., electronic word of mouth).

Understanding social e-shoppers' personality traits is important for marketers and retailers because personality traits are useful for and have been applied to consumer segmentation (Holbook, 1986; Mowen, 2000). Personality refers to relatively enduring personal characteristics that indicate long-term and pervasive individual differences in emotional style and have a general effect on emotional responses (Warr, 1999). Personality traits interact with a situation to influence consumer attitudes and actions

(Mowen, 2000). In fact, multiple personality traits come together to form "a motivational network" that acts to influence consumer behavior (Mowen, 2000, p. 318).

In addition to personality, understanding social e-shoppers' psychographic characteristics is important for marketers and retailers interested in providing social shopping services because these characteristics are useful in segmenting consumers (Wells, 1975) and help fine-tune marketers' and retailers' offerings to fulfill the needs of different consumer groups (Solomon, 2009). Examining social e-shoppers' psychographic characteristics is a way of dividing an online marketplace with various commonly used segmentation criteria. In its broadest sense, consumer psychographics refers to any form of measurement or analysis of a consumer's thoughts, feelings, and reactions (Nelson, 1971) or an analysis of a consumer's lifestyle and demographics (Michman, 1991). Psychographics involve the use of psychological, sociological, and anthropological factors (Alpert & Gatty, 1969). In its narrowest sense, Boedeker (1995) defined consumer psychographics as "the measurement of the consumer's shopping-related lifestyle" (p. 18).

The identification of consumer motives is important for marketers and retailers to enhance the probability that the products and experiences they develop and provide satisfy consumers' needs. Functional motives represent the reasons and purposes that motivate a consumer to engage in a particular behavioral propensity (Clary et al., 1998). To understand motivation is to understand why consumers do what they do (Solomon, 2009). Marketers try to fulfill consumer needs but the reasons consumers buy any product can vary widely. Thus, identifying the set of motivational factors behind consumers'

social e-shopping will allow retailers to utilize these factors to improve consumers' social e-shopping experience and develop efficient marketing strategies.

Interpersonal influences from one consumer to another can affect consumers' decisions whether or not to make a purchase (Arora, 2007) as well as their intentions to e-shop. Because technologically-savvy consumers have a high level of involvement in peer-to-peer interaction using social networking, understanding interpersonal influences on users (i.e., social influence from close friends and important others) is important for marketers and retailers (Shankar et al., 2010). Messages sent by friends are trusted more than messages sent by advertisers (Marini & Wiedemann, 2006). Gordon (2006) noted, "most everyone agrees that there is no better advertising than word of mouth. After all, a customer who is following a personal recommendation from a friend or colleague is more likely to buy" (p. 97). In addition, previous researchers demonstrated that interpersonal influences are important to predicting intention for technology use (Nysveen et al., 2005) as well as m-shopping (Kim et al., 2009) and other types of shopping innovations.

In summary, an investigation of interrelationships among personality traits, psychographic characteristics, motivations, and interpersonal influence provides an opportunity to apply and test a model of a motivational network of traits behind social e-shoppers' behavior. This proposed model of interrelationships may provide a tool for retailers to clearly define social e-shopper market segments and enhance consumers' social e-shopping experience accordingly.

**Objective of Research**

The research objectives were to investigate (1) whether personality traits were related to psychographic characteristics (i.e., shopping-related lifestyles) and intentions to social e-shop apparel, (2) whether psychographic characteristics were relate to motivations (i.e., gratifications) and intentions to social e-shop apparel, (3) whether gratifications were related to intentions to social e-shop apparel, and (4) whether interpersonal influences moderated the relationships between gratifications and intentions to social e-shop apparel.

**Significance of Research**

In pursuing these objectives, results can have important managerial and consumer research implications. Results can provide practical managerial implications for shaping the social e-shopping experience as identifying personality traits, psychographic characteristics, and motivations (i.e., gratifications) would lead firms to define specific market segments as well as differentiate and fine-tune their strategies accordingly. To effectively develop social e-shopping through SNSs, companies and marketers need to be aware of the types of social e-shoppers and how they want to integrate social e-shopping into their consumption behaviors. Marketers and service providers should base improvements to their SNSs and shopping applications upon empirical data. A critically important element for a successful implementation is to analyze thoroughly social e-shoppers' social e-shopping behavior on SNSs and to understand how social commerce platforms must perform to guarantee their social e-shopping satisfaction.

From a theoretical standpoint, the contribution of this study is to extend prior work on the social e-shopping phenomenon by examining various determinants of

intentions to social e-shop apparel. This study utilizes a proposed model that identifies a trait hierarchy (i.e., elemental, compound, situational, and surface traits). This proposed model may hold great potential for further application to different consumption-related aspects such as explaining and predicting green product purchase behavior, luxury consumption, and mobile web shopping behaviors. Hence, this study can provide a deeper understanding of market segments by identifying multiple personality traits, psychographic characteristics, and motivations that are empirically derived from a theoretically based model of motivation and personality.

## Definition of Terms

**Arousal needs** refer to desire for stimulation and excitement (Mowen, 2000).

**Facebook commerce (f-commerce)** refers to a form of social commerce; it is buying and selling of goods or services through Facebook, either through Facebook directly or through the Facebook Open Graph[2] (Marsden, 2011).

**Homophily** refers to the degree to which individuals who interact are congruent or similar on certain attributes such as demographic variables (Rogers & Bhowmik, 1970) and the perceptual similarity of their beliefs, values, experience, and lifestyle (Gilly, John, Graham, Wolfinbarger, & Yale, 1998).

**Information-seeking gratification** refers to the degree of likelihood that a person would social e-shop for the purpose of identifying the best deals and looking for product information.

**Market mavenism** refers to consumers' tendencies to "have information about many kinds of products, places to shop, and other facets of markets. They initiate discussions

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[2] The Open Graph allows any page on the Web to have all the features of a Facebook Page; Facebook users are able to become a Fan of the page, it will show up on that user's profile and in search results, and that page will be able to publish stories to the stream of its fans (O'Neill, 2009).

with other consumers and respond to requests from consumers for market information"
(Feick & Price, 1987, p. 85).

**Market resource needs** refer to the desire to collect and possess material goods (Mowen,
2000).

**Openness to experience** refers to the need to find novel solutions, be original, and use
one's imagination (Mowen, 2000).

**Shopping** refers to a number of experiences including information search, web site
browsing/navigation, ordering, payment, customer service interactions, delivery, post-
purchase problem resolution, and satisfaction with one's purchases (Ha & Stoel, 2008).

**Social browsing** refers to "exploring new fashion trends and products popular among
others" (Kang & Park-Poaps, 2011, p. 341).

**Social commerce** refers to integrating social media and e-commerce; it is "a subset of
electronic commerce that involves using social media, online media that supports social
interaction and user contributions, to assist in the online buying and selling of products
and services" (Marsden in Social Commerce Today, 2009, p. 1).

**Social media** consists of various user-driven channels (e.g., Facebook, Twitter, blogs,
YouTube); it is the online technologies and practices that people use to share content,
opinions, insights, experiences, perspectives, and media (Burgess, 2011).

**Social network** refers to a web of social relationships that surround individuals; it is
linkages between people that may or may not provide social support and that may serve
functions other than providing support (Heaney & Israel, 1997).

**Social networking site** refers to web-based services that enable individuals to create a public profile and a list of their contacts with whom they share a social network (Boyd & Ellison, 2007).

**Social shopping** refers to merging shopping and social networking activities through social media online (Tedeschi, 2006; Wang, 2009); it is where consumers collaborate and shop in an environment similar to social networking platforms (e.g., MySpace, Facebook, Xanga, Orkut, Hi5) (Leitner & Grechenig, 2007).

**Socialization gratification** refers to the degree of likelihood that a person would social e-shop for the purpose of enjoying socializing with others and communicating with other people who share similar shopping experiences.

**Tie strength** refers to the potency of the bond between members of a network (Granovetter, 1973; Mittal, Huppertz, & Khare, 2008); it refers to the combination of the amount of time, degree of emotional intensity, level of intimacy, and degree of reciprocity between two or more members of a network (Chu & Kim, 2011).

**Uses and gratifications (U & G)** refers to 'how and why' of media use as well as the motivations of specific uses and the satisfaction people obtain from such use (Joinson, 2008).

**Value consciousness** refers to a concern for paying low prices, subject to some quality constraint (Ailawadi, Neslin, & Gedenk, 2001).

**Web 2.0** refers to a grouping of second generation web-based technologies and services, many of which are designed to aid in collaboration and sharing between web users (O'Reilly, 2005).

## CHAPTER II

## LITERATURE REVIEW

In this chapter, the conceptual model for the research is presented first followed by a review of related research. The chapter ends with a presentation of the research hypotheses.

### Theoretical Background

**The 3M Model of Motivation and Personality**

The proposed model for this research is based on the concept of "trait hierarchy" developed by Mowen (2000) in his "Meta-Theoretic Model of Motivation and Personality." Often referred to as "the 3M model," the model is a hierarchical model of motivation and personality (see Figure 1 for the overall 3M model). This model provides an integrated account of how personality traits interact with situations to influence consumer feelings, thoughts, attitudes, and behaviors (Mowen, 2000).

In the 3M model, the "trait hierarchy" includes four levels: (1) elemental traits, (2) compound traits, (3) situational traits, and (4) surface traits (Mowen, 2000, p. 33). Using this trait hierarchy approach to understand relationships between consumer characteristics and their behavioral intentions requires researchers to consider traits at four levels of abstractness. These levels move from the broad to the specific. The lowest level of abstractness encompasses broad elemental traits. This is followed by compound, situational, and surface traits (see Figures 1 and 2). When applied to intentions to social e-shop apparel, considered a surface trait, the 3M model suggests that this intention may be influenced by elemental traits, compound traits, and situational traits.
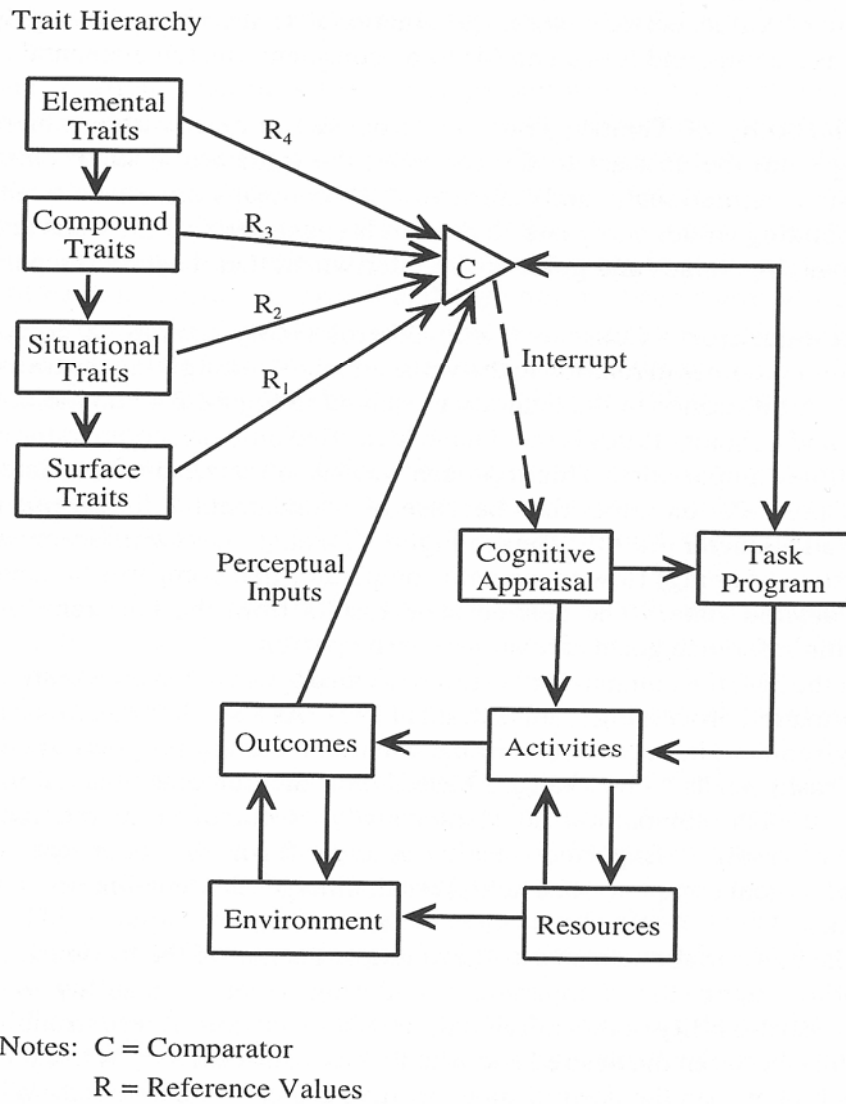
Trait Hierarchy



*Figure 1*. The 3M model of motivation and personality (Mowen, 2000, p. 33)

Table 1

*Definitions of the Four Levels of Trait Hierarchy (Mowen, 2000)*

| Four Level of Traits Hierarchy | Definitions |
|---|---|
| Elemental Traits | They are the unidimensional underlying predispositions of individuals that arise from genetics and early learning. Examples include openness to experience, conscientiousness, introversion, agreeableness, emotional instability, need for material resources, need for arousal, and need for body resources (Fang & Mowen, 2009; Mowen, 2000). |
| Compound Traits | They are the unidimensional predispositions that result from the effects of multiple elemental traits, a person's learning, and cultural environment. They combine with the context of behavior to create situational traits. Examples include self-efficacy, impulsiveness, task orientation, and competitiveness (Mowen & Harris, 2003; Sun & Wu, 2011) |
| Situational Traits | They are the unidimensional predispositions to behave within a general situational context and result from the joint effects of elemental traits and compound traits. They interact with enduring attitudes and involvement. Examples include motivation for gambling (Fang & Mowen, 2009) and health motivation (Moorman & Matulich, 1993). |
| Surface Traits | They represent enduring dispositions to behave with respect to a specific domain of behavior. Examples include online shopping intention (Bosnjak, Galesic, & Tuten, 2007) and online purchase intention (Chen, 2011). |
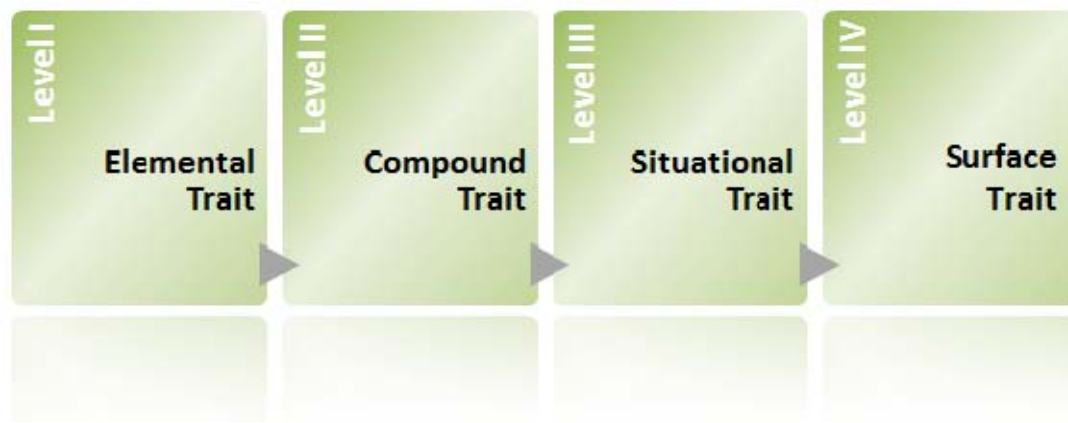


*Figure 2.* Mowen's (2000) four levels of traits hierarchy

The 3M model (Mowen, 2000) has been utilized as a structure to investigate a variety of phenomena such as consumer behavior consequences tied to the trait of superstition (Mowen & Carlson, 2003), competitiveness (Mowen, 2004), volunteerism (Mowen & Sujan, 2005), word-of-mouth communications (Mowen, Park, & Zablah, 2007), intention to shop online (Bosnjak et al., 2007), visual product aesthetics (Mowen, Fang, & Scott, 2009), gambling activities (Fang & Mowen, 2009), and online impulsive buying tendency (Sun & Wu, 2011).

**Level I: Elemental traits.** As the most abstract level, the elemental trait is the most basic component of the personality-motivational structure of the individual. Elemental traits refer to "the basic underlying predispositions of individuals that arise from genetics and a person's early learning" (Mowen, 2000, p. 20). Mowen (2000) identified eight elemental traits: openness to experience, conscientiousness, introversion, agreeableness, emotional instability, need for material resources, need for arousal, and need for body resources. Five of these traits (i.e., emotional instability, openness to experience, introversion, agreeableness) were derived from the Five-Factor Model of personality (Costa & McCrae, 1985; Wiggins, 1996). Based on evolutionary psychology principles, Mowen (2000) proposed three additional elemental traits: the need for arousal, the need to protect/enhance the body, and the need for material resources. The placement of these personality traits as elemental traits in the proposed model is consistent with Chen's (2011), Fang and Mowen's (2009), and Mowen's (2000) studies.

Among the eight elemental traits identified, this study utilized three traits: (1) openness to experience (i.e., the need to find novel solutions, be original, and use one's imagination), (2) material resources needs (i.e., the desire to collect and possess material

goods), and (3) arousal needs (i.e., the desire for stimulation and excitement). These three were selected because Bosnjak, Galesic, and Tuten (2007) found that openness to experience, material resources needs, and arousal needs influenced other factors tied to use of shopping technologies such as online shopping intention and involvement with online shopping.

   **Level II: Compound traits.** Compound traits represent the second category of individual difference variables found in the trait hierarchy. Compound traits refer to "unidimensional dispositions emerging from combinations of elemental traits, from the culture in which an individual lives, and from the learning history of the individual" (Mowen, 2000, p. 22). What is the key difference between elemental traits and compound traits? According to Mowen (2000), "unfortunately, the distinction between compound and elemental traits is somewhat vague and hard to operationalize. Based upon the definition of a compound trait, however, an empirical means of differentiating them from elemental traits can be derived" (p. 30). Compound traits are more narrowly focused than elemental traits. In other words, the elemental traits provide "general guides" in performing the behavior or task, while the compound traits offer more "direct guidance" in performing the behavior or task (Mowen, 2000, p. 30). For example, Mowen and Harris (2003) found that the combination of five elemental traits (e.g., consciousness, agreeableness, emotional instability, material resource needs, arousal needs) were positively associated with competitiveness (e.g., I enjoy competition more than others) as a compound trait. Other researchers using Mowen's 3M model (e.g., Mowen, 2004; Sun & Wu, 2011) have examined self-efficacy, impulsiveness, task orientation, and competitiveness as compound traits.

Three consumer psychographic characteristics were examined as compound traits: (1) market mavenism (i.e., having information about many kinds of products, places to shop, and other facets of markets), (2) social browsing (i.e., exploring new fashion trends and products popular among others), and (3) value consciousness (i.e., a concern for equally about low prices and product quality). Because social e-shopping involves gathering and sharing product-related information with others, market mavenism was selected. Market mavens are likely to be interested in product-related information and promotion usage (Ailawadi et al., 2001). In addition, social browsing was selected because it was found to be one of the dimensions of social shopping behavior concerning fashion (Kang & Park-Pops, 2011). Lastly, value consciousness was selected because social e-shopping allows consumers to make price comparisons and identify deals. Price and discount comparison were identified as advantages associated with usage of social shopping websites (Dennis, Morgan, Wright, & Jayawardhena, 2010).

The combination of elements traits including openness to experience, arousal needs, and material resource needs may contribute to both market mavenism and social browsing as compound traits. In addition, material resource needs as an elemental trait may provide a "general guide" for social e-shopping, while value consciousness as a compound trait may offer "direct guidance" for social e-shopping.

**Level III: Situational traits.** Situational traits represent the third category of individual difference variables in the trait hierarchy. Situational traits influence the surface traits located on the next level.  They result from[3] the joint effects of elemental and compound traits, as well as the press of the general situational environment (Mowen,

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[3] To examine this causality (i.e., situation traits result from the joint effects of elemental and compound traits), researchers should perform an experimental approach. However, previous researchers employing this 3M model performed an associational approach.

2000). For example, other researchers have conceptualized health motivation (Moorman & Matulich, 1993) and functional motives for gambling (Fang & Mowen, 2009) as situational traits because they manifested only in situations that dealt with health and gambling activity. Thus, the placement of functional motives as situational traits in this proposed model is consistent with Fang and Mowen's (2009) and Moorman and Matulich's (1993) studies.

Results from Park, Kee, and Valenzuela (2009) and Yun (2011) were fundamental to identifying functional motives for engaging in social e-shopping for apparel in Facebook commerce. Park et al. (2009, p. 730) identified the 'how and why' of media use as well as the motivations for specific uses for Facebook groups. Four types of gratifications (i.e., socializing, entertainment, self-status seeking, information-seeking) were recognized as the primary needs and motivations for participating in groups within Facebook. In subsequent research related to social e-shopping, Yun (2011) identified two key motive dimensions (i.e., information-oriented, socially-oriented) in her conceptual model identifying influences on intentions to social e-shop. Hence, based on Park's (2009) findings and Yun's (2011) model, (1) socializing gratification and (2) information-seeking gratification were located as situational traits. These functional motives may stimulate participation in specific activities including intention to social e-shop apparel.

**Level IV: Surface traits.** The most concrete traits and the immediate predictors of behavior are surface traits. The fourth level in the hierarchy, surface traits represent highly specific dispositions that result from the joint effects of elemental, compound, and situational traits as well as from the press of the context-specific environment (Mowen, 2000). In addition, they occur in narrower contexts than general situational traits. This

level includes tendencies which rely heavily on both situation and behavior and are closely associated with the concept of behavioral intention (Bosnjak et al., 2007). The placement of a specific behavioral intention, that is, intentions to social e-shop apparel using Facebook as a surface trait is consistent with Bosnjak et al.'s (2007) and Chen's (2011) research.

## Review of Related Research

This section provides a review of relevant research addressing online social shopping and social e-shopping in Facebook commerce.

### Online Social Shopping

Social shopping is a method of e-commerce in which shoppers and their friends take part in the shopping experience, imitating the social interactions found between people in physical stores (Social eCart, 2011). Social shopping can be subdivided into five categories: (1) group shopping sites, (2) shopping communities, (3) recommendation engines, (4) shopping marketplaces, and (5) shared shopping (Social eCart, 2011).

First, group shopping sites, such as Grooster, SocialShopper, Tippr, Groupon, Kactoos, LivingSocial, GoodNews, and BuyWithMe, encourage groups of people to purchase together at wholesale prices (Social eCart, 2011). Second, shopping communities allow people with shared interests to aggregate, discuss, or share information about products and shop (Social eCart, 2011). To date, there are several communities that specifically feature fashion items such as Kaboodle, Stylefeeder, and Polyvore. Third, recommendation engines (i.e., reviews) enable shoppers to offer advice to and receive input from fellow shoppers (Social eCart, 2011). Social shopping sites (e.g., ThisNext, Stylehive, Etsy) encourage consumers to create custom shopping lists

and share them with their friends. Social shopping startups (i.e., a web application or an agency for retailers that helps operate social shopping services on the retailers' websites) (e.g., Swipely, ShopSocially, Blippy) allow shoppers to ask shopping questions, to recommend purchased products to their friends, and to facilitate discussion and comparison shopping among people who are connected with each other online. Fourth, social shopping marketplaces (i.e., where markets or public sales using social e-shopping are held) (e.g., ThisNext, Stylehive, Etsy) attract sellers and buyers together to interact and transact (Social eCart, 2011). Fifth, shared shopping mechanisms (e.g., United Cloud's shared shopping, DecisionStep's shop together software) for ecommerce sites enable shoppers to create collaborative shopping groups in which one shopper can drive an online shopping experience for other shoppers and interact in real-time with the retailer and among other shoppers (Social eCart, 2011).

Dennis, Morgan, Wright, and Jayawardhena (2010) examined the effect of social e-shopping on enhancing young women's online shopping behavior. They first administered a pre-screening measure to determine whether participants ($n$ = 30) were hedonic or utilitarian in their shopping orientation and to ensure that there were an equal number of each type represented. Next, they conducted an experiment for the purpose of making a comparison between a traditional e-shopping website with a social e-shopping website. Finally, they conducted a follow-up focus group. In the experiment female participants ($n$ = 30) were asked to browse the traditional e-shopping website and the social e-shopping website. They were also questioned about their shopping experience and preferences. In the follow-up focus group participants ($n$ = 10; five hedonic and five utilitarian shoppers) were asked to explore both the traditional e-shopping website and

the social e-shopping website. They were also asked to indicate the features that made social e-shopping enjoyable, their purchase and revisit intentions towards social e-shopping, and their recommendations. Both utilitarian and hedonic shoppers found social e-shopping enjoyable and useful. Although many young female shoppers found the social e-shopping site challenging to use, they rated their enjoyment and usefulness of the social shopping site as more important than ease of use.

Previous quantitative researchers interested in online social shopping have focused their attention on purchase intentions. Variables investigated included reasons for trusting the shoppers' recommendations (i.e., perceived ability, benevolence, critical mass), trust in a website (Hsiao, Lin, Wang, Lu, & Yu, 2010), motivation, value, and perceived self-efficacy of consumers (Dennis et al., 2010). For example, Hsiao et al. (2010) investigated reasons why consumers trust product recommendations on social shopping websites and examined the impact of trust on consumers' intention to purchase products from an online shopping website. They conducted an online survey of the members of the Bahamut website (www.gamer.com.tw). This website is the most popular game-based community website with developed social shopping-related services in Taiwan. Participants ($n = 1,219$) were asked to answer questions about perceived ability, benevolence/integrity, critical mass, web reputation, website quality, institution assurance, trust in recommendations, and intention to purchase products. Perceived ability, perceived benevolence/integrity, perceived critical mass, and trust in a website were important determinants of trust in product recommendation in a SNS. Further, trust in product recommendations positively affected consumers' purchase intention from the website.

In subsequent research, Yun (2011) investigated the relationships among social e-shopping motivation, values, and behavioral intention. She collected data from members of online consumer panels of a web survey service company. Participants (*n* = 625) were online consumers who joined web communities or online social networking to search for or share shopping information. They were asked about (1) their motivation, (2) perceived credibility of intellectual capital (e.g., I consider other consumers' reviews provided in a social shopping environment to be relevant and clear), (3) perceived credibility of social capital (e.g., in a social shopping environment, there are several people online I trust to help make important decisions), (4) perceived social shopping value, (5) perceived self-efficacy (e.g., the use of other consumers' reviews and recommendations as shopping advice affects the accuracy of my decisions), (6) online word-of-mouth (WOM) intention (e.g., I would like to share my favorite products or shopping experiences with others), and (7) purchase intention on social shopping websites. Perceived credibility and motivation positively affected perceived social shopping value, which in turn affected online WOM intention as well as purchase intention on social shopping websites. Consumers who sought utilitarian value were more likely to have firm judgments of their ability to shop online to reduce risk and achieve good quality decisions.

**Online Social Shopping in Facebook Commerce**

Social networks have grown phenomenally over the last few years. There are about 180 well-known SNSs. Facebook has the largest group with 750 million users. Qzone has 481 million users, Twitter has 250 million users, LinkedIn has 115 million users, MySpace has 50 million users, and GooglePlus has 25 million users (Qualman,

2011). The United States has the most Facebook users (94,748,820), followed by the

United Kingdom (22,261,080), Turkey (14,215,880), France (13,396,760), and Canada

(13,228,380) (Burbary, 2011).

Facebook users spend over 700 billion minutes a month on Facebook and install

20 million applications per day. Over 250 million people interact with Facebook from

outside their official website on a monthly basis, across two million other websites. In

just 20 minutes on Facebook over one million links are shared, two million friend

requests are accepted and almost three million messages are sent (Hepburn, 2011).

Further, 48% of young people said they now get their news through Facebook. Thus, the

reasons for creating an online store on Facebook are obvious. Offers on Facebook can

spread virally.

Facebook pages are not just for communicating. By utilizing applications like

"Facebook Connect" which enables users to ask their Facebook friends' opinions on a

social shopping site, Facebook commerce (f-commerce) helps businesses facilitate and

execute sales transactions. Marketers have begun to use f-commerce to enhance the

shopping experience by facilitating customer acquisition (i.e., trial), customer loyalty (i.e.,

re-purchase), and customer advocacy (i.e., word of mouth) (Marsden, 2011).

For instance, the social commerce platform Payvment has launched the first-

ever "Shopping Mall" on Facebook. Other examples of shopping places, "Storenvy

Store" and "Social eCart," also have begun to sell products using a Facebook page.

Specifically, the "Shopping Mall" provides over one million searchable products and

contains a directory of e-commerce stores providing items representing celebrity brands

to local merchants (Sachoff, 2011). Payvment has signed up about 50,000 retailers selling

about 1.2 million items (Sachoff, 2011). It is the place consumers discover new brands, great deals, and the products they and their friends like. While they are shopping, they can also post personalized recommendations and make comments on any item in the store. Additional examples of shopping places include well-known multichannel brands such as Lands' End, Hallmark, and Delta Airlines. Each allows consumers to buy their products from inside their Facebook page. Thus, social networks (i.e., Facebook) utilizing social shopping applications have enormous potential to transform the apparel retail landscape (Pookulangara & Koesler, 2011).

Research concerning the topic of consumer response to social e-shopping using SNSs is just beginning. Cha (2009) investigated how factors influencing shopping attitudes on SNSs may differ according to product type: real items (i.e., books, tickets, DVDs, clothing, computers) and virtual items (i.e., profile layouts, virtual gifts, avatars, music to be played on an individual's profile). She conducted a survey of male and female college students ($n = 167$). Participants were asked about their attitude toward shopping on SNSs, its perceived usefulness, ease of use, enjoyment, perceived fit, and perceived security for each real and virtual item as well as their experience with social networks and Internet purchasing experiences. In terms of real items, her findings revealed age, usefulness, ease of use, perceived security, and perceived fit were related to holding favorable attitudes toward shopping on SNSs. For virtual items, gender, social networking site experience, perceived ease of use, and fit were associated with holding favorable attitudes toward shopping on SNSs.

Pookulangara and Koesler (2011) proposed a conceptual model proposing cultural influences on consumers' usage of SNSs as well as intention to use SNSs for online

shopping. They combined Hofstede's cultural dimensions (i.e., individualistic /collectivistic cultures, uncertainty avoidance cultures, short/long term orientation cultures), the Technology Acceptance Model's (Davis, 1986) variables (i.e., perceived ease of use, perceived usefulness), subjective norm, and social search (i.e., the process of seeking information online with the assistance of friends and unknown persons). They proposed that (1) subjective norm, social search, and self-efficacy would influence the perceived usefulness of social networks and the perceived ease of use of social networks as well as intention to use social networks and that (2) cultural dimensions would influence subjective norm, social search, and self-efficacy. They did not, however, test the relationships they proposed.

**Uses and gratifications: SNSs and online social shopping.** Uses and gratifications (U & G) refers to the 'how and why' of media use as well as the motivations of specific uses and the satisfaction that people acquire from such use (Joinson, 2008). The concept of uses and gratifications was first developed in research on the effectiveness of radio communication during the 1940s (Huang, 2008). Uses and gratifications can be considered from a psychological communication perspective focusing on how people use mass-media and other forms of communication, such as interpersonal communication, to satisfy their needs and wants (Rubin, 2002). A basic assumption of uses and gratifications is that users are significantly engaged in media usage and interact extensively with communication media. Given the inherent interactive and user-directed nature of the Internet, uses and gratifications is particularly appropriate for examining consumer Internet use (Huang, 2008).

Previous researchers have explored the uses and gratifications approach in non-traditional media, examining factors such as e-mail (Dimmick, Kline, & Stafford, 2000), Internet use (James, Wotring, & Forrest, 1995; Stafford & Gonier, 2004; Stafford & Stafford, 2001), wireless advertising (Peters, Amato, & Hollenbeck, 2007), SNSs (Park et al., 2009; Raacke & Bonds-Raacke, 2008; Urista, Dong, & Day, 2008), and user-generated media (Shao, 2009). For example, Stafford and Gonier (2004) identified several gratifications from Internet use that motivated users' behaviors. They conducted a survey of online consumers ($n = 915$) with the assistance of America Online (AOL). They found that gratifications in online activity included Web searching, the acquisition of information (i.e., education, ideas, knowledge, news, learning, research), the ability to engage in interpersonal communication, and socialization (i.e., chatting, interaction with friends and others).

In terms of SNSs, Raacke and Bonds-Raacke (2008) examined (1) why users use these SNSs, (2) what the typical college users' characteristics were, and (3) what uses and gratifications (U & G) was satisfied by using SNSs. They conducted a survey of male and female college students ($n = 119$). Very popular uses and gratifications included keeping in touch with both old and current friends, followed by posting/looking at pictures, and making new friends. Less commonly reported uses and gratifications included learning about events, posting social functions, feeling connected, and sharing information about oneself.

Urista, Dong, and Day (2008) also identified uses and gratifications of SNSs. They conducted focus groups with male and female college students ($n = 50$) who were members of MySpace or Facebook. They asked about why young adults used SNS

relative to (1) efficient communication, (2) convenient communication, (3) curiosity about others, (4) popularity, and (5) relationship formation and reinforcement. These young adults were likely to depend heavily on the Internet for the purposes of entertainment and information-seeking. They used SNSs to experience selective, effective, and instant connection with others as well as a means to search for the approval and support of other users.

Park et al. (2009) examined Facebook groups' uses and gratifications and how demographics and political or civic participation offline (e.g., volunteering for charity /political groups and participating in election) were related to gratifications. They conducted an online survey of Facebook group users ($n = 1,715$). They asked about Facebook users' needs for participating in Facebook groups and their experience regarding political and civic engagement. Their findings revealed that uses and gratifications with regards to participation in Facebook groups included (1) socializing gratification (i.e., engagement in Facebook groups to fulfill socializing needs and for meeting and talking with others, as well as finding peer support and a sense of community), (2) entertainment gratification (i.e., engagement in Facebook groups for leisure and amusement needs), (3) self-status seeking gratification (i.e., engagement in Facebook groups for feeling peer pressure, wanting to look cool, developing their careers, and seeking and maintaining personal status), and (4) information-seeking gratification (i.e., engagement in Facebook groups for learning about on- and off-campus events and details regarding specific products and services). They also found that information-seeking gratification for Facebook groups use was more correlated to political or civic engagement offline than entertainment gratification.

In an online social shopping context, previous researchers have not specifically examined uses and gratifications. However, Yun (2011) categorized social e-shopping motivations into two key motive dimensions based on the literature for online shopping and for social networking. One motive dimension was labeled information-oriented and the other was socially-oriented. In other words, motivations to use social e-shopping occurred when consumers need product information and social interaction to help them reduce risk and uncertainty in their purchase decisions. She conducted an online survey ($n = 625$) of the online social shoppers or the members of web communities or SNSs. Information-oriented motives were positively related to perceived utilitarian value (e.g., overall, I find reviews or recommendations by other consumers useful in finding suitable products), which in turn was positively related to purchase intentions utilizing online social shopping as well as online word-of-mouth intentions (e.g., I would like to share my favorite products or shopping experiences with others). Socially-oriented motives were positively related to perceived hedonic value (e.g., social shopping that provides interactive product information and uses other consumers' reviews or recommendations as shopping advice is truly a joy), which in turn was positively related to purchase intentions utilizing online social shopping as well as online WOM intentions.

**Consumer psychographic characteristics.**

*Market mavenism***.** Market mavens are referred to as "individuals who have information about many kinds of products, places to shop, and other facets of markets. They initiate discussions with consumers and respond to requests from consumers for market information" (Feick & Price, 1987, p. 85). Previous researchers interested in market mavens have focused their attention on consequences and antecedents of market

mavenism including word-of-mouth communications about retail image and retail settings (Higie, Feick, & Price, 1987), couponing behaviors (Price, Feick, & Guskey-Federouch, 1988), out-of-store promotion usage (Ailawadi et al., 2001), affinity for technology, need for cognition, optimism, and self-efficacy (Geissler & Edison, 2005), self-esteem, tendency to conform, interpersonal influence, and need for uniqueness (Clark & Goldsmith, 2005), new brand trial, information-seeking, risk-taking, and innovativeness (Ruvio & Shoham, 2007).

For example, Higie et al. (1987) investigated word-of-mouth communications about retail image dimensions across three major types of retail settings (i.e., grocery, discount, department stores). Participants were residents ($n = 303$) of a metropolitan county in the U.S. Northeast and participated through telephone interviews. They were asked about salient dimensions of retail image (i.e., quality of merchandise, special sales, prices, variety of products, return policy, service) and market mavenism. They found that market mavens were likely to frequently provide information about retailers. As topics of conversation, grocery stores were more commonly talked about than discount and department stores.

In subsequent research, Price et al. (1988) examined couponing behaviors of market mavens. Participants were residents ($n = 213$) of a metropolitan county in the U.S. Northeast and researchers gathered information through telephone interviews. Participants were asked about market mavenism, use of shopping lists, budgeting for groceries, percentage of trips using coupons, number of coupons used per week, planning shopping using advertising, and number of coupons given/received per month. Market

mavens were likely to be heavy coupon users, be active in offering coupons to others, budget their expenditures, use shopping lists, and plan their purchases using advertising.

Geissler and Edison (2005) examined market mavens' attitudes towards general technology. Participants were male and female consumers ($n$ = 565) between the ages of 18 and 65 years. They were asked about market mavenism, affinity for technology (e.g., I find most technology easy to learn), need for cognition (e.g., I would prefer complex to simple problems), dispositional optimism (e.g., I am always optimistic about my future), self-efficacy (e.g., I can usually handle whatever comes my way), and locus of control (e.g., people's misfortunes result from the mistakes they make). They found that market mavens scored higher on the affinity for technology, need for cognition, optimism, and self-efficacy than non-mavens.

In similar research, Clark and Goldsmith (2005) investigated relationships between psychological influences and market mavenism. Participants were U.S. college students ($n$ = 644). They were asked about market mavenism, global psychological constructs (i.e., self-esteem, tendency to conform), consumer traits (i.e., susceptibility to interpersonal influence [e.g., I achieve a sense of belonging by purchasing the same products and brands that other purchase], need for uniqueness), and opinion leadership. Their findings revealed that individuals who have high levels of self-esteem, tendency to conform, a need for uniqueness, and a willingness to conform to the expectations of others regarding purchase decisions (i.e., susceptibility to normative influence) were likely to be market mavens. Market mavens were also likely to be opinion leaders.

Ruvio and Shoham (2007) investigated the effect of innovativeness and exploratory behavior on market mavenism and opinion leadership. Participants were

Israeli consumers (*n* = 142) and were asked about market mavenship, opinion leadership, new brand trial, information seeking, risk-taking, and innovativeness. They found that market mavens were likely to be innovative, be users of new brands, seek information, and be risk-takers. Opinion leaders were also likely to be innovative and be users of new brands.

Using mavenism as a general descriptive trait, Ailawadi et al. (2001) investigated psychographic and demographic traits that potentially drive usage of store brands and national brand promotions. Participants were shoppers (*n* = 319) who were intercepted at four shopping malls located in the U.S. They were asked about their demographic and psychographic profiles (i.e., price consciousness, financial constraints, shopping enjoyment, innovativeness, variety seeking, impulsiveness, mavenism, motivation to conform, brand/store loyalty, need for cognition, time pressure), store brand usage, and our-of-store national brand promotion usage. They found that price consciousness, quality consciousness, and store loyalty were related to store brand usage. Financial constrains (e.g., my household budget is always tight) and impulsiveness were related to in-store promotion usage. Mavenism, shopping enjoyment, motivation to conform, and need for cognition (e.g., thinking is my idea of fun) were related to out-of-store promotion usage.

*Social browsing.* Social browsing refers to "exploring new fashion trends and products popular among others" (Kang & Park-Poaps, 2011, p. 341). There is limited research concerning social browsing. However, one team of researchers has developed a measure of social browsing that will facilitate future research efforts. Kang and Park-Poaps (2011) developed a scale to measure components of social shopping for fashion.

First, they conducted in-depth interviews with 17 college students for item generation. Second, they pretested these items to enhance content and face validity. Then, they conducted exploratory factor analysis with 132 students for the purposes of item purification. Finally, they validated the measures (i.e., confirmatory factor analysis, convergent and discriminant validity, predictive validity) with 858 students. They found a five-dimension scale with 16 behavioral items including social browsing, social bonding (e.g., often go shopping for fashion with friends and ⁄ or family), opinion seeking, power seeking (e.g., when I enter a store, I often receive attention from store personnel), and socio-networking (i.e., I often make new friends through fashion shopping and ⁄ or fashion talk). These five dimensions were all positively related to shopping expenditures (i.e., monthly spending on fashion) and shopping enjoyment.

*Value consciousness.* Value consciousness refers to a concern for paying low prices, subject to some quality constraint (Ailawadi et al., 2001). Most of the researchers interested in value consciousness have examined WOM communications (Mowen, Park, & Zablah, 2007), online apparel consumption (Cowart & Goldsmith (2007), online shopper characteristics (Brashear et al., 2009), and social e-shopping behaviors (Dennis et al., 2010). Specifically, Mowen et al. (2007) investigated word-of-mouth communications using the 3M model (Mowen, 2000) he developed earlier. Participants were college students ($n = 285$) in South Korea. They were asked about seven personality traits (i.e., introversion, conscientiousness, openness to experience, agreeableness, emotional stability, need for material resources, need for arousal, need to enhance body), three compound traits (need for play, need for information, value consciousness), three situational traits (shopping enjoyment, fashion innovativeness,

31

susceptibility to influence) and one surface trait (sending/receiving market information) (e.g., I like to introduce new brands and products to others. I ask other people for information about products, place to shop, or sales). One elemental trait (i.e., need for material resources), along with two compound traits (i.e., need for information, value consciousness) and two situational traits (i.e., fashion innovativeness, shopping enjoyment) were related to sending and receiving market information.

Cowart and Goldsmith (2007) examined the influence of consumer decision-making styles on online apparel consumption. Participants were college students ($n = 357$). They were asked about consumer decision-making styles and online apparel buying behavior. College students who were quality conscious, brand conscious, and fashion conscious as well as enjoyed hedonistic shopping, were impulsive, and were brand loyal were likely to shop for apparel online.

In subsequent research, Brashear et al. (2009) developed a profile of the Internet shopper. Participants were Internet shoppers and non-Internet shoppers in six countries (i.e., 790 U.S. shoppers, 199 Brazil shoppers, 194 China shoppers, 184 New Zealand shoppers, 201 England shoppers, 188 Bulgaria shoppers). Participants were asked about price consciousness, importance of convenience, innovativeness, risk aversion, attitude toward shopping, direct marketing, advertising, brand consciousness, impulsiveness, variety seeking, e-mail usage, and Internet usage. They found that Internet shoppers were likely to be more price conscious than non-Internet shoppers in China, New Zealand, and England. Internet shoppers in all six countries were similar in terms of their desire for convenience, were likely to impulsive, have favorable attitudes toward direct marketing and advertising, and were heavy users of e-mail and the Internet.

**Personality traits.**

*Openness to experience.* Openness to experience refers to the need to find novel solutions, be original, and use one's imagination (Mowen, 2000). Previous researchers interested in this variable have focused their attention on consequences of openness to experience including how it may predict intention to shop online (Bosnjak et al., 2007; Wang, Wang, & Wang, 2006) and market mavenism (Goodey & East, 2008). For instance, Wang et al. (2006) investigated how cognition and personality would affect young adults' attitude toward online shopping and their intention to shop online. Participants were college students ($n = 472$) and were asked about their Internet knowledge, Internet-based information search, perceived risk of online shopping, risk-taking propensity, self-efficacy (e.g., I enjoy trying to learn new things when they look too difficult for me), attitude toward online shopping, and intention to shop online. Consumers who were open to experience were likely to have favorable attitudes toward online shopping which affected their intention to shop online. Overall, young adults who were risk-takers, open to new experience, and had a high level of self-efficacy were likely to buy online.

In subsequent research, Bosnjak et al. (2007) examined personality determinants of online shopping. They conducted an online survey of Internet users ($n = 808$). They were asked about five elemental traits (i.e., neuroticism, conscientiousness, extraversion, openness, agreeableness), four compound traits (i.e., need for cognition, need to evaluate, need for arousal, need for material resources), two situational traits (i.e., affective and cognitive involvement), and one surface trait (i.e., intention to shop online). They found that Internet users who were open to experience (i.e., elemental trait) were likely to need

33

to evaluate (i.e., compound trait) and intend to shop online (i.e., surface trait). In addition, Internet users who were neurotic and agreeable (i.e., elemental traits), had a need for cognition (i.e., compound trait), and had affective involvement (i.e., situational trait) were likely to intend to shop online.

Goodey and East (2008) investigated the relationships between personality traits and mavenism. They conducted a mail survey of U.K. consumers ($n = 164$). Consumers completed measures of market mavenism, self-esteem, and materialism along with a personality inventory (i.e., extroversion, agreeableness, conscientiousness, emotional stability). They also responded to a measure of motivations for providing WOM. Male consumers who were open to experience were likely to be market mavens. Consumers who were materialistic and had high levels of education were also likely to be market mavens. They found no motivational differences for giving WOM between mavens and non-mavens.

*Arousal needs.* Arousal needs refer to a desire for stimulation and excitement (Mowen, 2000). Previous researchers interested in arousal needs and adoption of retail technologies have examined the effect of arousal needs including image interactivity and willingness to purchase online (Fiore, Jin, & Kim, 2005), text messaging use and mobile commerce intention (Mahatanankoon, 2007), and satisfaction with online shopping and purchase intention online (Ha & Lennon, 2010). For example, Fiore et al. (2005) investigated hedonic value from image interactivity and response toward an online store. They conducted an online survey with college students ($n = 103$). They had students interact with a stimulus website (i.e., guess.com) that provided an opportunity for the participants to interact with the images provided. Students were asked to respond to

measures of optimum stimulation level (i.e., arousal seeking tendency), attitude, image interactivity (i.e., enlargement of front views of products, virtual model), emotional pleasure, recreational shopping, and willingness to purchase and patronize. Consumers who sought high levels of stimulation were likely to prefer recreational shopping and to try image interactivity as a stimulating experience, which was also related to their willingness to purchase.

Mahatanankoon (2007) investigated the effects of personality traits on text-messaging activities and mobile commerce intention. They conducted an online survey of college students who were text-messaging users ($n = 246$). Users responded to measures of innovativeness, individual playfulness, optimum stimulation level, text messaging use, and m-commerce intention. They found that users who sought high levels of stimulation were likely to use text messaging and intended to use m-commerce. In addition, users who had high levels of innovativeness and individual playfulness were likely to seek high levels of stimulation.

In subsequent research, Ha and Lennon (2010) examined consumer pleasure and arousal induced by online visual merchandising (VMD). They conducted an experiment (using mock websites) with female college students ($n = 1,634$). The study was a $2 \times 2 \times 2$ between subjects experimental design with two levels of high task relevant cues (i.e., medium, high amount), two levels of low task relevant cues (i.e., presence, absence), and two levels of situational involvement (i.e., high browsing with a purchasing goal, low browsing). High task relevant cues include online VMD cues including "verbal and pictorial information directly relevant to consumers' shopping goal" (p. 144). Low task relevant cues include "those not directly relevant to shopping goals such as colors,

borders and background patterns, fonts, animation, music, icons, pictures for decorative purposes, and even the amount of white space" (p. 144). Participants were asked about pleasure and arousal, their satisfaction, and purchase intention. Participants who reported high levels of arousal and pleasure were likely to be satisfied and intended to shop online. In addition, they found pleasure and arousal mediated the relationship between high task relevant cues and satisfaction/purchase intention.

*Material resource needs.* Material resource needs refer to the desire to collect and possess material goods (Mowen, 2000). Pervious researchers have addressed the consequences of material resource needs in several contexts including consumption behavior (Tatzel, 2002), market mavenism (Goodey & East, 2008), word of mouth intention (Mowen et al., 2007) and the relationship between values and materialism (Kilbourne, Grunhagen, & Foley, 2005). For example, Tatzel (2002) reviewed money dispositions, materialism, and price-related behavior based on literature. They reported that consumers who are reluctant to spend and were low in materialism were likely to have price aversion, be non-spender, and be a saver. Consumers who were reluctant to spend and were high in materialism were likely to be value seekers, be bargain hunters, and enjoy price comparison shopping. In addition, being overly tight with money, overly loose with money, materialistic, or overly concerned with financial success were related to low overall well-being.

Kilbourne, Grunhagen, and Foley (2005) investigated the relationships between materialism and individual values. Participants were college students in U.S., Canada, and Germany ($n = 404$). They were asked about their general values including success, centrality (e.g., need, importantance), happiness, self-enhancement, self-transcendent

values, and materialism. The strongest indicator of materialism was self enhancement values (i.e., wealth, authority, power). However, self-transcendent values (i.e., quality, peace, justice) were negatively related to materialism.

**Interpersonal influences.**

***Tie strength and homophily.*** Tie strength refers to the potency of the bond between members of a network (Granovetter, 1973; Mittal et al., 2008). It refers to a combination of the amount of time, degree of emotional intensity, level of intimacy, and degree of reciprocity between two or more members of a network. Homophily refers to the degree to which individuals who interact are congruent or similar on certain attributes such as demographic variables (Rogers & Bhowmik, 1970) and are similar in their beliefs, values, experience, and lifestyle (Gilly et al., 1998). There is limited research concerning the topic of tie strength and homophily. Previous researchers interested in tie strength have discussed relationships between social capital and tie strength (Pigg & Crank, 2004). They noted two types of social capital: bonding social capital and bridging social capital. Binding social capital is usually associated with having close relationships with others (i.e., strong ties). In contrast, bridging capital is associated with weak ties. Previous researchers interested in homophily have investigated the effect of homophily on credibility and evaluation of health information (Wang, Walther, Pingree, & Hawkins, 2008), examined SNS group users' homophily (Thelwall, 2009), and how homophily influences eWOM behaviors on a SNS (Chu & Kim, 2011).

Wang et al. (2008) investigated credibility and homophily as underlying factors impacting social influence with regard to online health information. They conducted an online survey with two levels of messages (i.e., Web-page message vs discussion board

message), two levels of discussion board messages (i.e., didactic vs narrative), and two levels of message content (i.e., how to deal with the nausea from chemotherapy vs how to deal with feelings of inadequacy when a family member had late-stage cancer). Participants were parents of college students and 'cancer-related Usenet newsgroups' ($n$ = 97). Participants were asked about their homophily, the credibility of online health information, to complete an evaluation of health information (e.g., I believe that what this source said was true), and to indicate their likelihood of acting on advice given. The more homophilious the online health information was perceived to be, the more likely individuals were to adopt the advice offered. Homophily was a significant determinant of credibility perceptions and the persuasive process (i.e., evaluation) for health information on Websites as well as health information in online discussion groups.

In an SNS context, Thelwall (2009) examined homophily in MySpace. He conducted an online survey of MySpace users ($n$ = 2,567). Users were asked about their homophily and demographic characteristics. His findings revealed that there was a wide range of homophily in MySpace. Active Friends tended to be more similar than would be expected. The foundation for participants' homophily included attitude toward children along with a range of existing known sources (i.e., ethnicity, age, religion) as well as other likely offline sources (i.e., sexual orientation, country, marital status). MySpace commenting activity, number of friends, and reasons for joining MySpace were important sources of homophily. Although females tended to comment more than males, gender was not found to be a predictor of homophily.

Chu and Kim (2011) investigated antecedents of consumer engagement in eWOM in SNSs. They conducted an online survey of college students ($n$ = 363). Participants

were asked about tie strength, homophily, perceived trust, normative influence (e.g., if other people can see me using a product, I often purchase the brand they expect me to buy), informational influence (e.g., I often consult other people to help choose the best alternative available from a product class), and eWOM behaviors (e.g., opinion-seeking and giving) in SNSs. Consumers experiencing closeness and placing importance on the connections they had with their 'friends' on SNSs were likely to seek opinions using SNSs. In addition, consumers who trusted their 'friends' on the SNS and who were influenced by their friend's behaviors were likely to both seek and give opinions using SNSs.

**Hypotheses Development**

Because Facebook is the largest SNS and has been quickly developing social e-shopping sites, it was decided to conduct the research in the context of Facebook. These hypotheses were developed specifically for this SNS.

**Situational Traits: Socializing and Information-Seeking Gratifications**

Shopping motives are the determinants of behavior that compel consumers to the marketplace to satisfy their internal needs (Westbrook & Black, 1985). As noted, Yun (2011) categorized social e-shopping orientations or motivations into two key motive dimensions: information-oriented and socially-oriented. In other words, consumers are motivated to use social shopping when they need product-related information and/or social interaction to help them decrease risk and uncertainty in their purchase decisions (Yun, 2011) as well as to confirm their decisions.

With the increasing importance of social interaction on the Internet as well as the desire to be connected and share ideas with others has been identified as a dominant motivation for online social media use and online shopping (Joinson, 2008; Park et al., 2009). Online social experiences (e.g., seeking new acquaintances, communication with others with similar preferences, finding product recommendations, peer/reference group influence) encourage consumers to engage in social e-shopping (Yun, 2011). These findings lead to the prediction that users who were likely to social e-shop for the purpose of socializing may intend to social e-shop apparel.

Consumers seek information or opinions to reduce perceived risk and to increase their likelihood of success in product choice (Goldsmith & Horowitz, 2006). Yun (2011) indicated that in social e-shopping, consumers were also likely to access, search, identify,

and acquire information from consumer-generated content (e.g., reviews) in order to stay or become informed about products and trends before making a purchase decision. Yun (2011) also found that individuals who intended to social shop and to share their views (WOM) also used social networks to seek information. These findings lead to the prediction that users who were likely to social e-shop for the purpose of information-seeking may intend to social e-shop apparel. Based on these research findings and this reasoning, the following hypotheses were formulated:

**H1-2:** Socializing gratification (H1) and information-seeking gratification (H2) are positively related to intentions to social e-shop apparel.

**Compound Traits: Market Mavenism**

Market mavens embrace general market knowledge and their potential influence on other consumers (Cal, 2004; Goodey & East, 2008; Ruvio & Shoham, 2007). Market mavens are similar to opinion leaders in that their influence is based on knowledge and expertise. However, market mavens and opinion leaders are different in that opinion leaders tend to be experts on specific category products; market mavens tend to be experts on general aspects of many products (Ruvio & Shoham, 2007).

**Socializing gratification.** One of the characteristics of mavenism is the desire to help others by sharing information (Ruvio & Shoham, 2007). Previous researchers found mavens were more likely to conform to the expectations of others than non-mavens (Clark & Goldsmith, 2005). Due to this tendency to conform, market mavens may need to belong to certain communities and stay in touch with people. Thus, it was anticipated that users exhibiting market mavenism would be likely to social e-shop for the purpose of

communicating with other people to share similar shopping experiences (i.e., socializing gratification).

**Information-seeking gratification.** Market mavens enjoy gathering and disseminating information about a wide range of products (Geissler & Edison, 2005). They tend to place extra importance on both quality and price (Williams & Slama 1995), offer others information related to changed prices (Ruvio & Shoham, 2007), use shopping lists and coupons frequently, and budget their shopping more so than non-mavens (Price et al., 1988). Mavens are also likely to have high levels of need for cognition (i.e., the degree to which a person tends to engage in and enjoy effortful information processing or thinking) than non-mavens (Geissler & Edison, 2005). In order to become experts on multiple aspects of markets for many products and services, market mavens could gather or give information using SNSs. Thus, it was anticipated that users who exhibited market mavenism would be likely to social e-shop for the purpose of information-seeking gratification.

**Intentions to social e-shop apparel.** Although not directly within the context of social e-shopping, some evidence shows that market mavens are particularly attentive to media as a basis for their expertise (Higie et al., 1987). They tend to read direct mail and local advertising (Higie et al., 1987) and to be heavy users of coupons (Price et al., 1988). Previous researchers also found that market mavens were likely to be interested in out-of-store promotion usage (Ailawadi et al., 2001) and to intend to forward mobile viral content (Wiedemann et al., 2008). These findings lead to the prediction that users who exhibited market mavenism would be interested in new shopping formats and thus, may

42

intend to social e-shop apparel. Based on these research findings, the following

hypotheses were formulated.

**H3a-c:** Market mavenism is positively related to socializing gratification (a),

information-seeking gratification (b), and intentions to social e-shop apparel (c).

**Compound Traits: Social Browsing**

   **Socializing gratification.** Social browsing refers to exploring new fashion

trends and products popular with other people (Kang & Park-Poaps, 2011). Previous

researchers found that social browsing was positively correlated with interpersonal

influence (Kang & Park-Poaps, 2011). Because social browsing involves looking for or

buying new fashion products that are popular with friends, individuals who have high

levels of social browsing may talk about new fashion products with their friends and

experience a social connection. Therefore, it was expected that users exhibiting high

levels of social browsing would be likely to social e-shop for the purpose of socializing

gratification.

   **Information-seeking gratification.** Kang and Park-Poaps (2011) demonstrated

that social browsing was positively correlated with attention to social comparison

information. Individuals who pay attention to and follow what others wear and purchase

may need to obtain information related to fashion products from others. Thus, it was

proposed that users with high levels of social browsing would be likely to social e-shop

for the purpose of information-seeking gratification.

   **Intentions to social e-shop apparel.** There is limited research on whether social

browsing is positively related to intentions to social e-shop apparel. Facebook users who

often buy fashion products that are similar to what others are wearing may acquire advice

or recommendation from others, collaborate online, and form social shopping communities. Thus, it was anticipated that users who engaged in social browsing may intend to social e-shop apparel. Based on this reasoning, the following hypotheses were developed.

**H4a-c:** Social browsing is positively related to socializing gratification (a), information-seeking gratification (b), and intentions to social e-shop apparel (c).

**Compound Traits: Value Consciousness**

The Internet offers consumers a broad range of information for very little investment of time and money (Hoffman & Novak, 1996). One advantage of reduced search costs and price transparency is that consumers can easily seek the lowest prices for acceptable quality products and service on the Internet (Brashear et al., 2009). Given their product search capabilities for the best price and value, online shoppers are regarded as well-informed consumers (Hoffman & Novak, 1997; Smith, 2002). As noted previously, value-conscious consumers tend to be concerned equally about low prices and product quality. They also tend to check prices, compare the prices of different brands, and get the best value for their money.

**Socializing gratification.** In the context of SNS, the effect of value consciousness on socialization gratification during social e-shopping using Facebook has yet to be investigated. In order to obtain information related to the best value for their money, value-conscious consumers may communicate with other people who share similar shopping experiences. Thus, it was proposed that users who were value conscious would be likely to social e-shop for the purpose of socialization gratification.

**Information-seeking gratification.** Value conscious consumers were likely to introduce new brands and products to others and to ask other people for information about products, places to shop, or sales (Mowen et al., 2007). Thus, it was anticipated that users who were value conscious would be likely to social e-shop for the purpose of information-seeking gratification.

**Intentions to social e-shop apparel.** Although it is not directly related to social e-shopping using SNSs, previous researchers support the relationship between price/value consciousness and online shopping behavior (Cowart & Goldsmith, 2007; Konus et al., 2008). Specifically, the frequency of online shopping was significantly associated with consumers' price/value consciousness (Cowart & Goldsmith, 2007). In the social e-shopping context, Dennis et al. (2010) found that utilitarian shoppers mentioned a price and discount comparison as advantages of social shopping web sites. Thus, it was expected that users who were value conscious may intend to social e-shop apparel. Based on these research findings and reasoning, the following hypotheses were developed:

**H5a-c:** Value consciousness is positively related to socializing gratification (a), information-seeking gratification (b), and intentions to social e-shop apparel (c).

**Elemental Traits: Openness to Experience**

Individuals with greater openness to new experiences tend to have an interest in varied experiences for their own sake (McCrae, 1987). Openness to experience encompasses such human attributes as vivid fantasy, artistic sensitivity, depth of feeling, behavioral flexibility, intellectual curiosity, and unconventional attitudes (McCrae, 1996).

**Market mavenism.** Individuals that are open to experience are more likely to have broad interests and to seek new experiences compared to those less open to

experience (i.e., individuals described as set in their ways, practical, and traditional) (Crozier, 2000). Market mavens have been found to try new products (Elliot & Warfield, 1993). Therefore, because openness to experience involves seeking out new experiences and having broad interests (Crozier, 2000), openness to experience may also be related to trying new products similar to the market mavenism tendency. Goodey and East (2008) found a positive relationship between openness to experience and male mavens. These findings supported the prediction that users who were open to experience would exhibit market mavenism.

**Social browsing.** The connection between openness to experience and social browsing is uncertain. Individuals with greater openness to new experiences are likely to be curious, have broad interests, and be interested in variety (John & Srivistava, 1999). This personality trait may allow individuals to look for new trends and products used by their friends. Thus, it was anticipated that users who were open to experience would also engage in social browsing.

**Intentions to social e-shop apparel.** Previous researchers have examined the relationship between openness to experience and online shopping behavior. Consumers who were open to experience were likely to have favorable attitudes toward online shopping (Wang et al., 2006) and intended to shop online (Bosnjak et al., 2007). Subsequently, Mowen et al. (2007) found that consumers who were open to experience were likely to ask other people for information about products, places to shop, or sales. Online social shopping features product-related information. Thus, it was proposed that users who were open to experience may intend to social e-shop apparel. Based on these research findings and reasoning, the following hypotheses were formulated:

46

**H6a-c:** Openness to experience is positively related to market mavenism (a) social

browsing (b), and intentions to social e-shop apparel (c).

**Elemental Traits: Arousal Needs**

The next set of hypotheses was developed to examine whether arousal needs are

related to market mavenism, social browsing, and intentions to social e-shop apparel.

**Market mavenism.** Individuals with a need for arousal always want to do

something different (Mowen, 2000). Previous researchers found that mavens were likely

to show a need for uniqueness (Clark & Goldsmith, 2005). It seems that mavens wish to

differentiate themselves from others. Individuals who exhibited a need for arousal tended

to think it was necessary to take risks sometimes (Mowen, 2000). Ruvio and Shoham

(2007) demonstrated that individuals who had risk-taking tendency and preferred new

brand trials were likely to exhibit market mavenism. Thus, it was anticipated that users

who needed arousal would also exhibit market mavenism.

**Social browsing.** Little investigation has been completed that relates the effect of

need for arousal to social browsing. The need for arousal involves seeking new

experiences. This tendency may enable consumers to look for new fashion products and

brands that are popular among their friends. Therefore, it was presumed that users who

needed arousal would engage in social browsing.

**Intentions to social e-shop apparel.** Individuals who need arousal may seek

environmental stimulation (i.e., optimum stimulation level). The act of making a

purchase is frequently considered a stimulant for some buyers because it represents

power and status (Yamauchi & Templar, 1982) and fulfills urges for desirable goods or

services (Rook, 1987). Previous researchers found that consumers with high optimum

stimulation level were likely to adopt several retail outlets (Mittelstaedt Grossbart, & Curtis, 1976), seek hedonic value related to their willingness to purchase online (Fiore et al., 2005), and use mobile devices to buy products and services (Mahatanankoon, 2007). In addition, arousal induced by an online store environment increased purchase intention (Ha & Lennon, 2010). Based on these research findings, online social shopping behavior using Facebook may increase consumers' level of stimulation and satisfy their need for arousal. Hence, it was anticipated that users who needed arousal may intend to social e-shop apparel. Based on these research findings and reasoning, the following hypotheses were formulated:

**H7a-c:** Arousal needs are positively related to market mavenism(a), social browsing (b), and intentions to social e-shop apparel (c).

**Elemental Traits: Material Resource Needs**

The next set of hypotheses was developed to examine whether openness to experience is related to market mavenism, social browsing, value consciousness, and intentions to social e-shop apparel.

**Market mavenism.** Previous researchers found that materialism was positively related to market mavenism (Goodey & East, 2008) and sending or receiving market information from others when it comes to new products or sales (Mowen et al., 2007). In addition, because market mavens are considered experts on multiple aspects of markets for many products and services, market mavens are interested in the marketplace and therefore in material possessions (Goodey & East, 2008). It was anticipated that users who needed material resource could exhibit market mavenism.

**Social browsing.** Previous researchers demonstrated that materialistic consumers are concerned about presenting their status and possessions within their relevant social groups (Kilbourne et al., 2005), which may allow consumers to look for new fashion products and brands that are popular among their social groups. Thus, it was presumed that users who needed material resource could engage in social browsing.

**Value consciousness.** Individuals with high levels of material resource needs enjoy buying nice things. This trait may enable consumers to be interested in prices and product quality. Previous researchers reported that tightness with money (i.e., reluctance to spend) combined with high materialism predicted value-seeking bargain hunting (Tatzel, 2002). Thus, it was expected that users who needed material resource could be value conscious.

**Intentions to social e-shop apparel.** Although it is not directly related to social e-shopping using SNSs, some evidence indicates that a need for material resources has an indirect influence on intention to shop online through affective involvement (Bosnjak et al., 2007). In addition, individuals who need material resource tend to like to own nice things more than most people. This tendency could influence shopping intentions. Thus, it was anticipated that users who needed material resource may intend to social e-shop apparel. Based on these research findings and reasoning, the following hypotheses were formulated:

**H8a-d:** Material resource needs are positively related to market mavenism (a), social browsing (b), value consciousness (c), and intentions to social e-shop apparel (d).

**Moderators: Tie strength**

Social ties can be classified as strong or weak (Granovetter, 1973). Strong ties, such as family and friends, encompass strong and close relationships that are within an individual's personal network and can offer substantive and emotional support (Pigg & Crank, 2004). In contrast, weak ties often exist among weak and less personal social relationships that constitute a wide set of acquaintances or colleagues and that assist information-seeking on various topics (Pigg & Crank, 2004).

Chu and Kim's (2011) study on tie strength in SNSs found that SNS users' perceived tie strength with their contacts was positively related to their engagement in eWOM behaviors in SNSs. With easily available personal networks in SNSs, consumers' product choices may be affected by both (1) stable or intimate "strong tie" interactions and (2) randomly or remotely associated "weak tie" interactions (e.g., simple acquaintances) (Chu & Kim, 2011). The perceived tie strength based on both strong and weak ties developed through SNSs may stimulate users to communicate with one another and disseminate product-related information. Frequency of communication with the contacts on users' 'friends' list on Facebook (i.e., tie strength) may encourage their social e-shopping motivations and intentions using Facebook. Thus, the research findings and this reasoning lead to the prediction that positive relationships between gratifications and intentions to social e-shop apparel could be greater for users with high tie strength. The following hypothesis was developed:

**H9:** Tie strength moderates the relationships between gratifications (i.e., socializing and information-seeking) and intentions to social e-shop apparel.

**Moderators: Homophily**

Although it is not directly related to social e-shopping, previous researchers found that homophily was a significant determinant of credibility perceptions and the persuasive process for health information on web sites and health information in online discussion groups (Wang et al., 2008). In a SNS context, Thelwall (2009) demonstrated that homophily for age and attitude were reasons for participating in MySpace groups. In subsequent research, Chu and Kim (2011) indicated that SNS users' perceived homophily with their contacts was positively related to their engagement in eWOM behaviors. Users' perception indicating that the contacts on their 'friends' list on Facebook think like them, are similar to them, and behave like them (i.e., homophily) may encourage their social e-shopping motivations and intentions using Facebook. Hence, it was expected that positive relationships between gratifications and intentions to social e-shop apparel could be greater for users with high homophily than for those low in homophily. The following hypothesis was formulated.

**H10:** Homophily moderates the relationships between gratifications (i.e., socializing and information-seeking) and intentions to social e-shop apparel.
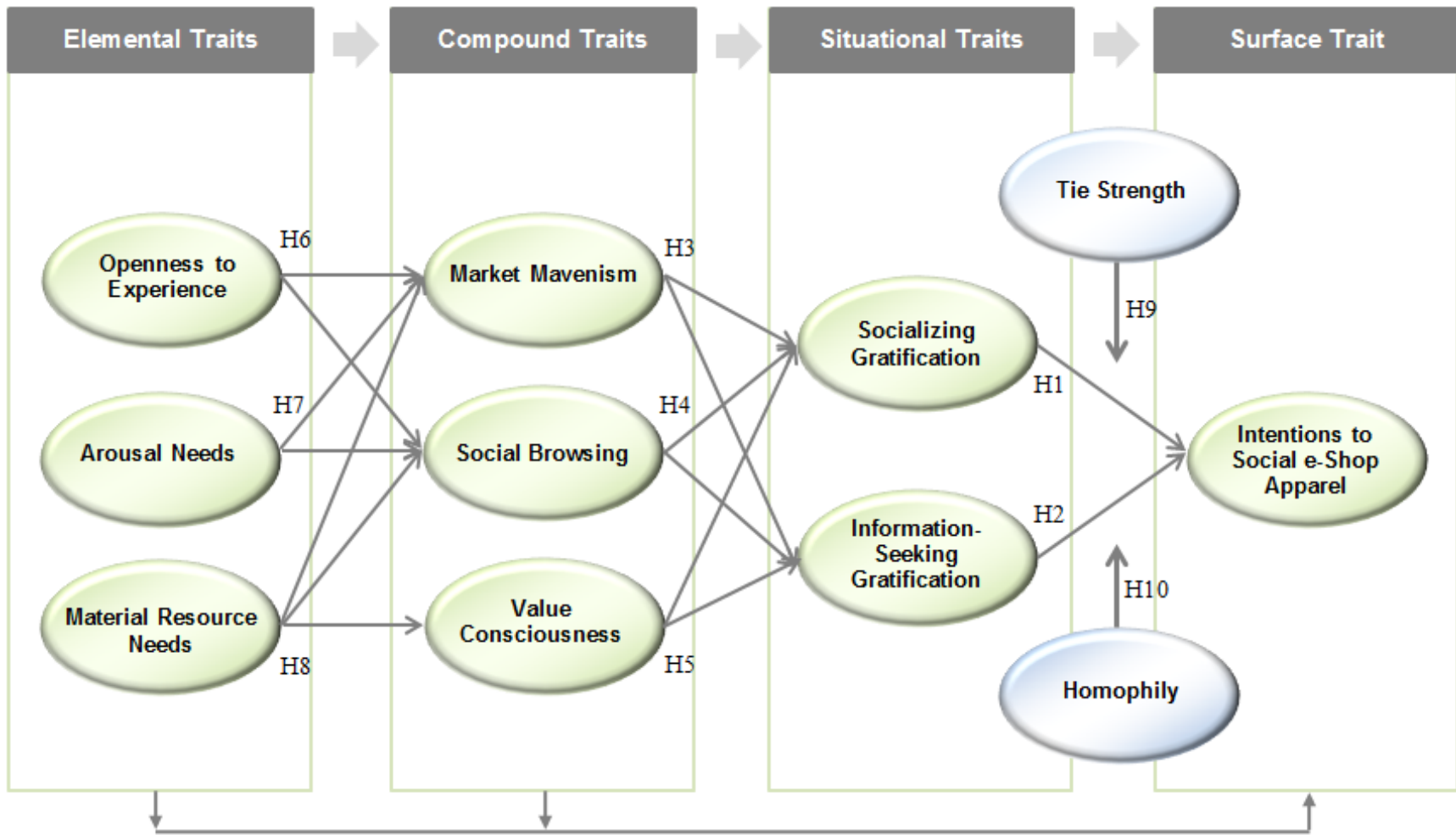
*Figure 3.* Hypothesized model of proposed relationships

**CHAPTER III**

**METHODOLOGY**

This chapter provides a description of the research methodology. Included are a presentation of the procedures followed for questionnaire development including content validity testing, pilot testing, sampling, and data collection.

**Questionnaire Development**

The online questionnaire used to collect the data consisted of several parts. On the introduction page, the definition of online social shopping was provided to participants. Having read the definition, participants were provided with URL links to the Express Facebook page and to a YouTube video about the Levis' Facebook connection (see Appendix B and C). Participants were asked to click on these links and view this material before proceeding to the next part of the questionnaire. These links were provided and participants were asked to view the accompanying material because even though participants may have had online social shopping experience using other websites, some of them may not have been familiar with the Facebook social shopping service because this service was in an early developmental stage at the time of the study.

Further, in the first part of the questionnaire, a participant was asked to respond to a set of qualifying questions. Although emails were planned to be sent to qualified panel members only (i.e., male or female Facebook users between the ages of 18 to 44 years, who had social shopping experience), unqualified individuals might have been sent invitations to participate. Therefore, in order to prevent the participation of unqualified individuals, three screening questions were asked. The first screening question was about online social shopping experience. Online social shopping experience was defined as

having experience related to sharing information about products or services, providing one's opinion or making recommendations about products or services while using SNSs or other websites to communicate with other people (Kang & Park-Poaps, 2011). Participants read the definition on the introduction page and then were asked to respond to the following screening questions "Have you ever shared information about products or services, or provided your opinion about products or services, or made recommendations about products or services while using social networking sites or other websites to other people?" The next screening questions were about experience with general Facebook use and age. Participants were asked, "Are you a Facebook user?" and "What is your age in years?" Responses were recorded as yes or no responses in terms of screening questions about social shopping experience and Facebook usage. Participants also indicated their age by checking an age range category (e.g., 18-24, 25-34, 35-44).

The next parts of the questionnaire contained the measurement items. These items were developed according to the following four steps: (1) literature search; (2) 1st content validity testing; (3) pilot testing; and (4) 2nd content validity testing.

**Literature Search: Initial Item Generation**

The extant literature was searched for existing measures of all concepts under investigation. This search resulted in identification of 11 measures with adequate reported reliabilities. Following is a presentation of each concept and how it was measured.

**Openness to experience.** Licata, Mowen, Brown, and Donovan's (2003) scale was employed to measure openness to experience. This scale assesses a person's need to find novel solutions, be original, and use his/her imagination. This scale consists of four items. Participants responded to items using five-point Likert scales (5 = strongly agree).

54

Sample items include "I find novel solutions" and "I am more original than others." The scale has a reported reliability of α = .96 (Mowen & Harris, 2003).

**Arousal needs.** Mowen and Spears' (1999) scale was used to employed to measure arousal needs. This scale assesses the degree to which a person's desire for stimulation and excitement. This scale consists of four items. Participants responded to items using five-point Likert scales (5 = strongly agree). Sample items include "I actively seek out new experiences" and "I seek an adrenaline rush." The scale has a reported reliability of α = .92 (Mowen & Harris, 2003).

**Material resource needs.** Mowen and Spears' (1999) scale was used to assess material resource needs. This scale assesses a person's desire to collect and possess material goods. This scale consists of four items. This scale attempts to assess a person's desire to collect and possess material goods. Participants responded to items using five-point Likert scales (5 = strongly agree). Sample items include "I like to own nice things more than most people" and "acquiring valuable things is important to me." The scale has a reported reliability of α = .86 (Bosnjak et al., 2007).

**Market mavenism.** Market mavenism was assessed using a scale developed by Feick and Price (1987). This scale assesses the degree to which a consumer views himself or herself as an opinion leader with regard to shopping in general. This scale is composed of three items. Participants responded to items using five-point Likert scales (5 = strongly agree). Sample items include "I am somewhat of an expert when it comes to shopping" and "people think of me as a good source of shopping information." The scale has a reported reliability of α = .88 (Ailawadi et al., 2001).

**Social browsing.** Kang and Park-Poaps' (2011) scale was employed to measure social browsing. This scale assesses the degree to which a person explores new fashion trends and products popular among others. This scale consists of four items. Participants responded to items using five-point Likert scales (5 = strongly agree). Sample items include "I often look for new fashion products and/or brands that are popular among my friends" and "I often buy fashion products that I see my friends wearing." The scale has a reported reliability of α = .87 (Kang & Park-Poaps, 2011).

**Value consciousness.** Lichtenstein, Netemyer, and Burton's (1990) scale was employed to measure participant's value consciousness. This scale assesses a person's concern for paying low prices, subject to some quality constraint. This scale consists of four items. Participants responded to items using five-point Likert scales (5 = strongly agree). Sample items include "when I buy products, I like to be sure that I get my money's worth" and "when purchasing, I always try to maximize the quality I get for the price I pay." The scale has a reported reliability of α = .86 (Mowen & Harris, 2003).

**Socializing gratification.** The measure of socializing gratification was developed from Yun (2011). The scale is designed to measure the likelihood of engaging in social e-shopping for the purpose of enjoying socializing with others and communicating with other people who share similar shopping experiences. This scale is composed of ten items. Participants indicated their responses using five-point scales ranging from 1 = very unlikely to 5 = very likely. Sample items include "I engage in online social shopping for apparel using Facebook to enjoy socializing with others while I shop online" and "I engage in online social shopping for apparel using Facebook to shop with others who have similar interests." The scale has a reported reliability of α = .97 (Yun, 2011).

**Information-seeking gratification.** The measure of information-seeking gratification was also developed from Yun (2011). The scale is designed to measure the likelihood of engaging in social e-shopping for the purpose of identifying the best deals and looking for product information. This scale is composed of ten items. Participants responded to using five-point scales ranging from 1 = very unlikely to 5 = very likely. Sample items include "I engage in online social shopping for apparel using Facebook to search for detailed information about the apparel product/brand category" and "I engage in online social shopping for apparel using Facebook to seek advice and solutions for my problems with an apparel product." The scale has a reported reliability of α = .95 (Yun, 2011).

**Intentions to social e-shop apparel.** This scale was adopted from Baker, Parasuraman, Grewal, and Voss (2002) and Jeong, Fiore, Niehm, and Lorenz (2009) to fit a social shopping context. This scale consists of four items. Participants responded to items using five-point Likert scales (5 = strongly agree). Sample items include "I am likely to social e-shop for apparel using Facebook" and "I am willing to buy apparel using Facebook." The scale has a reported reliability of α = .88 (Baker et al., 2001).

**Tie strength.** The measure of tie strength originated from Chu and Kim (2011). This scale includes three statements about the participants' frequency of communication and the closeness of social relations. Participants responded to items using five-point scales ranging from 1 = never to 5 = very frequently, 1 = not at all important to 5 = very important, and 1 = not at all close to 5 = very close. Sample items include "approximately how frequently do you communicate with the contacts on your 'friends' list on

Facebook?" and "overall, how close do you feel to the contacts on your 'friends' list on Facebook?" The scale has a reported reliability of $\alpha$ = .82 (Chu & Kim, 2011).

**Homophily.** The measure of homophily originated from Chu and Kim (2011). This scale assesses the degree to which individuals who interact are congruent or similar on certain attributes and perceptual similarity of beliefs and experience. This scale consists of four items. Participants responded to items using five-point semantic-differential scales. Sample items include "in general, the contacts on my 'friends' list on Facebook think like me" and "in general, the contacts on my 'friends' list on Facebook are similar to me." The scale has a reported reliability of $\alpha$ = .85 (Chu & Kim, 2011).

In summary, participants responded to five sets of items. The first set measured intentions to social e-shop apparel, socializing gratification, and information-seeking gratification. The second set measured tie strength and homophily. The third set assessed participants' psychographic characteristics (i.e., market mavenism, social browsing, value consciousness). The fourth set measured participants' openness to experience, arousal needs, and material resource needs. General questions on demographic information (i.e., gender, age, ethnicity, education, online shopping frequency, affinity of SNSs) were included in the last set of items (see the Appendix A for a complete copy of the questionnaire).

**1st Content Validity Testing**

      To evaluate the content validity of the questionnaire items, a group of researchers

(i.e., two academic researchers and four doctoral students specializing in Apparel Studies,

Education, and Marketing) qualitatively evaluated the measurement items. Experts were

provided with the definition of each construct and asked to assess each item for clarity,

readability, and content validity. Revisions were created based on the judges' feedback.

The items that were revised based on the outcome of this process are presented

in Table 2.

Table 2

*1ˢᵗ Content Validity Testing*

| Construct | | Initial Item | Revised Item |
|---|---|---|---|
| Socializing Gratification | SG1 | …to shop online with others as a way to socialize. | …as a way to socialize. |
| | SG4 | …to shop online with others as a way to have a bonding experience | …as a way to have a bonding experience. |
| | SG3 | …to shop online with others having a social occasion. | …as a way to have a social involvement. |
| Information-Seeking Gratification | ISG6 | …to check out company information online for apparel products I | …to look at company information online for apparel products I would like to buy. |
| | ISG10 | …to get a variety of information from people who have positive and negative opinions. | …to get information from others (positive and negative). |

**Pilot Test**

Prior to collecting data[4] for the main study, an online data collection for a pilot

test took place. The online questionnaire was administered to 121 college students who

were Facebook users with social shopping experience. Participants were recruited using

an intercept technique. Students entering a student center and a computer lab were

approached randomly and asked if they were Facebook users with social shopping

experience. If an individual indicated he or she was a Facebook user with social shopping

experience, the individual was asked to volunteer to complete a questionnaire. The

questionnaire took 15 minutes to complete on average. Data collection was completed in

about ten business days.

The pilot sample was composed of more women (65.3%) than men (34.7%).

Participants' ages ranged from 18 to 32, with a mean age of 21.8 years ($SD = 3.24$). The

majority of participants were Caucasian (78.5%), followed by Asian/Pacific Islander

(10.7%). Participants spent five to seven hours (28.9%) per week on Facebook, followed

by three to four hours (25.6%) and one to two hours (19.0%). The purpose of this pilot

test was to ensure that participants were responding to items consistently and easily.

Participants were asked to identify any items that they had problems understanding or

responding to. The pretest revealed no difficulties with wording or understanding of

questionnaire items.

Exploratory factor analysis (EFA) results for each of the 11 constructs were

reviewed independently. The purpose of EFA is to assure unidimensionality within each

construct by eliminating items that do not adequately reflect any of the theoretical

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[4] All procedures were approved by the Institutional Review Board at the University of Minnesota for use of human subjects (#1112E07505).

components of the construct. In addition, Cronbach's alpha was examined to assess the

reliability and internal consistency of each scale. Based on the sample size, any factor

loading greater than .40 was assumed to have practical significance (Hair et al., 2006).

The results of the EFA are summarized in Table 3. All items were retained for the

primary data collection.

Table 3

*Pilot Test: Results of Exploratory Factor Analysis and Associational Reliabilities*

| Construct | Number of Items | Factor Loading (min.– max.) | Eigenvalue | % of Variance | Cronbach's Alpha |
|---|---|---|---|---|---|
| 1. Openness to Experience | 4 | .80 – .83 | 3.33 | 6.05 | .89 |
| 2. Arousal Needs | 4 | .70 – .89 | 3.14 | 5.71 | .88 |
| 3. Material Resource Needs | 4 | .76 – .85 | 3.22 | 5.86 | .88 |
| 4. Market Mavenism | 3 | .80 – .81 | 2.61 | 4.74 | .93 |
| 5. Social Browsing | 4 | .74 – .83 | 3.75 | 6.82 | .94 |
| 6. Value Consciousness | 4 | .76 – .87 | 3.15 | 5.72 | .88 |
| 7. Socializing Gratification | 10 | .61 – .83 | 6.81 | 12.38 | .95 |
| 8. Information-Seeking Gratification | 10 | .64 – .90 | 9.57 | 17.40 | .97 |
| 9. Social e-Shopping Intentions | 4 | .63 – .69 | 2.98 | 5.41 | .95 |
| 10. Tie Strength | 3 | .74 – .82 | 2.41 | 4.38 | .86 |
| 11. Homophily | 4 | .75 – .88 | 3.46 | 6.28 | .91 |

**2nd Content Validity Testing**

A second content validity of the items was completed by another group of five graduate students majoring in Apparel Studies, Education, and Marketing. Items were again evaluated for clarity and adequacy of item presentation. No problems with wording or understanding question items were revealed. Thus, no changes were made to the questionnaire.

**Sampling**

According to data from Facebook, activity on Facebook varies based on age. For example, 48% of 18-34 year olds check Facebook when they wake up and 28% of this group do so before even getting out of bed. The core 18-24 year old segment of Facebook users is growing the fastest at 74% each year (Burbary, 2011). The 35+ demographic is also growing rapidly. Overall, use of Facebook by age breaks down as follows: the largest age group of U.S. Facebook users is the 18-25 years of age group (35%), followed by the 26-34 age group (20%), the 35-44 age group (16%), the 45-54 age group (12%), the 13-17 age group (10%), and the 55-64 age group (7%) (Burbary, 2011). Thus, users from 18 to 44 years of age comprise 71% of Facebook users. Therefore, male and female Facebook users ranging in age from 18 to 44 years who had online social shopping experience were recruited as participants.

**Main Data Collection**

A survey methodology was the design of the study. The main advantage of a survey methodology is that it is possible to accumulate very large volumes of data in a short span of time at a relatively low cost (Duffy, Smith, Terhanian, & Bremer, 2005). The questionnaire used for data collection was posted online. Posting the questionnaire

online is considered a robust and representative approach to data collection (Yun, 2011),

provides low financial and coding costs, few coding errors, privacy, and convenience to

respondents (Reilly & Rudd, 2009) and was relevant to the research context, which was

online social shopping.

The online questionnaire was created using a University of Minnesota online tool

(http://www.oit.umn.edu/umsurvey/). Data were obtained from individuals who

participated in an online marketing panel maintained by e-Rewards (http://www.e-

rewards.com). E-Rewards is a U.S. marketing research firm specializing in consumer

survey methodology and has partnered with numerous sponsors that have large emailable

databases of customers to create their consumer panels. E-Rewards was contracted to

recruit participants. At the time of this research, their panel was composed of three

million members that mirrored the U.S. population. The company recruited panel

members through an email invitation-only process.

Participants drawn from the e-Rewards company's online panel were first

qualified as being male or female Facebook users, between the ages of 18 to 44 years,

and with social shopping experience. Previously noted, online social shopping experience

was defined as having experience related to sharing information about products or

services, providing one's opinion or making recommendations about products or services

while using SNSs or other websites to communicate with other people (Kang & Park-

Poaps, 2011). Qualifications for participation in the research and the definition of online

social shopping experience were presented in the invitation emails offered by e-Rewards.

Then, online panel members were invited to participate in this online survey if they

viewed themselves as meeting the stated qualifications. Considering the general response

rate for online surveys (approximately 10%), the company initially chose 6,000

individuals at random from their consumer panel to qualify and invite to participate. The

company sent out 6,000 invitations including the qualifications of participation, survey

link, and unique ID to targeted panelists. This ID enabled the company to track

participants. Participants clicked into the survey, provided their unique ID, and then

completed the questionnaire online.

A voluntary informed consent form was provided prior to the first page of the

online questionnaire. The e-Rewards company provided a "virtual currency" incentive to

participants to complete the survey. This currency can be accumulated over time and then

redeemed for things like gift cards and travel vouchers. The data were collected during

three business days in March, 2012. On average, the questionnaires took 15 minutes for

participants to complete. This process resulted in a purposive nonprobablity sample.

**CHAPTER IV**

**RESULTS**

This chapter presents preliminary data analyses including participants'
characteristics, assumption tests, unidimensionality tests, and measurement model tests.
Hypotheses testing and mediation testing are provided. In addition, invariance testing of
structural relationships for gender comparison is presented. To verify the performance of
the hypothesized model, three rival models are identified.

**Preliminary Data Analyses**

**Participants' Characteristics**

The purposive sample consisted of 601 participants. The sample was composed of
more females (64.4 %) than males (35.6%). Participants' ages ranged from 18 to 44, with
a mean age of 31.23 years ($SD = 6.33$). The majority of participants were Caucasian
(81.2 %), followed by Asian/Pacific Islander (11.1%). Participants had earned bachelor's
degrees (44.3%) or graduate degrees (31.3%). A range of personal income levels were
represented with 15.3% of participants having incomes of between $50,000-$59,999,
followed by incomes between $30,000-$39,999 (12.5%), and incomes between $40,000-
$49,999 (12.5%).  Participants spent five to seven hours (24.3%) per week on Facebook,
followed by three to four hours (24.0%), and one to two hours (22.6%). In terms of
frequency of participants' social shopping experience specifically using Facebook,
"never" had the highest percentage of participants (54.2%), followed by "two or three
times a month" (15.8%). Additional details of participants' characteristics are provided in
Table 4.

Table 4

*Demographic Characteristics of Participants*

| Characteristics | Description | Frequency | Percent ($n = 601$) |
|---|---|---|---|
| Gender | Female | 387 | 64.4 |
| | Male | 214 | 35.6 |
| Ethnic group | Caucasian | 488 | 81.2 |
| | Asian/Pacific Island | 67 | 11.1 |
| | African American | 14 | 2.3 |
| | Hispanic | 12 | 2.0 |
| | Bi-Racial/Mixed Race | 14 | 2.3 |
| | Other | 6 | 1.0 |
| Age | 18-24 | 87 | 14.5 |
| | 25-34 | 322 | 53.6 |
| | 35-44 | 192 | 31.9 |
| Education | High school education | 94 | 15.6 |
| | Bachelor | 266 | 44.3 |
| | Graduate | 188 | 31.3 |
| | Others | 53 | 8.8 |
| Income | Under $10,000 | 45 | 7.5 |
| | $10,000-$19,999 | 33 | 5.5 |
| | $20,000-$29,999 | 56 | 9.3 |
| | $30,000-$39,999 | 75 | 12.5 |
| | $40,000-$49,999 | 75 | 12.5 |
| | $50,000-$59,999 | 92 | 15.3 |
| | $60,000-$69,999 | 38 | 6.3 |
| | $70,000-$79,999 | 56 | 9.3 |
| | $80,000-$89,999 | 28 | 4.7 |
| | $90,000-$99,999 | 27 | 4.5 |
| | $100,000 over | 76 | 12.6 |
| Facebook usage time per week | 0/no activity | 1 | .2 |
| | 1-2 hours | 136 | 22.6 |
| | 3-4 hours | 144 | 24.0 |
| | 5-7 hours | 146 | 24.3 |
| | 8-10 hours | 75 | 12.5 |
| | 11+ hours | 99 | 16.5 |

Table 4

*Continued.*

| Characteristics | Description | Frequency | Percent ($n = 601$) |
|---|---|---|---|
| Frequency of social e-shopping using Facebook | More than once a week | 18 | 3.0 |
| | About once a week | 18 | 3.0 |
| | Two or three times a month | 95 | 15.8 |
| | About once a month | 48 | 8.0 |
| | Two or three times a semester | 36 | 6.0 |
| | Never | 326 | 54.2 |
| | Don't know | 60 | 10.0 |

*Note.* Participants were qualified as being male and female Facebook users ranging in age from 18 to 44 years who had online social shopping experience.

**Assumption Tests**

Assumptions for Structural Equation Modeling (SEM) were tested by evaluating (1) the normality of the data, (2) reliability of the measures, and (3) multicollinearity between latent variables. As shown in Table 5, normality was assessed by examining skewness and kurtosis of the data. All absolute values of skewness were less than the rule of thumb (absolute value 2.58) suggested by Hair et al. (1998). This finding indicated a symmetrical distribution of the data. Hair et al. (1998) also suggested the same standard (absolute value less than 2.58) for judging a normal distribution of kurtosis. The data of this study presented absolute skewness values that ranged from .01 to 1.11 and absolute kurtosis values that ranged from .01 to 1.15.

The reliability of the eleven measures used was assessed by calculating Cronbach's alpha (see Table 6). The values of reliability need to be .70 or above for further data analysis (Nunnally, 1978). The alpha values ranged between .89 and .96 indicating all measures were reliable. As an additional step, multicollinearity was evaluated by developing a correlation matrix with the eleven key variables to detect any problems of multicollinearity. Multicollinearity can be a cause of a non-positive covariance matrix in SEM (Kline, 2005). A correlation matrix was created to inspect multicollinearity between variables. Any value over .85 was used as an indicator of potential problems with multicollinearity based on Kline's (2005) suggestion. Table 7 presents the correlation values which are all between .13 and .66. The measures of latent variables all adequately fit the assumptions of SEM analysis; thus, the measures were considered acceptable for the main data analyses.

69

Table 5

*Normality of Primary Data*

| Construct | Item | Mean | Standard Deviations | Skewness | Kurtosis |
|---|---|---|---|---|---|
| 1. Openness to Experience | OPE1 | 3.62 | 1.02 | -.39 | -.38 |
| | OPE2 | 3.74 | .94 | -.47 | -.15 |
| | OPE3 | 3.55 | .94 | -.17 | -.44 |
| | OPE4 | 3.66 | .90 | -.28 | -.27 |
| 2. Arousal Needs | ARN1 | 3.32 | 1.05 | -.19 | -.56 |
| | ARN2 | 3.64 | .95 | -.26 | -.45 |
| | ARN3 | 3.14 | 1.18 | -.03 | -.85 |
| | ARN4 | 3.23 | 1.14 | -.09 | -.79 |
| 3. Material Resource Needs | MRN1 | 2.83 | 1.22 | .09 | -.92 |
| | MRN2 | 2.93 | 1.14 | .03 | -.69 |
| | MRN3 | 2.76 | 1.18 | .22 | -.73 |
| | MRN4 | 3.03 | 1.22 | -.08 | -.82 |
| 4. Market Mavenism | MM1 | 3.22 | 1.11 | -.22 | -.59 |
| | MM2 | 3.26 | 1.14 | -.30 | -.63 |
| | MM3 | 3.32 | 1.19 | -.40 | -.64 |
| 5. Social Browsing | SB1 | 2.89 | 1.16 | -.02 | -.77 |
| | SB2 | 2.85 | 1.22 | .04 | -.91 |
| | SB3 | 2.75 | 1.16 | .12 | -.79 |
| | SB4 | 2.83 | 1.15 | .04 | -.70 |
| 6. Value Consciousness | VC1 | 3.97 | .93 | -.86 | .75 |
| | VC2 | 3.99 | 1.01 | -.96 | .57 |
| | VC3 | 4.10 | .91 | -.95 | .77 |
| | VC4 | 4.23 | .89 | -1.11 | 1.15 |
| 7.Socializing Gratification | SG1 | 2.64 | 1.39 | .21 | -1.10 |
| | SG2 | 2.59 | 1.28 | .27 | -1.05 |
| | SG3 | 2.59 | 1.27 | .25 | -1.02 |
| | SG4 | 2.38 | 1.24 | .49 | -.78 |
| | SG5 | 2.81 | 1.29 | -.01 | -1.14 |
| | SG6 | 2.75 | 1.28 | .07 | -1.07 |
| | SG7 | 2.87 | 1.26 | -.12 | -1.08 |
| | SG8 | 2.33 | 1.24 | .58 | -.65 |
| | SG9 | 3.03 | 1.29 | -.13 | -1.01 |
| | SG10 | 2.41 | 1.23 | .42 | -.87 |

Table 5

*Continued.*

| Construct | Item | Mean | Standard Deviations | Skewness | Kurtosis |
|---|---|---|---|---|---|
| 8. Information-Seeking Gratification | ISG1 | 3.52 | 1.31 | -.60 | -.72 |
| | ISG2 | 3.08 | 1.25 | -.26 | -.89 |
| | ISG3 | 3.22 | 1.29 | -.36 | -.91 |
| | ISG4 | 3.24 | 1.27 | -.39 | -.81 |
| | ISG5 | 3.12 | 1.27 | -.29 | -.92 |
| | ISG6 | 3.03 | 1.23 | -.24 | -.90 |
| | ISG7 | 3.59 | 1.28 | -.64 | -.60 |
| | ISG8 | 3.30 | 1.25 | -.41 | -.75 |
| | ISG9 | 2.84 | 1.26 | .02 | -.99 |
| | ISG10 | 3.19 | 1.29 | -.29 | -.93 |
| 9. Intentions to Social e-Shop Apparel | SSI1 | 2.85 | 1.17 | .03 | -.83 |
| | SSI2 | 2.77 | 1.20 | .10 | -.93 |
| | SSI3 | 2.90 | 1.16 | .03 | -.83 |
| | SSI4 | 2.90 | 1.18 | .04 | -.82 |
| 10.Tie Strength | TS1 | 3.62 | 1.00 | -.13 | -.78 |
| | TS2 | 3.66 | .94 | -.40 | -.14 |
| | TS3 | 3.71 | .95 | -.37 | -.34 |
| 11.Homophily | HO1 | 3.62 | .86 | -.07 | -.30 |
| | HO2 | 3.36 | .82 | -.02 | .10 |
| | HO3 | 3.38 | .80 | -.01 | .16 |
| | HO4 | 3.39 | .80 | .03 | -.01 |

Table 6

*Reliability of Measures for Hypotheses Testing*

| Construct | Number of Items | Cronbach's Alpha Coefficients |
|---|---|---|
| 1. Openness to Experience | 4 | .90 |
| 2. Arousal Needs | 4 | .90 |
| 3. Material Resource Needs | 4 | .91 |
| 4. Market Mavenism | 3 | .92 |
| 5. Social Browsing | 4 | .95 |
| 6. Value Consciousness | 4 | .88 |
| 7. Socializing Gratification | 10 | .95 |
| 8. Information-Seeking Gratification | 10 | .95 |
| 9. Intentions to Social e-Shop Apparel | 4 | .96 |
| 10. Tie Strength | 3 | .84 |
| 11. Homophily | 4 | .90 |

Table 7

*Correlation Matrix of Latent Variables for Primary Data Analyses*

| Construct | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Openness to Experience | 1.00 | | | | | | | | | | |
| 2. Arousal Needs | .44** | 1.00 | | | | | | | | | |
| 3. Material Resource Needs | .24** | .40** | 1.00 | | | | | | | | |
| 4. Market Mavenism | .43** | .30** | .45** | 1.00 | | | | | | | |
| 5. Social Browsing | .13** | .29** | .55** | .51** | 1.00 | | | | | | |
| 6. Value Consciousness | .29** | .14** | .13** | .33** | .22** | 1.00 | | | | | |
| 7. Socializing Gratification | .17** | .26** | .39** | .36** | .56** | .15** | 1.00 | | | | |
| 8. Information-Seeking Gratification | .20** | .28** | .33** | .33** | .44** | .42** | .65** | 1.00 | | | |
| 9. Intentions to Social e-Shop | .20** | .24** | .31** | .42** | .46** | .18** | .64** | .66** | 1.00 | | |
| 10. Tie Strength | .33** | .24** | .22** | .30** | .32** | .35** | .30** | .34** | .28** | 1.00 | |
| 11. Homophily | .26** | .22** | .23** | .35** | .36** | .28** | .33** | .31** | .30** | .47** | 1.00 |

*Note.* **. Correlation is significant at the .01 level (2-tailed).

**Unidimensionality**

　　To ensure that the items comprising a scale measure only one dimension or concept at a time (i.e., unidimensionality within each construct), three different analyses were done. Measure purification was conducted on the main data.

　　**Skewness and kurtosis of the data.** First, descriptive statistics were analyzed to identify problems with individual scale items that could create problems within subsequent analyses. Items were examined for low variances (i.e., high kurtosis) or skewed distributions. In the previous assumption test section, the absolute skewness values and the absolute kurtosis values were presented (see Table 5). All absolute values of skewness and kurtosis were less than the rule of thumb (absolute value 2.58) suggested by Hair et al. (1998). The results indicated a symmetrical/normal distribution of the data and unidimensionality within each construct.

　　**Exploratory factor analysis.** As a second step, exploratory factor analysis (EFA) with varimax rotation was conducted on the 54-item set as a whole and for each of the 11 constructs independently. Any factor loading greater than .40 was assumed to have practical significance (Hair et al., 2006). Items with low factor loadings and items cross-loading on two or more of the 11 factors were eliminated. This process resulted in the elimination of a total of five items (i.e., SG7, SG9, SG10, ISG9, ISG10) from the original 54-item set.

　　At this stage, the 11 factors explained 81.44% of the total variance in the data, with factor loadings ranging from .71 to .87. Each of the 11 factors had an eigenvalue greater than one. All items loaded heavily onto one of the factors and all factors were easily interpreted. The results of the EFA are summarized in Table 8-$_1$ and Table 8-$_2$. As

an additional step, reliability and internal consistency at the individual construct level for final reduced items were supported, using Cronbach's alpha (see Table 8-$_2$). The results of EFA indicated further modification of each of the scales was needed. What follows is a presentation of decision making steps for refining each scale.

*Socializing gratification.* The 10 items measuring socializing gratification clearly loaded on two factors; one factor contained items SG7 and SG9 and the second factor contained items SG1 to SG6, SG8, and SG10. The factor containing items SG7 and SG9 also contained all of the information seeking gratification items (ISG1 to ISG8). This was interpreted as indicating the SG7 and SG9 items were unidimensional with information-seeking gratification items (i.e., ISG1 to ISG8) rather than socializing gratification items. In addition, one item (i.e., SG 10) in the second factor had low factor loadings. Removing these three items (i.e., SG7, SG9, SG10) produced a robust, unidimensional seven-item scale assessing socializing gratification.

- SG7. I engage in online social shopping for apparel using Facebook to communicate with other people who share similar shopping experiences.

- SG 9. I engage in online social shopping for apparel using Facebook to observe what others are buying and using.

- SG10. I engage in online social shopping for apparel using Facebook to purchase those apparel products or brands that I think others will approve of.

*Information-seeking gratification.* The 10-item scale clearly loaded on two factors; one factor contained items ISG9 and ISG10 and the second factor contained items ISG1 to ISG8. Two items (i.e., ISG 9, ISG10) had low factor loadings. Removing

these two items produced a robust, unidimensional eight-item scale. Thus, ISG9 and ISG10 were eliminated from further analyses.

- ISG 9. I engage in online social shopping for apparel using Facebook to seek advice and solutions for my problems with an apparel product.

- ISG10. I engage in online social shopping for apparel using Facebook to get a variety of information from people who have positive and negative opinions.

**Confirmatory factor analysis.** As a final step, confirmatory factor analysis (CFA) results for each of the 11 constructs taken independently were considered. The construct measurement models were assessed through CFA using maximum likelihood estimation on the item correlation matrices. Results from each of the three different data analysis approaches were considered collectively in the final decision regarding which items to retain and which to delete. As a result of these analyses, 49 of the original 54 items were retained.

The final measures used for the data analysis are organized by construct in Table 9. For the constructs of socializing gratification and information-seeking gratification, significant improvements in fit were observed in comparing $\chi^2$ statistics for models with and without problematic items. Moreover, the fit of all reduced-item set models was satisfactory, with Comparative Fit Index (CFI) statistics of .95 and higher (see Table 9).

Table 8-[1]

*Main Data: Exploratory Factor Analysis*

| Item | Factor Loadings | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| OPE1 | .86 | | | | | | | | | | |
| OPE2 | .87 | | | | | | | | | | |
| OPE3 | .84 | | | | | | | | | | |
| OPE4 | .71 | | | | | | | | | | |
| ARN1 | | .81 | | | | | | | | | |
| ARN2 | | .76 | | | | | | | | | |
| ARN3 | | .85 | | | | | | | | | |
| ARN4 | | .83 | | | | | | | | | |
| MRN1 | | | .78 | | | | | | | | |
| MRN2 | | | .84 | | | | | | | | |
| MRN3 | | | .83 | | | | | | | | |
| MRN4 | | | .80 | | | | | | | | |
| MM1 | | | | .79 | | | | | | | |
| MM2 | | | | .83 | | | | | | | |
| MM3 | | | | .77 | | | | | | | |
| SB1 | | | | | .77 | | | | | | |
| SB2 | | | | | .80 | | | | | | |
| SB3 | | | | | .79 | | | | | | |
| SB4 | | | | | .74 | | | | | | |
| VC1 | | | | | | .74 | | | | | |
| VC2 | | | | | | .80 | | | | | |
| VC3 | | | | | | .88 | | | | | |
| VC4 | | | | | | .83 | | | | | |
| SG1 | | | | | | | .81 | | | | |
| SG2 | | | | | | | .80 | | | | |
| SG3 | | | | | | | .85 | | | | |
| SG4 | | | | | | | .84 | | | | |
| SG5 | | | | | | | .73 | | | | |
| SG6 | | | | | | | .73 | | | | |
| SG8 | | | | | | | .70 | | | | |
| ISG1 | | | | | | | | .84 | | | |
| ISG2 | | | | | | | | .83 | | | |
| ISG3 | | | | | | | | .85 | | | |
| ISG4 | | | | | | | | .83 | | | |
| ISG5 | | | | | | | | .81 | | | |
| ISG6 | | | | | | | | .75 | | | |
| ISG7 | | | | | | | | .86 | | | |
| ISG8 | | | | | | | | .73 | | | |
| SSI1 | | | | | | | | | .75 | | |
| SSI2 | | | | | | | | | .77 | | |
| SSI3 | | | | | | | | | .73 | | |
| SSI4 | | | | | | | | | .72 | | |
| TS1 | | | | | | | | | | .77 | |
| TS2 | | | | | | | | | | .84 | |
| TS3 | | | | | | | | | | .78 | |
| HO1 | | | | | | | | | | | .70 |
| HO2 | | | | | | | | | | | .81 |
| HO3 | | | | | | | | | | | .87 |
| HO4 | | | | | | | | | | | .85 |
| Eigenvalue | 3.25 | 3.14 | 3.44 | 2.46 | 3.16 | 3.16 | 5.78 | 7.27 | 2.77 | 2.29 | 3.19 |
| % of Variance | 6.64 | 6.41 | 7.01 | 5.01 | 6.45 | 6.44 | 11.80 | 14.85 | 5.65 | 4.67 | 6.51 |

*Note*. Dropped Items: SG7, SG9, SG10, ISG9, ISG10

Table 8-2

*Main Data: Exploratory Factor Analysis*

| Construct | Number of Items | Factor Loading (min.-max) | Eigenvalue | % of Variance | Cronbach's Alpha |
|---|---|---|---|---|---|
| 1. Openness to Experience | 4 | .71 – .87 | 3.25 | 6.64 | .90 |
| 2. Arousal Needs | 4 | .76 – .85 | 3.14 | 6.41 | .90 |
| 3. Material Resource Needs | 4 | .78 – .84 | 3.44 | 7.01 | .91 |
| 4. Market Mavenism | 3 | .77 – .83 | 2.46 | 5.01 | .92 |
| 5. Social Browsing | 4 | .74 – .80 | 3.16 | 6.45 | .95 |
| 6. Value Consciousness | 4 | .74 – .88 | 3.16 | 6.44 | .88 |
| 7. Socializing Gratification | 7 | .70 – .85 | 5.78 | 11.80 | .96 |
| 8. Information-Seeking Gratification | 8 | .73 – .86 | 7.27 | 14.85 | .97 |
| 9. Intentions to Social e-Shop | 4 | .72 – .77 | 2.77 | 5.65 | .95 |
| 10. Tie Strength | 3 | .77 – .84 | 2.29 | 4.63 | .84 |
| 11. Homophily | 4 | .70 – .87 | 3.19 | 6.51 | .90 |

Table 9

*Goodness-of-Fit Statistics for Full and Reduced Item Sets*

| Construct | Number of Items | | Full Item Set | Reduced Item Set |
|---|---|---|---|---|
| | Full | Reduced | | |
| Socializing Gratification | 10 | 7 | $\chi^2 = 771.09$ <br> $df = 35$ <br> $p = .00$ <br> CFI = .89 | $\chi^2 = 147.10$ <br> $df = 13$ <br> $p = .00$ <br> CFI = .97 |
| Information-Seeking Gratification | 10 | 8 | $\chi^2 = 554.97$ <br> $df = 35$ <br> $p = .00$ <br> CFI = .91 | $\chi^2 = 292.41$ <br> $df = 20$ <br> $p = .00$ <br> CFI = .95 |

Table 10

*Summary of Items Comprising Final Measures*

| Construct | Measures | Scale |
|---|---|---|
| Openness to Experience | **OPE1:** I frequently feel highly creative.<br>**OPE2:** I am imaginative.<br>**OPE3:** I am more original than others.<br>**OPE4:** I find novel solutions. | 5-point scales anchored at "1 = Strongly disagree" to "5 = Strongly agree" |
| Arousal Needs | **ARN1:** I am drawn to experiences with an element of risk.<br>**ARN2:** I actively seek out new experiences.<br>**ARN3:** I seek an adrenaline rush.<br>**ARN4:** I enjoy taking some risks more than others. | |
| Material Resource Needs | **MRN1:** I admire people who own expensive homes, cars, and clothes.<br>**MRN2:** I like to own nice things more than most people.<br>**MRN3:** Acquiring valuable things is important to me.<br>**MRN4:** I enjoy owning luxurious things. | |
| Market Mavenism | **MM1:** I enjoy owning luxurious things.<br>**MM2:** People think of me as a good source of shopping information.<br>**MM3:** I enjoy giving people tips on shopping. | |
| Social Browsing | **SB1:** I often buy fashion products similar to what others are wearing.<br>**SB2:** I often look for new fashion products and/or brands that are popular among my friends.<br>**SB3:** I often buy fashion products that I see my friends wearing.<br>**SB4:** I usually purchase fashion products that many others have also bought. | |
| Value Consciousness | **VC1:** I am concerned about low prices, but I am equally concerned about product quality.<br>**VC2:** When shopping, I compare the prices on brands to make sure that I get the best value.<br>**VC3:** When purchasing, I always try to maximize the quality I get for the price I pay.<br>**VC4:** When I buy products, I like to be sure that I get my money's worth. | |

Table 10

*Continued.*

| Construct | Measures | Scale |
|---|---|---|
| Socializing Gratification | I engage in online social shopping for apparel using Facebook…<br>**SG1:** as a way to socialize.<br>**SG2:** to enjoy socializing with others when I shop online.<br>**SG3:** as a way to have a social involvement.<br>**SG4:** as a way to have a bonding experience.<br>**SG5:** to shop with others who have similar tastes/interests.<br>**SG6:** to shop with my peer group or reference group.<br>**\*SG7:** to communicate with other people who share similar shopping experiences.<br>**SG8:** to achieve a sense of belonging by shopping for the same apparel products that others purchase.<br>**\*SG9:** to observe what others are buying and using.<br>**\*SG10:** to purchase those apparel products or brands that I think others will approve of. | 5-point scales anchored at "1 = Very unlikely" to "5 = Very likely" |
| Information-Seeking Gratification | I engage in online social shopping for apparel using Facebook…<br>**ISG1:** to check out the best deals.<br>**ISG2:** to search for detailed information about the apparel product/brand category.<br>**ISG3:** to compare several apparel products/brands online before making a decision.<br>**ISG4:** to look at websites for sales and service information.<br>**ISG5:** to look for apparel product information that is specific to my requirements.<br>**ISG6:** to look at company information online for apparel products I would like to buy.<br>**ISG7:** to look for online discounts and bargains.<br>**ISG8:** to hear about something new.<br>**\*ISG9:** to seek advice and solutions for my problems with an apparel product.<br>**\*ISG10:** to get a variety of information from people who have positive and negative opinions. | 5-point scales anchored at "1 = Very unlikely" to "5 = Very likely" |

\*. Dropped items

Table 10

*Continued.*

| Construct | Measures | Scale |
|---|---|---|
| Intentions to Social e-Shop Apparel | **SSI1:** I would buy apparel through online social shopping using Facebook.<br>**SSI2:** I am likely to social e-shop for apparel using Facebook.<br>**SSI3:** I would encourage my friends to go to this site related to online social shopping for apparel using Facebook.<br>**SSI4:** I am likely to revisit this site related to online social shopping using Facebook and buy apparel. | 5-point scales anchored at "1 = Strongly disagree" to "5 = Strongly agree" |
| Tie Strength | **TS1:** Approximately how frequently do you communicate with the contacts on your 'friends' list?<br><br>**TS2:** Overall, how important do you feel the contacts on your 'friends' list are?<br><br>**TS3:** Overall, how close do you feel to your frequent contacts on your 'friends' list? | 5-point scales anchored at "1 = Never" to "5 = Very Frequently"<br>"1 = Not at all important" to "5 = Very important"<br>"1 = Not at all close" to "5 = Very close" |
| Homophily | In general, the contacts on my 'friends' list on Facebook:<br>**HO1:** do not think like me. / think like me.<br>**HO2:** do not behave like me. / behave like me.<br>**HO3:** are different from me. / are similar to me.<br>**HO4:** are unlike me. / are like me. | 5-point semantic differential scales |

Table 11

*Final Measures: Reliability*

| Construct | Number of Items | Cronbach's Alpha Coefficients |
|---|---|---|
| 1. Openness to Experience | 4 | .90 |
| 2. Arousal Needs | 4 | .90 |
| 3. Material Resource Needs | 4 | .91 |
| 4. Market Mavenism | 3 | .92 |
| 5. Social Browsing | 4 | .95 |
| 6. Value Consciousness | 4 | .88 |
| 7. Socializing Gratification | 7 | .96 |
| 8. Information-Seeking Gratification | 8 | .97 |
| 9. Intentions to Social e-Shop Apparel | 4 | .96 |
| 10. Tie Strength | 3 | .84 |
| 11. Homophily | 4 | .90 |

**Measurement Model**

To test the measurement model, confirmatory factor analysis with maximum likelihood was conducted on the forty-two indicators of the nine latent variables for the measurement model. All nine latent variables were included for rigorous measurement model testing. The measurement model specification is illustrated in Figure 4.

An overall model fit was assessed by multiple indices such as Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), Normal Fit Index (NFI), Standardized Root Mean Square Residual (SRMR), and Root Mean Square Error of Approximation (RMSEA). GFI, AGFI, CFI, and NFI values of .90 or higher and SRMR and RMSEA of .08 or lower indicate a good model fit (Kline, 2005). According to Hu and Bentler (1999), CFI and NNFI values of .95 or higher and RMSEA and SRMR of .06 or lower indicate a good model fit.

Table 13$_{-1}$ provides an overview of construct means, standard deviations, and correlations for the measurement model. The results of confirmatory factor analysis indicated that the measurement model had acceptable construct validity and reliability. The model exhibited an excellent fit: $\chi^2$ = 125.89 with 54 *df*, $\chi^2/df$ = 2.33, *p* = .00; CFI = .96; NNFI= .96; SRMR = .04; RMSEA = .05. Indicators such as offending estimates, squared multiple correlations, standardized residual covariances, and modification indices were examined to determine whether modification was needed. All the factor loadings on their respected constructs were higher than .66 (see Table 12). Convergent validity was supported by the following: (1) all loadings were significant (*p* < .001), (2) the composite reliability for each construct exceeded the recommended level of .70, and (3) the average variance extracted (AVE) for each construct fulfilled the recommended benchmark of .50

(Hair et al., 1998). As evidence of discriminant validity of the scales, none of the confidence intervals of the phi estimates included 1.00. All the factor loadings were significant ($p < .001$), with composite reliability greater than .88 and AVE all greater than .50.
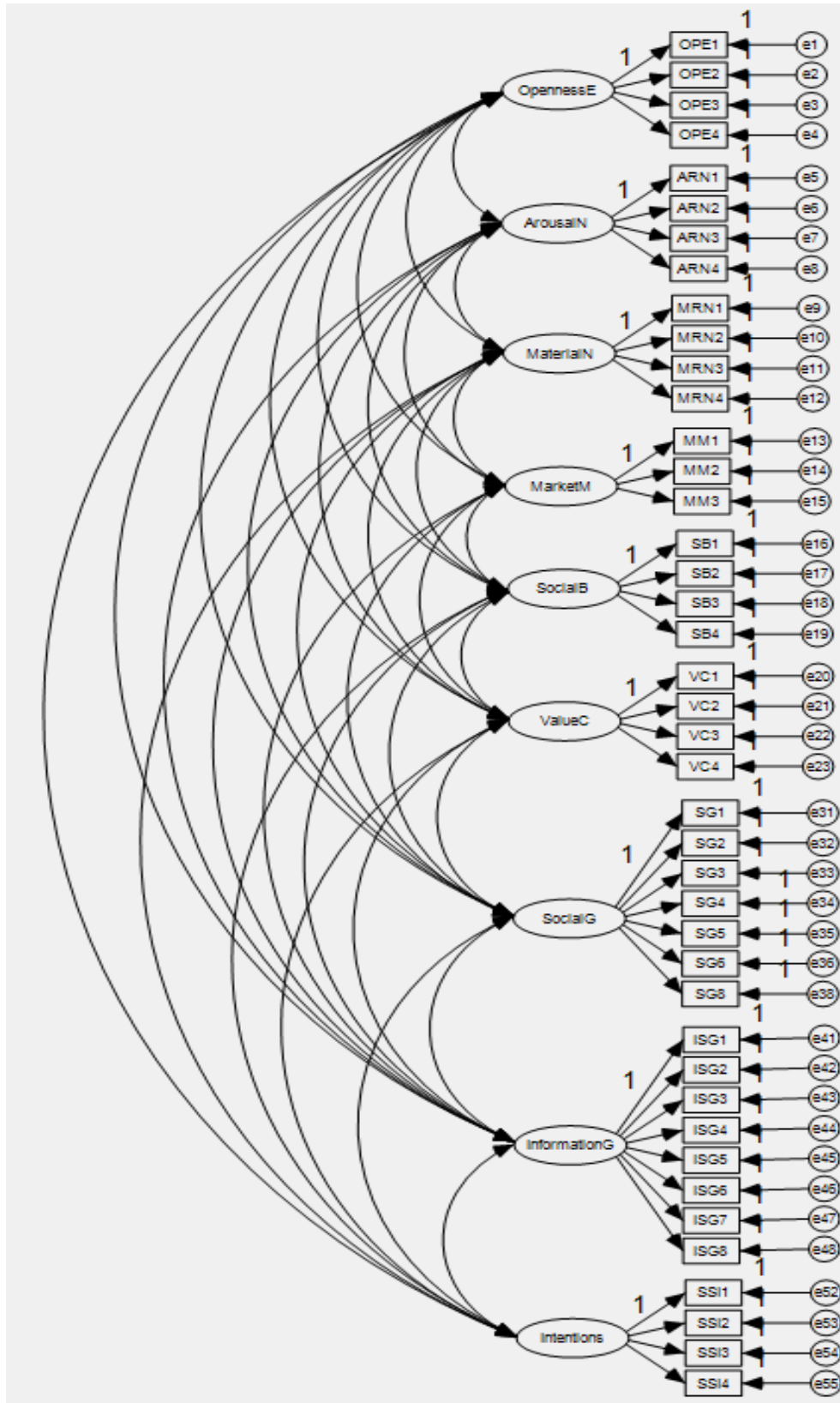
*Figure 4.* Confirmatory factor analysis: Measurement model specification

Table 12

*Measurement Model Evaluation: Standardized Loadings*

| Construct and Measures | Number of Items | Standardized Loading (min. – max.) |
|---|---|---|
| 1. Openness to Experience | 4 | .66 – .91 |
| 2. Arousal Needs | 4 | .77 – .87 |
| 3. Material Resource Needs | 4 | .72 – .93 |
| 4. Market Mavenism | 3 | .87 – .93 |
| 5. Social Browsing | 4 | .90 – .96 |
| 6. Value Consciousness | 4 | .70 – .92 |
| 7. Socializing Gratification | 7 | .78 – .93 |
| 8. Information-Seeking Gratification | 8 | .87 – .93 |
| 9. Intentions to Social e-Shop Apparel | 4 | .87 – .91 |

Table 13-1

*Results: Measurement Model*

| Construct | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Openness to Experience | 1.00 | | | | | | | | |
| 2. Arousal Needs | .50 | 1.00 | | | | | | | |
| 3. Material Resource Needs | .28 | .44 | 1.00 | | | | | | |
| 4. Market Mavenism | .43 | .30 | .51 | 1.00 | | | | | |
| 5. Social Browsing | .16 | .35 | .58 | .38 | 1.00 | | | | |
| 6. Value Consciousness | .26 | .12 | .14 | .38 | .26 | 1.00 | | | |
| 7. Socializing Gratification | .20 | .30 | .42 | .38 | .58 | .18 | 1.00 | | |
| 8. Information-Seeking Gratification | .18 | .28 | .35 | .33 | .50 | .37 | .60 | 1.00 | |
| 9. Intentions to Social e-Shop | .23 | .28 | .38 | .48 | .53 | .20 | .59 | .60 | 1.00 |
| | | | | | | | | | |
| Mean | 3.64 | 3.33 | 2.89 | 3.27 | 2.83 | 4.07 | 2.59 | 3.26 | 2.85 |
| *SD* | .82 | .95 | 1.06 | 1.07 | 1.10 | .81 | 1.15 | 1.14 | 1.10 |
| | | | | | | | | | |
| Composite Reliability[a] | .89 | .88 | .91 | .92 | .96 | .89 | .96 | .97 | .95 |
| Variance Extracted[b] | .67 | .66 | .72 | .80 | .85 | .66 | .78 | .77 | .83 |

[a]Composite Reliability $= (\sum \text{standardized loading})^2/(\sum \text{standardized loading})^2 + \sum \text{measurement error}$

[b]Variance Extracted $= \sum (\text{standardized loading})^2/ \sum (\text{standardized loading})^2 + \sum \text{measurement error}$

88

Table 13-2

Discriminant Validity Assessment Matrix of the Measurement Model

| Construct | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Openness to Experience | *.67* | | | | | | | | |
| 2. Arousal Needs | .25 | *.66* | | | | | | | |
| 3. Material Resource Needs | .07 | .20 | *.72* | | | | | | |
| 4. Market Mavenism | .18 | .09 | .26 | *.80* | | | | | |
| 5. Social Browsing | .03 | .12 | .37 | .31 | *.85* | | | | |
| 6. Value Consciousness | .07 | .01 | .02 | .15 | .07 | *.66* | | | |
| 7. Socializing Gratification | .04 | .09 | .18 | .14 | .33 | .03 | *.78* | | |
| 8. Information-Seeking Gratification | .03 | .08 | .12 | .11 | .23 | .14 | .50 | *.77* | |
| 9. Intentions to Social e-Shop | .05 | .08 | .14 | .23 | .28 | .04 | .47 | .49 | *.83* |

*Note.* Values on the diagonal represent average variance extracted; remaining values are squared correlations.

**Hypotheses Testing/Structural Model Evaluation**

A structural analysis was conducted using the maximum likelihood estimation method. The results from the structural model are presented in Table 14. The structural model exhibited a good fit with the data ($\chi^2$ = 1890.76 with 765 $df$, $\chi^2/df$ = 2.47, CFI = .96, NNFI = .96, RMSEA = .05, and SRMR = .06). In addition, modification indices showed no critical problems of misfit and did not suggest any additions or eliminations of paths. Figure 5 illustrates the model and shows parameter estimates. Table 14 indicates that in each sample, all significant relationships between latent constructs were in the hypothesized direction.

Table 14

*Results: Structural Model*

| Endogenous Constructs | SE[a] | t-value[b] |
|---|---|---|
| **Intentions to Social e-Shop Apparel** | | |
| $R^2$ | .60 | |
| H1 Socializing Gratification | .26 | 5.77*** |
| H2 Information-Seeking Gratification | .46 | 10.15*** |
| H3c Market Mavenism | .24 | 6.17*** |
| H4c Social Browsing | .10 | 2.41* |
| H5c Value Consciousness | .12 | 3.86*** |
| H6c Openness to Experience | .04 | 1.15 |
| H7c Arousal Needs | -.01 | -.36 |
| H8c Material Resource Needs | -.06 | -1.28 |
| **Socializing Gratification** | | |
| $R^2$ | .33 | |
| H3a Market Mavenism | .09 | 2.37* |
| H4a Social Browsing | .53 | 13.67*** |
| H5a Value Consciousness | .02 | .46 |
| **Information-Seeking Gratification** | | |
| $R^2$ | .27 | |
| H3b Market Mavenism | .02 | .60 |
| H4b Social Browsing | .41 | 10.22*** |
| H5b Value Consciousness | .27 | 6.90*** |
| **Market Mavenism** | | |
| $R^2$ | .36 | |
| H6a Openness to Experience | .32 | 7.17*** |
| H7a Arousal Needs | -.05 | -1.12 |
| H8a Material Resource Needs | .46 | 10.63*** |
| **Social Browsing** | | |
| $R^2$ | .40 | |
| H6b Openness to Experience | -0.05 | -1.11 |
| H7b Arousal Needs | .11 | 2.55* |
| H8b Material Resource Needs | .58 | 13.96*** |
| **Value Consciousness** | | |
| $R^2$ | .03 | |
| H8c Material Resource Needs | .17 | 3.80*** |

Fit Statistics

| | |
|---|---|
| N | 601 |
| $\chi^2$ (df) | 1890.76 ***(765) |
| $\chi^2/df$ | 2.47 |
| CFI | .96 |
| NNFI | .95 |
| RMSEA | .05 |
| SRMR | .06 |

[a] SE, Standardized estimate
[b] *$p < .05$, **$p < .01$, ***$p < .001$
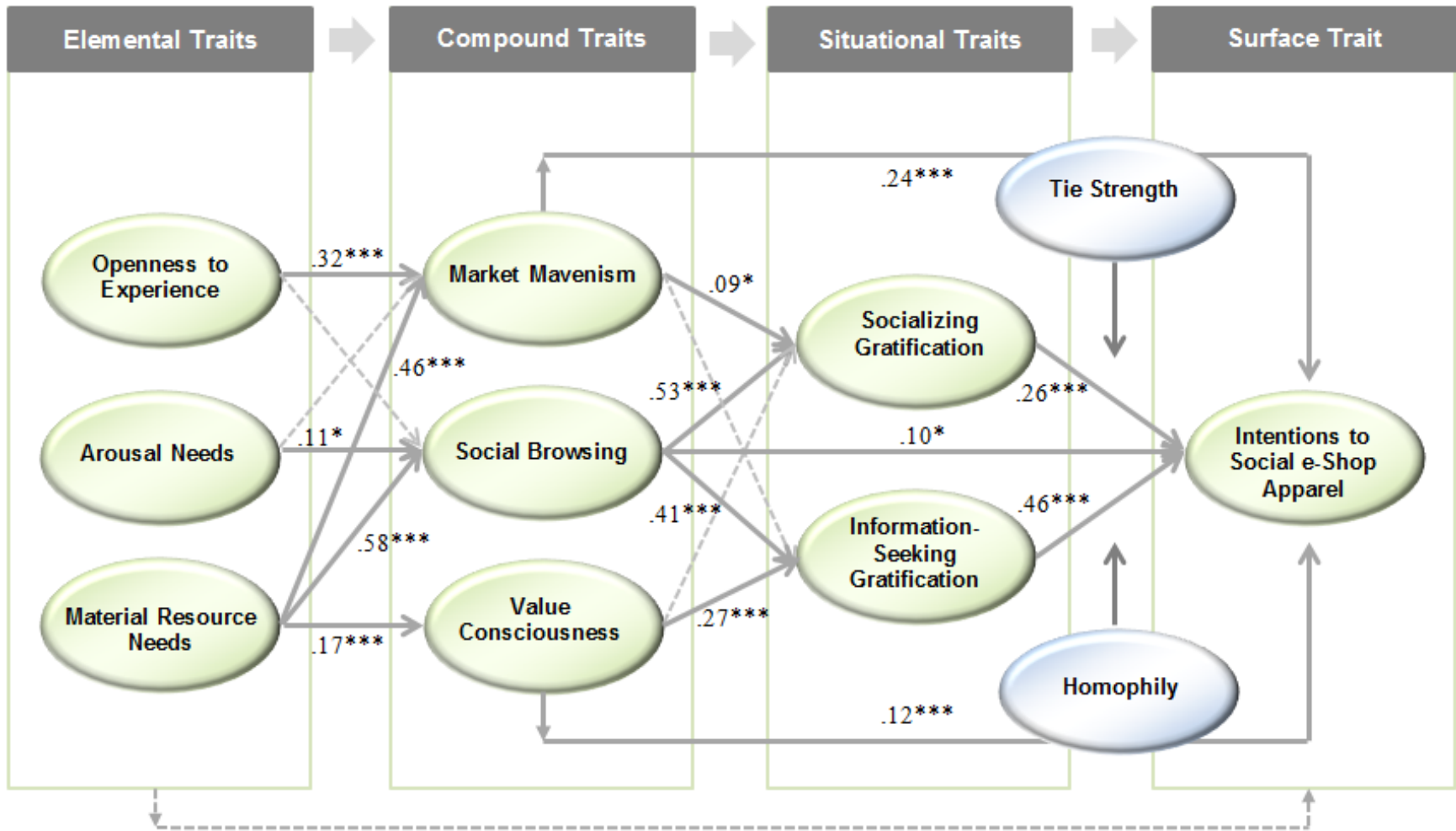
*Figure 5.* Final model

$\chi^2 = 1890.76$ with 765 *df*, $\chi^2/df = 2.47$, CFI = .96, NNFI = .96, RMSEA = .05, SRMR = .06

*Note.* All are standardized estimates. Bold paths indicate significant. *\*p < .05, \*\*p < .01, \*\*\*p < .001*

**Effects of Gratifications: Hypotheses 1 and 2**

Hypotheses 1 and 2 posited that two gratifications of social e-shopping have influences on intentions to social e-shop apparel. The structural model test result demonstrated that socializing gratification ($\beta = .26$, $t = 5.77$) and information-seeking gratification ($\beta = .46$, $t = 10.15$) were positively related to intentions to social e-shop apparel. Thus, both H1 and H2 were supported.

**H1-2:** Socializing gratification (H1) [supported] and information-seeking gratification (H2) are positively related to intentions to social e-shop apparel [supported].

**Effects of Psychographic Characteristics: Hypotheses 3 to 5**

Hypotheses 3 to 5 predicted that psychographic characteristics influence gratifications and intentions to social e-shop apparel. The structural model test result demonstrated that market mavenism (H3) was positively related to socializing gratification ($\beta = .09$, $t = 2.37$, $p < .05$) and intentions to social e-shop apparel ($\beta = .24$, $t = 6.17$, $p < .001$). Social browsing (H4) was positively related to socializing gratification ($\beta = .53$, $t = 13.67$, $p < .001$), information-seeking gratification ($\beta = .41$, $t = 10.22$, $p < .001$), and intentions to social e-shop apparel ($\beta = .10$, $t = 2.41$, $p < .05$). Value consciousness (H5) was positively related to information-seeking gratification ($\beta = .27$, $t = 6.90$, $p < .001$) and intentions to social e-shop apparel ($\beta = .12$, $t = 3.86$, $p < .001$). Thus, H3a, H3c, H4a, H4b, H4c, H5b and H5c were supported.

**H3a-c:** Market mavenism is positively related to socializing gratification (a) [supported], information-seeking gratification (b) [not supported], and intentions to social e-shop apparel (c) [supported].

**H4a-c:** Social browsing is positively related to socializing gratification (a) [supported], information-seeking gratification (b) [supported], and intentions to social e-shop apparel (c) [supported].

**H5a-c:** Value consciousness is positively related to socializing gratification (a) [not supported], information-seeking gratification (b) [supported], and intentions to social e-shop apparel (c) [supported].

**Effects of Personality Traits: Hypotheses 6 to 8**

Hypotheses 6 to 8 predicted that three personality traits influence psychographic characteristics and intentions to social e-shop apparel. The structural model test result demonstrated that openness to experience (H6) was positively related to market mavenism ($\beta = .32$, $t = 7.17$, $p < .001$). Arousal needs were positively related to social browsing ($\beta = .11$, $t = 2.55$, $p < .05$). Material resource needs were positively related to market mavenism ($\beta = .46$, $t = 10.63$, $p < .001$), social browsing ($\beta = .58$, $t = 13.96$, $p < .001$) and value consciousness ($\beta = .17$, $t = 3.80$, $p < .001$). Thus, H6a, H7b, H8a, H8b, and H8c were supported.

**H6a-c:** Openness to experience is positively related to market mavenism (a) [supported], social browsing (b) [not supported], and intentions to social e-shop apparel (c) [not supported].

**H7a-c:** Arousal needs are positively related to market mavenism (a) [not supported], social browsing (b) [supported], and intentions to social e-shop apparel (c) [not supported].

**H8a-d:** Material resource needs are positively related to market mavenism (a)

[supported], social browsing (b) [supported], value consciousness (c) [supported], and

intentions to social e-shop apparel (d) [not supported].

**Moderating Effects of Interpersonal Influences: Hypotheses 9 and 10**

Hypotheses 9 and 10 predicted that two interpersonal influence factors moderated

the links between two gratifications and intentions to social e-shop apparel. Multiple

group SEM analysis was used for the invariance test of the model to test moderating

effects. This invariance test was achieved by comparing chi-square ($\chi^2$) values and

degrees of freedom (*df*) for the base model and the constrained model. All path

parameters were constrained to be equal across two groups to test whether the

constrained model was invariant between the groups. Then the fit of the base model (free

parameter estimation) and the constrained model (equality constraints imposed on

parameter estimation) were compared (see Table 15).  Differences in chi-square values

between models reveal whether tie strength and homophily act as moderating variables.

Therefore, a significant decrease in chi-square from the equal model to a model in which

one relationship is set free indicates that the moderator variable has a significant

influence on that relationship.

The model fit difference from the comparison of the two tie strength groups (low

versus high; median split = 3.67) indicated that the coefficients for the two groups were

significantly different ($\Delta\chi^2$ = 11.44, $\Delta$ *df* = 2, *p* =. 003). Tie strength moderated the

relationships between both types of gratifications and intentions to social e-shop apparel.

Thus, H9 was supported.

The model fit difference from the comparison of the two homophily groups (low versus high; median split = 3.25) indicated that the coefficients for the two groups were significantly different ($\Delta\chi^2$ = 5.84, $\Delta df$ = 2, $p$ = .04). Thus, homophily moderated the relationships between both types of gratifications and intentions to social e-shop apparel. Thus, H10 was supported. For each moderator, table 15 displays the results for four separate structural model estimations in terms of chi-square and degrees of freedom.

**H9:** Tie strength moderates the relationships between gratifications (i.e., socializing and information-seeking) and intentions to social e-shop apparel [supported].

**H10:** Homophily moderates the relationships between gratifications (i.e., socializing and information-seeking) and intentions to social e-shop apparel [supported].

Table 15

*Multiple-Group Structural Model Invariance Test*

| Groups | Model Description | $\chi^2$ | df | $\Delta\chi^2$ | $\Delta$ df | Sig. p | Model Invariance |
|---|---|---|---|---|---|---|---|
| High/Low levels of Tie Strength | Based Model (free estimation) | 3246.61 | 1549 | 11.44 | 2 | .003 | No (variance) |
| | Model with equality constraint imposed | 3258.05 | 1551 | | | | |
| High/Low levels of Homophily | Based Model (free estimation) | 3281.31 | 1551 | 5.84 | 2 | .04 | No (variance) |
| | Model with equality constraint imposed | 3287.15 | 1549 | | | | |

Table 16

*Summary of Hypotheses Testing*

|  | Hypotheses | Results |
|---|---|---|
| H1 | Socializing gratification is positively related to intentions to social e-shop apparel. | Supported |
| H2 | Information-seeking gratification is positively related to intentions to social e-shop apparel. | Supported |
| H3a | Market mavensim is positively related to socializing gratification. | Supported |
| H3b | Market mavensim is positively related to information-seeking gratification. | Not supported |
| H3c | Market mavensim is positively related to intentions to social e-shop apparel. | Supported |
| H4a | Social browsing is positively related to socializing gratification. | Supported |
| H4b | Social browsing is positively related to information-seeking gratification. | Supported |
| H4c | Social browsing is positively related to intentions to social e-shop apparel. | Supported |
| H5a | Value consciousness is positively related to socializing gratification. | Not supported |
| H5b | Value consciousness is positively related to information-seeking gratification. | Supported |
| H5c | Value consciousness is positively related to intentions to social e-shop apparel. | Supported |
| H6a | Openness to experience is positively related to market mavenism. | Supported |
| H6b | Openness to experience is positively related to social browsing. | Not supported |
| H6c | Openness to experience is positively related to intentions to social e-shop apparel. | Not supported |
| H7a | Arousal needs are positively related to market mavenism. | Not supported |
| H7b | Arousal needs are positively related to social browsing. | Supported |
| H7c | Arousal needs are positively related to intentions to social e-shop apparel. | Not supported |
| H8a | Material resource needs are positively related to market mavenism. | Supported |
| H8b | Material resource needs are positively related to social browsing. | Supported |
| H8c | Material resource needs are positively related to intentions to social e-shop apparel. | Not supported |
| H9 | Tie strength moderates the relationships between gratifications (i.e., socializing and information-seeking) and intentions to social e-shop apparel. | Supported |

Table 16

*Continued.*

| | Hypotheses | Results |
|---|---|---|
| H10 | Homophily moderates the relationships between gratifications (i.e., socializing and information-seeking) and intentions to social e-shop apparel. | Supported |

## Mediation Testing

The Sobel (1982) test was used to calculate for mediation in the structural model and to assess whether mediator variables (i.e., three psychographic characteristics, two gratifications) significantly carried the effect of independent variables to the dependent variable (i.e., intentions to social e-shop apparel).

### Mediating Effects of Compound Traits (Psychographic Characteristics)

The indirect effects of the three exogenous constructs (i.e., personality traits) on gratifications as well as intentions to social e-shop apparel were assessed. The Sobel test assessed whether mediator variables (i.e., three psychographic characteristics) significantly carry (1) the effects of personality traits to two gratifications and intentions to social e-shop apparel and (2) the effects of personality traits to gratifications.

**Mediating effect of market mavenism.** The results of the Sobel test revealed that market mavenism fully mediated the effects of openness to experience ($\beta_{indirect}$ = .08, $z$ = 3.92, $p$ < .001) and material resource needs ($\beta_{indirect}$ = .11, $z$ = 5.36, $p$ < .001) on to intentions to social e-shop apparel. Since the direct relationships between the three personality traits and intentions to social e-shop apparel were not significant, market mavenism could be regarded as a full mediator in the link between openness to experience and intentions to social e-shop apparel as well as the link between material resource needs and intentions to social e-shop apparel. However, mavenism did not mediate the effect of openness to experience on socializing gratification ($\beta_{indirect}$ = .03, $z$ = .69, $p$ > .05).

**Mediating effect of social browsing.** The results of the Sobel test demonstrated that social browsing fully mediated material resource needs ($\beta_{indirect}$ = .06, $z$ = 2.52, $p$

< .05) on intentions to social e-shop apparel. Since the direct relationship between material resource needs and intentions to social e-shop apparel was not significant, social browsing could be regarded as a full mediator in the link between material resource needs and intentions to social e-shop apparel. However, social browsing did not mediate the effects of arousal needs ($\beta_{indirect}$ = .01, $z$ = 1.67, $p$ > .05) on intentions to social e-shop apparel. In addition, social browsing fully mediated the effect of arousal needs on socializing gratification ($\beta_{indirect}$ = .06, $z$ = 2.16, $p$ < .05) and information-seeking gratification ($\beta_{indirect}$ = .05, $z$ = 2.14, $p$ < .05) as well as the effect of material resource needs on socializing gratification ($\beta_{indirect}$ =.31, $z$ = 9.29, $p$ < .001) and information-seeking gratification ($\beta_{indirect}$ = .24, $z$ = 7.90, $p$ < .001).

**Mediating effect of value consciousness.** The results of the Sobel test revealed that value consciousness fully mediated the effects of material resource needs ($\beta_{indirect}$ = .02, $z$ = 2.62, $p$ < .01) on intentions to social e-shop apparel. Since the direct relationship between material resource needs and intentions to social e-shop apparel was not significant, value consciousness could be regarded as a full mediator in the link between material resource needs and intentions to social e-shop apparel. In addition, value consciousness fully mediated the effect of material resource needs on information-seeking gratification ($\beta_{indirect}$ = .05, $z$ = 3.60, $p$ < .001).

**Mediating Effects of Situational Traits (Gratifications)**

The indirect effects of the three psychographic characteristics on intentions to social e-shop apparel were assessed. The Sobel test assessed whether mediator variables (i.e., two gratifications) significantly carry the effects of psychographic characteristics to intentions to social e-shop apparel.

**Mediating effect of socializing gratification.** The results of the Sobel test identified that socializing gratification partially mediated the effect of social browsing ($\beta_{indirect} = .05$, $z = 2.11$, $p < .05$) on intentions to social e-shop apparel. Since the direct relationship between social browsing and intentions to social e-shop apparel was significant, socializing gratification could be regarded as a partial mediator in the link between social browsing and intentions to social e-shop apparel. However, socializing gratification did not mediate the effects of market mavenism ($\beta_{indirect} = .01$, $z = 1.50$, $p > .05$) on intentions to social e-shop apparel.

**Mediating effect of information-seeking gratification.** The results of the Sobel test demonstrated that information-seeking gratification partially mediated the effects of social browsing ($\beta_{indirect} = .19$, $z = 7.19$, $p < .001$) and value consciousness ($\beta_{indirect} = .12$, $z = 4.69$, $p < .001$) on intentions to social e-shop apparel. Since the direct relationships between psychographic characteristics and intentions to social e-shop apparel were significant, information-seeking gratification could be regarded as a partial mediator in the link between social browsing and intentions to social e-shop apparel as well as the link between value consciousness and intentions to social e-shop apparel.

**Invariance Test of Structural Relationships for Gender Comparison**

Multiple-group SEM analysis was used for the invariance test of the model to examine the robustness of the structural model across gender. The invariance test was achieved by comparing chi-square ($\chi^2$) values and degrees of freedom ($df$) for the base model and the constrained model. All path parameters were constrained to be equal across two groups to test whether the constrained model was invariant between the groups. Then the fit of the base model (free parameter estimation) and the constrained model (equality constraints imposed on parameter estimation) were compared (see Table 17). The model fit difference from the comparison of gender (male versus female) indicated that the coefficients for the two groups were significantly different ($\Delta\chi^2$ = 55.03, $\Delta df$ = 21, $p$ = .00).

After the initial model assessment for the hypothesized model, Structural Equation Modeling (SEM) for male and female groups was conducted to test proposed hypotheses by estimating the structural coefficients for the male group and the female group separately. The standardized structural coefficients and the significance are compared within a group and between the two groups in Table 18.

In terms of noticeable differences in the results, interestingly, as compared to female participants, male participants who were likely to social e-shop for the purpose of socializing and who were also value conscious indicated that they did not intend to social e-shop apparel using Facebook. Male participants who were market mavens were not likely to social e-shop for the purpose of socializing, while female participants were. Further, male participants who needed arousal were likely to be market mavens, while female participants were not. As compared to male participants, female participants who

104

were social browsers indicated that they did not intend to social e-shop apparel using

Facebook. Female participants who needed material resources were not likely to be value

conscious, while male participants were.

Table 17

*Multiple-Group Structural Model Invariance Test for Gender Comparison*

| Groups | Model Description | $\chi^2$ | df | $\Delta\chi^2$ | $\Delta$ df | Sig. p | Model Invariance |
|--------|-------------------|----------|-----|-------|------|--------|------------------|
| Gender | Based Model (free estimation) | 3353.61 | 1530 | 55.03 | 21 | .000 | No (variance) |
|        | Model with equality constraint imposed | 3408.65 | 1551 | | | | |

Table 18

*Within-Group Structural Coefficients and Significance for Hypotheses*

| | | Male | | Female | |
|---|---|---|---|---|---|
| Endogenous Constructs | | SE[a] | t-value[b] | SE[a] | t-value[b] |
| Intentions to social e-Shop Apparel | | | | | |
| $R^2$ | | .59 | | .64 | |
| H1 | Socializing Gratification | .08 | 1.10 | .38 | 6.58*** |
| H2 | Information-Seeking Gratification | .51 | 6.64*** | .39 | 7.27*** |
| H3c | Market Mavenism | .31 | 4.23*** | .18 | 4.03*** |
| H4c | Social Browsing | .30 | 3.38*** | .04 | .88 |
| H5c | Value Consciousness | .11 | 1.80 | .10 | 2.50* |
| H6c | Openness to Experience | .09 | 1.20 | .01 | .18 |
| H7c | Arousal Needs | -.14 | -1.82 | .03 | .76 |
| H8c | Material Resource Needs | -.14 | -1.59 | -.03 | -.55 |
| Socializing Gratification | | | | | |
| $R^2$ | | .46 | | .27 | |
| H3a | Market Mavenism | -.04 | -.61 | .18 | 3.62*** |
| H4a | Social Browsing | .64 | 10.14*** | .44 | 9.00*** |
| H5a | Value Consciousness | .14 | 2.48 | .07 | 1.51 |
| Information-Seeking Gratification | | | | | |
| $R^2$ | | .43 | | .18 | |
| H3b | Market Mavenism | -.06 | -.94 | .08 | 1.51 |
| H4b | Social Browsing | .47 | 7.35*** | .35 | 6.79*** |
| H5b | Value Consciousness | .39 | 6.41*** | .18 | 3.55*** |
| Market Mavenism | | | | | |
| $R^2$ | | .47 | | .34 | |
| H6a | Openness to Experience | .46 | 5.56*** | .27 | 5.14*** |
| H7a | Arousal Needs | -.18 | -2.10* | .03 | .54 |
| H8a | Material Resource Needs | .51 | 7.15*** | .44 | 8.27*** |
| Social Browsing | | | | | |
| $R^2$ | | .55 | | .33 | |
| H6b | Openness to Experience | -.13 | -1.86 | -.03 | -.52 |
| H7b | Arousal Needs | .20 | 2.67** | .12 | 2.22* |
| H8b | Material Resource Needs | .68 | 10.63*** | .52 | 9.81*** |
| Value Consciousness | | | | | |
| $R^2$ | | .11 | | .01 | |
| H8c | Material Resource Needs | .33 | 4.69*** | .07 | 1.25 |

[a] SE, Standardized estimate; [b] *p* < .05, **p* < .01, ***p* < .001

## Rival Models

It is commonly agreed that researchers need to compare rival models and not just test the performance of their hypothesized models (Bagozzi & Yi 1988). Three rival models were tested to verify the performance of the hypothesized model.

The "Meta-Theoretic Model of Motivation and Personality" (the 3M) (Mowen, 2000) provided a theoretical basis for positioning compound traits (i.e., psychographic characteristics) and situational traits (i.e., gratifications) as mediating variables. Three nonparsimonious rival models neglected the mediating role of psychographic characteristics and/or gratifications. Further, because a parsimonious hypothesized model allows no direct paths from personality traits to gratifications, two nonparsimonious rival models hypothesized direct paths from personality traits to gratifications (i.e., socializing and information-seeking).

On the basis of previous researchers' work (De Wulf, Odekerken-Schröder, & Iacobucci, 2001; Morgan & Hunt, 1994), the hypothesized model was compared with three rival models on the following criteria: overall fit, parsimony, percentage of either model's parameters that were statistically significant, and $R^2$ s for the endogenous constructs.
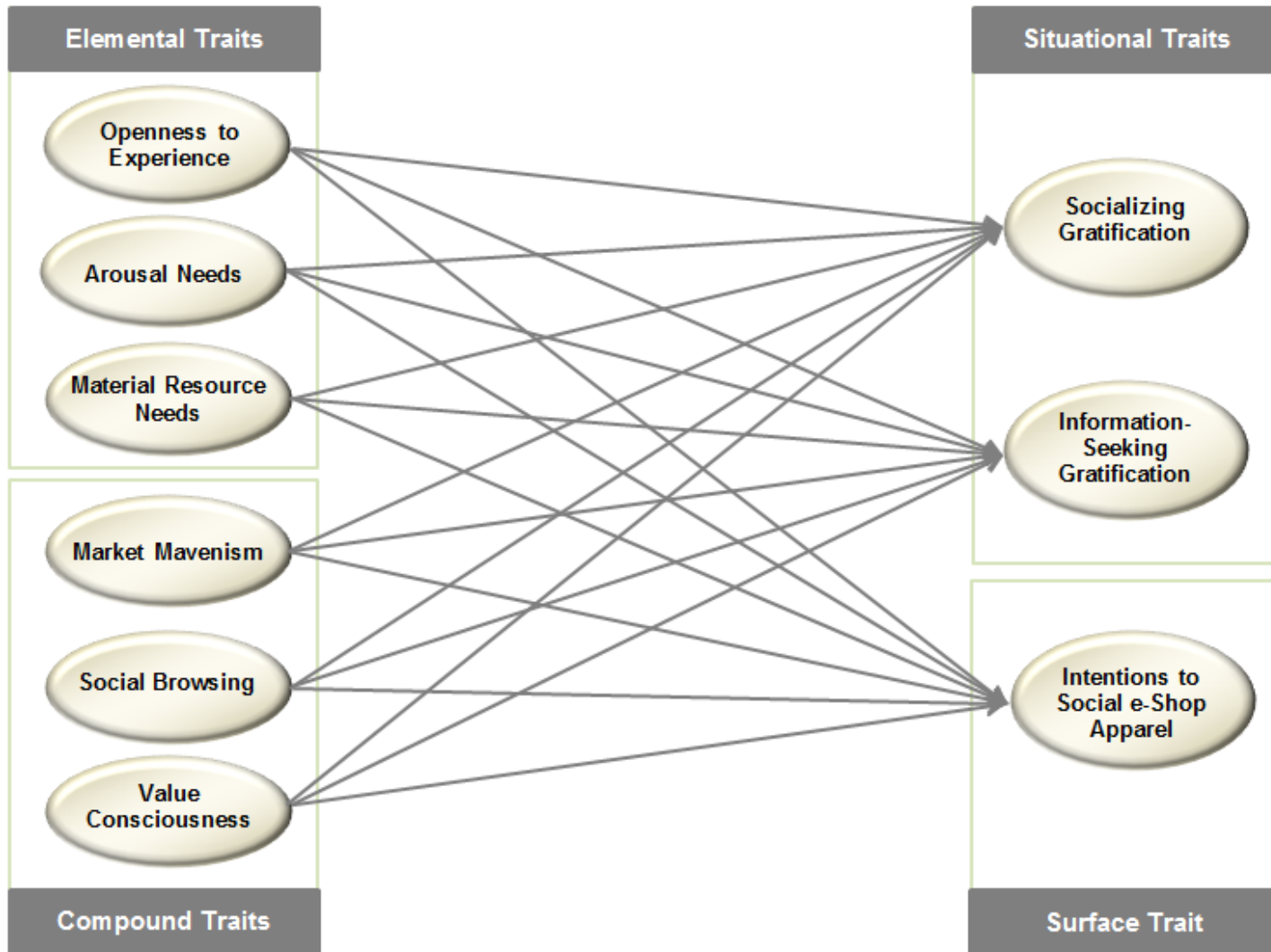
*Figure 8.* Rival model 1
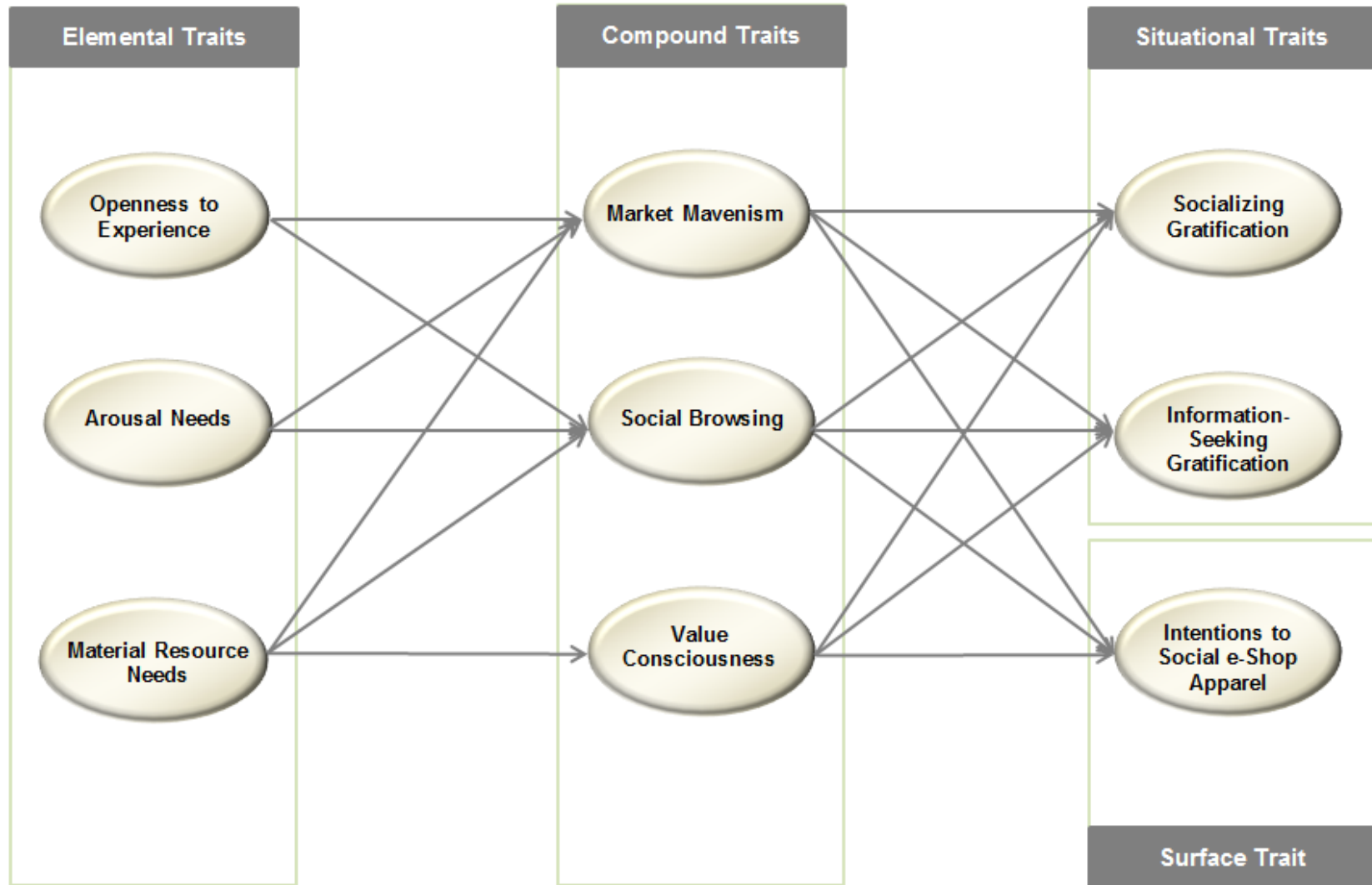
*Figure 9.* Rival model 2
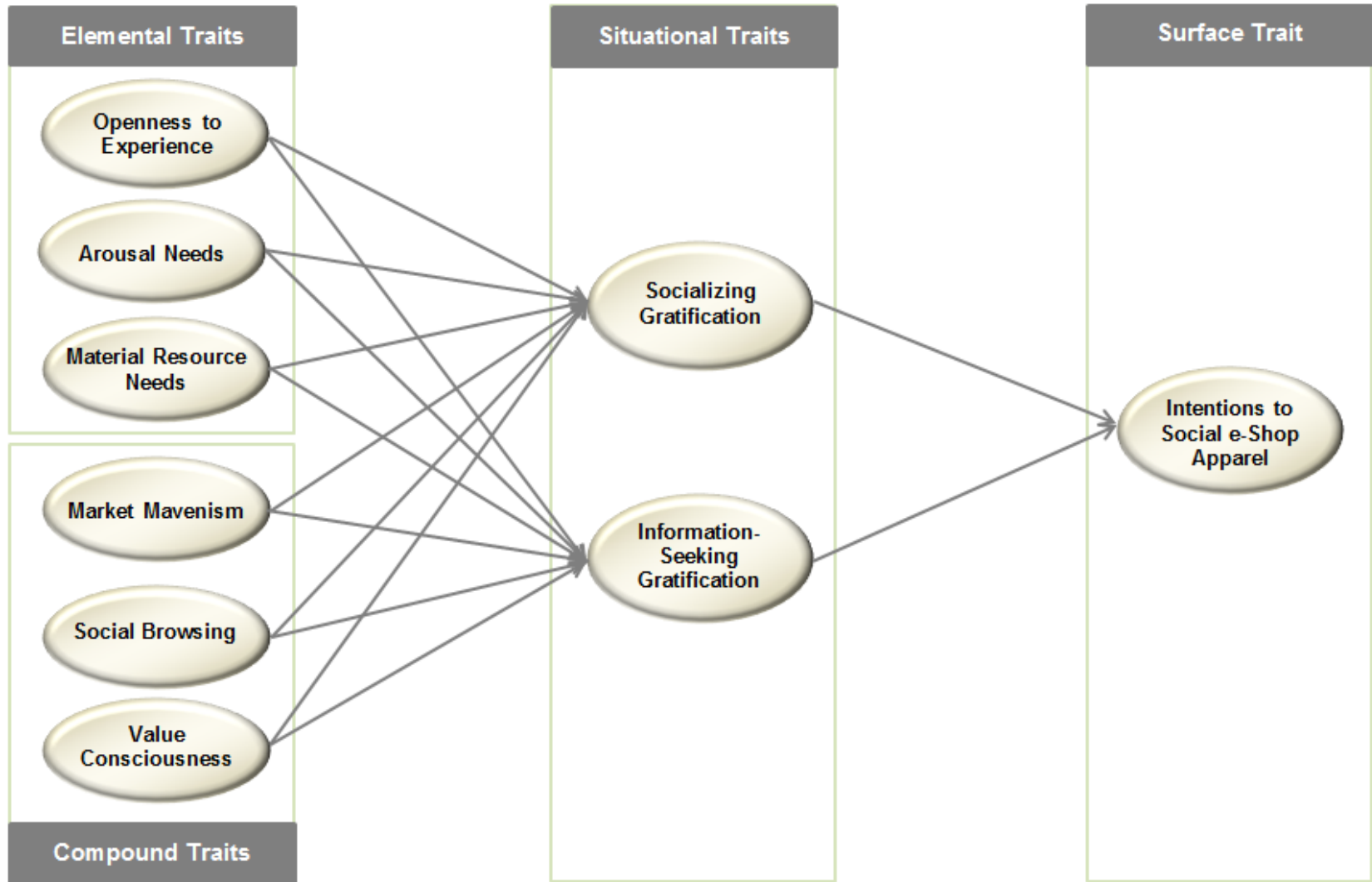
*Figure 10.* Rival model 3

**Rival Model 1**

**Model development.** Previous researchers (e.g., De Wulf et al., 2001[5]) have typically examined a rival structural model that neglected all mediating roles in order to enhance their confidence in their hypothesized structural model. Thus, the first rival model neglected the mediating roles of both compound traits (i.e., psychographic characteristics) and situational traits (i.e., gratifications) and allowed direct paths from personality traits to gratifications.

In addition, the hypothesized model of this study did not include relationships between elemental traits (i.e., personality traits) and situational traits (i.e., gratifications). Previous researchers indicated that consumers who were open to experience were likely to have favorable attitudes and intentions toward online shopping (Bosnjak et al., 2007; Wang et al., 2006) and to ask other people for information about products, places to shop, or sales (Mowen et al., 2007). Consumers who desire stimulation (i.e., a high stimulation level, high arousal needs) were likely to adopt more retail outlets (Mittelstaedt, Grossbart, & Curtis, 1976) and that their willingness to purchase online was related to their hedonic values (Fiore et al., 2005). Further, consumers who needed material resources (Bosnjak et al., 2007) were likely to view online shopping as fun and exciting (i.e., affective involvement in online shopping). These tendencies could stimulate the type of gratifications they linked to social e-shopping for apparel using Facebook. Collectively, it was anticipated that users who were open to experience and needed arousal and material resources would be likely to social e-shop for the purpose of socializing and information-

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[5] De Wulf et al. (2001) specifically examined the effects of relationship marketing tactics (e.g., direct mail, interpersonal communication, tangible rewards) on behavioral loyalty (e.g., how often do you buy clothes in this store compared to other stores where you buy clothes?) with the two-level mediating roles of (1) perceived relationship investment (e.g., this store really cares about keeping regular customers) and (2) relationship quality (e.g., as a regular customer, I have a high-quality relationship with this store).

seeking gratifications. Thus, testing these alternative relationships between personality traits and gratifications could increase the rival model's parsimony, offset the incremental improvement in fit, and result in a higher percentage of significant path coefficients.

**Results of testing rival model 1.** With respect to overall fit, the CFI of the hypothesized model was higher than that of the first rival model (.957 versus .944) and the hypothesized model's ratio of chi-square to degrees of freedom was lower than that of the first rival model (2.47 versus 2.96). In addition, 66.7% of the paths in the hypothesized model were significant as opposed to only 33.3% of the paths in the first rival model. Finally, in terms of $R^2$ s for the endogenous constructs, the average explained variance of socializing gratification of the hypothesized model was lower than that of the first rival model (.326 versus .367). The average explained variance of information seeking gratification of the hypothesized model was lower than that of the first rival model (.268 versus .322). This is not surprising because in addition to psychographic characteristics, three personality traits were modeled to explain socializing gratification and information-seeking gratification in the first rival model. Further, the average explained variance of intentions to social e-shop apparel the hypothesized model was higher than that of the first rival model (.603 versus .347). This means that the explanatory power of psychographic characteristics, socializing gratification, and information-seeking gratification as antecedents of intentions to social e-shop apparel in the hypothesized model is stronger than the combined explanatory power of the psychographic characteristics plus personality traits as the antecedents of intentions to social e-shop apparel in the first rival model.

**Rival Model 2**

**Model development.** The second rival model neglected the mediating role of situational traits (i.e., gratifications). Testing whether compound traits mediated the relationships between elemental traits (i.e., personality traits) and the combination of situational traits with the surface trait (i.e., gratifications with intentions to social e-shop) could increase the rival model's parsimony, offset the incremental improvement in fit, and result in a higher percentage of significant path coefficients. For instance, previous researchers examined the antecedents of credit card misuse using elemental traits, central traits, and surface traits based on the 3M hierarchical model of personality (Pirog & Roberts, 2007[6]). They reported that "Mowen (2000) distinguishes between two levels of what they referred to as central traits-compound and situational traits; however, as a practical matter the distinction is not always clear, and often unnecessary" (Pirog & Roberts, 2007, p. 67). Therefore, Pirog and Roberts' (2007) hypothesized structural model frame (i.e., elemental traits-compound traits [i.e., central traits]-surface traits) that proposed only compound traits as mediators was tested for the second rival model.

**Results of testing rival model 2.** In terms of overall fit, the CFI of the hypothesized model was higher than that of the second rival model (.957 versus .937) and the hypothesized model's ratio of chi-square to degrees of freedom was lower than that of the second rival model (2.47 versus 3.16). In addition, 66.7% of the paths in the hypothesized model were significant as opposed to only 57.9% of the paths in the second rival model. Finally, in terms of $R^2$ s for the endogenous constructs, the average explained variance of socializing gratification of the hypothesized model was lower than

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[6] Pirog and Roberts (2007) specifically examined the effects of personality traits (i.e., emotional instability, introversion, conscientiousness, need for arousal) on credit card misuse (e.g., I spend more when I use a credit card) with the mediating role of impulsiveness.

that of the second rival model (.326 versus .399). The average explained variance of

information seeking gratification of the hypothesized model was lower than that of the

second rival model (.268 versus .282). The average explained variance of intentions to

social e-shop apparel of the hypothesized model was higher than that of the second rival

model (.603 versus .321). These findings indicate that the explanatory power of

psychographic characteristics, socializing gratification, and information-seeking

gratification as antecedents of intentions to social e-shop apparel in the hypothesized

model is stronger than the explanatory power of the psychographic characteristics as

antecedents of intentions to social e-shop apparel in the second rival model.

**Rival Model 3**

> **Model development.** The third rival model tested neglected the mediating role of

compound traits (i.e., psychographic characteristics) and allowed direct paths from

personality traits to gratifications. The mediating role of only situational traits (i.e.,

gratifications) could increase the rival model's parsimony, offset the incremental

improvement in fit, and result in a higher percentage of significant path coefficients. For

instance, previous researchers (Prabhu, Sutton, & Sauser, 2008[7]) examined the mediating

effect of intrinsic motivation on the relationships between personality traits (i.e.,

elemental traits) and creativity (i.e., a surface trait). Their results supported this

relationship. Thus, the mediating roles of only situational traits (i.e., gratifications) were

examined as the third rival model. In addition, rationales for allowing direct paths from

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[7] Prabhu et al. (2008) specifically examined the effects of personality traits (i.e., openness to experience, self-efficacy, perseverance) on creativity (e.g., I prefer tasks that challenge me) with a mediating role of intrinsic motivation (e.g., I enjoy trying to solve complex problems).

114

personality traits to gratifications were presented in the first rival model development section (see pp. 112-113).

**Results of testing rival model 3.** With respect to overall fit, the CFI of the hypothesized model was slightly higher than that of the third rival model (.957 versus .954), and the hypothesized model's ratio of chi-square to degrees of freedom was lower than that of the third rival model (2.47 versus 2.59). In addition, 66.7% of the paths in the hypothesized model were significant as opposed to only 45.0% of the paths in the third rival model. Finally, in terms of $R^2$ s for the endogenous constructs, the average explained variance of socializing gratification of the hypothesized model was lower than that of the third rival model (.326 versus .359). The average explained variance of information seeking gratification of the hypothesized model was lower than that of the third rival model (.268 versus .317). Just as with the first rival model, this is not surprising because in addition to psychographic characteristics, three personality traits were tested to explain socializing gratification and information-seeking gratification in the third rival model. Further, the average explained variance of intentions to social e-shop apparel of the hypothesized model was higher than that of the third rival model (.603 versus .582). This means that the explanatory power of psychographic characteristics, socializing gratification, and information-seeking gratification as antecedents of intentions to social e-shop apparel in the hypothesized model is stronger than the explanatory power of socializing gratification and information-seeking gratification as the antecedents of intentions to social e-shop apparel in the third rival model.

**Conclusion**

On the basis of these findings, the exercise of testing rival models provided additional support for the meaningfulness and robustness of the hypothesized model. Neglecting the mediating role of psychographic characteristics (i.e., compound traits) or/and gratifications (i.e., situational traits) reduced the rival-model's overall fit and parsimony, and resulted in a lower percentage of significant path coefficients.

**CHAPTER V**

**DISCUSSION AND IMPLICATIONS**

This chapter presents the discussion of the findings from the empirical study

along with theoretical implications. Based on STP (Segmentation, Targeting, and

Positioning) as key components of any marketing strategy and the four principles of the

marketing mix[8] (i.e., product, price, place, promotion) practical managerial implications

to practitioners and retailers are presented. In addition, the limitations of the study are

identified and suggestions for future research are provided.

### Discussion of Findings

The research objectives were to investigate (1) whether personality traits (i.e.,

openness to experience, arousal needs, material resource needs) were positively related to

psychographic characteristics and intentions to social e-shop apparel, (2) whether

psychographic characteristics (i.e., market mavenism, social browsing, value

consciousness) were positively related to gratifications and intentions to social e-shop

apparel, (3) whether gratifications (i.e., information-seeking and socializing) were

positively related to intentions to social e-shop apparel, and (4) whether interpersonal

influences (i.e., tie strength, homophily) moderated the relationships between

gratifications and intentions to social e-shop apparel.

**Effects of Gratifications (Situational Traits)**

The effects of information-seeking and socializing gratifications on intentions to

social e-shop apparel were assessed. Participants who were likely to social e-shop for the

purpose of information-seeking and socializing indicated that they intended to social e-

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[8] Marketing mix refers to a business tool used in marketing products. McCarthy developed the marketing mix concept including four elements (i.e., product, price, place, promotion) in 1963.

shop apparel. Information-seeking gratification was a significant antecedent of intentions to social e-shop apparel. These findings support Yun (2011) who found that social shoppers' information-oriented motives indirectly influenced purchase intentions using social shopping. In addition to information-seeking gratification, socializing gratification was found to be an important antecedent of intentions to social e-shop apparel. This finding is consistent with previous researchers who found that both useful social interaction with others and social bonding were key motivations for online shopping as well as for online social media use (Flanagin & Metzger, 2001; Papacharissi & Rubin, 2000; Ray, 2007; Rohm & Swaminathan, 2004). Online social shopping can provide consumers with a means to share information about products/services as well as to facilitate socializing with others and building communities of individuals who share similar shopping interests and experiences.

**Effects of Psychographic Characteristics (Compound Traits)**

This study assessed the effects of market mavenism, social browsing, and value consciousness as compound traits on two gratifications (i.e., information-seeking and socializing). These compound traits were also examined for their influences on intentions to social e-shop apparel.

**Market mavenism.** Participants who were market mavens indicated they intended to social e-shop apparel. They were also likely to social e-shop for the purpose of communicating with other people to share similar shopping experiences (i.e., socializing gratification). These two findings support existing research that indicated market mavens tended to share information that may help others (Ruvio & Shoham,

118

2007) and tended to be interested in new shopping formats (Ailawadi et al., 2001; Wiedemann et al., 2008).

However, participants who were market mavens were not likely to social e-shop for the purpose of identifying the best deals and looking for product information (i.e., information-seeking gratification). This insignificant relationship may be due to the developmental stage of Facebook's social e-shopping services. Participants who were market mavens were likely to be gathering influential and useful information about a wide range of products from a wide range of established resources including visiting physical apparel stores, reading fashion magazines, receiving direct mail, viewing advertising, and visiting other credible product review websites in addition to visiting apparel social e-shopping sites through Facebook. Thus, because Facebook's social e-shopping services are in a nascent stage of development, they may not yet satisfy these market mavens' information needs.

**Social browsing.** Individuals who are social browsers tend to explore new fashion trends and products that are popular among others. In order to know what products are popular with others, social browsers need to seek information and be in communication with these others as they follow their fashion directions. As individuals socialize with each other and share information while shopping, they exert a certain level of influence on each other's decisions. This influence could be an outcome of directly shared information (e.g., you should buy that new outfit) or through comparison processes. Participants who were social browsers intended to social e-shop apparel. These participants were likely to social e-shop for the purpose of communicating with other people to share similar shopping experiences (i.e., socializing gratification) as well as

look for product-related information (i.e., information-seeking gratification). The significant associations between social browsing and both socializing and information-seeking gratifications support Kang and Park-Poaps' (2011) finding that social browsers were influenced by others and that they sought social comparison information. Kang and Park-Poaps (2011) also reported that noting what other shoppers purchased helped consumers decide on which fashion items they should purchase.

**Value consciousness.** Participants who were value conscious intended to social e-shop apparel. These participants were likely to social e-shop for the purpose of looking for product information (i.e., information-seeking gratification). This later finding confirms the results from Mowen et al., (2007) who found value conscious consumers were likely to ask other people for information about products, places to shop, or sales. This result is also in agreement with the work of Dennis et al. (2010) who found utilitarian[9] shoppers reported the ability to make price and discount comparisons as advantages of social shopping websites

However, participants who were value conscious were not likely to social e-shop for the purpose of socializing gratification. It may be that these participants, who were concerned about finding the best value for their money, may prefer practical e-activities, such as looking for direct information related to online discounts and bargains as well as getting a variety of positive and negative product reviews, rather than social e-activities including achieving a sense of belonging or other social bonding experiences. This pragmatic tendency may explain the link to the information-seeking gratification of social e-shopping rather than the socializing.

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[9] High-quality-consciousness, price-consciousness, and value-for-money represent a utilitarian orientation (Shim, 1996).

**Effects of Personality Traits (Elemental Traits)**

This study assessed the effects of openness to experience, arousal needs, and material resource needs on psychographic characteristics (i.e., market mavenism, social browsing, value consciousness) and intentions to social e-shop apparel. Participants who had these three personality traits did not intend to social e-shop apparel, thus the elemental traits investigated did not directly influence intentions to social e-shop apparel. However, these three personality traits indirectly influenced intentions to social e-shop apparel through psychographic characteristics (i.e., compound traits).

**Openness to experience.** Participants who were open to experience were likely to be market mavens. This finding is consistent with prior research work (Goodey & East, 2008). However, participants who were open to experience were not likely to engage in social browsing. Although it is not clear why there was no link between openness to experience and social browsing, it may be that the lack of a significant association was due to the measurement items used to assess social browsing and their exclusive focus on fashion products. The measurement items assessing social browsing (e.g., buying fashion products similar to those others are wearing and looking for new fashion products that are popular among their friends) could be a measure of individuals' interest in what others are wearing. An individual who is open to experience tends to feel highly creative and imaginative and to seek novel solutions (Licata et al., 2003). Thus, they are less likely to be interested in following or conforming to the fashion direction of others (i.e., social browsing).

**Arousal needs.** Individuals who need arousal tend to actively seek new experiences and an adrenaline rush. Participants who needed arousal were also likely to

be social browsers. Taken together and applied to apparel, these individuals may be looking for and purchasing new fashion products/brands that are popular among their friends as a means to satisfy their arousal needs.

However, participants who needed arousal were not likely to be market mavens. This finding did not support the previous research findings of Ruvio and Shoham (2007). Market mavenism refers to being an expert when it comes to shopping information about a range of categories. Market mavens enjoy gathering and disseminating information about a wide range of products and have high needs for cognition (Geissler & Edison, 2005). Thus, market mavenism implies forethought and engaging in a deliberate decision-making process in purchasing. These attributes reflect a utilitarian orientation relative to purchasing. In contrast, the need for arousal is related to online buying impulsiveness (Sun & Wu, 2011) and implies an impetuous propensity such as being stimulated to action or having a physiological readiness for activity and desire for stimulation and excitement. These attributes reflect a hedonic orientation to purchasing. Perhaps a chronic need to be stimulated is simply contrary to the development of the reflective and deliberate nature of market mavens. Further research could verify this explanation.

**Material resource needs.** Participants who needed material resources were likely to be market mavens, look for new fashion products/brands that were popular among their friends (i.e., social browsing), and be concerned about low prices and product quality (i.e., value consciousness). These findings are consistent with the work of previous researchers (Goodey & East, 2008; Tatzel, 2002) who found that individuals

who needed material resource tended to be market mavens and be bargain hunters who seek value.

**Moderating Effects of Interpersonal Influences**

**Tie strength.** The relationships between gratifications and intentions to social e-shop apparel were stronger for participants who perceived that the contacts on their 'friends' list on Facebook were important and close (i.e., high levels of tie strength). The perceived tie strength developed through Facebook encouraged them to communicate with one another and seek product-related information as well as fueled intentions to social e-shop apparel. This finding supports the result of previous researchers (Chu & Kim, 2011) who demonstrated that SNS users with high levels of tie strength tended to engage in eWOM activities (e.g., sharing and seeking opinions) in SNSs. It is very possible that friends, perceived as close and important, evoke a level of confidence such that information that comes from these individuals is perceived as reliable and trustworthy.

**Homophily.** The relationships between gratifications and intentions to social e-shop apparel were stronger for participants who perceived that the contacts on their 'friends' list on Facebook thought like them and were similar to them (i.e., high levels of homophily). Thus, Facebook friends who are perceived as similar to them are going to be good sources of fashion information because they share similar tastes, hold similar views, and are likely to be the type of person that is easy to build a social connection with. This finding is consistent with the work of Chu and Kim (2011) who identified that SNS users with a high level of homophily with their SNS contacts tended to engage in eWOM activities in SNSs.

**Confirmation**

The hypothesized model for this study was based on the concept of "trait hierarchy" developed by Mowen (2000) in his "Meta-Theoretic Model of Motivation and Personality (the 3M)." This study examined personality traits (i.e., openness to experience, arousal needs, material resource needs) as elemental traits. Psychographic characteristics about shopping-related lifestyles (i.e., market mavenism, social browsing, value consciousness) were treated as compound traits. Gratifications for social e-shopping using Facebook (i.e., socializing gratification, information-seeking gratification) were treated as situational traits. Lastly, intentions to social e-shop apparel were treated as a surface trait.

By applying "trait hierarchy" in the 3M model (Mowen, 2000), the results of this study confirmed a conceptual model that identified four levels of trait hierarchy (i.e., elemental, compound, situational, and surface traits) in the context of social e-shopping for apparel using Facebook. This study demonstrated that the effects of elemental traits (i.e., three personality traits) were associated with compound traits (i.e., three psychographic characteristics). The effects of compound traits were associated with situational traits (i.e., two gratifications). The joint effects of situational traits, compound traits, and elemental traits were associated with a surface trait (i.e., intentions to social e-shop apparel).

The 3M model (Mowen, 2000) posits that surface traits could be influenced by situational traits, compound traits, or/and elemental traits. However, this study found a surface trait (i.e., intentions to social e-shop apparel) was not directly linked to elemental

traits (i.e., three personality traits). The surface trait was influenced by only situational traits (i.e., two gratifications) and compound traits directly (i.e., three psychographic characteristics). This finding is not consistent with previous researchers' findings employing the 3M model (e.g., Bosnjak et al., 2007; Mowen et al., 2007; Sun & Wu, 2011). These previous researchers found one or more of the elemental traits (i.e., personality traits) directly influenced surface traits (i.e., intentions to shop online, word-of-mouth communications, online impulsive buying).

The participants of this study were Facebook users with social shopping experience. In this instance, elemental traits may have not been related to a surface trait because of the types of elemental traits included (i.e., openness to experience, arousal needs, material resource needs). These participants were already familiar with using social commerce in other formats and have participated in a social e-shopping community. Thus, participation in a social e-shopping format using Facebook may not satisfy their propensities related to seeking new experiences (i.e., openness to experience) and desire for stimulation (i.e., arousal needs). Further, these social shopping sites may not yet provide diverse product categories because social e-shopping using Facebook is in an early developmental stage. Therefore, participation in this social e-shopping format using Facebook may not satisfy their tendency related to desire to collect and possess material goods. These results point to a revision of the 3M model such that elemental traits may only be indirect influences on surface traits. Determination of whether or not this revision to Mowen's 3M model is appropriate requires further testing with a range of operationalizations of surface traits and elemental traits.

Since elemental traits did not link to the surface trait, it was not too surprising that compound traits (i.e., three psychographic characteristics) fully mediated the links between elemental traits and the surface trait. This finding is consistent with Sun and Wu (2011)'s findings related to online impulsive buying that indicated a full mediating role of a compound trait (i.e., task orientation) in the link between an elemental trait (i.e., conscientious) and a situational trait (i.e., Internet addiction).

This study also found the partial mediating roles of situational traits (i.e., socializing gratification, information-seeking gratification) in the links between compound traits and a surface trait. These findings are also consistent with Bosnjak et al. (2007)'s finding that indicated the partial mediating role of a situational trait (i.e., affective involvement of online shopping) in the link between a compound trait (i.e., need for cognition) and a surface trait (i.e., intention to shop online).

Further, the exercise of testing rival models strengthened the meaningfulness and robustness of the hypothesized model that was based on Mowen's (2000) trait hierarchy approach. Although the three rival models that neglected the mediating role of compound traits or/and situational traits exhibited acceptable model fit with the data, when compared to the hypothesized model, all three rival models resulted in a lower percentage of significant path coefficients as well as lower overall fits and parsimony.

**Application and Ongoing Refinement**

Previous researchers have applied the 3M model to examine consumer behavior consequences of the trait of superstition (Mowen & Carlson, 2003), competitiveness (Mowen, 2004), gambling activities (Fang & Mowen, 2009), volunteerism (Mowen & Sujan, 2005), word-of-mouth communications (Mowen et al., 2007), visual product

aesthetics (Mowen et al., 2009), and online shopping behaviors (Bosnjak et al., 2007; Sun & Wu, 2011). This study applied the 3M model to examine Facebook users who were social shoppers' intentions to social e-shop apparel in Facebook commerce. This study demonstrated that this conceptual model based on the concept of "trait hierarchy" in the Meta-Theoretical Model of Motivation and Personality (the 3M) (Mowen, 2000) holds great potential for further application to diverse consumer behaviors and responses (e.g., mobile commerce).

**Contribution to Literature**

This study advanced and contributed to prior work on the social e-shopping phenomenon by examining various determinants of intentions to social e-shop apparel using Facebook. Existing researchers (Cha, 2009; Pookulangara & Koesler, 2011) investigating shopping services on SNSs used the Technology Acceptance Model (Davis, 1989) to frame their research and focused almost exclusively on the variables identified in the TAM model. These researchers did not integrate individual characteristics of social e-shoppers, (e.g., personality traits, psychographic characteristics, motivations) that may help explain their use of SNSs to shop online. Thus, this study contributed to the body of literature on the social e-shopping marketplace and Facebook commerce by discovering powerful factors that influence Facebook users' social e-shopping experience. This study also provides a deeper understanding of market segments for implementing a social e-shopping format using Facebook, by recognizing the roles of multiple personality traits (i.e., elemental traits), psychographic characteristics (i.e., compound traits), and gratifications (i.e., situational traits) that are empirically derived from a theoretically based model of motivation and personality.

<center>**Practical Implications**</center>

The findings of this study provided important and relevant implications to
practitioners and retailers. Practical implications and recommendations are presented
based on the STP (Segmentation, Targeting, and Positioning) components of a basic
marketing strategy and the elements of the marketing mix (i.e., product, price, place,
promotion).

## STP (Segmentation, Targeting, and Positioning)

Target markets for groups of consumers who intend to social e-shop apparel using
Facebook can be defined by using the personality traits, psychographic characteristics,
and gratifications identified. Further, products to be sold via social e-shopping can also
be positioned to appeal to those individuals whose characteristics suggest they are
interested in using this shopping medium. Once the target segment's personality traits,
psychographic characteristics, and gratifications have been identified and the positioning
strategy of the brand developed, the practitioners and retailers can then develop the four
principles (4Ps) of marketing mix within social e-shopping for apparel using Facebook
context.

Participants who were open to experience and who were also market mavens
intended to social e-shop apparel. Participants who needed arousal and who were also
social browsers intended to social e-shop apparel. Participants who needed material
resources and who were also market marvens, or social browsers, or were value
conscious intended to social e-shop apparel. As gratifications, participants who were
likely to social e-shop for the purpose of socializing and information-seeking indicated
that they intended to social e-shop apparel. Thus, the results suggest that the STP for

<center>128</center>

social e-shopping for apparel using Facebook could be defined as Facebook users with social shopping experience who have these five propensities. Specifically, their STP could be Facebook users with social shopping experience who tend to (1) be market mavens, (2) often look for new fashion products/brands that are popular among their friends (i.e., social browsing), and (3) be very concerned about low prices and product quality (i.e., value consciousness). In addition, practitioners and retailers could target Facebook users with social shopping experience who (4) are likely to social e-shop for the purpose of product-related information-seeking and who (5) are likely to social e-shop for the purpose of socializing.

**Marketing Mix**

The major marketing management decisions generally can fall into the following four controllable categories (also referred to as principles): product, price, place, and promotion. These principles are the aspects that marketing managers can control in order to best satisfy users in their target markets and generate positive consumer responses. Based on these four principles (4Ps) of the marketing mix, managerial implications and strategies regarding product, price, place, and promotion are discussed (see Table 19).

*Figure 9.* Four principles of the marketing mix

Table 19

*Managerial Implications and Strategies Based on Four Principles of Marketing Mix*

|  | Marketing Mix | Considered Research Variables | Managerial Implications and Strategies |
|---|---|---|---|
| 4Ps | Product | Openness to experience<br>Arousal needs<br>Material resource needs<br>Information-seeking gratification<br>Socializing gratification<br>Market mavenism | 1) Product-scope strategy<br>(Multiple-product strategy)<br>2) Product-design strategy<br>3) Enhanced website contents |
|  | Price | Value consciousness | 1) Penetration strategy<br>2) Bundling-price strategy<br>3) Price-comparison function |
|  | Place | Material resource needs<br>Value consciousness | 1) Multi-channel strategy |
|  | Promotion | Market mavenism<br>Social browsing<br>Value consciousness | 1) Sales promotion<br>: F-coupons, loyalty program,<br>pop-up f-stores<br>2) Direct marketing<br>: Mobile marketing, email<br>3) Online marketing<br>: Blogs, YouTube |

**Product.** Participants who were open to experience and who were also market mavens intended to social e-shop apparel. Participants who needed material resources and who were also market mavens intended to social e-shop apparel. Participants who needed arousal and who were also social browsers intended to social e-shop apparel. This study also identified that participants who were likely to social e-shop for the purpose of socializing and information-seeking gratifications indicated that they intended to social e-shop apparel. Collectively, these results point to three recommendations: implementing (1) a product-scope strategy (i.e., a multiple-product strategy) and/or (2) a product-design strategy as well as (3) enhancing website contents. Outcomes of implanting these strategies could be increased growth, market share, and profits.

*Product-scope strategy.* This strategy addresses the perspectives of the product mix of a company, such as the number of product lines and items in each line that a company may offer (Grant, 2002). A multiple-product strategy is recommended. For instance, practitioners and apparel retailers could provide diverse product categories including outwear, underwear, accessories (e.g., shoes, bag, jewelry), home interior items, kitchenware, music, fashion-related books and so on, in order to fulfill Facebook users who are social shoppers' desire to collect and possess material goods.

*Product-design strategy.* This strategy deals with the degree of standardization of a product (Pitts & Lei, 2006). The apparel company has a choice among the following strategic options: standard product, customized product, and standard product with modifications. Practitioners and retailers could integrate customization options with a reasonable price range into mass produced apparel. Including users in a co-design process as an option within mass customization could facilitate fulfillment of social e-shoppers'

131

needs for new experiences and desires for stimulation and excitement. Co-design

processes include blogging for socializing purposes and commenting on the designs of

others. These behaviors are aspects of socializing gratification linked to intentions to

social e-shop apparel as well as tied to market mavenism.

***Enhanced website contents.*** According to the E-tailing Group (2011), consumers

need to read four to seven customer reviews on a product to give them sufficient

confidence to judge a product. To satisfy Facebook users who are social shoppers'

information-seeking and socializing gratifications, practitioners and retailers can

reinforce user-generated product reviews and ratings, customer service information, lists

of top-rated products, merchant supplied videos of the product, Q&A (i.e., customers

asking and answering questions about products onsite), community forums for

conversations among customers, and customer supplied information concerning product

use (e.g., videos, photographs). In addition, to satisfy Facebook users who are social

shoppers' market mavenism, practitioners can provide multiple means of being one of the

voices of expertise (e.g., "friends," brand "experts," "people like me," staff "experts,"

community "experts").

Consumers demand a comprehensive and credible review experience and seek a

variety of voices (E-tailing Group, 2011). When there are no or limited negative reviews

and positive reviews always positioned first, consumers' trust may degrade as they

evaluate products that include customer reviews. To facilitate their trust about product

reviews, practitioners and retailers need to ensure their site is a destination that provides

the information-hungry shopper with the information they need and that offers a product

page complete with strong descriptions, in-depth user-generated content, rich media, and

recommended products. By identifying verified users and emphasizing content volume, they could exclude factors that reduce trust. Further, practitioners and retailers need to facilitate the creation of user-generated content and provide the whole picture to gain the greatest trust among the customer base.

      **Price.** Strategically, because the function of pricing has been to provide adequate return on investment, pricing strategy is a very important part of successful marketing. Participants who were value conscious intended to social e-shop apparel using Facebook as well as were likely to social e-shop for the purpose of information-seeking. Practitioners and retailers need to satisfy these consumers' desires to check prices, compare the prices of different brands, and get the best value for their money by implementing three pricing strategies. The findings suggest implementing (1) a penetration pricing strategy and/or (2) a bundling-price strategy as well as (3) a sophisticated price-comparison function.

      *Penetration strategy.* A penetration strategy for new products is the strategy of setting a relatively low price during the initial stages of a product's life (Schindler, 2011). To squelch competition in e-commerce or the social commerce marketplace by quickly taking a large market share and by obtaining a cost advantage through realizing economies of scale,[10] a penetration strategy is recommended to fuel diffusion of social e-shopping for apparel using Facebook. Although this penetration strategy could initially result in a low margin on sales and lower unit costs relative to competition, this strategy could lead to high sales volume and large market share in the long term life of a social e-shopping marketplace.

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[10] Economies of scale for a firm primarily refers to reductions in average cost and marginal costs arising from an increase in size of an operating unit (BusinessDictionary.com)

133

***Bundling-price strategy.*** This strategy refers to the practice of offering two or more different products for sale at one price (Arora, 2007). For instance, practitioners and retailers could provide one reasonable price for specific items such as t-shirts/blouses and skirts/pants (e.g., one loose box shaped t-shirt and a pair of leggings with diverse color choice). This strategy offers price-sensitive consumers' a low-priced alternative that is appealing and may result in repeat purchases.

***Price-comparison function***. Practitioners and retailers need to emphasize the price-comparison function on their social shopping sites using Facebook. Through this function, Facebook users can easily identify the best deals and compare prices on brands to make sure that they get the best value for the money.

**Place (Distribution).** Participants who needed material resources and who were also value conscious intended to social e-shop apparel. To collect material goods and get the best value for their money, they may want to browse and shop through diverse channels. Based on these findings, a multi-channel strategy (i.e., store, website, mobile web, SNSs) is recommended.

***Multi-channel strategy.*** A multi-channel strategy refers to employing two or more different channels for distribution of goods and services (Keillor, 2007). Facebook users who are social shoppers might want retailers to provide an integrated shopping experience via multiple channels offering convenience, ease of access, and special events. For instance, purchases through SNSs could be picked up or returned at a physical store. Value conscious consumers are looking for coupons, discounts, and frequent-user incentives as well as expect promotional pricing across all channels including social commerce. Thus, websites, mobile webs, SNSs, and physical stores could simultaneously

feature offline and online sales, promotions, loyalty programs, and events in order to create a consistent brand image across all channels of operation. Those multi-channels should be compatible and complement each other in order to increase market share as well as customer satisfaction and loyalty.

**Promotion.** Participants who were market mavens, social browsers, and value conscious intended to social e-shop apparel. To satisfy these characteristics related to shopping behavior, this study suggests several promotion strategies such as (1) sales promotion (i.e., f-coupons, loyalty program, pop-up f-stores), (2) direct marketing (i.e., mobile marketing, email), and (3) online marketing (i.e., blogs, YouTube).

*Sales promotion*. Practitioners and retailers could provide f-coupons, loyalty programs, and pop-up f-stores focusing on special events/incentives and excitement-building programs within the Facebook social e-shopping site. Specifically, practitioners and retailers could link f-coupons directly to their loyalty programs. Apparel retailers could track their consumers' purchases from their loyalty cards and could then provide loyal users with f-coupons that address their specific interests. Providing f-coupons could induce consumers to try products for the first time, convert first-time users to regular users, stimulate large purchases, and protect against competitors.

In addition, pop-up stores refer to impermanent storefronts that operate for only a limited time and usually provide access to a new product or limited group of products provided by a retailer (Biggs, 2012). For instance, Neiman Marcus and Saks may send e-mail notifications of limited-time events to registered customers, announcing a three-hour sale of items at half price. If customers do not visit the website during the three-hour window, they do not have the opportunity to take advantage of the promotion. These

retailers dodge the reputation for offering low prices or clearance sales by providing huge discounts to select customers. Thus, pop-up f-stores in a social e-shopping using Facebook context are recommended in order to satisfy these consumers' value consciousness. Practitioners and retailers could post limited-time events to registered users on Facebook or send e-mail notifications to their regular or loyal users and let them tell their Facebook friends.

*Direct marketing.* Practitioners and retailers could use mobile marketing and email for direct marketing. Specifically, retailers' success with mobile marketing could rely on integrating marketing communications with useful mobile applications. These m-applications could focus on providing social e-shopping, fascinating street fashion, best-selling product-related information and reviews, and socializing with others. Further, practitioners and retailers could use e-mail to inform Facebook users of new merchandise, special promotions, popular/hot-selling items among their customers and within the mainstream market, and new fashion trends, and to confirm the receipt of an order and indicate when an order has been shipped.

*Online marketing.* Practitioners and retailers could use blogs[11] and YouTube. As part of the communication strategy, blogs could join Facebook users together by creating a social e-shopping community as well as communicating new fashion trends, popular items among people, product-related information/reviews, and special events/promotions. Blogs also could allow the company to respond directly to consumers' comments, facilitating long-term relationships between users and the company (Solomon, 2009). A well-received blog could communicate trends, announce special events, and create word-of-mouth advertising (Van Hoye & Lievens, 2007).

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[11] In blogs, users post message to the Web in diary form.

136

In addition, on this video-sharing social media platform, Facebook users could upload, share, and view videos. For instance, a television home shopping company like HSN can broadcast its own channel, that is, a YouTube site that includes content relevant only to the company's own products. Further, Home Depot draws more than 4,400 viewers per day with an array of videos detailing new products available in stores, as well as instructional do-it-yourself videos (Solomon, 2009). To satisfy the social browsing and market mavenism of Facebook users who are social shoppers, YouTube could provide an effective medium for posting product review videos, introducing new apparel merchandise videos, and offering videos related to new fashion trends and popular apparel items among people.

## Limitations and Future Research

This study has some limitations. This study was limited to apparel products. Future researchers could be directed at a range of products that vary by several characteristics such as level of involvement. Comparisons of high involvement products[12] including a car, a computer, other electronic to low involvement products[13] including bath/body care products may reveal different contributions of each trait level as well as different interactions among traits. Examining diverse product categories could provide useful managerial implications for the implementation of social e-shopping commerce.

Participants of this current study were Facebook users ranging in age from 18 to 44 years who were social shoppers. Non-social shoppers' responses were not examined in this research. As a marketing perspective, retailers need to draw non-social shoppers to

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[12] High involvement products refer to high capital value good that is purchased only after long and careful consideration.

[13] Low involvement products refer to products which are bought frequently and with a minimum of thought and effort.

their market place. A direction for future research could be a comparison of social shoppers and non-social shoppers. Non-social shoppers' obstacles to, motivations for, and suggestions for social e-shopping using Facebook could be examined to increase Facebook users' acceptance of this method of shopping as well as developing strategies that could fuel the diffusion of social e-shopping using Facebook.

The findings of this study indicated that elemental traits (i.e., personality traits) did not directly affect a surface trait (i.e., intentions to social e-shop apparel). This finding is not consistent with conceptualizing by Mowen (2000). Data revealed that elemental traits in this instance, only indirectly affected a surface trait via compound traits. These findings point to a revision of trait hierarchy in the 3M model such that elemental traits may only indirectly influence surface traits. Future researchers could test a revised trait hierarchy for the 3M model to further identify the part that elemental traits (e.g., personality traits) play in different consumption-related aspects (i.e., explaining and predicting green product consumption, luxury consumption, mobile web shopping behaviors). In addition, to effectively measure elemental traits in combination with compound traits, situational traits, and surface traits, parsimonious measures of elemental traits must be developed. Individuals can quickly become bored or fatigued completing laborious and lengthy measures and either halt their participation in research containing such measures or simply refuse to participate to begin with as a result of questionnaire length.

Actual purchasing behavior was not examined in this research. Because the social e-shopping format using Facebook is in the introduction stage within the e-shopping sector, the majority of participants did not have social e-shopping experience using

138

Facebook. After a couple of years, as participation in social e-shopping continues to

mature and grow, further investigations regarding the antecedents of actual purchasing

behaviors using Facebook is recommended.

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144

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# APPENDIX A: QUESTIONNAIRE FOR MAIN STUDY

## UNIVERSITY OF MINNESOTA
### Driven to Discover℠

## Online Social Shopping for Apparel using Facebook

This study is designed to investigate your perceptions and experiences with online social shopping for apparel using Facebook. Online social shopping is "merging shopping and social networking activities through online social media." Online social shopping is typified as providing online spaces in which consumers collaborate, post product recommendations and reviews, post photos of themselves wearing products, acquire advice from reliable people, search for the right products, make purchases, and form social shopping communities.

You have been selected to participate in a research project on online social shopping using Facebook because you are a Facebook user ranging in age from 18 to 44 years and have online social shopping experience. You will be asked questions about your personality, shopping style, and online social shopping intentions for apparel using Facebook.

Before this online survey, please click these two URL links showing online social shopping experience using Facebook.
1. http://www.youtube.com/watch?v=Ed5vJeaEuzA&feature=related
2. http://www.facebook.com/#!/express?sk=app_106610596087750

Please1) watch this short video about Levi's (40 seconds) and 2) browse Express fashion brand's Facebook (1minute): a) check women's or men's wear, b) click a specific apparel item (You can write a comment and send this to your Facebook friends if you like. You can see other users' product comments and make purchases on Express Facebook).

You may ask any questions you have now. If you have questions later, you may contact Ju-Young M. Kang at kangx301@umn.edu. If you would like to talk to someone other than the researcher, contact Research Subjects' Advocate line, D528 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455; telephone (612) 625-1650.

Please click NEXT to provide your consent and complete the questionnaire. Thanks for your participation!!!

Load unfinished survey       Next >>       [Exit and clear survey]

**UNIVERSITY OF MINNESOTA**
**Driven to Discover℠**

## Online Social Shopping for Apparel using Facebook

0%  [          ]  100%

### Part I.

*
**Please enter your unique ID in the field below.**

[                                    ]

---

*Have you ever shared information about products/services, or provided your opinion about products/services, or made recommendations about products/services while using social networking sites or other websites to other people?

◯ Yes

◯ No

---

*Are you a Facebook user?

◯ Yes

◯ No

---

*What is your age in years?
Choose one of the following answers

[ Please choose... ▾ ]

---

*The first set of questions is concerned with your intentions to social e-shop for apparel using Facebook. Please indicate the strength of your agreement with each statement.

| | Strongly disagree 1 | 2 | 3 | 4 | Strongly agree 5 |
|---|---|---|---|---|---|
| I would buy apparel through online social shopping using Facebook. | ◯ | ◯ | ◯ | ◯ | ◯ |
| I am likely to social e-shop for apparel using Facebook. | ◯ | ◯ | ◯ | ◯ | ◯ |
| I would encourage my friends to go to this site related to social shopping for apparel using Facebook. | ◯ | ◯ | ◯ | ◯ | ◯ |
| I am likely to revisit this site related to social shopping using Facebook and buy apparel. | ◯ | ◯ | ◯ | ◯ | ◯ |

154

*Please indicate your degree of likelihood that you would engage in online social shopping using Facebook to search/share best deals, reviews or recommendations with others about a product, a service in the following situations.

Q. I engage in online social shopping for apparel using Facebook_____.

| | Very unlikely 1 | 2 | 3 | 4 | Very likely 5 |
|---|---|---|---|---|---|
| as a way to socialize. | ○ | ○ | ○ | ○ | ○ |
| to enjoy socializing with others when I shop online. | ○ | ○ | ○ | ○ | ○ |
| as a way to have a social involvement. | ○ | ○ | ○ | ○ | ○ |
| as a way to have a bonding experience. | ○ | ○ | ○ | ○ | ○ |
| to shop with others who have similar interests. | ○ | ○ | ○ | ○ | ○ |
| to shop with my peer group or reference group. | ○ | ○ | ○ | ○ | ○ |
| to communicate with others who have similar shopping experiences. | ○ | ○ | ○ | ○ | ○ |
| to achieve a sense of belonging by shopping for the same apparel products that others purchase. | ○ | ○ | ○ | ○ | ○ |
| to observe what others are buying and using. | ○ | ○ | ○ | ○ | ○ |
| to purchase those apparel products/brands that I think others will approve of. | ○ | ○ | ○ | ○ | ○ |
| to check out the best deals. | ○ | ○ | ○ | ○ | ○ |
| to search for detailed information about the apparel product/brand category. | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| to compare several apparel products/brands online before making a decision. | ○ | ○ | ○ | ○ | ○ |
| to look at websites for sales and service information. | ○ | ○ | ○ | ○ | ○ |
| to look for apparel product information that is specific to my requirements. | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| to look at company information online for apparel products I would like to buy. | ○ | ○ | ○ | ○ | ○ |
| to look for online discounts and bargains. | ○ | ○ | ○ | ○ | ○ |
| to hear about something new. | ○ | ○ | ○ | ○ | ○ |
| to seek advice and solutions for my problems with an apparel product. | ○ | ○ | ○ | ○ | ○ |
| to get information from others (positive and negative). | ○ | ○ | ○ | ○ | ○ |

Resume later    << Previous    Next >>    [Exit and clear survey]

## UNIVERSITY OF MINNESOTA
### Driven to Discover℠

# Online Social Shopping for Apparel using Facebook

0% ▮▯▯ 100%

## Part II.

*The following questions are concerned with describing the relationship you have with the individuals indicated on your friends list on Facebook. Please respond to each question so that it reflects the nature of your relationship.

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Approximately how frequently do you communicate with the contacts on your "friends" list? (1= Never; 5= Very Frequently) | ○ | ○ | ○ | ○ | ○ |
| Overall, how important do you feel the contacts on your "friends" list are? (1= Not at all important; 5= Very important) | ○ | ○ | ○ | ○ | ○ |
| Overall, how close do you feel to your frequent contacts on your "friends" list? (1= Not at all close;5= Very close) | ○ | ○ | ○ | ○ | ○ |

*Q. In general, the contacts on my "friends" list on Facebook _____.

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1= do not think like me.;5= think like me. | ○ | ○ | ○ | ○ | ○ |
| 1= do not behave like me.; 5= behave like me. | ○ | ○ | ○ | ○ | ○ |
| 1= are different from me.; 5= are similar to me. | ○ | ○ | ○ | ○ | ○ |
| 1= are unlike me.; 5= are like me. | ○ | ○ | ○ | ○ | ○ |

[ Resume later ]      [ << Previous ] [ Next >> ]      [Exit and clear survey]

**UNIVERSITY OF MINNESOTA**

**Driven to Discover℠**

## Online Social Shopping for Apparel using Facebook

0% ▮▮▮▯▯ 100%

**Part III.**

*The next section of questions is concerned with your general shopping behavior. Please indicate your degree of agreement with each statement.

| | Strongly disagree 1 | 2 | 3 | 4 | Strongly agree 5 |
|---|:---:|:---:|:---:|:---:|:---:|
| I am somewhat of an expert when it comes to shopping. | ○ | ○ | ○ | ○ | ○ |
| People think of me as a good source of shopping information. | ○ | ○ | ○ | ○ | ○ |
| I enjoy giving people tips on shopping. | ○ | ○ | ○ | ○ | ○ |
| I often buy fashion products similar to what others are wearing. | ○ | ○ | ○ | ○ | ○ |
| I often look for new fashion products that are popular among my friends. | ○ | ○ | ○ | ○ | ○ |
| I often buy fashion products that I see my friends wearing. | ○ | ○ | ○ | ○ | ○ |
| I usually purchase fashion products that many others have also bought. | ○ | ○ | ○ | ○ | ○ |
| I am concerned about low prices, but I am equally concerned about product quality. | ○ | ○ | ○ | ○ | ○ |
| When shopping, I compare the prices on brands to make sure that I get the best value. | ○ | ○ | ○ | ○ | ○ |
| When purchasing, I always try to maximize the quality I get for the price I pay. | ○ | ○ | ○ | ○ | ○ |
| When I buy products, I like to be sure that I get my money's worth. | ○ | ○ | ○ | ○ | ○ |

158

*The next set of questions is concerned with your personality traits. Please rate your degree of agreement with each statement.

| | Strongly disagree 1 | 2 | 3 | 4 | Strongly agree 5 |
|---|---|---|---|---|---|
| I frequently feel creative. | ○ | ○ | ○ | ○ | ○ |
| I am imaginative. | ○ | ○ | ○ | ○ | ○ |
| I am more original than others. | ○ | ○ | ○ | ○ | ○ |
| I find novel solutions. | ○ | ○ | ○ | ○ | ○ |
| I am drawn to experiences with an element of risk. | ○ | ○ | ○ | ○ | ○ |
| I actively seek out new experiences. | ○ | ○ | ○ | ○ | ○ |
| I seek an adrenaline rush. | ○ | ○ | ○ | ○ | ○ |
| I enjoy taking some risks more than others. | ○ | ○ | ○ | ○ | ○ |
| I admire people who own expensive homes, cars, and clothes. | ○ | ○ | ○ | ○ | ○ |
| I like to own nice things more than most people. | ○ | ○ | ○ | ○ | ○ |
| Acquiring valuable things is important to me. | ○ | ○ | ○ | ○ | ○ |
| I enjoy owning luxurious things. | ○ | ○ | ○ | ○ | ○ |

Resume later       << Previous   Next >>                [Exit and clear survey]

# UNIVERSITY OF MINNESOTA
### Driven to Discover℠

## Online Social Shopping for Apparel using Facebook

0%  ▮▮▮▮▮▯▯  100%

**Part IV.**

\*
**The next set of questions allows description of the participants in this research in terms of demographic variables. Please answer the following questions as they describe you.**
**What is your gender?**

○ Female
○ Male

\***What is your age in years?**

[                    ]

\***What is your ethnicity?**

Choose one of the following answers

[ Please choose... ▾ ]

\***What is your highest level of education earned?**

Choose one of the following answers

[ Please choose... ▾ ]

\***What is your approximate annual income?**
Choose one of the following answers

[ Please choose... ▾ ]

\***How many hours per week do you spend on Facebook?**

Choose one of the following answers

[ Please choose... ▾ ]

\***How often do you purchase any products through social shopping using Facebook?**
Choose one of the following answers

[ Please choose... ▾ ]

[?] **Please click "SUBMIT"!!! Thank you for your participation...**

[ Resume later ]     [ << Previous ]  [ Submit ]     [Exit and clear survey]

160

**APPENDIX B. SCREEN SHOT OF LEVI'S YOUTUBE VIDEO**

Social Shopping Comes to Levi's
http://www.youtube.com/watch?v=Ed5vJeaEuzA

FRIENDS RECENTLY LIKED

Darryl Amico likes Slim Boot 507™ Jeans - Raw Cut

0:42 / 0:59

---

**f FRIENDS STORE** Like-minded shopping starts here

EVERYONE | LEVI'S FANS | **FRIENDS**

FILTER BY

KRISTA KNABLE'S FRIENDS STORE

f Invite Your Friends

Your Connected Friends

**FRIENDS LIKE**

Explore. Find. Share. Shop: Mens Women's Juniors Kids & Baby

0:48 / 0:59

**APPENDIX C. EXPRESS FACEBOOK PAGE**

# EXPRESS

**EXP RESS** 👍 Like ‹2m

Enter keyword or item # | **SEARCH**

**WOMEN'S** | **MEN'S**

SIGN IN | SHOPPING BAG (0)

**« Spring Bright Dresses**

Roll over image to zoom

**STRIPED ONE SHOULDER DRAPED-SLEEVE DRESS**

Style: 7863088

**$49.90**

★★★★½ Read Reviews

👍 Like ‹ 3 | ADD TO WISHLIST

Up the flirt factor in your going out style with this one-shoulder dress in a soft, jersey knit. An exaggerated, flowing sleeve give this impeccably draped dress a leg up.

- One-sleeve style
- Exaggerated, draped sleeve
- Hits at mid-thigh
- Rayon/Spandex
- Machine washable
- Imported

**COLOR: ORANGE**

**CHOOSE A SIZE:**

X Small | Small | Medium | Large

**QUANTITY:**

1

**Add to Shopping Bag**

ADD TO WISHLIST

Add a comment...

Posting as Mary Kang (Not you?) | **Comment**

☑ Post to Facebook

f Facebook social plugin

---

**12 Customer Reviews** | **Write a Review**

Overall Average Rating:

★★★★★

4.8 out of 5

**LAID BACK LOOK**
by 01061955 from MOUNDVILLE/AL on Mar 27, 2012 ⌄

**love**
by Italiasfinest30 from Bayonne, NJ on Mar 26, 2012 ⌄

**Love this Shirt!**
by Solalalla from on Mar 24, 2012 ⌄

**Cool**
by Jd23 from Dallas,Tx on Mar 24, 2012 ⌄

**very nice tee**
by toufic from on Mar 18, 2012 ⌄

1-5 of 12 Reviews **Next**

---

FIND A STORE | GIFTCARDS | WISH LIST | ORDER STATUS | PRIVACY POLICY

# APPENDIX D. IRB APPROVAL FORM

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2 SURVEYS/INTERVIEWS; STANDARDIZED EDUCATIONAL TESTS; OBSERVATION OF PUBLIC BEHAVIOR.

**Study Number:** 1112E07505

**Principal Investigator:** Ju-Young Kang

**Title(s):**
Social e-Shopping for Apparel using Facebook

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This e-mail confirmation is your official University of Minnesota RSPP notification of exemption from full committee review. You will not receive a hard copy or letter.

This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

Research that involves observation can be approved under this category without obtaining consent.

SURVEY OR INTERVIEW RESEARCH APPROVED AS EXEMPT UNDER THIS CATEGORY IS LIMITED TO ADULT SUBJECTS.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study?s expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-5654.

You may go to the View Completed section of eResearch Central at http://eresearch.umn.edu/ to view further details on your study.

The IRB wishes you success with this research.

We have created a short survey that will only take a couple of minutes to complete. The questions are basibut will give us guidance on what areas are showing improvement and what areas we need to focus on:
https://umsurvey.umn.edu/index.php?sid=94693&lang=um