

POWER OF CONSUMERS: EXAMINING THE INFLUENCE OF BRAND-RELATED USER-GENERATED CONTENT ON CONSUMER RESPONSE

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Abstract

This study was designed to test a model examining the influence of brand-related UGC shared via Facebook on consumer response. Specific research objectives were to 1) investigate whether brand-related UGC act as stimuli to activate consumer response in relation to brands, 2) examine the process by which brand-related UGC influences consumer behavior via emotional and cognitive responses, and 3) test whether brand-related UGC source and receiver characteristics moderated the relationships between brand-related UGC and emotional and cognitive responses. The model tested was derived from the S-O-R consumer response model (Mehrabian & Russell, 1974) that depicts the effects of environmental stimuli on consumer responses (i.e., emotional, cognitive, behavioral).

Data were collected from individuals participating in consumer panels ($n = 533$) managed by a marketing research company. Participants were individuals who were at least 18 years old and who had a Facebook account. An online self-administered survey methodology was employed. Mock Facebook fan pages were developed as visual stimuli and presented participants with brand-related UGC. Participants also completed a questionnaire containing measures of emotional, cognitive, and behavioral responses. Structural equation modeling (SEM) was used to test the proposed hypotheses indicated in the model.

The study examined brand-related UGC as stimulus, pleasure and arousal as emotional responses and perceived information quality as cognitive response. Information pass-along, impulse buying, future-purchase intention, and brand

engagement were treated as behavioral response constructs (i.e., behavioral outcomes in relation to brand) in the S-O-R model. Homophily and brand involvement were tested as moderators in the S-O relationships.

Brand-related UGC were informational stimuli that activated consumers' emotional and cognitive responses (i.e., pleasure, perceived information quality). However, arousal as an emotional response was not significantly influenced by brand-related UGC. The eWOM source characteristic (i.e., homophily) moderated the relationships between brand-related UGC and emotional and cognitive responses.

Both emotional and cognitive responses examined (i.e., pleasure, arousal, perceived information quality) significantly influenced behavioral responses. Thus, information pass-along, impulse buying, future-purchase intention, and brand engagement were behavioral responses stimulated by brand-related UGC. Discussions of the findings, theoretical and practical implications, and limitations and suggestions for future research were provided based on the findings.

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CHAPTER I

INTRODUCTION

This chapter begins with a general background on social media use in the retail industry and consumer activities on social media. The sections following address the research objective and the significance of research.

Background

The retail industry is changing rapidly due to the adaptation of new technologies. Advancement in technologies (e.g., smartphones, social media) has helped retail businesses improve and optimize their operations, leverage data, and strengthen relationships with their customers (Accenture, 2013). Not surprising, new technologies have also fueled change in the consumer experience within the retail environment. As barriers to the adoption of new technologies among consumers have been reduced, resulting in people of any age or background using digital devices and the Web (Accenture, 2013), consumers are actively taking control of their shopping experiences. They can easily acquire information and make purchases anywhere. For example, according to a Google (2013) survey of consumers' mobile device use, 82 % of 1,507 shoppers indicated that they searched product information using their smartphones while shopping and 90% used their mobile devices during the pre-shopping stage to compare prices and find promotions.

Among the new technologies impacting consumer behavior in the retail environment, social media have brought a significant change. Social media encompass a broad range of online venues that facilitate interaction, collaboration, and the sharing of

contents among users (Tuten, 2008). Types of social media include social networking sites (SNSs; e.g., MySpace, Facebook), wikis (e.g., Wikipedia), online forums, blogs, micro blogs (e.g., Twitter), and content-sharing communities (e.g., YouTube, Flickr). Social networking sites are online websites providing services for people to find others with similar interests and to maintain pre-existing social connections (Joinson, 2008). Wikis are collaborative projects that allow people to make contribution or edit content in a collective way (Heinonen, 2011). Blogs and micro blogs are online publications that are written in a conversational style. Content-sharing communities are online communities centered on sharing videos or photos (Heinonen, 2011). Participating members in each of these communities are able to interact with each other while they produce and share content (Tuten, 2008).

Social media have gained substantial popularity. According to the International Data Corporation (2013), smartphone users spend more than two hours using social media every day. Among them, a social networking site, Facebook, is the dominant SNS with more than 500 million active users worldwide (Tuten, 2008). Facebook offers an effective channel for users to share information with friends, family, and others via personal Facebook pages. Users are allowed to design a personal profile, create networks, and share commentary (Lenhart & Madden, 2007). According to Lipsman, Mudd, Rich and Bruich (2012), participation in Facebook accounts for 90% of time spent on SNSs. It has outpaced email use as the most popular online activity (Keenan & Shiri, 2009).

Twitter is another type of popular social media. Twitter is a micro-blogging site founded in 2006. Twitter allows people to publish posts that are fewer than 140

characters in length. Twitter posts may include links to pictures, videos, news stories, and blogs. Tweets (i.e., published posts on Twitter) often convey news, opinions, complaints, or details about daily activities (Smith, Fischer, & Yongjian, 2012). The content of some tweets (19%) includes information about brands or products such as product reviews (Jansen, Zhang, Sobel, & Chowdury, 2009).

YouTube is a content-sharing community founded in 2005. YouTube allows users to link videos. Similar to Facebook and Twitter, users can set up personal profiles on YouTube and make comments on posted videos. According to Burgess and Green (2009), popular videos on YouTube include vlogs (i.e., video blogs), music videos, live material, informational content, and scripted performances.

Realizing the rapid increase in social media use among consumers, companies became interested in using SNSs as a tool for marketing communication. More than 1.5 million companies established brand communities on social media for marketing purposes (Goh, Heng, & Lin, 2013). All of the top 100 advertisers in *Advertising Age* have a profile on Facebook for their brands (Lipsman et al., 2012) and a majority of the top 100 companies established profiles on either Facebook (79%) or Twitter (69%; eMarketer, 2009). Companies use their brand profile pages on both Facebook and Twitter to engage with consumers and enable them to become followers of their brand(s), (Jansen et al., 2009), that is, someone who subscribes to a brand's social media pages.

Companies use their brand pages to distribute product-related information (Chu & Kim, 2011) about their products and brands as well as to leverage their voices for strategic marketing impact. They make active use of SNSs as venues to post digital

advertising. For example, brand fan pages on Facebook provide images of new product arrivals and provide information such as nearest store location. Twitter is used to post the latest information regarding sales or promotions. Customers can monitor brand activities continuously via new information updates. YouTube is a medium for companies to share video clips providing additional information about how to use their products or details on the origin of products.

In addition to sending out information on brands, SNSs also provide operational benefits allowing retailers to perform service recovery (Xiang & Gretzel, 2010) and foster mutually beneficial relationships with customers (Smith, Coyle, Lightfoot, & Scott, 2007; Tuten, 2008) as customers ask questions and receive answers. By closely monitoring consumer activities on SNSs, companies can intervene quickly if potential problems emerge (Blakley, 2013). For example, if a consumer posts a complaint on a company's Facebook page about an unrecognized promotion code she tried to use, the brand representative on Facebook can immediately respond to the complaint.

With the variety of features provided by social media, consumers are increasingly using social media to aid their shopping. Consumers research products, promotions, and prices as well as provide their opinions about products and services. According to the American Marketing Association (2007), about half of the 1,174 people who participated in an online interview on holiday shopping indicated that they would visit a SNS to find out about upcoming sales in stores, search for gift ideas, and download coupons. Participants (22%) also indicated that they would read or write a product review on social media and that they would buy products through SNSs (31%).

Social media facilitate interaction among users by allowing them to easily connect. One of the ways this happens is through user-generated content (UGC). UGC refers to media content created by members of the general public rather than by paid professionals (Daugherty, Eastin, & Bright, 2008). Due to the development of Web technology and relevant applications, consumers are also able to generate online content in the form of text, image, audio, and video (Nielsen BuzzMetrics, 2006). Any form of online content created, initiated, circulated, and used by users are classified as UGC (Daugherty et al., 2008). Examples include blog posts, photographs or video clips shared on media sharing websites, product reviews, and comments or posts on SNSs (Corrigan, 2013; Smith et al., 2012).

UGCs delivered through social media convey facts, opinions, impressions, sentiments, and experiences (Nielsen BuzzMetrics, 2006). According to Smith et al. (2012), much of the UGCs across different social media often include brand-related content. Brand-related UGC can be seen in brand or personal pages on SNSs (e.g., Facebook, Twitter), content-sharing websites and applications (e.g., YouTube, Flickr, Instagram), consumer review websites (e.g., consumrsearch.com, Angie's List, Tripadvisor.com), online discussion forums (e.g., handbag.com), and customer reviews located on the websites of online retailers (e.g., Amazon.com). Electronically delivered statements about a product, service, or brand made by potential, actual, or former customers are referred to as electronic word-of or eWOM (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). Although, UGC is broader in its scope than eWOM as it

includes any content created by general public, UGC and eWOM are concepts that can be used interchangeably when UGC is brand-related (Smith et al., 2012).

Product information or personal opinions concerning a brand shared publicly via social media often drive product awareness and influence consumers' purchase decisions (Blakley, 2013). Some companies even encourage customers to create brand-related UGC on their brand pages (Corrigan, 2013). For example, a company may ask its followers to participate in a contest held on its brand pages. Followers may be asked to upload photos, videos, or essays related to the brand or product and the winner of the contest may receive gift cards. This type of activity enables customers to get involved with the brand and enhances relationships with the brand's customers. Examples of different forms of brand-related UGCs are presented in Figure 1.

YouTube benefit cosmetics

GUIDE



Benefit Boxed Powders! Swatches + My Thoughts & Faves

beautybaby44 · 438 videos · 158,647 views

Subscribe 829,324

Like About Share Add to Embed Print

Share this video Embed Email

http://youtu.be/fjVMLjHjSJ8

Uita HAUL! by claoobellaxo 137,699 views

benefitcosmetics 138 videos · 42K subscribers

Makeup Collection & Storage 2013 | Beautybaby44 740,851 views

My Makeup Collection & Vanity Tour! | Beautybaby44 174,364 views

Products I Regret Buying by Beautybaby44 302,521 views

Interview With Nick Cannon At The Breakfast Club Power 105.1 by 1051BreakfastClub 251,845 views

Night Time Routine by Beautybaby44 308,632 views

Christmas Haul! 2012 by Beautybaby44 508,536 views

My Everyday Makeup Routine

facebook

Keirriya Miquele Gregory

I just love the Sally Hansen brand of nail polish in general. So when I received the #TripleShine polish in my #VioletVoxBox I was super excited to try it! I love it! I love the shine, the vibrant color, and how fast it dries! Excellence! I can't quit painting my nails. 😊

Like · Comment · 5 hours ago

2 people like this.

Customer Reviews

★★★★★ (107)
4.6 out of 5 stars

5 star	87
4 star	8
3 star	5
2 star	5
1 star	2

See all 107 customer reviews

THANKS and have a glittery UGG holiday all!

Deb

I love the look of these boots and the comfortable fit.

Dorothy A. Samuels

Most Helpful Customer Reviews

14 of 15 people found the following review helpful

★★★★★ **Feel like slippers**

By Christine Pedersen on November 4, 2011

Color Name: Black | Size Name: 10 B(M) US | Amazon Verified Purchase

So warm. So comfortable. Feel like slippers and I would wear them every day, even to bed, if possible. Amazon is the best shopping venue ever.

1 Comment | Was this review helpful to you?

Figure 1. Examples of brand-related UGCs available on social media.

According to Corrigan (2013), the number of individuals participating in UGC activities (e.g., creating, sharing, viewing) at least once a month was expected to grow by 32 million between 2008 and 2013. Reasons for creating and sharing UGC are often self-promotional (Corrigan, 2013). As UGC allows users to freely express their individual opinions and promote their personal values, UGC can be an effective means for online self-expression. For example, one can create an online review on Sephora.com about personal experiences with new products, and thus inform other consumers. If readers of the review find the information useful, the reviewer can build a positive reputation and eventually gain notoriety in a community of consumers sharing similar interests.

In addition to self-promotion, consumers create UGC in response to incentives offered by businesses (Corrigan, 2013). As an example, Ford gave a new Fiesta to 100 bloggers and asked them to record and share their experiences with the car and participate in monthly challenges.

The growing use of social media among consumers has changed consumers' role in the market place. Social media have facilitated new ways of sharing information about brands among consumers and accelerated the accessibility of a variety of content related to brands (Lipsman et al., 2012). Because social media enable consumers to actively gather information and share their opinions via online communities, consumers are no longer passive recipients of product information, but active generators and distributors of such information (Stewart & Pavlou, 2002). According to social media statistics (Richards-Kunkel, 2013), 53% of people recommend products and companies on Twitter. The same statistics reported that the average consumer talks about brands with family,

friends, and co-workers about 90 times a week. Thus, social media use among consumers has empowered consumers to exert their individual and collective influence on other consumers as well as on brands. Consumers are contributing to other consumers' consumption activities as they provide advice when they share their experience with products (Accenture, 2013).

While one might initially think of sharing positive experiences with products with friends and family members, brand-related UGC can be threatening to brands if the content of consumer comments is negative. For example, negative comments and poor reviews about a product posted on a brand's Facebook wall can reach thousands of other Facebook users and may impact sales of the product, as well as damage the brand's reputation. Thus, it is important for brands and retailers to know the extent to which brand-related UGC created and shared among consumers impacts other consumers' decision-making.

Researchers interested in social media have focused their attention on analyzing companies' marketing activities on SNSs (Chan & Guillet, 2011; Kietzmann, Hermkens, McCarthy, & Silvestre, 2011) and the effects of companies' social media marketing activities on brands' performance measures such as purchase intention and customer equity (De Vries, Gensler, & Leeflang, 2012; Kim & Ko, 2010; Kim & Ko, 2012; Lipsman et al., 2012). Besides the influence of marketers' activities on social media, researchers interested in consumer activities and social media have focused their attention on analyzing consumer behaviors using social media, motivations behind participation in eWOM activities on social media, and identifying factors influencing consumer attitudes

toward social media (Akar & Topcu, 2011; Chu & Kim, 2011; Heinonen, 2011). A major limitation of existing literature on social media use relative to brands and retailers is that researchers have not examined the direct influence of UGC on other consumers.

Research Objective

With the growing use of social media as a means to share product- and brand-related information, it is important to examine the influence of consumer eWOM on other consumers. Given the limited research into the consequences of UGC on the readers of this content, this study was designed to investigate brand-related UGC shared via social networking sites as an eWOM message and its influence on consumer response. Studying the influence of brand-related UGC is critical because its impact is expected to be a significant method of consumer influence within the marketplace and a challenge to retailers as they are limited in their ability to control it. Also, empirical investigation of consumers' use of UGC is timely and necessary to enhance understanding of the shift of marketplace power from producers to consumers. Thus, answering the question of what is the extent of influence of brand-related UGC on consumer response is a compelling question to address.

Different types of social media vary in their ability to provide services and features that enable brand-related UGC to be created and shared. Thus, this study focused on brand-related UGC within the context of Facebook, given that Facebook is the dominant social medium of its kind and has a range of features to enable brand-related UGCs to be published and shared.

In order to understand the entire process by which brand-related UGC influences consumer behavior in regards to the brand, I took a broad approach. This approach entailed application of as well as testing of the Stimulus (S) – Organism (O) - Response (R) consumer response model (Mehrabian & Russell, 1974). As this research was planned as an investigation of the effect of brand-related UGCs on Facebook as eWOM, characteristics of eWOM source and receiver (i.e., homophily, brand involvement) were examined as possible moderators of the influence of brand-related UGC on brand-related consumer responses following the theory of communication (Hovland, Janis, & Kelley, 1953).

The present study addressed the following research questions.

1. What is the process by which brand-related UGC influences consumer behavior in relation to a brand?
2. To what extent are consumers' emotional and cognitive responses impacted by brand-related UGC?
3. To what extent do consumers' emotional and cognitive responses impact their behaviors in relation to a brand?
4. What role does brand-related UGC source characteristic (i.e., homophily) have on the relationships between brand-related UGC and emotional and cognitive responses?
5. What role does a brand-related UGC receiver characteristic (i.e., brand involvement) have on the relationships between brand-related UGC and emotional and cognitive responses?

Significance of Research

In addressing the aforementioned research questions, the results of the study yielded both practical and theoretical information. First, the study contributed to generating a grounded understanding of the influence of brand-related UGC as one of many consumer activities taking place in social media. Results provided practical implications for brand management on social media by allowing marketers to understand consumer response toward brand-related UGC. Identifying the role of source and receiver characteristics (i.e., homophily, brand involvement) will facilitate companies' efforts to manage the influence of brand-related UGC on their customers. Also, information concerning the relationships between brand-related UGC and different behavioral responses (i.e., information pass-along, impulse buying, future-purchase, brand engagement) allows brands to strategically plan marketing activities according to their purpose as the tested model illustrates paths leading to the behavioral responses via internal process of organism within the S-O-R model.

From a theoretical standpoint, the study extended prior work on eWOM via social media by examining its influence on specific brand-related consumer behaviors within SNS context and documenting one process by which eWOM influenced consumer response. The proposed model based on the S-O-R framework was the first to look at brand-related UGC as informational stimuli and examined the entire process by which brand-related UGC (i.e., eWOM) influences consumer behavior. Thus, the study offers insights concerning the applicability of the widely accepted model of the consumer response (i.e., S-O-R model) to consumer activities in social media. As a theoretical

framework that integrates consumer response to eWOM message and factors influencing the impact of eWOM were developed and tested, the proposed framework can help researchers and marketers to better understand the critical components of eWOM delivered via a specific form of SNS (i.e., Facebook) as well as internal processes regulating decision-making and behaviors in response to eWOM messages. This proposed model also represents a theory-based connection between research and practice and may hold great potential for future application in the area of consumer research in this emerging area.

Definition of Key Terms

The following terms and definitions were used to conduct the research.

Arousal refers to the extent to which an individual feels stimulated or active (Mehrabian & Russell, 1974).

Brand engagement refers to emotional ties that connect customers to brands (Goldsmith, 2012).

Brand involvement is the personal relevance of a particular brand to an individual (Martin, 1998).

Brand-related user-generated content (brand-related UGC) refers to brand and/or product related information created and shared by consumers (Smith, Fischer, & Yongjian, 2012).

Cognitive response refers to cognitive mental activities such as perceptions, thoughts, comprehension, beliefs, and knowledge generated by individuals in response to stimuli (Ha & Im, 2012).

Electronic word-of-mouth (eWOM) refers to electronically delivered statements about a product, service, or brand made by potential, actual, or former customers (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). Brand-related UGC and eWOM can be used interchangeably when UGC is brand and/or product related.

Emotional response refers to affective states that focus on pleasure and arousal as expected reactions to stimuli (Mehrabian & Russell, 1974).

Future-purchase intention is consumers' intention to buy a particular product or service at some point in the future (Adelaar, Chang, Lancendorfer, Lee, & Morimoto, 2003).

Homophily is the perceptual similarity between people's values, likes, dislikes, and experience (Chu & Kim, 2011).

Impulse buying refers to making a purchase based on a sudden urge to buy something immediately (Adelaar, Chang, Lancendorfer, Lee, & Morimoto, 2003).

Information pass-along refers to users sharing information with others on their social networks by forwarding or passing-along contents. Passing along brand-related information is considered a type of eWOM activity.

Information quality is the usefulness of information to an individual judged by its value, reliability, currency, and accuracy (Yang, Cai, Zhou, & Zhou, 2005).

Pleasure refers to the extent to which an individual feels good or happy (Mehrabian & Russell, 1974).

Social media is defined as online platforms that facilitate interaction, collaboration, and the sharing of contents among users (Tuten, 2008).

Social networking sites (SNSs) are online websites that provide services for people to find others with similar interests, to interact, and to maintain pre-existing social connections (Joinson, 2008).

Suggestion impulse buying occurs when a consumer sees a product for the first time and visualizes a need for it (Stern, 1962).

User-generated content (UGC) is publically available online information (e.g., text, video, images) that was created, initiated, and sourced by end-users of online services (Daugherty, Eastin, & Bright, 2008).

CHAPTER II

LITERATURE REVIEW

The chapter begins by introducing the theoretical framework for the research followed by a review of related research. The chapter ends with a presentation of the hypotheses and the proposed research model.

Theoretical Background

Stimulus-Organism-Response Framework

The framework for this research was the stimulus (S) – organism (O) - response (R) model originally formulated by two environmental psychologists, Mehrabian and Russell (1974). The S-O-R model depicts the effects of environmental stimuli on emotional and cognitive reactions of an organism, which in turn, shape behavioral responses (e.g., approach, avoidance) of the organism. The S-O-R model indicates that the relationship between these three main constructs (i.e., stimulus, organism, response) is linear with organism acting as mediator between stimulus and response (Kihlstrom, 1987).

Stimulus. Within the S-O-R model, stimulus is conceptualized as physical atmospheric factors that provoke or influence individual's internal and organismic states (Eroglu, Machleit, & Davis, 2001; Sherman, Mathur, & Smith, 1997). Past researchers utilizing the model have studied the effect of various environmental stimuli such as color (Babin, Hardesty, & Suter, 2003; Bellizzi, Crowley, & Hasty, 1983; Bellizzi & Hite, 1992), lights (Babin et al., 2003; Baker, Levy, & Grewal, 1992), music (Baker et al.,

1992), and scent (Fiore, Yah, & Yoh, 2000) as predictors of emotional and cognitive responses influencing consumers' behavioral responses.

Organism. The organism in the S-O-R framework refers to internal processes that intervene in the relationship between the stimulus and responses (Mehrabian & Russell, 1974). Mehrabian and Russell (1974) proposed that emotional states (O) mediating approach-avoidance behaviors (R) in any environment include pleasure, arousal, and dominance (PAD). According to Mehrabian and Russell, pleasure is the extent to which an individual feels good or happy, whereas arousal is the extent to which an individual feels stimulated or active. The third component, dominance, refers to the extent to which an individual feels unrestricted. Early researchers in environmental psychology focused on these three emotional states as the emotional responses to environmental stimuli (e.g., Brengman & Geuens, 2004; Valdez & Mehrabian, 1994). However, since the initial development of the model, in numerous instances, only the pleasure and arousal variables have been included as emotional response because the dominance dimension received limited empirical support (Donovan & Rossiter, 1982).

In addition to emotional responses (i.e., pleasure and arousal), researchers (Eroglu et al., 2001) have modified the model to include cognitive responses as part of the organism construct, as several researchers have documented that stimuli elicit not only emotional but also cognitive responses within organisms and that both types of responses influence subsequent behaviors (Babin et al, 2003; Donovan, Rossiter, Marcoolyn, & Nesdale, 1994; Fiore et al., 2000; Hu & Jasper, 2006). Cognitive responses include perceptions, thoughts, comprehension, beliefs, and knowledge generated in respond to

various stimuli (Ha & Im, 2012). The inclusion of cognitive responses in the organism construct meant the organism was viewed as an active processor of information and environmental stimuli were viewed as an informational input influencing internal decision-making (Bagozzi, 1983).

Response. The response in the S-O-R model represents the final outcomes including both psychological and behavioral reactions (Bagozzi, 1986). In the initial M-R model, responses were categorized as either approach or avoidance behaviors (Mehrabian & Russell, 1974; Sherman et al., 1997). Approach behaviors were all positive actions directed toward a particular setting such as intention to stay, explore, affiliate, and purchase (Bagozzi 1986; Mehrabian & Russell, 1974). In contrast, avoidance behaviors were concerned with opposing actions (e.g., leaving, escaping, evading; Eroglu et al., 2001). The S-O-R model is presented in Figure 2.

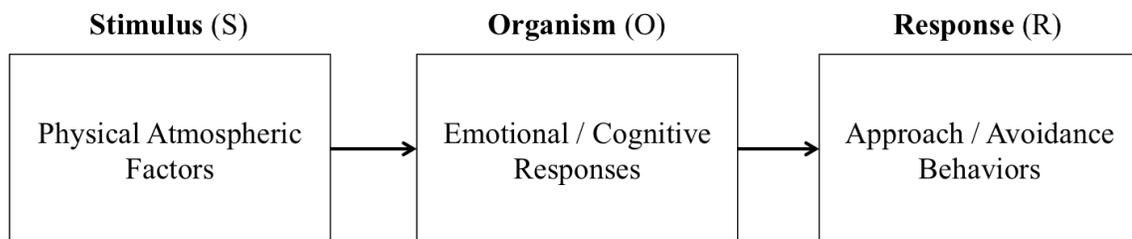


Figure 2. Stimulus-Organism-Response model (Eroglu, Machleit, & Davis, 2001).

In consumer behavior research, conceptualizing individuals' reactions to environmental information using the S-O-R framework presents an opportunity to capture elements of the complex process of consumer response and decision-making (Bagozzi,

1983). Applied to consumer behavior research, the S-O-R framework can be utilized as a structure to model the external determinants of consumer choice (S), the internal processes regulating that choice (O), and the behaviors constituting that choice (R). The external determinants of consumer choice (e.g., informational inputs) can include either managerially controllable factors such as advertising, price, product design, or non-controlled environmental factors such as competition, social pressure, and economic conditions (Bagozzi, 1983). Representing internal processes, variables for cognitive processes can include perceived risk, dissonance, and expectations, whereas variables for affective processes can include arousal, fear, and attraction (Bagozzi, 1983). Last, intended and actual activities such as intention to act, activities leading to choice, actual choices, outcomes, and reactions to choice can be included in the model to represent behavioral responses (Bagozzi, 1983).

According to Bagozzi (1983), consumer responses may follow different response sequences within the S-O-R framework. Differences in these response sequences (i.e., cognitive, affective, parallel) stem from the order in which reactions within the organism are evoked after a stimulus. Although Bagozzi (1983) illustrated consumer response models with six constructs (i.e., stimulus, cognitive state, affective state, preference, intention, and behavior), other variations excluding some of the constructs are also possible.

The cognitive response model holds that cognitions occur before affect (Bagozzi 1983). Stimuli such as advertisements often provide a consumer with information (e.g., facts about a product, usage instruction). When a consumer is exposed to such stimuli,

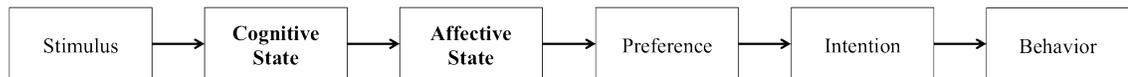
cognitive processes must occur to understand the factual content presented. After understanding the stimuli, the consumer might develop an affective or emotional response toward the information. For example, suppose one is viewing a user-generated video review of a product on Facebook that features subtle humor. The content of the review must first be interpreted (i.e., understood) and then the viewer might laugh at it. Consumer response is most likely to follow this cognition-dominated paradigm in circumstances when a consumer is highly involved with the product or decisions involve extensive problem solving.

In contrast to the cognitive response model, in the affective response model a stimulus evokes an affective state (e.g., joy, fear) prior to the occurrence of any cognitive response (Bagozzi, 1983). According to Bagozzi (1983), when a consumer is exposed to an advertisement with a compelling negative message (e.g., fear appeal) or an attractive information source (i.e., celebrity) along with a product, the situation induces initial emotional reactions (e.g., fear, liking). The cognitive activities that are believed to follow after this initial reaction are limited to finding ways to obtain the product and locating resources to do so. For example, if a consumer sees her favorite celebrity wearing a new stiletto shoe while browsing the celebrity's Facebook fan page, she may immediately like the shoe and then she might search for where she can subsequently purchase the shoe.

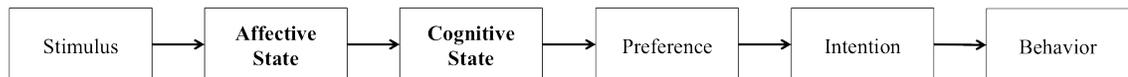
Finally, in the parallel response model, a stimulus implies affective content in addition to cognitive information resulting in both cognitive and affective responses occurring simultaneously. In this case, the affective content needs to be salient enough to evoke a response but should not be so high that it overwhelms the cognitive information.

When both cognitive and affective responses are present, each of them has independent effects on behavioral response. For example, when a consumer encounters a Facebook posting (e.g., a photo) about new restaurant in town, the consumer may use the photo to evaluate the restaurant and may get excited about the use of color in the image. Then, the consumer may want to visit the restaurant (see Figure 3 for generic consumer response sequences).

- **Cognitive Response Model**



- **Affective Response Model**



- **Parallel Response Model**

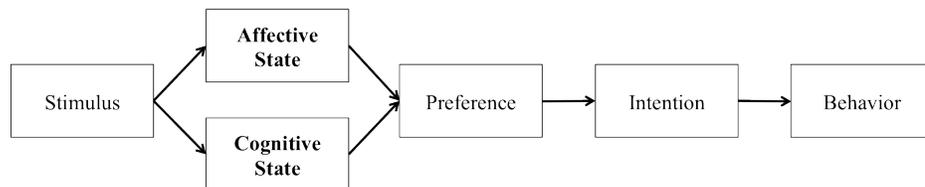


Figure 3. Generic consumer response sequences (Bagozzi, 1983).

S-O-R Model Applied to Consumer Research

Since the S-O-R model was introduced, it has been used in consumer research to understand consumer responses to various consumption contexts. A number of researchers have applied the S-O-R framework to study the effects of aspects of a store environment on a range of consumer intentions and behaviors, including patronage

intention (e.g., Babin et al., 2003; Baker et al., 1992; Wu et al., 2013), buying intention (e.g., Babin et al., 2003; Bellizzi & Hite, 1992), unplanned purchasing (e.g., Donovan et al., 1994), and time spent in the store (e.g., Donovan & Rossiter, 1982; Donovan et al., 1994).

Researchers interested in consumer behavior in an online context have also utilized the S-O-R model to study the influence of a variety of website attributes (i.e., product presentation, design quality, music) on intended consumer responses such as satisfaction (e.g., Eroglu, Machleit, & Davis, 2003; Ha & Im, 2012), website patronage intention (e.g., Eroglu et al, 2001; Jeong, Fiore, Niehm, & Lorenz, 2009), amount of money and time spent (e.g., Eroglu et al, 2001), and intention to engage in word-of mouth activities (e.g., Ha & Im, 2012).

The model has also been adopted to investigate the impact of advertising on viewing behavior (Olney, Holbrook, & Batra, 1991). Olney and his colleagues (1991) studied impact of advertising on consumer response using a model demonstrating the effects of ad content, through emotions and attitudinal responses, to viewing behavior (see Figure 4). They proposed that emotional responses and attitudinal components mediated the relationship between ad content and viewing time (i.e., behavioral response). In the study, sample of commercials ads were created and analyzed across the ads. The effects of advertising content were partially mediated by the emotional dimensions (i.e., pleasure, arousal) and attitude toward the ad (i.e., hedonism, utilitarianism, interestingness), supporting the S-O-R relationship.

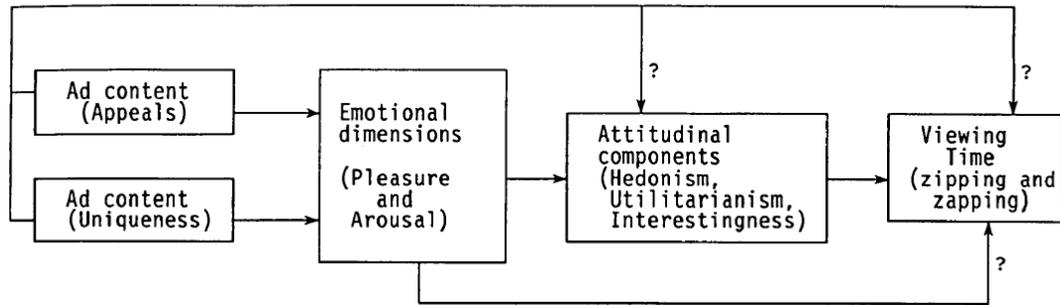


Figure 4. Hierarchical model of advertising effects proposed by Olney, Holbrook, and Batra (1991, p. 441).

Some of the researchers who have adopted the S-O-R model to study consumer responses have included personal traits as moderators. The moderators were individual characteristics that influenced the strength and direction of the relationship between the stimulus and organism (Fiore & Kim, 2007). For example, Eroglu et al. (2003) examined the moderating effects of involvement and atmospheric responsiveness on the relationship between site atmosphere (S) and emotional responses (O) (see Figure 5). The relationship between online store website quality and pleasure was moderated by both involvement and atmospheric responsiveness.

Similarly, Wu et al. (2013) tested the moderating effect of consumer characteristics (i.e., hedonic shopping value, fashion involvement) on the relationships between an environmental stimulus (S) and cognitive and emotional reactions (O). The researchers found a moderating effect for a personal trait (i.e., fashion involvement) on the relationship between fashion product display method and participant's retail interest.

Both research teams mentioned previously tested a moderating effect for consumer characteristics on the S-O relationship but not the O-R relationship. Some of the characteristics that have received attention as moderators include atmospheric responsiveness (e.g., Eroglu et al., 2003; Grossbart, Hampton, Rammohan, & Lapidus, 1990), level of involvement (e.g., Eroglu et al., 2003; Wu et al., 2013), shopping orientation (e.g., Morrin & Chebat, 2005; Wu et al., 2013), and knowledge of the shopping environment (e.g., Sirgy, Grewal, & Mangleburg, 2000).

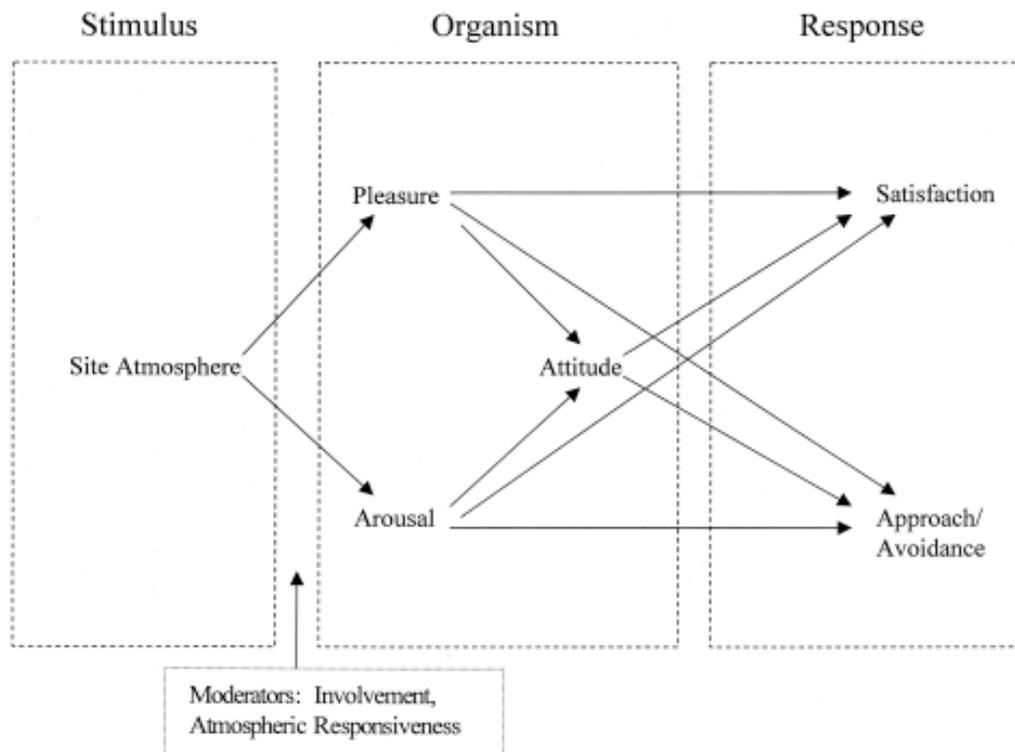


Figure 5. S-O-R model examining moderating effects of personal traits on the S-O relationship proposed by Eroglu, Machleit, and Davis (2003, p. 143).

Application of the S-O-R Model

The S-O-R framework was employed to examine the influence of brand-related UGC because the constructs included in the framework and the relationships among them illustrated the core interests of the research. I was interested in looking at the process by which brand-related UGC influenced consumer responses in relation to a brand via internal processes leading to behavioral responses. The S-O-R model including stimulus, emotional and cognitive responses, and behavioral responses describes a process by which stimuli may influence behavioral responses via internal responses (i.e., emotional and cognitive responses). As brand-related UGC is considered informational input, applying the S-O-R model, I proposed that brand-related UGC (S) evoked emotional and cognitive responses (O) within consumers, and these internal states influenced behavioral responses (R).

Following Bagozzi (1983), the sequence of responses anticipated was best exemplified by the parallel response sequence as brand-related UGC on Facebook often conveys both informational and emotional messages. Also, factors influencing eWOM (i.e., source characteristic, receiver characteristic) were examined as personal traits that potentially moderated relationships between stimulus and organism. Figure 6 presents the proposed S-O-R model of consumer response to brand-related UGC tested in this research. Specific variables in each construct are presented at the end of this chapter.

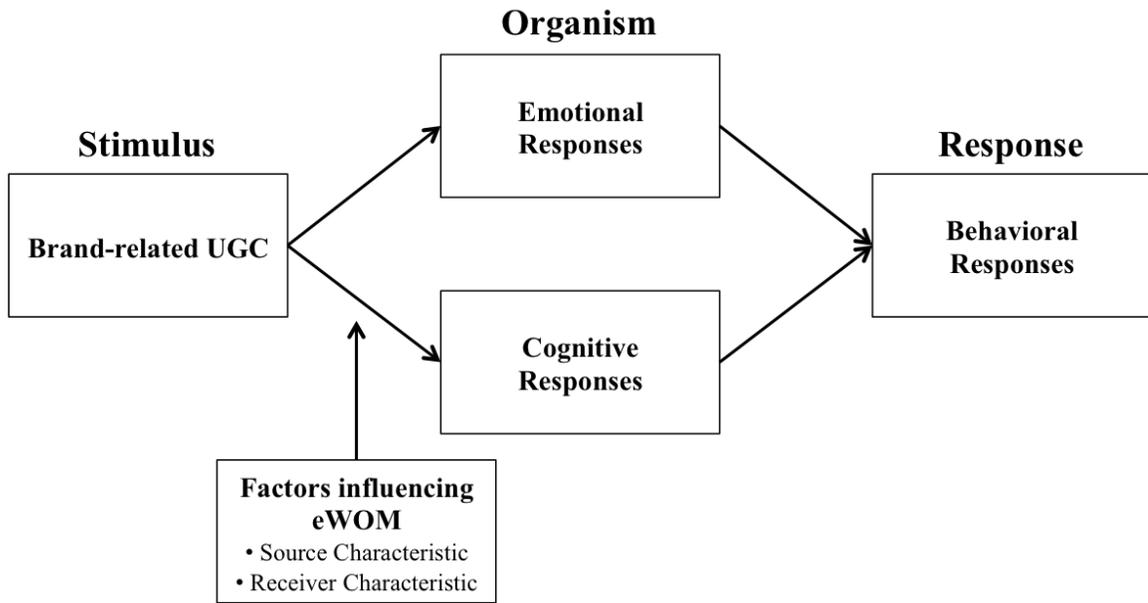


Figure 6. Proposed S-O-R model of consumer response to brand-related UGC.

Review of Related Research

This section provides a review of related research. An overview of prior research concerning brand-related UGC on social media as a form of eWOM message is presented first followed by a discussion of the influence of eWOM on consumer behavior. Finally, factors that influence the effect of eWOM communication are provided.

UGC in Social Media

As noted previously, UGC contained in social media have evolved into both a form of entertainment and an important online information source. People create and share stories on the Web that address a wide range of topics such as sports, politics, jokes, shopping experiences, preferences, and products (Nielsen BuzzMetrics, 2006). These stories conveyed in various formats (i.e., text, image, audio, video) are consumed

by other users as information as well as for entertainment purposes (Shao, 2009). Much of this content is related to brands and thus, it has the potential to influence other's attitudes and behaviors toward brands and associated products (Smith et al., 2012). In fact, some UGC is created with the specific intention of educating other consumers about products, brands, or services.

In addition to its usefulness to consumers, UGC is also an important information source to companies. UGC provides key insights for marketers because content often contains unsolicited feedback about their products (Nielsen BuzzMetrics, 2006) and is a beneficial source of information concerning product suggestions and alternate uses. By paying attention to UGC, marketers can uncover emerging issues among consumers and understand consumers' deepest needs and emotions (Nielsen BuzzMetrics, 2006). For competitors, brand-related UGC provide useful information about the users of competitors' products as well as problems encountered with those products (Nielsen BuzzMetrics, 2006). Competitors can also use this information to benchmark a product or service (Nielsen BuzzMetrics, 2006).

Previous researchers interested in UGC have studied consumers' motivations to engage in UGC activities as well as user perceptions of UGC (e.g., Daugherty et al., 2008; Kim, Jin, Kim, & Shin, 2012). In early research Daugherty and his colleagues (2008) investigated consumers' motivations for UGC consumption and creation. They conducted a survey of online panel members ($n = 325$) and asked them to report their media usage, attitude toward UGC, type of UGC experienced, frequency of creating UGC, and to respond to five functional motivations as influences on their engagement

with UGC (i.e., ego-defensive, social, knowledge, utilitarian, value-expressive). The ego-defensive function described the need to feel important and feel needed, whereas the social function was concerned with the need to meet and make new friends. The knowledge function represented the need to gain information and the utilitarian function represented the need to gain rewards and avoid punishments. Last, the value-expressive function captured the need to express personal value. Among the five functional sources of attitude toward UGC, the ego-defensive function and the social function were found to be the only motivational sources influencing attitudes toward UGC.

Concerning perceived benefits of UGC, Kim et al. (2012) explored user perceptions of the quality, value, and utility of UGC. The main objective of their study was to identify and evaluate factors affecting UGC value and then assess which factor(s) impacted the perceived utility of UGC. A questionnaire was distributed to UGC users ($n = 259$). Included in their data were responses from individuals in middle schools, high schools, universities, companies, research institutes, and public servants. The questionnaire asked about participants' experiences with specific UGC sites (i.e., Yelp, Blogger, YouTube, or MySpace). UGC quality involved content, design, and technology factors, and these three factors influenced the functional, emotional, and social value of UGC. Among the three UGC values (i.e., functional, emotional, social), both functional and emotional values were significant influences on perceived utility of UGC.

Brand-related UGC and eWOM

Whether consumers share information about brands or products in the form of online reviews or talk about their experience with brands or products on personal SNSs,

brand-related UGC appearing in social media function as eWOM. Research concerning the topic of brand-related UGC is just beginning. Jansen et al. (2009) investigated Twitter (i.e., micro blog) as a means of distributing eWOM concerning brands. Using a case-study approach, they analyzed more than 150,000 micro blog postings (i.e., comments, sentiments, opinions) in 50 micro blogs in terms of their range, frequency, timing, and content. The results showed that 19% of the micro blogs contained brand-related comments. Among these brand-related comments, 20% expressed a sentiment or opinion concerning a brand, product, or service. Comments posted about brands were more often positive comments (50%) rather than negative ones (33%). The other 80% of the content of the postings were questions and answers about brands. The majority of brand-related postings on Twitter appear to serve as a quick way to seek information about brands and get answers.

In subsequent research, researchers documented the subject matter of brand-related UGC shared via social media. Smith et al. (2012) investigated differences in brand-related UGC between Twitter, Facebook, and YouTube. They conducted a content analysis of 600 UGC posts for two apparel brands: Lululemon and American Apparel. As the basis of their comparison, they used six dimensions of UGC drawn from a priori reading and an inductive analysis of brand-related UGC (i.e., promotional self presentation, brand centrality, marketer-directed communication, response to online marketer action, factual information about the brand, brand sentiment). Brand-related UGC was categorized as promotional self-presentation when the content promoted both the individual making the posting and the brand. Brand centrality was concerned with

whether the brand was central or peripheral to the content, and brand sentiment was concerned with whether the content conveyed sentiments toward the brand that were either positive, negative, or neutral (e.g., liking, hating). The researchers found that brand-related UGC was different across these vehicles in terms of content. On YouTube, UGC broadcasted the self (i.e., self-promotional). Similarly, self-promotional content was prominent on Facebook but also featured more content that highlighted brands (i.e., brand centrality) than YouTube. UGC on Twitter was least likely to feature consumer self-promotion and more likely to contain information centered on brand for discussions and information sharing purposes.

Influence of eWOM on Consumer Behavior

eWOM via social media may have more influence on a consumer's judgment and attitude about brand than any other source of influence because eWOM is transmitted by a trustworthy information source embedded in consumer's personal network (Chu & Kim, 2011; Corrigan, 2013). In addition, the influence of eWOM on social media may be greater than traditional WOM because eWOM messages can easily and quickly reach global audiences who share similar interests in a product or brand (Christodoulides, Michaelidou, & Argyriou, 2012).

Realizing the potentially crucial influence of eWOM on social media, previous researchers have explored behavioral consequences of eWOM in various contexts (e.g., Christodoulides et al., 2012; Lee & Youn, 2009; Sun, Youn, Wu, & Kuntaraporn, 2006). For example, Christodoulides et al. (2012) investigated changes in purchase intention following exposure to eWOM on consumer review sites. Their study was cross-national

consisting of students from both the United Kingdom (UK) and China. The researchers were specifically interested in the influence of eWOM valence order and product type. Their research design was a 2 (valence order: negative followed by positive, positive followed by negative) \times 2 (product type: experience, search) \times 3 (purchase intentions at t_1, t_2, t_3) repeated measures factorial experiment, with national culture as a blocking factor. Participants were assigned randomly to experimental conditions and purchase intentions were measured at three different times (i.e., initial purchase intention, after 1st exposure to eWOM, after 2nd exposure to eWOM). The researchers conducted a repeated-measure ANOVA to analyze the data. The results of between-subject analyses showed that national culture, eWOM valence order, and product type all impacted purchase intentions. Average purchase intentions for Chinese respondents were more positive than UK respondents. Respondents who were first exposed to negative comments followed by positive comments had lower purchase intentions than those first exposed to positive comments followed by negative comments. Purchase intention for the experience product (i.e., hotel) was greater than for the search product (i.e., camera). The results of the within-subjects analysis showed that initial purchase intentions were higher than purchase intentions after the first and second exposures to eWOM. In regards to interaction effects, national differences existed in the relationship between eWOM valence order and purchase intention for the experience product. Chinese respondents were susceptible to recent eWOM regardless of their valence whereas UK consumers anchored on negative information regardless of the valence order.

In earlier research, Lee and Youn (2009) studied eWOM influence on consumers' judgments of products. These researchers were interested in whether and how different online platforms where eWOM was posted (i.e., brand's website, independent product review, personal blog) influenced consumers' judgments of reviewed products. They were also interested in testing for a moderating role of eWOM valence on the relationship between platform and product judgments. A 3 (eWOM platforms: brand's website, independent product review, personal blog) \times 2 (eWOM valence: positive, negative) between-subjects experimental design was employed with 247 undergraduates as participants. Participants were randomly assigned to one of the six conditions. An apartment was selected as the product category and attitude towards the apartment, intention to rent the apartment, and willingness to recommend the apartment were examined as dependent variables reflecting product judgments. The researchers conducted manipulation checks to make sure participants correctly recognized different types of eWOM platforms and valences of eWOM. The results of MANCOVA demonstrated that there were no significant differences between the eWOM platforms (i.e., brand's website, independent product review, personal blog) in regards to attitude toward and intention to rent an apartment. However, moderating effects of eWOM valence were found for the willingness to recommend the apartment to others.

In subsequent research, Sun et al. (2006) studied the antecedents and consequences of eWOM in the context of music-related communication. They developed an integrated model including innovativeness, Internet usage, music involvement, and Internet social connection as antecedents of eWOM. Online forwarding and online

chatting were behavioral consequences. The study was conducted with 250 undergraduate students located in the United States. Participants were asked to respond to a questionnaire assessing the variables included in the proposed model. Path analysis was performed via LISREL 8 to test the proposed model. The results identified innovativeness, Internet usage, and Internet social connection as significant predictors of eWOM. Also online forwarding and online chatting were identified as behavioral consequences of eWOM.

Factors Influencing eWOM Effects

According to Hovland, Janis, and Kelley (1953), communication is the process by which an individual (i.e., communicator, information source) transmits stimuli (i.e., communication content, message) to modify the behavior of other individuals (i.e., audience, receiver). The constructs forming the communication process (i.e., source, message, receiver) influence the effectiveness of a message (Hovland et al., 1953). As eWOM is a form of communication directed at other consumers, eWOM communication follows this communication process.

Source. The person or group perceived as originating the communication (i.e., information source) is an important factor determining the effectiveness of a communication message. Perceptions concerning an information source influence the persuasiveness of the information because characteristics of the communicator provide cues as to the trustworthiness, intentions, and affiliations of the source (Hovland et al., 1953). The influence of source characteristics, such as source credibility and similarity,

has been one of the widely investigated aspects of WOM communications in offline as well as in online settings.

Source characteristics have been investigated for their direct effects as well as for their ability to moderate relationships. For example, De Bruyn and Lilien (2008) studied the moderating effects of source characteristics (i.e., tie strength, perceptual affinity, demographic similarity, source expertise) on decision making while they examined the influence of eWOM (i.e., electronic referrals). The influences of source characteristics were examined at different stages of consumer decision-making (i.e., unaware, awareness, interest, final decision). A total of 2,733 participants participated in the study. At the unaware stage, 1116 participants received an email from one of his or her acquaintances. At the awareness stage, 825 participants opened the email and read the message. At the interest stage, 488 participants followed the link and visited the survey's website. At the decision stage, 304 participants completed the survey. Participants at the unaware, awareness, and interest stages were asked to send an email referral to one of their acquaintances. After the email had been sent, each participant who sent out an email invitation to another person was asked to complete an online questionnaire regarding the relationship the sender had with the referral recipient. The questionnaire assessed tie strength, perceptual affinity, demographic similarity, and source expertise.

When participants were asked to open the email sent from their acquaintances and read the message (i.e., awareness stage), participants who opened the email indicated stronger tie strength and lower demographic similarity between the email sender and themselves. When participants were asked to follow the link provided in the email and

visit the website (i.e., interest stage), participants indicating higher perceptual affinity and lower demographic similarity indicated a high chance of visiting the website. When participants were asked to complete the questionnaire located at the website (i.e., final decision stage), participants who demonstrated low demographic similarity were likely to follow the directions and complete the survey.

In related research, Wu and Wang (2011) examined the influence of source credibility, message appeals (i.e., rational appeal, emotional appeal), and product involvement as factors influencing the effect of eWOM on brand attitude. The researchers first examined the direct influence of source credibility and message appeals on brand attitude and then tested for a moderating effect of product involvement on these relationships. Two hundred and eleven participants responded to an online questionnaire assessing the variables under investigation. Participants who indicated high source credibility indicated a better brand attitude than participants who indicated low source credibility. There was no difference found in brand attitude between rational eWOM and emotional eWOM in regards to message appeals. Regarding the moderating effect of product involvement on the relationship between message appeals and brand attitude, participants with high product involvement showed a better brand attitude when a rational message was presented to them compared to when an emotional message was presented. For participants with low product involvement, there was no significant difference in brand attitude between the rational and emotional message.

In a social media context, Yu and Natalia (2013) explored user-generated video review as eWOM. YouTube was selected as the platform for the eWOM source and the

researchers examined the influence of source credibility on the extent to which YouTube viewers were willing to accept and adopt consumer reviews (i.e., eWOM information adoption) when making a purchase decision. A stratified random sampling method was used to collect data from 500 social media users in Taiwan and Indonesia. A questionnaire was used to measure source characteristics (i.e., credibility, expertise, trustworthiness), eWOM information adoption, and purchase intention. Structural Equation Modeling was used for data analyses. The results showed that eWOM information adoption largely depended on the credibility of the people who posted the video reviews on YouTube. The researchers also found that source credibility was closely related to source expertise and source trustworthiness.

Message. Characteristics of the message content such as organization and argument influence what the audience thinks about during exposure to a communication (Hovland et al., 1953). Specifically studied in an eWOM context, previous researchers have found that eWOM message characteristics such as message valence (Christodoulides et al., 2012; Lee & Youn, 2009; Lee, Rodgers, & Kim, 2009) and quality (Lee, Park, & Han, 2008; Sweeney, Soutar, & Mazzarol, 2008) are important factors influencing the effect of eWOM communications. For example, Lee et al. (2008) examined the effect of negative online consumer reviews on product attitude. In particular, the researchers examined the effects of proportion and quality of negative eWOM on product attitude along with the moderating influence of product involvement. Their experiment was a 2 (involvement: low, high) \times 2 (proportion of negative reviews: low, high) \times 2 (quality of negative reviews: low, high) full factorial design. Two hundred

and forty-eight Korean college students were randomly assigned to one of the experimental conditions. Participants' involvement was manipulated before the virtual shopping mall site containing the online consumer reviews was provided. Once participants reviewed the virtual shopping mall, they were asked to fill in a questionnaire assessing their product attitude. ANOVA tests showed that the portion of negative reviews increased unfavorable product attitudes. Also, high-quality negative reviews influenced product attitude more than low-quality negative reviews.

In subsequent research, Lee et al. (2009) investigated the effects of eWOM (i.e., product reviews) valence and extremity on brand and website attitudes. The researchers conducted two identical experiments with two different types of websites (i.e., retailer's website, brand's website). Each experiment was a one-factor (valence/extremity: extremely negative, moderately negative, extremely positive) between-subjects design with a control group. One hundred and three student participants and 100 student participants participated in the first and second study, respectively. Results of both studies showed that extremely positive reviews as well as moderately negative reviews strengthened attitudes. Also extremely negative reviews had a stronger influence on attitudes than either moderately negative or extremely positive reviews.

In a qualitative study, Sweeney et al. (2008) investigated factors influencing WOM communication in an offline context. The researchers were particularly interested in identifying factors that were likely to enhance WOM effectiveness. Research findings were drawn from six focus group discussions with a total of 54 customer participants. In regards to the nature of WOM message, the researchers found that the richness and

strength of the message impacted WOM acceptance. The researchers also found that the ways in which the WOM message was portrayed, such as through story telling, or the use of non-verbal communication (i.e., body language) played an important role in WOM acceptance as they determined the vividness of the WOM message.

Receiver. Some individuals are responsive to a persuasion message, whereas others are resistant (Hovland et al., 1953). Due to different personality types and growth experiences, some receivers may perceive eWOM as credible, whereas others may think it is not resulting in differences in the impact of eWOM (Cheng & Zhou, 2010). Investigating the influence of receiver characteristics on eWOM, Park and Kim (2009) examined the influence of eWOM receiver expertise (i.e., consumer knowledge) in the context of online reviews. The researchers included message characteristics (i.e., type of reviews, number of reviews) along with receiver expertise as they examined the eWOM impact on purchase intention. Their research design was a 2 (levels of expertise: high, low) \times 2 (types of reviews: benefit-centric, attribute-centric) \times 2 (number of reviews: two, six) mixed design including two control conditions. A benefit-centric review focuses on the reviewers' perceived value of the product whereas an attribute-centric review focuses on the product features and functions. A portable multimedia player was selected as the experimental product and five different sets of online consumer reviews were developed for each condition (i.e., two attribute-centric reviews, six attribute-centric reviews, two benefit-centric reviews, six benefit-centric reviews, control condition). Two hundred and fifty students were classified as either experts or novices according to their prior knowledge about the product, and participants in both groups were randomly

assigned to one of the five experimental conditions. Participants were asked to indicate their purchase intentions after reading the product information and online consumer reviews. The results of ANOVA tests showed significant interaction effects between expertise and review type. For experts, purchase intention was significantly higher in the attribute-centric condition than in the benefit-centric condition. For novices, purchase intention was significantly higher in the benefit-centric condition than the attribute-centric condition. The results also showed that the differences in purchase intention caused by the number of reviews were greater for novices as compared to experts.

Another receiver characteristic resulting in differences in eWOM acceptance is cultural background (Christodoulides et al., 2012; Chu & Choi, 2011). Chu and Choi (2011) examined social relationship variables (i.e., bridging social capital, bonding social capital, tie strength, trust, informational influence, normative influence) as potential predictors of eWOM engagement (i.e., opinion leadership, opinion seeking, pass-along behavior). eWOM in social networking sites was tested in two cross-national samples in the United States (US) and China. Online surveys were administered to 363 US undergraduate students and 200 Chinese undergraduate students in large universities in their respective countries. The questionnaire assessed opinion leadership, opinion seeking, pass-along behavior, bridging social capital, bonding social capital, tie strength, trust, informational influence, and normative influence. The questionnaire was originally developed in English and then translated into Chinese. Regression analysis was used to examine the degree to which social relationship variables influenced eWOM. Culture significantly predicted engagement in eWOM. Overall, Chinese participants engaged in

eWOM to a greater extent than did US participants. In regards to opinion giving, the results showed that bonding social capital was a significant predictor in both countries. Normative influence had a significant influence only for US participants and informational influence had a significant influence only for Chinese participants. Regarding opinion seeking, bridging social capital had a significant influence in both countries. The influence of normative influence was also significant in both countries. However, the influence was positive for US participants and the influence was negative for Chinese participants. Informational influence had a significant positive influence only for Chinese participants. Concerning pass-along behavior, bonding social capital and normative influence had significant influences in both countries. In addition, bonding social capital had a significant influence for US participants and informational influence had a significant influence for Chinese participants.

Although studied in an offline WOM context, Bansal and Voyer (2000) examined the effects of receiver's expertise, receiver's perceived risk, sender's expertise, and tie strength on WOM. One hundred and sixty-five individuals recruited from a Canadian Forces Base in eastern Canada participated. Participants were asked to remember a time when they attained information via WOM in the last 24 months and respond to a questionnaire assessing receiver's expertise, receiver's perceived risk, sender's expertise, and tie strength, WOM actively sought, and influence of sender's WOM on their purchase decision. Structural Equation Modeling was used to analyze the relationships. Receiver's expertise was negatively associated with receiver's perceived risk and receiver's perceived risk was positively associated with WOM actively sought. That is,

prior knowledge about the subject matter reduced perceived risk and increased the number of explicit information requests made to the WOM sender. The results also showed that sender's expertise was positively related to the influence of sender's WOM. That is, a WOM source perceived to be expert in the subject matter was viewed as a credible source of information and consequently, the influence of WOM on purchase decision increased.

Hypotheses Development

This study was focused on brand-related UGC shared via Facebook and the context of interest was consumers' encountering brand-related UGC during casual Facebook browsing. Casual Facebook browsing is an exploration of Facebook without a planned objective or search strategy. Thus, the hypotheses were developed specifically for this context.

Organismic Responses to Brand-related UGC: S-O Relationships

As noted, much of UGCs on social media convey consumers' beliefs, opinions, feelings, and thoughts about brand (Smith et al., 2012) and these UGCs can serve as eWOM messages influencing other consumers' attitudes and behavior toward brand. The influence of brand-related UGC on consumer's attitudes and behavior can be explained as the influence of stimulus on organism and response according to the S-O-R model. The S-O-R model suggests that stimuli influence the emotional and cognitive states of a person prior to the formation of behavioral responses (Eroglu et al., 2003). When a consumer encounters brand-related UGC on social media, the UGC acts as a stimulus to activate internal information processing of an organism (i.e., consumer), then behavioral

actions related to the brand follow as the consumer processes the information contained in the stimulus (i.e., UGC).

According to Bagozzi (1983), an informational input (S) provokes both emotional and cognitive states when it contains both affective and cognitive contents. The dual activation of both emotional and cognitive responses has been documented in Ha and Im's (2012) investigation of the role of web site design quality using the S-O-R model. According to Ha and Im (2012), web site design quality (S) had a significant influence on emotional responses (i.e., pleasure, arousal) of their participants as well as on cognitive responses (i.e., perceived quality of information).

Brand-related UGC on Facebook contains evaluation of consumption experiences, factual information, and affect related to a brand (Chen et al., 2013; Smith et al., 2012). Thus, brand-related UGC shared via Facebook contains both informational and emotional messages. With informational and emotional messages both being present on Facebook, it was predicted that brand-related UGC on Facebook is likely to evoke both emotional and cognitive responses of consumers.

Emotional response: Pleasure and arousal. Emotional responses are subjective feeling states within the individual that are immediate reactions to stimulation (Fiore & Kim, 2007). The pleasure and arousal components of Mehrabian and Russell's (1974) pleasure-arousal-dominance (PAD) paradigm have been implemented frequently in consumer behavior research to study the influence of environmental stimuli on emotions. As proposed by Mehrabian and Russell (1974), most of the researchers that applied the S-O-R model have found significant relationships between stimuli and emotional responses

(i.e., pleasure, arousal). Examined in a context relevant to current study, researchers have found that web site design elements such as color, images, and interactive features have a positive influence on online consumers' emotions (Eroglu et al., 2003; Park, Stoel, & Lennon, 2008; Ha & Im, 2012). Also, informational stimuli such as advertising content were found to influence pleasure as well as arousal (Olney et al., 1991). Therefore the following hypotheses were proposed.

H1. Brand-related UGC influences consumer emotional responses.

H1-a. Brand-related UGC influences pleasure.

H1-b. Brand-related UGC influences arousal.

Cognitive response: Perceived information quality. According to Fiore and Kim (2007), cognitive response components within the S-O-R framework include beliefs, thoughts, and perceptions constructed via direct interaction with the stimulus or the processing of secondary sources of information (e.g., advertisement, WOM). Thus, cognitive responses represent the results of mental activity stimulated by informational stimuli (Bagozzi, 1983).

Previous researchers found that perceived information quality is an important cognitive response component influenced by website design (Eroglu et al., 2003; Park et al., 2008; Ha & Im, 2012). Because brand-related UGC contains information about brands, consumers who view brand-related UGC are expected to process the information and determine its quality. Based on this reasoning, the following hypothesis was proposed.

H2. Brand-related UGC influences perceived information quality.

Behavioral Responses to Brand-related UGC: O-R Relationships

The core of the proposed relationships within the S-O-R model is that the organism (i.e., internal processes) acts as a mediator to regulate behavioral responses to stimuli. Bagozzi (1983) proposed that intentions to act, activities leading to choice, actual choices, or outcomes following actual choice can be modeled as the response component of the S-O-R model. In shopping-related contexts, the response component previously investigated included shopping-related behaviors or intentions toward a product, brand, service, or shopping environment such as actual purchase, willingness to purchase, satisfaction, and word-of-mouth (Fiore & Kim, 2007).

eWOM on social media influences brand-related decision making as well as attitudes toward the brand (Smith et al., 2012). Besides behavioral or attitudinal outcomes directly related to sales (i.e., actual purchase, willingness to purchase, satisfaction, positive word-of-mouth), eWOM on social media influences customer relationships with brands. According to Kim and Ko (2012), brand-related content on Facebook influences relationship equity, that is, the tendency of consumers to stay in a relationship with a brand. Brand-related content on social media could trigger new consumers' interest in the brand and make them want to learn about the brand potentially building relationships with the brand. In fact, important goals for companies engaged in social media activities are to increase brand awareness and to build and enhance relationships with existing and new customers (Henning-Thurau et al., 2010). Considering other possible brand-related outcomes of consumer activities on social media that include both behavioral and relational aspects, this study included information pass-along, impulse buying, future-

purchase intention, and brand engagement as the behavioral response component in reaction to brand-related UGC on Facebook.

Information pass-along. In the SNS context, the unique features of Facebook facilitate users sharing information with others on their social networks by responding to and forwarding or passing-along contents. According to Chen et al. (2013), responding to information by clicking “Like” or sharing the information on a friend’s wall are frequent activities on Facebook fan pages. Passing along brand-related contents on Facebook is eWOM activity, as the contents convey opinions, facts, or user experiences with brands or products. Consumers who encounter eWOM messages may frequently share information by passing along that information to other users.

In offline WOM contexts, researchers interested in consumers’ WOM activities have explored factors leading to WOM engagement. Closely related to this study, Ha and Im (2012) examined the influence of website design on WOM generation. They found that perceived quality of information as well as emotion (i.e., pleasure, arousal) were significantly related to WOM intention. Examining the emotional and the cognitive aspects of WOM, Ladhari (2007) found that pleasure and arousal have significant influence on WOM intention and Kim and Niehm (2009) found perceived information quality of website positively influence recommendation intention. Based on these research findings, the following hypotheses were proposed.

H3. Emotional response positively influences information pass-along.

H3-a. Pleasure positively influences information pass-along.

H3-b. Arousal positively influences information pass-along.

H4. Cognitive response (i.e., perceived information quality) positively influences information pass-along.

Impulse buying. Impulse buying refers to making a purchase based on a sudden urge to buy something immediately (Adelaar, Chang, Lancendorfer, Lee, & Morimoto, 2003). In the definition of impulse buying, the key is the “immediacy” between encountering a product and the decision to buy it. Impulse buying is different from purchase intention because decision-making time is very short and the purchase is unreflective (Weun, Jones, & Beatty, 1998). Thus, impulse buying reflects a situation in which a consumer’s desire and decision to buy occurs shortly after he or she is exposed to the product.

Due to the development of e-commerce, consumers can easily act upon their impulses and purchase featured products immediately upon exposure to brand-related information. In fact, features on Facebook fan pages allow consumers to make instant purchases by providing links to brands featured in online stores or other sponsored online retailers. Because of this, impulse buying is a possible behavioral response to encountering brand-related UGC on Facebook.

Conceptualizing impulsive buying behavior, Stern (1962) identified suggestion impulse buying as one of four impulse buying categories (i.e., pure impulse buying, reminder impulse buying, suggestion impulse buying, planned impulse buying). According to Stern (1962), suggestion impulse buying occurs when a consumer sees the product for the first time and visualizes a need for it. Applying the suggestion impulse buying response to the Facebook context, a consumer exposed to brand-related UGC may

see the product featured in the UGC for the first time and imagine what it would be like to use the product.

Although it was not directly related to the Facebook context, some evidence indicates that product-related information on the Web influences impulse buying via emotional response. Research findings from Adelaar et al. (2003) showed that regardless of the media formats, emotional response was positively related to impulse buying because sensory stimuli (i.e., audio, text, picture, motion) reduced self-control mechanisms. They also found that the influence of product-related information on impulse buying was mediated by emotion. Thus, it was expected that emotional response activated by brand-related UGC would trigger impulse buying intention because positive emotions evoke approach behaviors (Baker et al., 1992).

Again in an online environment, consumers are easily able to seek additional information and make purchases. If the perceived quality of the UGC information is high (i.e., information is clear, reliable, accurate), it is likely that the consumer will make an impulse purchase in response to the information. Thus, it was hypothesized that:

H5. Emotional response positively influences impulse buying.

H5-a. Pleasure positively influences impulse buying.

H5-b. Arousal positively influences impulse buying.

H6. Cognitive response (i.e., perceived information quality) positively influences impulse buying.

Future-purchase intention. Within a shopping context, previous researchers have examined intention to purchase as a behavioral response component using the S-O-R

model (Baker et al, 1992; Bellizzi & Hite, 1992). In general, purchase intention refers to intention to buy a particular product or service (Adelaar et al., 2003). Examined within the S-O-R model, purchase intention represents an intention to act favorably (i.e., approach behavior) in response to informational stimuli related to brands or products.

In regards to the relationship between emotional response and purchase intention, researchers have demonstrated that intention to purchase follows after positive internal states. In a study examining the influence of retail store environment on consumer response, Baker et al. (1992) found that participants' willingness to purchase was enhanced as pleasure and arousal increased.

Although previous researchers did not examined the influence of eWOM on purchase intention via cognitive response within the S-O-R framework, findings on the consequences of eWOM have shown that eWOM influences purchase intention (Christodoulides et al, 2012; Yu & Natalia, 2013). Hung and Li (2007) suggested one possible explanation for the relationship between eWOM and purchase intention is that eWOM provides opportunities for consumers to gain knowledge about brands and to store the information into their consideration set. A consumer's consideration set contains all the brands a consumer could think about when making a purchase. Any brands included in a consumer's consideration set may be recalled and purchased in the future. The process of comprehending and storing eWOM messages represents consumer's cognitive mental activity in response to eWOM. Thus, these findings led to the prediction that brand-related information was positively related to future purchase intention. Based on these research findings and the reasoning, the following hypotheses were developed.

H7. Emotional response positively influences future-purchase intention.

H7-a. Pleasure positively influences future-purchase intention.

H7-b. Arousal positively influences future-purchase intention.

H8. Cognitive response (i.e., perceived information quality) positively influences future-purchase intention.

Brand engagement. Brand-related content shared via social media influences consumers' behavioral and attitudinal outcomes in relation to the brand (Smith et al., 2012). Brand engagement is a key component in building relationships between brands and customers (Keller, 2001). According to Goldsmith (2012), brand engagement is the term to describe the emotional tie that connects customer to brands.

One of the important attitudinal outcomes in response to brand-related information (e.g., advertising) is brand loyalty (Fassot, 2004). Brand loyalty is a positive emotion, attitude, or predisposition toward a brand (Dick & Basu, 1994). Having customers with high brand loyalty allows a brand to have a competitive advantage over its competitors because loyal customers tend to repeatedly buy the same brand and are willing to pay premium prices for it (Goldsmith, 2012).

Explaining the relationship between brand loyalty and brand engagement, Goldsmith (2012) stated that brand engagement is an antecedent to brand loyalty because a customer can only build brand loyalty by strengthening existing relationships with a brand. At this initial stage of building relationships with a brand, a customer may show willingness to engage with the brand and gather more information about the brand, learn about the brand, talk about the brand, and exhibit its use to others (Keller, 2001). Brand

engagement is a consequence of emotional and cognitive states evoked by the brand that reflects how a customer feels and thinks about a specific brand (Allen et al., 2008; Goldsmith, 2012). Thus, it was hypothesized that emotional and cognitive responses in response to brand-related UGC influence brand engagement.

H9. Emotional response positively influences brand engagement.

H9-a. Pleasure positively influences brand engagement.

H9-b. Arousal positively influences brand engagement.

H10. Cognitive response (i.e., perceived information quality) positively influences brand engagement.

Moderators

Previous researchers interested in understanding the effects of eWOM have found that characteristics of source (i.e., source expertise, homophily) and receiver (i.e., receiver expertise) are important factors influencing eWOM communication (De Bruyn & Lilien, 2008; Wu & Wang, 2011; Yu & Natalia, 2013). Thus, in studying consumer response to brand-related UGC on Facebook, characteristics of the UGC generator as well as the viewer were expected to be influential.

Although people within one's social network primarily include family- and friendship- based relationships, consumers can make friends with anyone in the world who shares similar interests via SNSs. Often these acquaintances are online connections that users may never get to meet in person. Thus, expertness of the source is difficult to know via social media.

Unlike source expertness, demographic similarity along with information that could indicate shared backgrounds, opinions, likes, and dislikes can be established by examining a UGC source's personal profile. Features on Facebook allow users to easily look at the personal profile of other users. Certain characteristics of the UGC source such as source expertise, source attractiveness or perceived similarity may have an impact on consumer response to brand-related UGC from that individual.

Homophily. Homophily refers to perceived similarity between people's values, likes, dislikes, and experience (Chu & Kim, 2011). Previous researchers have documented that homophily is an important factor influencing the impact of eWOM because homophily contributes to perceived credibility of the message source (De Bruyn & Lilien, 2008). As presented earlier, De Bruyn and Lilien (2008) found that an eWOM message originating from a source with similar likes and dislikes to a viewer generated more interest than an eWOM message from a source with dissimilar tastes. Similarly, brand-related UGC shared by a consumer who is perceived to be similar to a viewer in terms of taste, experience, and behavior (i.e., high homophily) was expected to generate positive emotions and to be perceived as useful information. Thus, it was expected that perceived homophily moderated the influence of brand-related UGC on consumer's emotional and cognitive responses.

Previous researchers who have examined personal traits as moderating variables documented that moderating effects of personal traits are significant only on the S-O relationship (Eroglu et al, 2003; Wu et al., 2013). Based on these research findings and reasoning, it was hypothesized that:

H11. Homophily moderates the relationships between brand-related UGC and consumer's internal states.

H11-a. The relationship between brand-related UGC and pleasure will be stronger when perceived homophily of UGC source is high as compared to when the perceived homophily of UGC source is low.

H11-b. The relationship between brand-related UGC and arousal will be stronger when perceived homophily of UGC source is high as compared to when the perceived homophily of UGC source is low.

H11-c. The relationship between brand-related UGC and perceived information quality will be stronger when perceived homophily of UGC source is high as compared to when the perceived homophily of UGC source is low.

Brand involvement. In general, involvement refers to a person's perceived relevance or a level of interest about an issue or an object based on inherent needs, values, and interests (Zaichkowsky, 1985). In a consumption context, consumers can be involved in various objects such as products, marketing communications, purchase situations, and brand decisions (O'Cass & Choy, 2008). In regards to personal involvement with a product, previous researchers have defined product involvement as the personal relevance or importance of a product category (Higie & Feick, 1989). A consumer becomes involved with a product when the product is related to a person's centrally held values and self-concept (O'Cass & Choy, 2008).

Applying the concept of involvement to a brand, Martin (1998) defined brand involvement as the degree of affective and emotional attachment the consumer has with a specific brand. Brand involvement is an important factor influencing “person-brand relationship” and it determines consumer decision-making undertaken in brand selection (Martin, 1998). Knox and Walker (2003) distinguished product involvement as “the interest a consumer finds in the product category” and brand involvement as “the interest taken in making the brand selection” (p. 273).

As products or brands mean different things to different people, consumers exhibit varying degrees of involvement toward products or brands (Warrington & Shim, 2000). In consumer research, researchers interested in the influence of this individual difference variable studied consumer involvement as a personal characteristic exerting a moderating influence. Most relevant to this study, Wu and Wang (2012) examined the moderating influence of product involvement on the relationship between eWOM message and brand attitude. The researchers found that a rational message appeal resulted in a better brand attitude than an emotional appeal when participants demonstrated high product involvement, whereas no difference was found for participants with low product involvement. In a shopping context, Eroglu et al. (2003) examined the moderating effects of shopping situation involvement (browsing versus making purchase) on relationships between online store atmosphere and emotional responses (i.e., pleasure, arousal). The researchers found that the effect of store atmosphere on pleasure was significant only in the low-involvement condition. Both research teams (i.e., Eroglu et al., 2003; Wu &

Wang, 2012) found that involvement moderated relationships between environmental stimuli and consumer responses.

According to the elaboration likelihood model (Petty & Cacioppo, 1986), the information-processing route of consumers varies depending on the degree of involvement. The model posits that information processing occurs through the central route when a consumer is highly involved but the process takes place in a peripheral route when a consumer is not involved. Information processing via central route tends to rely on the cognitive evaluation of the information, whereas information processed via peripheral route relies on emotions. Thus, it is expected that consumers with high levels of brand involvement will process brand-related information via cognitive processes and consumers with low levels of brand involvement will process brand-related information based on emotions. Based on this rationale, the following hypotheses were developed.

H12. Brand involvement moderates the relationships between brand-related UGC and consumer's emotional and cognitive responses.

H12-a. The relationship between brand-related UGC and pleasure will be stronger when the UGC receiver's brand involvement is low compared to when the UGC receiver's brand involvement is high.

H12-b. The relationship between brand-related UGC and arousal will be stronger when the UGC receiver's brand involvement is low compared to when the UGC receiver's brand involvement is high.

H12-c. The relationship between brand-related UGC and perceived information quality will be stronger when the UGC receiver's brand

involvement is high compared to when the UGC receiver's brand involvement is low.

A model of all hypothesized relationships is presented in Figure 7.

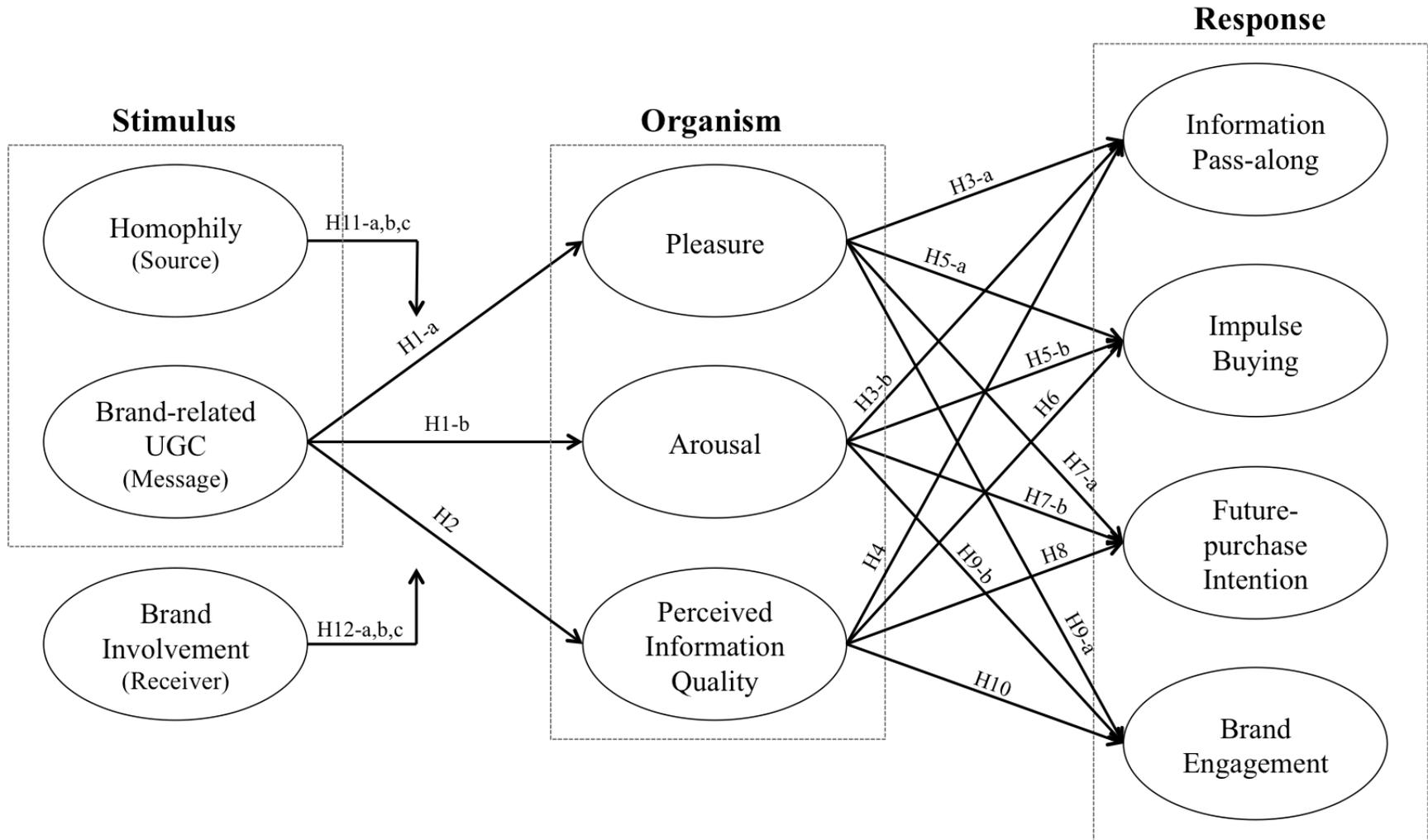


Figure 7. Model of hypothesized relationships.

CHAPTER III

METHODOLOGY

This chapter provides a description of the research methodology. Included are detailed descriptions of the instrument development including visual stimulus development, content validity testing, and pilot testing. A description of the sampling, data collection, and data analysis techniques used to test the hypothesized relationships are also presented.

Research Design

The design of this study was an online self-administered survey. A survey design provides a quantitative description of behaviors, attitudes, or opinions of a sample, allowing researchers to make inferences about the population by analyzing the data (Creswell, 2009). In the US, the use of an online survey method is growing at a rate of 50% per year (Comley, 2003). As compared to traditional data collection methods such as mail or telephone surveys, advantages of an online survey methodology include fast response rates, wide geographic reach, effective contingency questions, and a relatively low cost (Sue & Ritter, 2011). Researchers are able to accumulate large volumes of data in a short period of time and easily export responses for analysis (Duffy, Smith, Terhanian, & Bremer, 2005).

Online surveys are also convenient for the potential participants. Participants with Internet access can complete questionnaires anywhere and anytime. Because the potential participants can respond to online questionnaires in a private setting, social desirability biases due to the presence of an interviewer can be reduced (Duffy et al., 2005).

Most important, an online survey methodology is an effective tool to simulate a context similar to the phenomenon of interest. Because the purpose of this study was to investigate consumer responses toward UGC shared via SNS (i.e., Facebook), exposure to a visual stimulus in an online setting at the time of survey response was expected to illustrate a situation wherein consumers encounter UGC during their online activities. Thus, using an online survey method was appropriate to meet the research purpose.

Instrument Development

Visual Stimuli Development

Visual stimuli simulating Facebook fan pages were developed to examine the influence of brand-related UGC on consumer response. A fan page is a public profile on Facebook for businesses, brands, organizations, and celebrities that allows users to follow their interests and interact with others who share similar interests on Facebook. Because a fan page is where interactions between businesses and consumers take place on Facebook, eWOM often stems from a fan page (Chen et al., 2013). Most of the fan pages on Facebook allow users to create a new post or make replies to existing posts, allowing users to talk about the brand.

Brand selection. In order to develop mock fan pages to be used as visual stimuli, a pretest was conducted to select appropriate sample brands. Clothing and apparel is one of the fastest growing product categories in the online market (Ystats, 2013). In fact, the clothing and apparel category was one of the most frequently purchased items online in 2013 (Walker Sands, 2013). Fashion brands were identified for use because the focus of the research was to examine the influence of brand-related UGC in a fashion context, a

heavily purchased product category within online markets. A fashion brand was defined as a trademark or distinctive name identifying any apparel, shoes, bags or accessory product (Tungate, 2008).

In this study, brand awareness was included as a control variable. According to Aaker (1996), brand awareness can affect perceptions and attitudes of a brand and it can influence brand-related decision-making. Selected sample brands for use as stimuli were to be similar in terms of their merchandise offering and target market but varied in their brand awareness, so the influence of pre-existing knowledge and attitudes toward the sample brands on the hypothesized relationships could be controlled.

A pretest was conducted with three graduate students specializing in apparel studies. Participants were asked to list three fashion brands with a Facebook fan page that make unisex fashion products consumed by all ages (e.g., unisex jeans, t-shirts, sunglasses, shoes), so the brand would have some appeal regardless of the gender or age of research participant. The most frequently mentioned brands were selected from their lists. After reviewing the lists of brands developed by the students, Sperry Top-Sider was selected to represent a fashion brand with high brand awareness.

Sperry Top-Sider is a boat shoe brand originated by Paul Sperry in 1935. The brand makes unisex designed boat shoes for all ages and for both men and women. Once Sperry Top-Sider was selected, Sebago Docksidies, a competing brand was identified to represent a brand with low brand awareness. Sebago is also a boat shoe brand that offers similar merchandise in terms of design, quality, and price compared to Sperry Top-Sider.

Consumer brand awareness of the two selected brands were compared in a pilot test to affirm that the brands represented two distinct levels of awareness.

Content development. Mock pages containing brand-related UGC were developed for each of the brands after reviewing several existing fashion brands' Facebook fan pages. Special attention was paid to the postings made by consumers during the review. Six postings were created as brand-related UGC to be included in each brand's mock fan page. Brand-related UGC in the mock fan pages were presented in text and images because consumers' experience with brands are expressed within narratives or image posts on Facebook (Hollenbeck & Kaikati, 2012). The postings appearing in the mock fan pages contained both informational and emotional messages such as product descriptions, product usage, suggestions and recommendations, and product reviews. Some of the postings were accompanied with related product images and all messages were positive in terms of valence. Mock fan pages presented both informational and emotional messages together in one page for the purpose of face validity of the stimuli. Because one of the hypotheses in this study was to examine the moderating effect of homophily, demographic characteristics (e.g., occupation, gender, age, location) for each poster were included. Postings appearing on each brand's fan page were identical in terms of the message content but differed relative to brand name and product images (see Figures 8 and 9 for the mock Facebook fan pages for the Sperry Top-Sider and Sebago Dockside).

The image shows a screenshot of the Sperry Top-Sider Facebook fan page. At the top, the cover photo features a person's feet in Sperry boat shoes, with one foot in a blue shoe and the other in a yellow shoe, resting on a white picket fence. The background is a beach scene with sand and water. The Sperry logo, a white sail on a blue square, is in the bottom left of the cover photo. Below the cover photo, the page name "Sperry Top-Sider" is displayed with 492,805 likes and 8,781 people talking about this. The website URL "www.sperrytopsider.com/" is also visible. There are buttons for "Like", "Follow", and "Message". Below this, there are several tabs for "Photos", "College Tour Page", "Events", and "#TOPSIDING PHOTO CONTEST".

The main content area shows a list of posts by other users:

- Peter Campos** (3 hours ago): "That Carolina weather was perfect this weekend for a good ol' pair of Sperry. Rocking out with Sperry Top-Sider by the beach!"  Like · Comment · Share
- Tiffany McNeal** (19 hours ago): "I am a college student and I wear mine almost everyday. If you are looking for versatile comfortable shoes that can be worn year around, whether you own a boat or not I would highly recommend these to anyone. If you happen to get a little dirt on them it is easily wiped off with damp cloth. They are boat shoes so if they do get wet, it's no big deal. I just let them dry. The only suggestion I would make would be to make sure you tie the strings tight so they don't drag and get dirty."  Like · Comment · Share
- Jeff Johnson** (Yesterday): "I have been wearing topsiders since I was a kid and they are worth every penny. They last a long time and I am rough on shoes. They are my go to shoes for work now. I work in a garden center and they are so comfortable. I have tried numerous shoes for work and these are the best things ever!!!"  Like · Comment · Share
- Erik Niehoff** (10 hours ago): "I just got my fifth pair of Sperry boat shoes. These shoes are great for everyday wear. All my friends wear them too. You can get them covered in natty light, spray them off, and be good for church the next morning. They are comfortable and come in many styles and colors. They are quite versatile and great for all weather. I especially love them for casual outdoor activities like biking and walking when sneakers aren't totally necessary. They are more fashionable closed-toe option. These shoes are generally worn without socks and they do not have an odor if you do!"  Like · Comment · Share
- Clara Lauren** (23 hours ago): "I am a 45-year-old housewife and bought my first pair of Sperry Top-Siders for an upcoming cruise. For so many years I have seen others wear them and preach to me about their comfort. I put them on out of the box to break them in and OMG, immediately they were incredibly comfortable. The first time you slip your foot into a Sperry you understand what all the fuss is about. They are also very attractive. I love them!!!"  Like · Comment · Share
- Tammy Zhao** (Yesterday): "We love Sperry and can't wait for our first little baby to wear them too! Thanks for making great shoes!"  Like · Comment · Share

Figure 8. Visual stimuli 1: Sperry Top-Sider Facebook fan page.

Sebago Docksides (Official)
34,980 likes · 992 talking about this

www.sebago.com/

Like Follow Message

SEBAGO EMAIL SIGN-UP ENTER TO WIN 34,980

Posts by Others

Peter Campos
3 hours ago

That Carolina weather was perfect this weekend for a good ol' pair of Sebago. Rocking out with Sebago by the beach!

Erik Niehoff
10 hours ago

I just got my fifth pair of Sebago boat shoes. These shoes are great for everyday wear. All my friends wear them too. You can get them covered in natty light, spray them off, and be good for church the next morning. They are comfortable and come in many styles and colors. They are quite versatile and great for all weather. I especially love them for casual outdoor activities like biking and walking when sneakers aren't totally necessary. They are more fashionable closed-toe option. These shoes are generally worn without socks and they do not have an odor if you do!

Tiffany McNeal
19 hours ago

I am a college student and I wear mine almost everyday. If you are looking for versatile comfortable shoes that can be worn year around, whether you own a boat or not I would highly recommend these to anyone. If you happen to get a little dirt on them it is easily wiped off with damp cloth. They are boat shoes so if they do get wet, it's no big deal. I just let them dry. The only suggestion I would make would be to make sure you tie the strings tight so they don't drag and get dirty.

Clara Lauren
23 hours ago

I am a 45-year-old housewife and bought my first pair of Sebago for an upcoming cruise. For so many years I have seen others wear them and preach to me about their comfort. I put them on out of the box to break them in and OMG, immediately they were incredibly comfortable. The first time you slip your foot into a Sebago you understand what all the fuss is about. They are also very attractive. I love them!!!

Tammy Zhao
Yesterday

We love Sebago and can't wait for our first little baby to wear them too! Thanks for making great shoes!

Jeff Johnson
Yesterday

I have been wearing Sebago boat shoes since I was a kid and they are worth every penny. They last a long time and I am rough on shoes. They are my go to shoes for work now. I work in a garden center and they are so comfortable. I have tried numerous shoes for work and these are the best things ever!!!

Figure 9. Visual stimuli 2: Sebago Docksides Facebook fan page.

Questionnaire Development

The measurement items for constructs in the hypothesized model were developed following these procedures: initial item generation via literature search, 1st content validity testing, pilot testing, and 2nd validity testing.

The extant literature was searched for existing measures of constructs under investigation. Reliable and valid measures developed by previous researchers were used wherever possible. However, some of the measures were self-developed to enhance the operationalization of key concepts within the context of the study, that is, a brand fan page on Facebook. The questionnaire was presented to participants using Qualtrics (qualtrics.com), a web-based tool for building and delivering questionnaires to participants.

Brand-related UGC. Brand-related UGC may consist of information about the brand as well as users' emotional and subjective evaluations. Consumers often share their beliefs, opinions, feelings, and thoughts about products or brands through posting consumer reviews on Facebook pages. Brand-related UGC content describes product functions, values, and benefits as consumers share their consumption experience or provide useful tips on product use. Presented with photographs and personal narratives, brand-related UGC content also illustrates consumers' feelings and emotions related to products or brands.

Because of the absence of a brand-related UGC measure, items to measure brand-related UGC were self-developed. Questions initially developed to measure eWOM message appeals from Wu and Wang (2011) served as the foundation for developing the

new measure. The original measure contained two items measuring rational and emotional eWOM message appeals (i.e., the message mainly describes the product function, benefit, and value; the message mainly spreads a certain atmosphere, emotion, and feeling). These two items were modified to develop six items to assess the informational and the emotional brand-related UGC content. The modified scale consisted of the following items: UGC describes the brand/product function, UGC describes the brand/product benefit, UGC describes the brand/product value, UGC spreads a certain atmosphere about the brand/product, UGC spreads a certain emotion about the brand/product, and UGC spreads a certain feeling about the brand/product. Participants responded to each of these items using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree).

Emotional responses: Pleasure and arousal. Participants' emotional responses were assessed using measures of pleasure and arousal developed by Mehrabian and Russell (1974). Pleasure measures the degree to which a person feels good, happy, or joyful, whereas arousal measures the degree to which a person feels excited, active, or stimulated. There are six items to assess pleasure: happy-unhappy, pleased-annoyed, satisfied-dissatisfied, contented-melancholic, hopeful-despairing, and relaxed-bored. There are also six items to assess arousal: frenzied-sluggish, jittery-dull, aroused-unaroused, stimulated-relaxed, excited-calm, and wide awake-sleepy. All items were presented on seven-point semantic differential scales. The scale items for pleasure have a reported reliability of $\alpha = .85$ and the scale items for arousal have a reported reliability of $\alpha = .80$ (Eroglu et al., 2003).

Cognitive response: Perceived information quality. Perceived information quality was measured using a scale developed by Yang, Cai, Zhou, and Zhou (2005). When processing information presented on the Web, readers of the content determine its quality based on perceived usefulness of the content (Yang et al., 2005). Thus, perceived information quality was operationalized as the usefulness of information.

The scale employed was originally developed to measure information quality of web portals. Information quality refers to the value, reliability, currency, and accuracy of information. The scale items used to assess information quality were: relevant information to the customer, up-to-date information, valuable tips on products, and unique content. Participants indicated their degree of agreement with each item using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree). The measure has a reported reliability of $\alpha = .84$ (Yang et al., 2005).

Behavioral responses: Information pass-along, impulse buying, future-purchase intention, and brand engagement. Passing along brand or product related message via SNS is a common way of generating eWOM (Chu & Choi, 2011). In the context of Facebook, the unique applications of the platform allow users to easily forward and pass-along information to members of their personal networks by clicking “like” or “share” on posts made by other users (Chen et al., 2013). Because scales assessing information pass-along on Facebook do not exist, items to measure information pass-along on Facebook were developed by considering existing measures of eWOM used by Chu and Choi (2011) in a general SNS context. Five items measuring eWOM activities were reworded to include specific types of pass-along features provided by the Facebook platform. These

items were used to assess information pass-along. These items were: I would click “like” on the post, I would share the post on my own timeline, I would share the post on a friend’s timeline, I would pass along the post to contacts on my “friends” list, and I would pass on the information to other kinds of social media. Participants indicated their degree of agreement with each statement using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree).

Impulse buying was measured using two items developed by Adelaar et al. (2003). The scale items indicate the immediacy of the purchase decision within specific time constraints. The original items were revised to reflect the context of the current study. The scale items were: I intend to go to the brand’s online store to purchase the item appearing on the Facebook fan page, I intend to purchase the brand/product featured in the fan page immediately. Participants indicated their degree of agreement with these statements using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree). The initial reliability of the measure was $\alpha = .59$ (Adelaar et al., 2003).

Future-purchase intention was measured by adopting a scale used by Dodds, Monroe, and Grewal (1991). Future-purchase intention assesses the possibility and likelihood that a consumer will purchase a certain product or brand in the future. The scale items were: the likelihood of purchasing this brand is high; if I will go into buy this product, I would consider buying this brand; at the brand, I would consider buying the product; the probability that I would consider buying the brand is high; and my willingness to buy the brand is high. Participants indicated their degree of agreement with

each item using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree).

Reported reliability of the scale items ranged from $\alpha = .93$ to $\alpha = .96$ (Dodds et al., 1991).

Brand engagement was measured by adopting a scale developed by Keller (2001). Brand engagement assesses the level of an individual's brand-related emotional, cognitive, and behavioral activities. The scale items were: I really like to talk about this brand with others; I am interested in learning more about this brand; I would be interested in merchandise with this brand's name on it; I am proud to have others know I use this brand; I like to visit the website for this brand; compared to other people, I closely follow news about this brand. Participants indicated their degree of agreement with each item using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree). Reliability of the scale was not reported.

Source characteristic: Homophily. The measure of homophily was derived from Chu and Kim (2011). Four items assess the degree to which individuals who interact with one another are similar in socio-demographic characteristics as well as in perceptual attributes such as values, likes, and experiences. The items were restated for the Facebook fan page context because the source of UGC and the viewer may not have a personal relationship with each other either on Facebook or in real life. The modified items were: in general, the people who made the postings think like me, behave like me, are similar to me, and are like me. Participants responded to each item using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree). Reported reliability of the measure was $\alpha = .85$ (Chu & Kim, 2011).

Receiver characteristic: Brand involvement. The measure of brand involvement was adapted from Zaichkowsky's (1985) Personal Involvement Inventory (PII). Brand involvement was operationalized as a person's perceived relevance of and the importance placed on the brand based on inherent needs, values, and interests. The modified items were: this brand is important to me, this brand is of concern to me, this brand is relevant to me, this brand means a lot to me, this brand matters to me, and I have a strong interest in this brand. Participants responded to each item of the scale using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree). The reported reliability of the original scale ranged from $\alpha = .97$ to $\alpha = .99$ (Zaichkowsky, 1985).

As a manipulation check, participant's brand awareness was assessed. To assess brand awareness four items were adopted from Aaker (1996). These items were: I have heard of this brand, I know what this brand stands for, I have an opinion about the brand, and this brand is likely to be one of the fashion brands I can recall. Participants responded to the items using seven-point Likert scales (1 = strongly disagree; 7 = strongly agree).

In sum, the questionnaire consisted of six parts. At the beginning of the questionnaire, a consent form and a screening question were presented to potential participants. Screening criteria for participation was that an individual had to be over 18 years old and have an active Facebook account. If an individual met these two criteria, and they consented to participate in the research (see Appendices A and B for consent form), they were directed to the questionnaire.

In the first section of the questionnaire, questions concerning participants Facebook activity were presented (i.e., frequency of Facebook use, reasons for Facebook

use, brands/fashion brands following). Next, brand awareness and brand involvement measures were presented. Then the stimulus was presented to the participant. Participants were randomly assigned to one of the two stimuli described earlier (i.e., Sperry Top-Sider, Sebago Docksidies) that differed in terms of brand awareness. Brand involvement was presented in the second section because brand involvement was assumed to be a receiver characteristic that pre-existed before participants were exposed to the stimulus (i.e., brand-related UGC).

The third section assessed participants' attitude and behavioral intentions toward the brand after they were exposed to the visual stimulus (i.e., Facebook fan page). Participants were asked to read the fan page (see figures 8 and 9 for fan pages). Then, participants were directed to respond to the measures of information pass-along, impulse buying, future-purchase intention, and brand engagement. The fourth section of the questionnaire measured pleasure and arousal. In the fifth section, participants were asked to review the content of the postings and answered questions concerning perceived information quality, UGC message content, and homophily. The last section assessed participants' demographic characteristics (i.e., age, gender, marital status, ethnicity, education, household income). See Appendices A and B for copies of the questionnaire.

1st Content Validity Testing

To evaluate the content validity of the questionnaire items, a group of researchers (i.e., three academic researchers and two doctoral students specializing in apparel studies) qualitatively evaluated the measurement items. The expert group was provided with the definition of each construct and asked to assess each item for clarity, readability, and

content validity. Revisions were made based on the review and recommendations of the researchers. Table 1 presents the outcome of this procedure.

Table 1

1st Content Validity Testing

Construct	Initial Item Wording	Revised Item Wording
Brand-related UGC	RM1 ...describe the brand or product function.	...describe functions of the featured brand and product.
	RM2 ...describe the brand or product value.	...describe values of the featured brand and product.
	RM3 ...describe the brand or product benefit.	...describe benefits of the featured brand and product.
	EM1 ...spreads a certain atmosphere about the brand or product.	...create a positive atmosphere about the featured brand and product
	EM2 ...spreads a certain emotion about the brand or product.	...create positive emotions about the featured brand and product.
	EM3 ...spreads a certain feeling about the brand or product.	...create positive feelings about the featured brand and product.
Perceived Information Quality	IQ2 ...up-to-date information.	...up-to-date.
	IQ3 ...is valuable tips on the product and brand.	...provides valuable tips on the featured brand and products.
Information Pass-along	PA5 ...to other forms of social media.	...along using other forms of social media (e.g., Twitter, Pinterest, Instagram).
Impulse Buying	IB1 I intend to go to the brand's online store to purchase the item appear on the Facebook Fan Page.	I will visit the brand's online store to purchase the product appear on this Fan Page right away.
Future Purchase Intention	FP2 If I were going to buy shoes, I would consider buying this brand.	If I were going to buy the style of shoes featured on this Fan Page, I would consider buying them from this brand.
	FP3 At the brand, I would consider buying the product.	I would consider buying the product featured on this Fan Page.

Pilot Test

Prior to collecting data for the main study, a pilot test was conducted to refine and validate the measurement items. The propose of the pilot test was to examine whether the measurement items appropriately reflected the theoretical components of the constructs and to eliminate or reword items that did not adequately reflect any of the constructs under investigation. Also, brand awareness of the selected sample brands and the content dimensions of the visual stimuli were assessed. A convenience sample of 114 undergraduate students registered in retail merchandising courses at a mid-western university volunteered to complete an online questionnaire for the purpose of pilot testing the measurement items.

The questionnaire contained items assessing the content of the stimuli as well as all measurement items for the variables contained in the model to be tested. Participants were randomly assigned to an experimental condition containing questions for either Sperry Top-Sider or Sebago Dockside. Once participants were directed to an online questionnaire, they were first asked to answer items assessing brand awareness of the selected brand. Visual stimulus (i.e., mock fan page) was presented in the next section and participants were asked to review the selected brand's fan page. Participants were asked to read the postings contained in the fan page and to evaluate the content of the postings. After answering the questions assessing content dimensions of the brand-related UGC, participants responded to measurement items assessing the variables under investigation. The pilot questionnaire took about 10 minutes to complete. Participants received extra credit for their participation. Data collection was completed in one week.

The pilot sample was comprised both women (54.4%) and men (45.6%). The majority of the participants were 18 to 29 years of age (96.5%) and Caucasian (69.3%).

First, brand awareness of the selected brands (i.e., Sperry Top-Sider, Sebago Docksides) was assessed by averaging the four items measuring brand awareness. An independent sample *t*-test was conducted comparing the ratings of brand awareness given to each of the brands. The results showed that the brand awareness level between Sperry Top-Sider and Sebago Docksides was significantly different (Sperry Top-Sider $m = 5.30$, Sebago Docksides $m = 1.48$; $t = 13.95$, $df = 112$, $p = .001$). Thus, the mock fan pages representing the two fashion brands, Sperry Top-Sider and Sebago Docksides, were used as stimuli to represent a brand with high brand awareness and a brand with low brand awareness respectively.

Next, the content dimensions of the brand-related UGC contained in the mock fan pages were examined. Measurement items developed to assess brand-related UGC were used to assess the content dimensions (i.e., informational, emotional) of the stimuli. All items measuring brand-related UGC showed high mean values ranging from 4.95 to 5.64, indicating appropriate inclusion of both informational and emotional content (see Table 2). Thus, the stimuli were confirmed for use for the main data collection.

As a final step in the pilot testing, exploratory factor analysis (EFA) results for each of the 10 constructs were reviewed. The purpose of EFA is to assure unidimensionality within each construct by examining items that do not adequately reflect any of the theoretical components of the construct. In addition, Cronbach's alpha was examined to assess the reliability and internal consistency of each scale. Any item

with a factor loading greater than .50 was assumed to have practical significance (Hair et al., 2006). The results showed that each of the 10 factors had an eigenvalue greater than one. Factor loadings of items contributing to each factor ranged from .65 to .96. Cronbach's alpha for each factor also exhibited high reliability. Thus, all items were retained for the main data collection. The results of the EFA are summarized in Table 3.

Table 2

Pilot Test: Content Dimensions of Brand-related UGC

Construct	Item	Mean	Minimum	Maximum	Standard Deviations
UGC Message	RM1	5.06	1.00	7.00	1.16
	RM2	4.95	2.00	7.00	1.20
	RM3	5.12	2.00	7.00	1.09
	EM1	5.64	2.00	7.00	1.15
	EM2	5.59	2.00	7.00	1.09
	EM3	5.44	1.00	7.00	1.12

Table 3

Pilot Test: Exploratory Factor Analysis of the Retained Measures and Associational Reliabilities

Construct	Number of Items	Factor Loading (min. – max.)	Eigenvalue	% of Variance	Cronbach's Alpha	Initial Cronbach's Alpha
1. UGC Message	6	.73 - .89	4.02	67.07	.90	N/A
2. Pleasure	6	.78 - .86	4.21	70.26	.90	.85
3. Arousal	6	.77 - .84	3.96	66.09	.89	.80
4. Information Quality	4	.65 - .91	2.71	67.92	.83	.84
5. Information Pass-along	5	.78 - .91	3.69	73.82	.90	N/A
6. Impulse Buying	2	.94 - .94	1.79	89.66	.88	.59
7. Future-purchase Intention	5	.81- .95	4.05	81.01	.94	.93 - .96
8. Brand Engagement	6	.84 - .91	4.70	78.34	.94	N/A
9. Homophily	4	.93 - .96	3.63	90.91	.96	.85
10. Brand Involvement	6	.83 - .94	4.99	83.26	.95	.97 - .99

2nd Content Validity Testing

A second content validity test of the items was completed by two researchers. 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 any of the items.

Sampling

The population for this study was users of Facebook, the most popular SNS among its kind and a powerful platform for brands and products. According to Smith (2014), 67% of Internet users in the US are Facebook users. In the US, 86% of those who are 18-29 years old, 73% of those who are 30-49 years old, 57% of those who are 50-64 years old, and 35% of those who are 65 years old and over who use the Internet also use Facebook (Wildrich, 2013). Across all age groups, the 18-29 year old users comprise the highest percentage of Facebook users (67%). Although the majority of Facebook users are young, equal numbers of both men and women use it (Wildrich, 2013). Therefore, individuals who are 18 years old and older with a Facebook account were recruited to participate.

Data Collection

Potential participants were recruited from online panel members obtained from a marketing research company specializing in consumer surveys (i.e., Survey Sampling International). The company's panel members include 8.8 million respondents worldwide and nearly one million active members in North America (i.e., US, Canada). The company provides specific geographic and demographic panels including several

specialty panels (e.g., auto, health and patient, mobile, technology, clothing, entertainment) that allow researchers to reach their targets efficiently. The company also ensures eligibility of potential respondents by assessing a combination of personality and psychographic characteristics and monitoring their behavior patterns over time. Panelists who join the panel but do not respond to a survey invitation in two months or who have responded to a survey at one time but have not responded within the past six months are removed from the company's panels.

Invitations for research participation were sent to 9,615 US online panel members who had previously identified themselves as social media users by answering screening questions upon joining the company's consumer panel. Adult consumers over 18 years old with an active Facebook account were qualified to participate.

An e-mail invitation that provided a link to access the consent form and the online questionnaire were sent to potential participants. Potential participants were randomly assigned to one of the two online URL links (i.e., Sperry Top-Sider fan page, Sebago Dockside's fan page). Once participants clicked on the URL link to the questionnaire, he or she was directed to a page that provided information concerning informed consent and a screening question. After reading the consent information, participants were asked to answer a screening question and indicate their consent to participate. Once participants qualified for participation and provided their consent to participate, they were directed to the research questionnaire. Those who did not qualify for participation or clicked "no" on the consent question were directed out of the questionnaire. Data collection was

completed in three business days and on average, the questionnaires took seven minutes for participants to complete.

Six hundred and sixty-four individuals initiated the online questionnaire. Sixty-four individuals dropped out of the research at some point in the questionnaire. Fifty-four panel members were screened out as they did not meet the criteria to participate. Participants who completed the questionnaire were identified by a unique ID generated by the online questionnaire system. They were compensated for their participation through a point system whereby points were credited to their accounts. Points credited to participants' accounts can be redeemed for cash (e.g., via PayPal) and gift cards (e.g., Amazon.com gift card). After eliminating 13 responses from speeders (i.e., respondents who completed the questionnaire in an unrealistically short amount of time) and straight liners (i.e., respondents who give the same response to every item), 533 responses were used for data analysis.

Data Analysis

To test the proposed model, the Statistical Package for the Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) statistical packages were used for data analysis. Using SPSS, frequencies and descriptive analyses were conducted to perform preliminary data analysis and to summarize the demographic characteristics of the purposive sample. Independent sample *t*-tests were used to assess differences in measured items between the two sample brands. Factor analyses, reliability tests, and correlation analyses were conducted to assess validities and reliabilities of the measures.

Structural equation modeling (SEM) is the multivariate procedure allowing examination of a set of relationships between one or more independent variables and one or more dependent variables simultaneously. SEM is a combination of multiple regression and factor analysis, so that a researcher is able to analyze structural models with multiple item constructs in direct and indirect paths. In SEM, theoretical constructs are treated as latent variables that are measured via a set of items. Anticipated effect size and the model's complexity were considered to determine appropriate sample size and the size of the sample included for the main data analysis ($n = 533$) was considered desirable for testing the proposed model (Kline, 2005). Using AMOS, confirmatory factor analyses were conducted to confirm model constructs and structural analysis and multi group analysis were performed to test hypothesized relationships.

An imputation method that replaces the missing values with an estimated value was used to deal with missing data. Missing values were replaced with the arithmetic mean of each item.

CHAPTER IV

RESULTS

This chapter presents a description of the participants' characteristics and the results of preliminary data analyses. Preliminary data analyses included assumption tests, unidimensionality tests, and measurement model tests. Also, the results of hypotheses testing and additional data analyses are presented.

Participants Characteristics

The purposive sample consisted of 533 participants. Three hundred and forty were women (63.8%) and 193 were men (36.2%). The age of more than half of the participants (60.1%) fell between 18 to 34 years old, a percentage that is very similar to the age estimates of Facebook users (Wildrich, 2013). The majority of participants were Caucasian (73.2%), followed by African American (8.1%). Most participants were either married (46.0%) or never married (45.4%). More than half of the participants indicated that they completed either some college (34.3%) or had a four-year college degree (27.8%). Participants represented a range of personal income levels; 25.0% of the participants had household incomes between \$20,000- \$39,999, followed by household incomes between \$40,000-\$59,999. Additional details of participants' demographic characteristics are provided in Table 4.

In regards to participants' Facebook activity, the majority were frequent users of Facebook. Participants visited Facebook multiple times a day (45%), continuously used Facebook (28.9%), or visited Facebook once a day (11.4%). Most of the participants (90.4%) indicated that they used Facebook to keep in touch with people. The second most

cited use for Facebook was for entertainment (66.2%). More than a half of the participants indicated they used Facebook to get information (59.7%).

Because the study focused on consumers' Facebook activities in relation to brands, consumers' brand following activities and brand-related content posting activities were also requested. More than half of the participants (67.9%) were following brands on Facebook with 45.6% of these individuals following from 1 to 10 brands. About half of the participants (46.9%) were specifically following fashion brands on Facebook with 39.0% of these individuals following from 1 to 10 fashion brands. In regards to brand-related UGC posting activities, 36.6% of the participants indicated that they had posted brand-related UGC on Facebook. Participants (22.5%) posted brand-related UGC equally on brand fan pages and timelines. Participants' most often contributed brand-related UGC was "liking" a brand (24.2%), followed by writing comments (21.4%) and posting photos (20.8%). Additional details of participants' brand-related Facebook activity are presented in Table 5.

Table 4

Participants' Demographic Characteristics (n = 533)

Characteristics	Description	Frequency	Percent
Gender	Women	340	63.8
	Men	193	36.2
Age	18-24	196	36.8
	25-34	124	23.3
	35-44	77	14.4
	45-54	73	13.7
	55 and up	63	11.8
Ethnic group	Caucasian	390	73.2
	Asian	38	7.1
	African American	43	8.1
	Hispanic	35	6.6
	Bi-racial	15	2.8
	Other	11	2.1
	Missing	1	.2
Marital Status	Married	245	46.0
	Divorced	44	8.3
	Single	242	45.4
	Missing	2	.4
Education	High school or less	123	23.1
	Technical school	20	3.8
	Some college	183	34.3
	College graduate	148	27.8
	Masters degree	39	7.3
	Doctoral degree	5	.9
	Professional degree	11	2.1
	Other	3	.6
Missing	1	.2	
Household Income	Under \$20,000	85	15.9
	\$20,000- \$39,999	133	25.0
	\$40,000-\$59,999	109	20.5
	\$60,000-\$79,999	89	16.7
	\$80,000-\$99,999	63	11.8
	Over \$100,000	54	10.1

Table 5

Participants' Brand-related Facebook Activities (n = 533)

Characteristic	Description	Frequency	Percent	
Frequency of Facebook Use	Continuously using Facebook	154	28.9	
	Multiple times a day	240	45.0	
	Once a day	61	11.4	
	A couple of times a week	48	9.0	
	Once a week	10	1.9	
	Occasionally	20	3.8	
	Missing	0	0	
Reasons for Facebook Use ^a	Keeping in touch with people	482	90.4	
	Self-expression	229	43.0	
	Making new contacts	210	39.4	
	Getting information	318	59.7	
	Social surveillance	213	40.0	
	Entertainment	186	66.2	
Number of Brands Following	None	169	31.7	
	1-10	243	45.6	
	10-50	76	14.3	
	50-100	29	5.4	
	100 or over	14	2.6	
	Missing	2	.4	
Number of Fashion Brands Following	None	282	52.9	
	1-10	208	39.0	
	10-50	30	5.6	
	50-100	10	1.9	
	100 or over	2	.4	
	Missing	1	.2	
Made brand-related UGC Posting	Yes	195	36.6	
	No	335	62.9	
	Missing	3	.6	
Brand-related UGC Posting ^a	Site	Brand fan pages	120	22.5
		Personal wall pages (Timeline)	136	22.5
	Type	Narrative form (written text)	114	21.4
		Photos of consumption	111	20.8
		Likes ("liking" a brand)	129	24.2

^aParticipants were able to provide multiple responses so percentages do not total to 100%.

Preliminary Data Analyses

Prior to checking assumptions for the main data analyses, independent sample *t*-tests were conducted on 50 items comprising the original measurement set assessing the constructs under investigation (i.e., UGC content, pleasure, arousal, perceived information quality, information pass-along, impulse buying, future-purchase intention, brand engagement, homophily, brand involvement) to see whether differences existed between the two sample brands (i.e., Sperry Top-Sider, Sebago Docksidess). Before conducting *t*-tests on each item, the four brand awareness items were combined and the brand awareness mean for each brand were compared. The two sample brands (i.e., Sperry Top-Sider, Sebago Docksidess) had a significant difference in terms of its brand awareness (Sperry Top-Sider $M = 3.75$, Sebago Docksidess $M = 2.69$; $t = 6.31$, $df = 531$, $p = .001$). As expected, brand awareness for Sperry Top-Sider was significantly higher than Sebago Docksidess. The results of independent *t*-tests on 50 measurement items showed that responses to the measurement items were not significantly different across the two brands except for the items measuring brand involvement (see Table 6). Brand involvement was a moderator and not a critical component included in the measurement model. Therefore, the two data sets were combined for main data analysis, that is, testing the hypothesized model.

Table 6

Results: T-tests on Measurement Items between Brands

Construct	Item	Mean		<i>t</i> -test (<i>df</i> = 531)
		Sperry (<i>n</i> = 274)	Sebago (<i>n</i> = 259)	
1. UGC Message	RM1	5.20	5.22	-.12
	RM2	5.13	5.14	-.08
	RM3	5.24	5.26	-.19
	EM1	5.38	5.47	-.86
	EM2	5.29	5.42	-1.26
	EM3	5.35	5.39	-.36
2. Pleasure	PL1	5.28	5.36	-.70
	PL2	5.18	5.24	-.54
	PL3	5.12	5.20	-.73
	PL4	5.12	5.18	-.55
	PL5	5.16	5.05	1.01
	PL6	5.20	5.12	-.116
3. Arousal	AR1	4.34	4.38	-.46
	AR2	4.08	4.19	-1.22
	AR3	4.19	4.31	-1.03
	AR4	3.88	4.15	-1.98
	AR5	4.08	4.32	-1.74
	AR6	4.62	4.71	-.89
4. Information Quality	IQ1	5.05	5.20	-.20
	IQ2	5.20	5.26	-.63
	IQ3	5.05	5.13	-.80
	IQ4	4.86	4.77	.92
5. Information Pass-along	PA1	4.72	4.67	.31
	PA2	3.80	3.88	-.51
	PA3	3.78	3.77	.05
	PA4	3.82	3.89	-.46
	PA5	3.83	3.82	.03
6. Impulse Buying	IB1	4.13	4.16	-.27
	IB2	3.71	3.77	-.43

Table 6

Continued.

Construct	Item	Mean		<i>t</i> -test (<i>df</i> = 531)
		Sperry (<i>n</i> = 274)	Sebago (<i>n</i> = 259)	
7. Future-purchase Intention	FP1	4.01	4.18	-1.17
	FP2	4.74	4.83	-.64
	FP3	4.54	4.64	-.82
	FP4	4.37	4.44	-.52
	FP5	4.28	4.30	-.15
8. Brand Engagement	BE1	4.24	4.19	.33
	BE2	4.49	4.66	-1.23
	BE3	4.58	4.67	-.74
	BE4	4.45	4.32	.98
	BE5	4.31	4.46	-1.10
	BE6	3.91	4.00	-.58
10. Homophily	HM1	4.72	4.69	.22
	HM2	4.63	4.59	.31
	HM3	4.74	4.60	1.32
	HM4	4.67	4.58	.82
9. Brand Involvement	BI1	3.24	2.68	3.54 ^{***}
	BI2	2.94	2.69	1.62 [*]
	BI3	3.41	2.93	2.94 ^{**}
	BI4	3.14	2.69	2.85 ^{**}
	BI5	3.24	2.76	3.02 ^{**}
	BI6	3.43	2.94	2.97 ^{**}

* $p < .05$. ** $p < .01$. *** $p < .001$.

Assumption Tests

Assumptions for the use of Structural Equation Modeling (SEM) were tested by evaluating (1) the normality of the data, (2) reliability of the measures, and (3) multicollinearity among latent variables. To assess normality of the data, skewness and kurtosis of the data were examined (see Table 7). According to Hair, Anderson, Tatham, and Black (1998), absolute values of skewness and kurtosis that are less than 2.58 indicate univariate normality of each item. The findings indicated a symmetrical distribution of the data as the absolute skewness values ranged from .01 to .76 and absolute kurtosis values ranged from .05 to 1.24.

The reliability of the measures was assessed by calculating Cronbach's alpha (see Table 8). A value of .70 or above was used to indicate an acceptable level of reliability for the measure to be used for primary data analysis (Nunnally, 1978). The alpha values ranged between .81 and .97 thus, all measures were deemed acceptable.

As a final step in assumption testing, multicollinearity was evaluated. Multicollinearity refers to a situation wherein the predictor variables are highly correlated to each other and not just to the dependent variables. Therefore, when multicollinearity is present, predictors have high pairwise correlations and can cause a non-positive covariance matrix in SEM (Kline, 2005). A correlation matrix with the ten key variables was created to detect problematic multicollinearity between variables. Any value over .85 was used as an indicator of potential problems with multicollinearity (Kline, 2005). The results showed that correlation between future-purchase intention and brand engagement exceeded .85, however the two variables were included in the model as response

variables. The high correlation between these two variables does not create estimation problems in SEM (see Table 9). Thus, the measures of latent variables all adequately fit the assumptions of SEM analysis.

Table 7

Normality of Primary Data (n = 533)

Construct	Item	Mean	Standard Deviations	Skewness	Kurtosis
1. UGC Message	RM1	5.21	1.10	-.22	-.29
	RM2	5.14	1.09	-.23	-.34
	RM3	5.26	1.06	-.14	-.45
	EM1	5.43	1.12	-.23	-.79
	EM2	5.36	1.11	-.08	-.96
	EM3	5.38	1.14	-.28	-.56
2. Pleasure	PL1	5.32	1.22	-.21	-.67
	PL2	5.21	1.28	-.33	-.41
	PL3	5.16	1.20	-.14	-.57
	PL4	5.15	1.19	-.13	-.40
	PL5	5.11	1.17	-.10	-.31
	PL6	5.11	1.40	-.37	-.39
3. Arousal	AR1	4.36	1.07	.44	.61
	AR2	4.13	1.02	.33	1.24
	AR3	4.25	1.32	-.25	.43
	AR4	4.01	1.60	-.02	-.58
	AR5	4.20	1.61	-.08	-.75
	AR6	4.66	1.20	.10	.05
4. Information Quality	IQ1	5.06	1.28	-.64	.61
	IQ2	5.23	1.06	-.16	-.53
	IQ3	5.09	1.10	-.12	-.35
	IQ4	4.82	1.20	-.08	-.25
5. Information Pass-along	PA1	4.70	1.57	-.72	.10
	PA2	3.84	1.72	-.12	-.89
	PA3	3.78	1.74	-.08	-.93
	PA4	3.86	1.75	-.16	-.96
	PA5	3.82	1.81	-.13	-1.0
6. Impulse Buying	IB1	4.15	1.63	-.40	-.62
	IB2	3.74	1.61	-.11	-.73
7. Future-purchase Intention	FP1	4.09	1.63	-.31	-.60
	FP2	4.78	1.45	-.76	.39
	FP3	4.59	1.52	-.67	.08
	FP4	4.41	1.57	-.49	-.32
	FP5	4.29	1.57	-.41	-.42

Table 7

Continued.

Construct	Item	Mean	Standard Deviations	Skewness	Kurtosis
8. Brand Engagement	BE1	4.22	1.64	-.40	-.50
	BE2	4.57	1.60	-.60	-.20
	BE3	4.63	1.48	-.69	.18
	BE4	4.39	1.50	-.45	-.13
	BE5	4.38	1.63	-.46	-.41
	BE6	3.95	1.64	-.19	-.64
9. Homophily	HM1	4.71	1.24	-.09	-.18
	HM2	4.61	1.19	-.07	.06
	HM3	4.67	1.23	-.01	-.05
	HM4	4.63	1.28	-.10	-.05
10. Brand Involvement	BI1	2.97	1.82	.39	-1.05
	BI2	2.82	1.78	.56	-.79
	BI3	3.18	1.88	.28	-1.08
	BI4	2.92	1.82	.46	-.95
	BI5	3.00	1.83	.40	-.98
	BI6	3.19	1.92	.29	-1.16

Table 8

Reliability of Measures

Construct	Number of items	Cronbach's Alpha Coefficients
1. UGC Message	6	.92
2. Pleasure	6	.92
3. Arousal	6	.81
4. Information Quality	4	.83
5. Information Pass-along	5	.94
6. Impulse Buying	2	.89
7. Future-purchase Intention	5	.94
8. Brand Engagement	6	.95
9. Homophily	4	.94
10. Brand Involvement	6	.97

Table 9

Correlation Matrix of Variables for Primary Data Analyses

Construct	1	2	3	4	5	6	7	8	9	10
1. UGC Message	1.00									
2. Pleasure	.53**	1.00								
3. Arousal	.28**	.51**	1.00							
4. Information Quality	.77**	.60**	.39**	1.00						
5. Information Pass-along	.29**	.43**	.44**	.50**	1.00					
6. Impulse Buying	.33**	.46**	.44**	.50**	.80**	1.00				
7. Future-purchase Intention	.53**	.55**	.39**	.65**	.71**	.80**	1.00			
8. Brand Engagement	.47**	.53**	.43**	.63**	.79**	.81**	.90**	1.00		
9. Homophily	.52**	.58**	.49**	.66**	.61**	.60**	.63**	.67**	1.00	
10. Brand Involvement	.17**	.23**	.35**	.33**	.55**	.54**	.46**	.51**	.42**	1.00

** $p < .01$, two-tailed.

Unidimensionality

To attain strong measurement items, measure purification was conducted using the primary data to assure that the items comprising a scale measured only one dimension or one concept at a time. Three different analyses were conducted to test unidimensionality within each construct. First, skewness and kurtosis values of all scale items were examined to identify items with skewed distributions or low variances (i.e., high kurtosis) that could generate problems in subsequent analysis. As shown in Table 1, all values were in acceptable ranges as suggested by Hair et al. (1998).

Next, exploratory factor analysis (EFA) with Varimax rotation was conducted on the original item set as a whole and for each of the 10 constructs independently. Items cross-loading on two or more factors as well as items with low factor loadings (i.e., lower than .50) were carefully examined to determine whether they should be deleted (Hair, Black, Babin, Anderson, & Tatham, 2006).

This process resulted in the elimination of two items (i.e., AR1, AR2). The six-item scale clearly loaded on two factors; one factor contained items AR3, AR4, AR5, and AR6, and the second factor contained items AR1 and AR2. Both items in the second factor (i.e., AR1, AR2) had low factor loadings. Removing these two items produced a robust, unidimensional four-item scale. Thus, AR1 and AR2 were eliminated from further analyses.

As a final step, confirmatory factor analysis (CFA) was conducted on each of the ten constructs. The construct measurement models were assessed through CFA using maximum likelihood estimation on the item correlation matrices. The magnitude of item

error variances, large modification indices (MI), and standardized residuals values were carefully examined. Results from the previous analyses were considered collectively in the final decision regarding which items to retain and which to delete. As a result of the final step, an additional seven items were removed (i.e., AR3, AR6, IQ4, PA1, FP1, FP2, BE6). For the constructs including deleted items (i.e., arousal, information quality, pass-along intention, future-purchase intention, brand engagement), significant improvements in fit (i.e., χ^2 statistics) were observed. Moreover, the fit of all reduced-item set models was satisfactory, with comparative fit index (CFI) statistics of .95 and higher (see Table 10).

As a result of these preliminary analyses, 41 of the original 50 items were retained for hypotheses testing. The final measures used for the data analysis are organized by construct in Table 11. See Table 12 for the reliability values for each of the final measures.

Table 10

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

Construct	Full Item Set		Reduced Item Set	
	Number of Items	Model Fit Statistics	Number of Items	Model Fit Statistics
Arousal	6	$\chi^2 = 311.00$ $df = 9$ $p = .00$ CFI = .75	2	Saturated Model
Information Quality	4	$\chi^2 = 23.11$ $df = 2$ $p = .00$ CFI = .91	3	Saturated Model
Information Pass-along	6	$\chi^2 = 14.34$ $df = 5$ $p = .01$ CFI = .92	5	$\chi^2 = 2.00$ $df = 2$ $p = .38$ CFI = .99
Future-purchase Intention	5	$\chi^2 = 67.76$ $df = 5$ $p = .00$ CFI = .94	3	Saturated Model
Brand Engagement	6	$\chi^2 = 182.72$ $df = 9$ $p = .00$ CFI = .94	5	$\chi^2 = 92.21$ $df = 5$ $p = .00$ CFI = .97

Note. CFI = comparative fit index.

Table 11

Summary of Items Comprising Final Measures

Construct	Measures	Scale
1. UGC Message	RM1: The postings that appear on the Facebook fan page describe functions of the featured brand and product. RM2: The postings that appear on the Facebook fan page describe values of the featured brand and product. RM3: The postings that appear on the Facebook fan page describe benefits of the featured brand and product. EM1: The postings that appear on the Facebook fan page create a positive atmosphere about the featured brand and product. EM2: The postings that appear on the Facebook fan page create positive emotions about the featured brand and product. EM3: The postings that appear on the Facebook fan page create positive feelings about the featured brand and product.	Seven-point scales anchored at “1 = Strongly disagree” to “7 = Strongly agree”
2. Pleasure	PL1: Unhappy-happy PL2: Annoyed-pleased PL3: Dissatisfied-satisfied PL4: Melancholic-contented PL5: Despairing-hopeful PL6: Bored-relaxed	Seven-point semantic differential scales
3. Arousal	*AR1: Sluggish-frenzied *AR2: Dull-jittery *AR3: Unaroused-aroused AR4: Relaxed-stimulated AR5: Calm-excited *AR6: Sleepy-wide awake	Seven-point semantic differential scales

* Dropped items.

Table 11

Continued 1.

Construct	Measures	Scale
4. Information Quality	IQ1: The information contained in the postings is relevant. IQ2: The information contained in the postings is up-to-date. IQ3: The information contained in the postings provides valuable tips on the featured brand and products. *IQ4: The information contained in the postings is unique.	Seven-point scales anchored at “1 = Strongly disagree” to “7 = Strongly agree”
5. Information Pass-along	*PA1: I would click “like” on the some of the postings. PA2: I would share the postings on my own timeline. PA3: I would share the postings on a friend’s timeline. PA4: I would pass along the postings to contacts on my Facebook friends list. PA5: I would pass on the information along using other forms of social media.	Seven-point scales anchored at “1 = Strongly disagree” to “7 = Strongly agree”
6. Impulse Buying	IB1: I will visit the brand’s online store to purchase the product appear on this fan page right away. IB2: I intend to purchase the product featured on this fan page immediately.	Seven-point scales anchored at “1 = Strongly disagree” to “7 = Strongly agree”
7. Future- purchase Intention	*FP1: The likelihood of purchasing the product featured on the fan page is high. *FP2: If I were going to buy the style of shoes featured on this fan page, I would consider buying them from this brand. FP3: I would consider buying the product featured on this fan page. FP4: The probability that I would consider buying products from this brand is high. FP5: My willingness to buy the product featured on this fan page is high.	Seven-point scales anchored at “1 = Strongly disagree” to “7 = Strongly agree”

* Dropped items.

Table 11

Continued 2.

Construct	Measures	Scale
8. Brand Engagement	BE1: I would like to talk about this brand with others. BE2: I am interested in learning more about this brand. BE3: I would be interested in other products offered by this brand. BE4: I would be proud to have others know that I use this brand. BE5: I like to visit the website for this brand. *BE6: I would closely follow news about this brand.	Seven-point scales anchored at "1 = Strongly disagree" to "7 = Strongly agree"
9. Homophily	HM1: In general, the people who made the postings think like me. HM2: In general, the people who made the postings behave like me. HM3: In general, the people who made the postings are similar to me. HM4: In general, the people who made the postings are like me.	Seven-point scales anchored at "1 = Strongly disagree" to "7 = Strongly agree"
10. Brand Involvement	BI1: This brand is important to me. BI2: This brand is of concern to me. BI3: This brand is relevant to me. BI4: This brand means a lot to me. BI5: This brand matters to me. BI6: I have a strong interest in this brand.	Seven-point scales anchored at "1 = Strongly disagree" to "7 = Strongly agree"

* Dropped items.

Table 12

Reliability of Final Measures

Construct	Number of items	Cronbach's Alpha Coefficients
1. UGC Message	6	.92
2. Pleasure	6	.92
3. Arousal	2	.84
4. Information Quality	3	.81
5. Information Pass-along	4	.95
6. Impulse Buying	2	.89
7. Future-purchase Intention	3	.94
8. Brand Engagement	5	.94
9. Homophily	4	.94
10. Brand Involvement	6	.97

Measurement Model

To test the measurement model, confirmatory factor analysis with maximum likelihood was conducted on the 31 indicators of the eight latent variables for the measurement model. All eight latent variables were included for rigorous measurement model testing. The measurement model specification is illustrated in Figure 10.

An overall model fit was assessed by multiple indices such as χ^2 statistics, the ratios of chi-square to degrees of freedom (*df*), the comparative fit index (CFI), the non-normal fit index (NNFI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). In general, CFI, NNFI values of .95 or higher and RMSEA and SRMR of .06 or lower indicate a satisfactory model fit (Hu & Bentler, 1999).

The results of CFA indicated that the measurement model had acceptable construct validity. The model exhibited an excellent fit with the data: $\chi^2 = 1144.90$ with 406 *df*, $\chi^2/df = 2.82$, $p = .001$; CFI = .95; NNFI = .95; SRMR = .04; RMSEA = .05. Indicators such as offending estimates, squared multiple correlations, standardized residual covariance, and modification indices were examined to determine whether modification was needed. All the factor loadings on their respected constructs were higher than .70 (see Table 13).

Convergent validity was supported by the following: (1) all loadings are significant ($p < .001$), (2) the composite reliability for each construct exceeded the recommended level of .60, and (3) the average variance extracted (AVE) for each construct fulfilled the recommended benchmark of .50 (Hair et al., 1998). The results

showed that all the factor loadings were significant ($p < .001$), with composite reliability greater than .81 and AVE greater than .59 (see Table 14).

Discriminant validity was assessed by performing chi-square difference tests between an unconstrained model estimating the correlation between a pair of constructs and a constrained model with the correlation between that pair of constructs fixed to 1.0. A total of 28 rival models fixing the correlation between each pair of constructs to unity were compared to the measurement model one pair at a time. Discriminant validity is indicated when the results of chi-square difference tests between the constrained models and the unconstrained measurement model are all significant, which means the two constructs in a pair are significantly different constructs (Ping, 1994).

The results of chi-square difference tests for a total of 28 pairs of test resulted in a significant difference ($p = .001$). Therefore, discriminant validity of the measures was achieved. In addition, a rigorous test of discriminant validity was conducted by comparing AVE and the squared inter-correlation. According to Fornell and Larcker (1981), discriminant validity is assessed if the average variance extracted by the underlying construct is larger than the shared variance (i.e., the squared inter-correlation) with other latent constructs. The results showed that correlations among the latent constructs were significantly less than 1.0 and squared correlations were less than AVEs for each underlying construct except the correlations between UGC message and information quality and future purchase intention and brand engagement (see Table 15). In addition to the results of chi-square difference tests, further evidence supporting discriminant validity was indicated by the fact that the variance extracted estimates

exceeded the square of the correlation estimates for the majority of the constructs. Having established the convergent and discriminant validity of measures, the structural model was evaluated to test hypotheses.

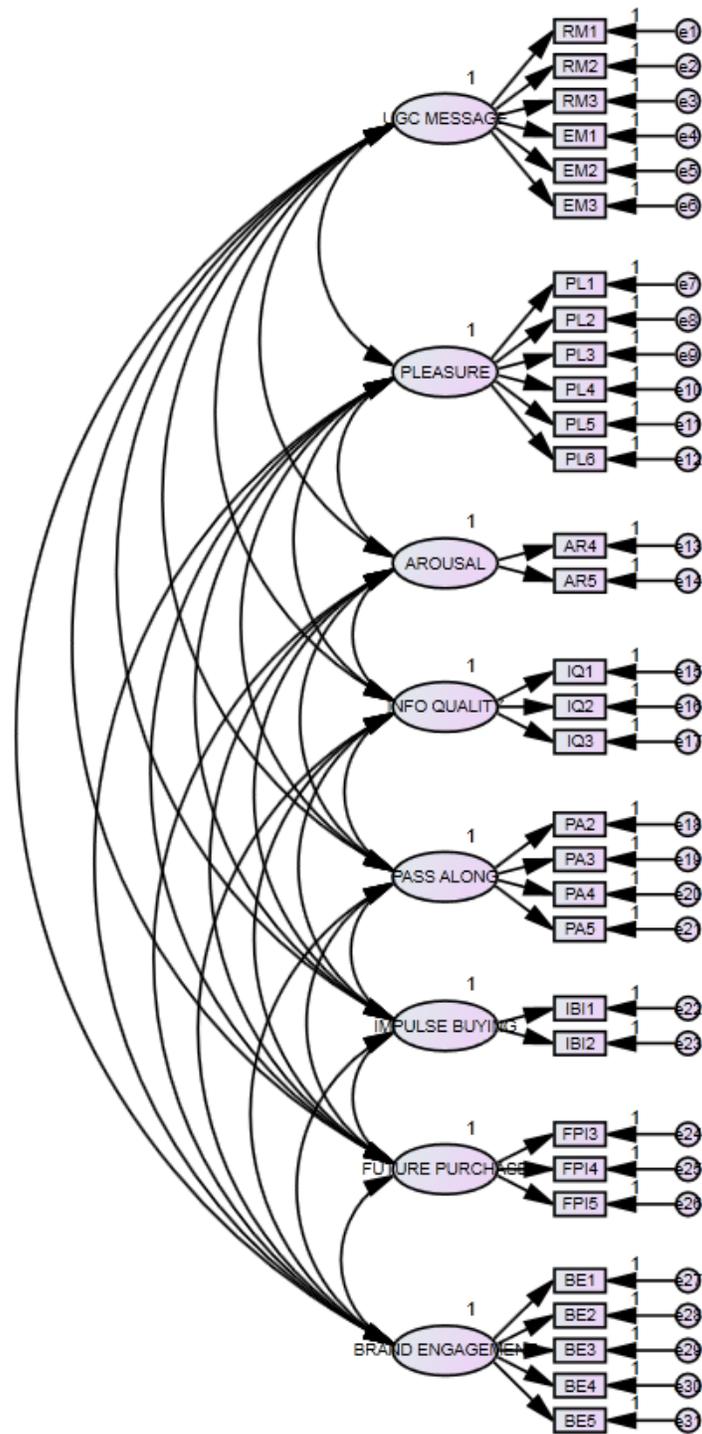


Figure 10. Confirmatory factor analysis: Measurement model specification.

Table 13

Measurement Model Evaluation: Standardized Loadings

Construct	Number of items	Standardized Loading (min. – max.)
1. UGC Message	6	.70 - .87
2. Pleasure	6	.80 - .88
3. Arousal	2	.93 - .93
4. Information Quality	3	.85 - .87
5. Information Pass-along	4	.91 - .95
6. Impulse Buying	2	.95 - .95
7. Future-purchase Intention	3	.93 - .96
8. Brand Engagement	5	.89 - .92

Table 14

Results: Measurement Model

Construct	1	2	3	4	5	6	7	8
1. UGC Message	1.00							
2. Pleasure	.53	1.00						
3. Arousal	.15	.25	1.00					
4. Information Quality	.75	.56	.19	1.00				
5. Information Pass-along	.25	.39	.28	.40	1.00			
6. Impulse Buying	.33	.46	.26	.45	.78	1.00		
7. Future-purchase Intention	.49	.54	.21	.60	.66	.78	1.00	
8. Brand Engagement	.49	.54	.24	.62	.72	.78	.89	1.00
Mean	5.29	5.18	4.10	5.13	3.83	3.94	4.43	4.44
SD	.93	1.05	1.498	.98	1.64	1.53	1.47	1.42
Composite Reliability^a	.92	.92	.92	.81	.95	.88	.94	.94
Variance Extracted^b	.66	.66	.86	.59	.82	.79	.84	.77

^aComposite Reliability = $(\Sigma \text{ standardized loading})^2 / (\Sigma \text{ standardized loading})^2 + \Sigma \text{ measurement error}$

^bVariance Extracted = $\Sigma(\text{standardized loading})^2 / \Sigma (\text{standardized loading})^2 + \Sigma \text{ measurement error}$

Table 15

Discriminant Validity Assessment Matrix of the Measurement Model

Construct	1	2	3	4	5	6	7	8
1. UGC Message	.66							
2. Pleasure	.33	.66						
3. Arousal	.03	.09	.86					
4. Information Quality	.77	.43	.04	.59				
5. Information Pass-along	.06	.17	.05	.20	.82			
6. Impulse Buying	.13	.27	.07	.28	.72	.80		
7. Future-purchase Intention	.28	.33	.04	.45	.48	.72	.85	
8. Brand Engagement	.09	.34	.06	.50	.57	.73	.88	.77

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

Structural Model Evaluation and Hypotheses Testing

A structural analysis was conducted using the maximum likelihood estimation method. The results from the structural model are presented in Table 10. The structural model exhibited a good fit with the data ($\chi^2 = 1182.26$ with 413 *df*, $\chi^2 / df = 2.86$, $p = .001$, CFI = .95, NNFI = .94, SRMR = .05, and RMSEA = .05). Table 16 indicates that in each sample, all significant relationships between latent constructs were in the hypothesized direction. Figure 11 illustrates the final model and provides the parameter estimates.

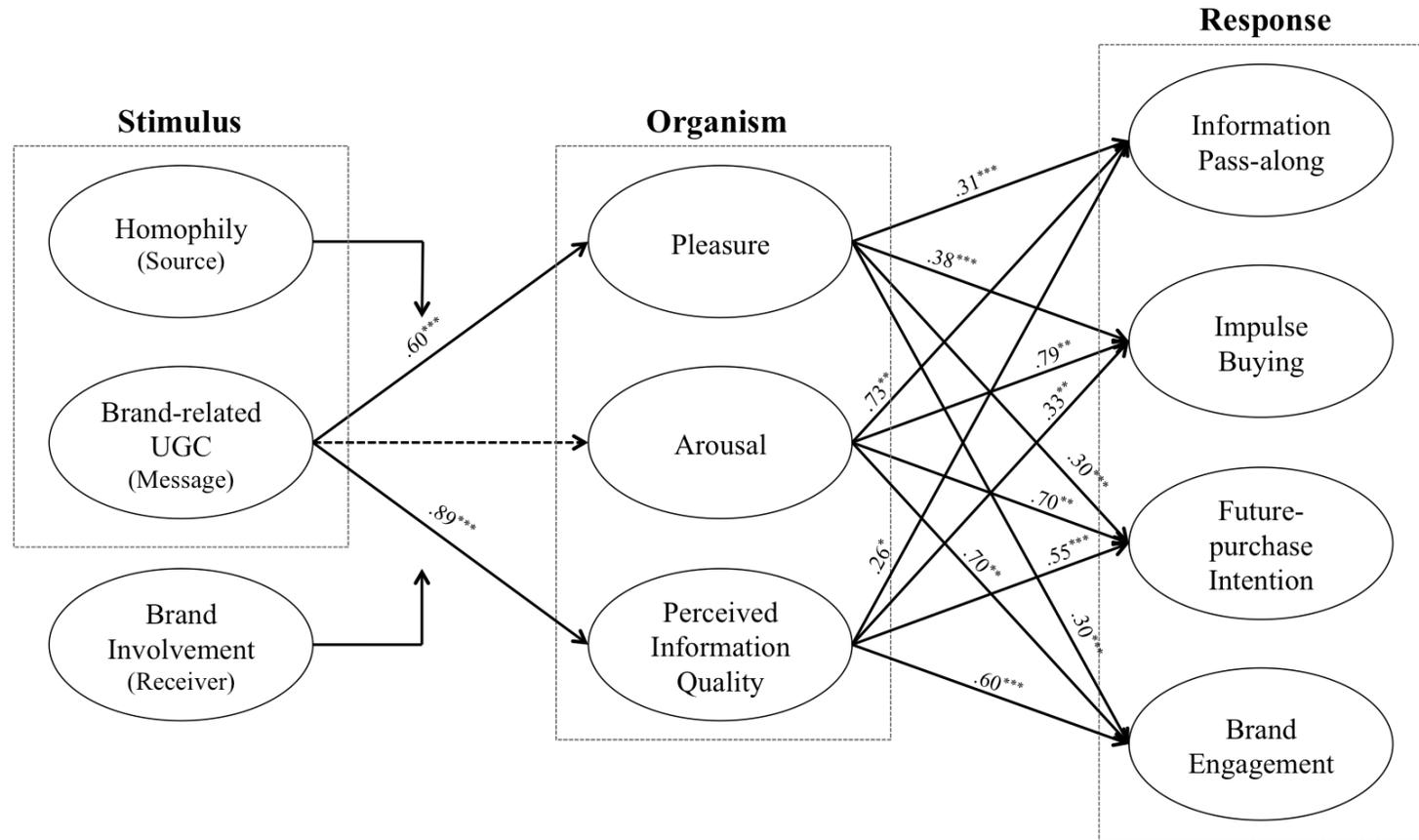
Table 16

Results: Structural Model

Hypotheses		SE	t-value	R²
1-a	UGC Message → Pleasure	.60	13.31***	.36
1-b	UGC Message → Arousal	-.19	-1.11	.03
2	UGC Message → Information Quality	.89	18.18***	.80
3-a	Pleasure → Information Pass-along	.31	5.91***	
3-b	Arousal → Information Pass-along	.73	2.71**	.67
4	Information Quality → Information Pass-along	.26	2.30*	
5-a	Pleasure → Impulse Buying	.38	7.27***	
5-b	Arousal → Impulse Buying	.79	2.72**	.86
6	Information Quality → Impulse Buying	.33	2.70**	
7-a	Pleasure → Future-purchase Intention	.30	6.68***	
7-b	Arousal → Future-purchase Intention	.70	2.71**	.88
8	Information Quality → Future-purchase Intention	.55	4.95***	
9-a	Pleasure → Brand Engagement	.30	6.63***	
9-b	Arousal → Brand Engagement	.70	2.72**	.94
10	Information Quality → Brand Engagement	.60	5.33***	
Fit Statistics				
N	533			
χ^2 (df)	1182.27*** (413)			
χ^2 /df	2.87			
CFI	.95			
NNFI	.94			
RMSEA	.06			
SRMR	.05			

Note. SE = standardized estimate.

* $p < .05$. ** $p < .01$. *** $p < .001$.



$\chi^2 = 1182.26$ with 413 *df*, $\chi^2 / df = 2.86$, $p = .001$, CFI = .95, NNFI = .94, SRMR = .05, RMSEA = .05
Note. All are standardized estimates. Solid paths indicate significant paths. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 11. Final Model.

Influence of Brand-related UGC on Emotional and Cognitive Responses

Hypotheses 1 and 2 predicted that brand-related UGC influence emotional (i.e., pleasure, arousal) and cognitive responses (i.e., perceived information quality). The structural model test results demonstrated that brand-related UGC message positively influenced pleasure ($\beta = .60, t = 13.31, p < .001$) and perceived information quality ($\beta = .89, t = 18.18, p < .001$). However, brand-related UGC was not significantly related to arousal. Thus, H1-a and H2 were supported.

Influence of Emotional and Cognitive Responses on Behavioral Responses

Hypotheses 3 and 4 predicted that emotional and cognitive responses influence brand-related UGC pass-along intention. The results showed that both the emotional responses, pleasure ($\beta = .31, t = 5.91, p < .001$) and arousal ($\beta = .73, t = 2.71, p < .01$), positively influenced pass-along intention. Also, perceived information quality, positively influenced pass-along intention ($\beta = .26, t = 2.30, p < .05$). Thus, H3-a, H3-b, and H4 were supported.

Hypotheses 5 and 6 predicted positive relationships between emotional and cognitive responses and impulse buying intention. Both emotional responses, pleasure ($\beta = .38, t = 7.27, p < .001$) and arousal ($\beta = .79, t = 2.72, p < .01$) positively influenced impulse buying intention. Also, perceived information quality positively influenced impulse buying intention ($\beta = .33, t = 2.70, p < .01$). Thus, H5-a, H5-b, and H6 were supported.

Hypotheses 7 and 8 predicted that emotional and cognitive responses positively influence future purchase intention. The results demonstrated that pleasure ($\beta = .30, t =$

26.68, $p < .001$), arousal ($\beta = .70$, $t = 2.71$, $p < .01$) and perceived information quality ($\beta = .55$, $t = 4.95$, $p < .001$) positively influenced future purchase intention. Thus, H7-a, H7-b, and H8 were supported.

Hypotheses 9 and 10 predicted that emotional and cognitive responses positively influence brand engagement. The results demonstrated that pleasure ($\beta = .30$, $t = 6.68$, $p < .001$), arousal ($\beta = .70$, $t = 2.72$, $p < .01$), and perceived information quality ($\beta = .60$, $t = 5.33$, $p < .001$) positively influenced brand engagement. Thus, H9-a, H9-b, and H10 were supported.

Moderating Influence of Brand-related UGC Source and Receiver Characteristics

The influences of brand-related UGC source and receiver characteristics (i.e., homophily, brand involvement) on the relationships between brand-related UGC message and emotional and cognitive responses were tested as moderating variables. Multiple-group SEM analysis was used for the invariance test of the model to test moderating effects of homophily and brand involvement. This invariance test was achieved by comparing chi-square values and degrees of freedom for the base model and the constrained model. Median split approach was used to create two groups for each moderating variable (high versus low).

Hypotheses 11 predicted that homophily moderates the relationships between brand-related UGC and emotional and cognitive responses. To test this hypothesis, the data set was first, divided into two homophily groups based on the median score (median = 4.50). The high homophily group consisted of 255 cases and the low homophily group included 278 cases. Following Dabholkar and Bagozzi (2002), the model demonstrating

the hypothesized relationships (i.e., base model) was tested and the standardized coefficient values between the groups (i.e., high homophily, low homophily) were compared. The base model excluded arousal because the relationship between brand-related UGC and arousal was insignificant according to the results of the previous hypotheses test. After evidencing differences in standardized coefficient values between the groups, a multi-group analysis was conducted. All path parameters were constrained to be equal across the 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 the two homophily groups indicated that the groups are significantly different at the model level ($\Delta\chi^2 = 42.88$, $\Delta df = 16$, $p = .001$). In order to see whether the groups were different at the path level, a pairwise parameter comparison was used to examine whether there were differences in path coefficients between the groups. Critical ratios for differences between parameters (z- scores) indicated that paths between the variables were significantly different between the high homophily group and the low homophily group. Standardized regression weights were higher in the high homophily group than in the low homophily group (see Table 18). Thus, it was concluded that homophily moderated the relationships between brand-related UGC message and pleasure as well as perceived information quality. Therefore, H11-a and H11-c were supported.

Hypotheses 12 predicted that brand involvement moderates the relationships between brand-related UGC and emotional and cognitive responses. During the preliminary data analysis, *t*-tests were conducted on measurement items to see whether there were differences between the two sample brands (i.e., Sperry Top-Sider, Sebago Docksidess). The results indicated there was a significance difference in the brand involvement items between the two brands. Therefore, the moderating influence of brand involvement was tested for the two brands separately.

Following the same process, an invariance test was conducted using multiple-group SEM. For Sperry Top-Sider, the high brand involvement group included 142 cases and the low brand involvement group included 132 cases (median = 3.33). For Sebago Docksidess, the high brand involvement group included 130 cases and the low brand involvement group included 129 cases (median = 2.33). The model fit difference from the comparison of the two brand involvement groups (high versus low) indicated that the groups were not significantly different for both Sperry Top-Sider and Sebago Docksidess (see Table 17). Therefore, it was concluded that brand involvement was not a moderator and H12 was not supported. Table 19 presents a summary of the results of hypotheses testing.

Table 17

Multiple-Group Structural Model Invariance Test

Groups	Model Description	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	<i>p</i>	Model Invariance
High/Low levels of Homophily	Base Model	490.13	176	37.28	14	.001	No
	Constrained Model	527.41	190				
High/Low levels of Brand Involvement (Sperry Top-Sider)	Base Model	403.29	176	15.90	16	.31	Yes
	Constrained Model	419.19	190				
High/Low levels of Brand Involvement (Sebago Docksides)	Base Model	349.53	176	13.97	14	.45	Yes
	Constrained Model	363.50	190				

Table 18

Multiple-Group Structural Model Path Coefficients Comparison

Path	High Homophily		Low Homophily		z-score
	Standardized Estimate	<i>p</i>	Standardized Estimate	<i>p</i>	
UGC Message → Pleasure	.60	.001	.29	.001	3.23***
UGC Message → Information Quality	.90	.001	.80	.001	1.66*

* $p < .10$. ** $p < .05$. *** $p < .01$.

Table 19

Summary of Hypotheses Testing

Hypotheses		Results
1-a	Brand-related UGC influences pleasure.	Supported
1-b	Brand-related UGC influences arousal.	Not supported
2	Brand-related UGC influences perceived information quality.	Supported
3-a	Pleasure positively influences information pass-along.	Supported
3-b	Arousal positively influences information pass-along.	Supported
4	Perceived information quality positively influences information pass-along.	Supported
5-a	Pleasure positively influences impulse buying.	Supported
5-b	Arousal positively influences impulse buying.	Supported
6	Perceived information quality positively influences impulse buying.	Supported
7-a	Pleasure positively influences future-purchase intention.	Supported
7-b	Arousal positively influences future-purchase intention.	Supported
8	Perceived information quality positively influences future-purchase intention.	Supported
9-a	Pleasure positively influences brand engagement.	Supported
9-b	Arousal positively influences brand engagement.	Supported
10	Perceived information quality positively influences brand engagement.	Supported
11-a	The relationship between brand-related UGC and pleasure will be stronger when perceived homophily of UGC source is high compared to when the perceived homophily of UGC source is low.	Supported
11-b	The relationship between brand-related UGC and arousal will be stronger when perceived homophily of UGC source is high compared to when the perceived homophily of UGC source is low.	N/A

Table 19

Continued.

	Hypotheses	Results
11-c	The relationship between brand-related UGC and perceived information quality will be stronger when perceived homophily of UGC source is high compared to when the perceived homophily of UGC source is low.	Supported
12-a	The relationship between brand-related UGC and pleasure will be stronger when the UGC receiver's brand involvement is low compared to when the UGC receiver's brand involvement is high.	Not supported
12-b	The relationship between brand-related UGC and arousal will be stronger when the UGC receiver's brand involvement is low compared to when the UGC receiver's brand involvement is high.	N/A
12-c	The relationship between brand-related UGC and perceived information quality will be stronger when the UGC receiver's brand involvement is high compared to when the UGC receiver's brand involvement is low.	Not supported

CHAPTER V

DISCUSSION AND IMPLICATIONS

The first section of this chapter provides a discussion of the results. Theoretical implications and practical implications for retailers are then discussed. This is followed by study limitations and suggestions for future research.

Discussion of Results

This study was designed to test a model examining the influence of positive brand-related UGC shared via Facebook on consumer response and to explain the influence of consumer activities on other consumers. The model was developed based on the S-O-R framework (Mehrabian & Russell, 1974) and combined the factors influencing communication effect following suggested propositions made by previous researchers (e.g., Bagozzi, 1983; Eroglu et al., 2003; Hovland et al., 1953). Specific research objectives were to 1) investigate whether brand-related UGC act as stimulus to activate consumer response in relation to brand, 2) examine the entire process by which brand-related UGC influences consumer behavior via emotional and cognitive responses, and 3) test whether brand-related UGC source and receiver characteristics moderates the relationships between brand-related UGC and emotional and cognitive responses.

Influence of Brand-related UGC on Emotional and Cognitive Responses

While examining the influence of brand-related UGC on consumer response, emotional and cognitive responses to brand-related UGC were revealed. Brand-related UGC including information and emotional content was positively related to pleasure and perceived information quality. This indicates that brand-related UGC acted as

informational stimuli to activate consumer's emotional and cognitive responses when participants encounter brand-related UGC during Facebook browsing. These findings confirm those of previous researchers (i.e., Eroglu et al., 2003; Ha & Im, 2012) who also documented that pleasure and perceived information quality are emotional and cognitive responses toward visual stimuli. It is possible that this study yielded the same results because the visual stimulus (i.e., mock Facebook fan pages) included photographs and descriptions of products on the Web, as was the case in the previous studies (i.e., Eroglu et al., 2003; Ha & Im, 2012).

However, findings revealed that arousal, another emotional response component within the S-O-R model, was not significantly influenced by brand-related UGC. This insignificant relationship may be due to several reasons. First, it is possible that the visual stimulus (i.e., Facebook fan pages) failed to activate arousal due to the limited presentation of interactive components. The stimuli (i.e., Facebook fan page) were presented as still images and were limited in terms of providing interactive features (e.g., clicking the image, viewing user profiles) that are provided by Facebook. In other online contexts (i.e., shopping), website significantly influenced arousal when participants were exposed to online store websites including a variety of environmental elements such as navigation aids (i.e., site map), music, color, merchandise images, and multimedia features (Eroglu et al., 2003; Ha & Im, 2012). Therefore, the relationship between brand-related UGC and arousal could have been significant if interactive components of Facebook were included in the stimulus.

Second, the insignificant relationship could have been influenced by the context of this study. This study was concerned with consumer response to brand-related UGC during Facebook browsing. In this situation, participants were simply asked to review the postings included in Facebook fan pages and respond to questionnaire assessing their responses to the provided brand-related UGC. In this case, it is possible that participants were in low involvement situation in general compared to when they were asked to complete a task after reviewing brand-related UGC (e.g., evaluate product, make purchase) or actively sought information about a particular product. It is possible that the participants were not aroused by the stimulus because not enough attention was able to be paid to the brand-related UGC. Brand-related UGC could have influenced arousal if the relationship was examined under a high involvement situation.

Another possible explanation for the insignificant relationship may have been due to the stimulation ability of the visual stimulus (i.e., brand-related UGC). Strictly, it is the relationship between the brand-related UGC and the person who sees it that determines the stimulation ability of brand-related UGC. It is possible that the brand-related UGC was not dramatic enough to create excitement or arousal within a viewer unless the person viewing the brand-related UGC was very involved in the content. In the study, participants were randomly exposed to one of the two Facebook fan pages. In this case, it is very unlikely that the participants were personally involved with the content they were asked to review.

In addition, the brand-related UGC content and featured images appearing on each mock fan page had to be controlled to be gender and age neutral so the postings may not

been stimulating enough to evoke arousal. Perhaps if the relationship was examined when participants were asked to review brand-related UGC about a brand they were actually following on Facebook or the fan pages developed featured stimulating content or images for a particular demographic group, the relationship between brand-related UGC and arousal may have been present.

Influence of Emotional and Cognitive Responses on Behavioral Responses

Using the S-O-R model, pleasure, arousal, and perceived information quality as organism constructs (i.e., emotional and cognitive responses) and information pass-along, impulse buying, future-purchase intention, and brand engagement as behavioral response constructs (i.e., behavioral outcomes in relation to brand) were tested. As expected, the results clearly showed that all emotional and cognitive responses examined (i.e., pleasure, arousal, perceived information quality) significantly influenced all behavioral outcomes in relation to the brand identified. Thus, for these participants it was concluded that information pass-along, impulse buying, future-purchase intention, and brand engagement were behavioral responses toward brand-related UGC. These findings support the O-R relationship proposed in the S-O-R model, that is, that individuals' emotional and cognitive responses influence their behavioral outcomes (Mehrabian & Russell, 1974).

As discussed earlier, arousal was not an emotional response resulting from brand-related UGC. Thus, the significant positive relationships between arousal and behavioral responses might be interpreted as indicating that some other factors not examined in the model could have resulted in arousal. It is possible that the physical surroundings (e.g.,

background music, presence of others) or the situational context (e.g., completing a questionnaire) caused uncontrolled arousal during the data collection process. This finding also means that the presence of arousal during exposure to brand-related UGC could have influenced participants to act in favor of the brand. Although brand-related UGC was not significantly nor specifically related to arousal, arousal was not the only emotional response measured. Results demonstrated that the brand-related UGC positively impacted pleasure. Thus, it can be concluded that brand-related UGC influenced behavioral responses in relation to brand via both emotional and cognitive responses. Discussions for each behavioral response to brand-related UGC follow.

Information pass-along. Participants whose emotional response to the brand-related UGC suggested it evoked pleasure and perceived the information to be useful indicated they intended to pass-along the content by sharing it via their personal Facebook pages or other forms of social media. Passing-along the information via social media is considered eWOM activity as the information contains brand-related content. These findings are consistent with previous researchers (Kim & Niehm, 2009; Ladhari, 2007; Ha & Im, 2012) who also found that emotional responses (i.e., pleasure, arousal) and perceived information quality were significant factors influencing WOM intention. Social networking sites (i.e., Facebook) allow consumers to easily share brand-related information with other users within their social networks and information pass-along is one of the behavioral consequences of positive emotional and cognitive responses to brand-related UGC.

Impulse buying. Impulse buying was another consequence of participants' exposure to brand-related UGC on Facebook. Participants who responded to the brand-related UGC with pleasure and perceived the information to be useful were more likely to indicate they would purchase the product featured on the fan page immediately by visiting the brand's online store. These specific relationships within the Facebook context had not been examined by previous researchers; however, the relationships may exist because brand-related UGC triggered a sudden urge to purchase the featured product (Stern, 1962) as the brand-related UGC was describing the product functions and values as well as positive emotions associated with the product. Also, consumers are persuaded by the message when the information quality is high (Hovland et al., 1953). Impulse buying can be an immediate action consumers can take in response to brand-related content on the Web because consumers can make purchases directly online.

Future-purchase intention. Brand-related UGC on Facebook is eWOM influencing future-purchase intention. Participants who responded that the brand-related UGC evoked pleasure and perceived the information to be useful were likely to consider the featured product and brand for future purchases. These findings are consistent with those of Baker et al. (1992) who also noted that willingness to purchase is enhanced when emotional responses are favorable. Future-purchase intention measured participants' willingness to purchase in the future so the influence of brand-related UGC on the featured brand may be both instantaneous (e.g., impulse purchase) as well as gradual.

Brand engagement. Among the behavioral outcomes in relation to brand, brand engagement represents the influence of brand-related UGC on relationship building.

Brand engagement assessed participants' willingness to build emotional connection with the brand. Thus, participants who responded to the brand-related UGC with pleasure and perceived the information to be useful were more likely to associate with the brand. This finding provided empirical support for the conceptual definition of brand engagement, that is, brand engagement is a result of emotional and cognitive responses stimulated by the brand (Allen et al., 2008; Goldsmith, 2012).

In summary, brand-related UGC positively influenced brand sales (i.e., impulse buying, future-purchase intention), contributed to enhancing relationships between brands and consumers (i.e., brand engagement), and generated eWOM (i.e., information pass-along) by eliciting positive emotion (i.e., pleasure) and evaluation of the content (i.e., perceived information quality). In the process, arousal facilitated favorable behavioral reactions to the brand.

Moderating Influence of Brand-related UGC Source and Receiver Characteristics

This study examined the influence of brand-related UGC as eWOM communication among consumers. Within the context of the theory of communication (Hovland et al., 1953), moderating effects for both homophily and brand involvement as UGC source and receiver characteristics were tested.

Homophily. The relationships between brand-related UGC and emotional and cognitive responses (i.e., pleasure, perceived information quality) were stronger for participants who perceived the UGC source as generally similar to them (i.e., high homophily). Thus, consumers posting brand-related UGC on brands' fan pages who are perceived as similar by the viewers of the posting are going to exert more influence on

those other consumers than consumers who are thought to be dissimilar to the viewers. This finding is consistent with the work of De Bruyn and Lilien (2008) who found that participants responded more favorably toward an eWOM message that originated from a source who was similar than toward one who was dissimilar. The influence of homophily is also in agreement with the earlier findings of Brown and Reingen (1987) who found that information sources that were perceived to be similar to viewers resulted in greater influence on the viewers than dissimilar information sources.

Brand involvement. Brand involvement did not have a moderating influence on relationships between brand-related UGC and emotional and cognitive responses (i.e., pleasure, perceived information quality). Although the participants presented adequate variability in their level of brand involvement (Sperry Top-Sider $M = 3.23$, $SD = 1.69$; Sebago Docksides $M = 2.78$, $SD = 1.76$) and significant differences existed between the high brand involvement group and the low involvement group (Sperry Top-Sider $t = 27.56$, $df = 272$, $p = .001$; Sebago Docksides $t = 29.80$, $df = 257$, $p = .001$), the relationships between brand-related UGC and emotional and cognitive responses showed no difference between the brand involvement groups (high versus low). Although brand involvement showed adequate variability within each condition, it is possible that the moderating influence of brand involvement was not detectable due to the small sample size. The sample was divided into two for the brand involvement moderation test as the two sample brands were significantly different in their brand involvement score. Reduced sample size in SEM model estimation could have resulted in small statistical power, thus it is possible that the moderating influence was not detected due to power failure.

Again, the insignificant findings may be due to the context of the study (i.e., encountering brand-related UGC during Facebook browsing). The elaboration likelihood model (Petty & Cacioppo, 1986) posits that consumers' degree of involvement causes difference in the information-processing route. However, it is possible that participants processed brand-related UGC regardless of their relationships with the brand (i.e., brand involvement) because they were under low involvement situation in general, that is, they were simply browsing.

Implications

Theoretical Implications

The hypothesized model was based on the S-O-R framework (Mehrabian & Russell, 1974). This study examined brand-related UGC as stimulus, emotional and cognitive responses as organism, and behavioral responses in relation to brand as response components of the model. In addition, the proposed model examined homophily as a UGC source characteristic and brand involvement as a UGC receiver characteristic.

This study advances the literature and theory in the area of consumer response to environmental/informational stimuli and electronic word-of-mouth communication. The findings confirmed the S-O-R model of consumer response in the context of Facebook by providing empirical support for the model. The study demonstrated that the stimulus component in the model (i.e., brand-related UGC) influenced both emotional and cognitive responses within the organism. Then, the emotional and cognitive responses of the organism influenced behavioral responses relative to the brand. As the S-O relationships and the O-R relationships in the proposed S-O-R model of consumer

response to brand-related UGC were significant, the study successfully demonstrated that the S-O-R model could be applied to explain the influence of consumer activities on social media. The results of the study also confirmed the parallel response model of consumer response proposed by Bagozzi (1983). That is when a stimulus contains both affective and cognitive components (i.e., informational and emotional message), the stimulus influences both emotional and cognitive responses directly and each response in the organism has independent influence on behavioral responses.

In addition, the study contributes to extending prior work on consumer behavior within the SNS context and eWOM via social media. It examined the influence of brand-related UGC on consumer behaviors specific to a SNS context. As the proposed model demonstrated a significant influence of brand-related UGC on brand engagement, the model suggests a place for relationship building variables (i.e., brand engagement) as possible behavioral outcomes leading to brand choice in addition to the outcome variables previously identified by previous researchers (e.g., Bagozzi, 1983; Fiore & Kim, 2007).

The study examined pleasure and arousal as emotional response components in the S-O-R model following Mehrabian and Russell (1974). However, brand-related UGC (i.e., stimuli) did not exhibit a significant influence on arousal. This finding points to a revision of the emotional response component in the S-O-R model in that the emotional response component may only include pleasure when the model is applied to examine consumer responses to brand-related UGC on Facebook. Although not examined in the study, the emotional responses resulted from brand-related UGC may include other

emotional constructs such as excitement or enjoyment in the context of consumer activities taking place in social media. Determination of whether or not to revise the emotional response component requires further testing of the model with a range of operationalizations of emotional response within this context.

The study expanded the application of the S-O-R model by integrating variables representing eWOM source and receiver characteristics (i.e., homophily, brand involvement). Although the model was specifically developed to test consumer response to brand-related UGC on Facebook context, the model provided possibilities for the inclusion of different moderating variables in the S-O-R model. When previous researchers applied the S-O-R model, they examined the influence of receiver characteristics (e.g., involvement, personal values, atmospheric responsiveness, shopping orientation, knowledge) as moderators in the relationship between stimulus and organism (e.g., Eroglu et al., 2003; Grossbart et al., 1990; Morrin & Chebat, 2005, Sirgy et al., 2000; Wu et al., 2013,). However, no study has yet to examine the influence of source characteristics as moderators in the S-O relationship within the S-O-R model. For example, if applied to other shopping contexts, source characteristics that could be examined for their moderating influence include variables such as retailer image, brand reputation, and model attractiveness.

In sum, the results of the study can be used to revise the existing S-O-R model of consumer response. This study suggests a modified S-O-R model that includes relationship building variables as components of behavioral response and stimulus source characteristics and situational factors as moderating variables in the S-O relationships in

addition to the foundational constructs of the S-O-R model (i.e., informational stimuli, physical atmospheric factors, emotional responses, cognitive responses, approach and avoidance behaviors). Figure 12 presents the modified S-O-R model of consumer response. The new model may be used to explain the influence of physical atmospheric factors or informational stimuli on behavioral responses including both sales related and relationship building variables via emotional and cognitive reactions of consumers in various consumption contexts. The model holds great potential for further application in emerging areas of consumer behaviors such as new shopping environments (e.g., video shopping, virtual shopping, augmented reality retailing) and digital communications (e.g., interactive TV).

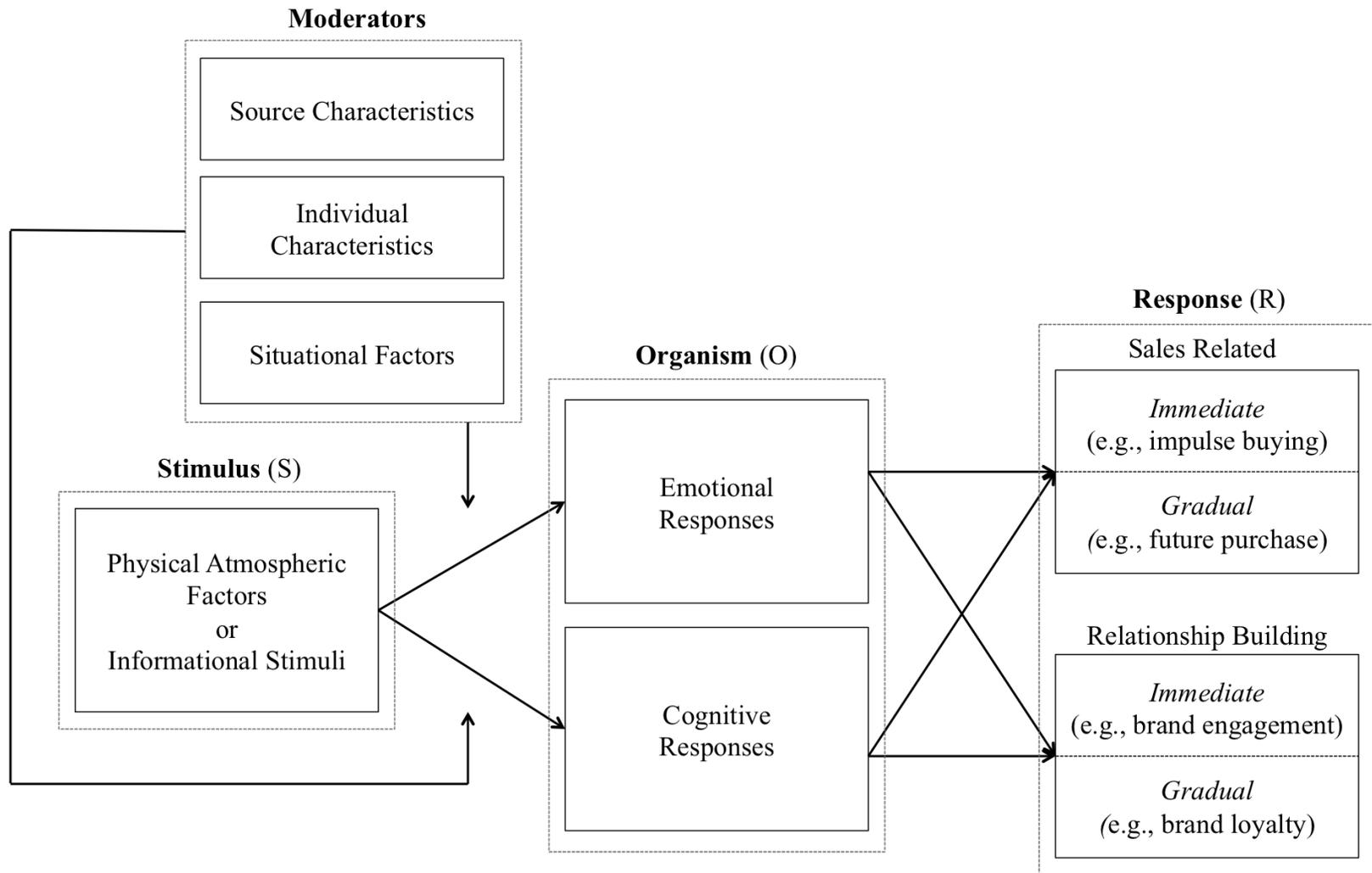


Figure 12. Modified S-O-R model of consumer response.

Practical Implications

Fashion brands and retailers have embraced social media as means to reach out to new customers as well as to foster relationships with existing customers. As social media have become popular venues for consumers to connect with brands and share brand-related information with other consumers, the influence of consumer activities (i.e., sharing brand-related UGC) on other consumers was examined. The findings provide practical implications to brand management practitioners and social media marketing practitioners.

The study exhibited the influence of brand-related UGC shared via Facebook fan pages on consumer response. Brand-related UGC was found to evoke consumers' emotional and cognitive responses that are antecedents to behavioral responses. The findings provide implication for companies by helping them to understand the consequences of engaging in Facebook. The study revealed that consumers' behavioral responses to brand-related UGC were related to brand sales (i.e., impulse buying, future-purchase intention), relationship building (i.e., brand engagement), and eWOM (i.e., information pass-along). Thus, providing new venues for consumers to connect and talk about brands on social media can contribute to increases in brand sales and initiate brand-customer relationships. However, the downside to brand-related UGC for consumers can be unintended purchase upon exposure to brand-related UGC. The findings suggest that highly salient informational and emotional brand-related content can contribute to increase in immediate sales (i.e., impulse buying) as well as gradual sales (i.e., future-purchase). Also, the influence of brand-related UGC may be more powerful than

marketer-generated information because consumers perceive UGC as more trustworthy information (Chu & Kim, 2011). Thus, consumers should be aware of the drawbacks of unintended impulse purchases while browsing Facebook because the negative consequences of impulse buying may contribute to serious financial problems, disappointment with the product, or feelings of guilt (Park & Choi, 2013).

The study also suggests that social media users can be an important factor to consider when generating sales or establishing brand-customer relationships. Brand management practitioners need to work on providing positive brand experiences to their regular customers so they can influence other consumers' behaviors in regards to the brand via sharing their brand-related UGC. Also, social media marketing practitioners may want to create various activities on social media to engage consumers to talk about the brand with other consumers on social media. For example, encouraging brand followers to participate in contests or providing them with incentives (e.g., discount coupons, membership points) for sharing product reviews could result in increase in brand sales as well as positive brand-customer relationships. Customers can also benefit from active participation in brand fan pages as they receive financial incentives and strengthen relationship with the brands they like.

Although the influence of consumer-generated brand-related messages was documented, social media marketing practitioners still may want to pay attention to the extent that consumers' emotional and cognitive responses impact their behaviors. Among the emotional and cognitive responses, arousal had the greatest impact on behavioral responses (i.e., information-pass along, impulse buying, future-purchase intention, brand

engagement). Following arousal, pleasure exhibited the second most influence on information pass-along and impulse buying while perceived information quality exhibited influence on future-purchase intention and brand engagement. These findings suggest that pleasure exerts influence on consumers' immediate behavioral responses (i.e., information pass-along, impulse buying) and perceived information quality exerts influence on consumers' gradual behavioral responses (i.e., future-purchase intention, brand engagement). Social media marketing practitioners can use this information to strategically plan their marketing activities. For example, a brand aspiring to build relationships with potential customers may want to put efforts on creating useful information on the brand's SNS so the SNS users who visit the brand page can be motivated to engage with the brand.

In addition, the study provides social media with a marketing segmentation guide. The finding concerning the moderating influence of homophily indicated that the influence of brand-related UGC on emotional and cognitive responses (i.e., pleasure, perceived information quality) was greater when participants perceived the UGC source to be similar to them in general. To increase homogeneity of users, fashion brands with several target markets (e.g., women, men, baby, wedding) may want to create separate Facebook fan pages for each specific target market. By providing venues for consumers of the same target market (i.e., similar in terms of demographic characteristics and taste) to interact with each other, brands may benefit themselves from favorable influence of brand-related UGC as perceived homophily of the UGC generators and readers will be high.

Limitations and Suggestions for Future Research

This study has limitations that could be addressed in future research. The proposed model was developed and tested under a specific context, that is, the casual encountering of brand-related UGC on fashion brands' Facebook fan pages. Thus, the findings cannot be simply generalized to other consumption contexts. Future research could be directed at a different situational contexts (e.g., intentional visit to brand fan pages) or a range of product categories (e.g., electronics, automobiles, healthcare, entertainment) that vary in terms of product attributes (e.g., hedonic, utilitarian) so that the model of consumer response to brand-related UGC can be validated and modified as needed. Examining diverse situational contexts and/or product categories could provide useful implications for social media marketing strategies applicable to a broader range of consumer products and services.

This study focused on the influence of positive brand-related UGC. This is a limitation to the external validity of the study because in reality, brand-related UGC can be positive as well as negative in terms of its valence. Examining the influence of negative brand-related UGC is important because the impact of negative eWOM is greater than positive eWOM (Park & Lee, 2009), especially when the brand-related UGC can easily reach great number of consumers all over the world.

Although the brand-related UGC measures included informational and emotional content, the study examined the influence of brand-related UGC by combining the two aspects as one construct. The results could have explained the influence of brand-related UGC more in detail if the influence of different aspects of brand-related UGC (i.e.,

informational content, emotional content) on emotional and cognitive responses were examined separately. Perhaps, the results could have presented a significant relationship between brand-related UGC and arousal and revealed a specific attribute of brand-related UGC that evokes arousal. It is recommended that the future research examine the influence of informational content and emotional content individually so the results can provide practical implications concerning specific relationships between UGC content attributes and emotional and cognitive responses. Also, future research assessing the content dimensions of brand-related UGC is needed in order to identify a variety of brand-related UGC attributes besides informational and emotional content (e.g., trendiness, entertaining, social value) that can possibly influence consumer response.

This study assessed behavioral responses to brand-related UGC via a self-report online survey method. This process meant that the behavioral responses indicating participants' intention to act upon exposure to the brand-related content could be different from their actual behaviors. One advantage of advances in technologies is that consumer behaviors can be easily monitored and tracked by web logs and digital data (Accenture, 2013). Thus, future research could utilize digital data to assess accurate consumer behavior in response to brand-related UGC.

The study found arousal to be a powerful emotional response influencing behavioral outcomes, yet it was not related to brand-related UGC. This finding raises a question to the role of arousal as an emotional response in the S-O-R model. Specifically, whether arousal is a direct predictor of behavioral responses or is a moderator in the relationship between pleasure and behavioral response. Further investigation of the

influence of arousal as well as possible antecedents to arousal in the Facebook context (e.g., multimedia message, limited time offer) is necessary as arousal exhibited the most influence among the organism variables tested (i.e., pleasure, arousal, perceived information quality). Future research could also reexamine the model by measuring arousal before and after an exposure to stimulus. That way, the influence of pre-existing arousal on consumer response to brand-related UGC could be controlled.

The hypotheses regarding the moderating influence of the brand-related UGC receiver characteristic (i.e., brand involvement) did not receive statistical support. This non-significant finding might have been due to the unique situation in the context of this study, that is, that participants were under low situational involvement in general as they were simply asked to browse brand-related UGC appearing on the brands' Facebook fan pages. The finding suggests a possible moderating influence of situational factors (e.g., casual browsing, information search) on the relationship between brand-related UGC and consumers' emotional and cognitive responses. In the process of validating the model of consumer response to brand-related UGC, it is recommended that the future research retest the model with a different UGC receiver characteristic (e.g., brand knowledge, product knowledge, fashion involvement, Facebook participation) or add a situational factor (e.g., casual browsing, information search, UGC posting) as a possible moderator in the model.

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APPENDIX A
Questionnaire Type A (Sperry Top-Sider)

Greetings!

You are invited to participate in a research study investigating consumer response to user-generated content (UGC) shared via Facebook Fan Page. You were selected as a possible participant because you are identified as a general consumer in the US with a Facebook account.

Please access this survey using your desktop or laptop computer. Images contained in this survey may not appear properly on small mobile devices.

By participating in this online questionnaire, you are providing your consent for your data to be included in this research. Please read this form before agreeing to participate.

Consent Form

Thank you in advance for your participation. This study is concerned with consumer response to user-generated content (UGC) shared via Facebook Fan Page. UGC refers to media content created by general public rather than paid professionals in this survey.

Confidentiality. Any information you provide will not be directly tied to you as an individual. In reports that may be published or publicly presented, we will not include any information that will make it possible to identify you as a participant. The records of this study will be kept completely confidential.

Voluntary Nature of the Study. Your participation in this survey is completely voluntary. If you decide to participate, you are welcome to refuse any answer or withdraw your participation at any time.

Procedures. If you agree to participate, we would like you to complete the accompanying questionnaire concerning your thoughts, feelings, and behaviors in response to UGC appear on a Facebook Fan Page. A Facebook Fan Page will be provided within the questionnaire. Please complete this survey to the best of your ability. It takes about 10-15 minutes to complete the questionnaire.

Contacts and Questions. This online survey is being conducted by Angella Kim in the Retail Merchandising program at the University of Minnesota. Any questions you may have about the study may be directed to the researcher at kimx3119@umn.edu. If you have any questions or concerns of the study that you would like to discuss with someone other than the researcher, please contact Research Subject Advocate Line, (612) 625-1650.

We greatly appreciate your sharing opinions and participating in this research.

Are you at least 18 years old and have an active Facebook account?

- Yes
- No

Do you agree to participate in this study?

- Yes
- No



0% 100%

Section 1. This section is concerned with your Facebook experience.

Direction

Please respond by selecting one answer for each of the following unless otherwise indicated.

1. How often do you use Facebook?

- Continuously using Facebook
- Multiple times a day (more than once)
- Once a day
- A couple of times a week
- Once a week
- Occasionally (once every two weeks)

2. Why do you use Facebook? Please select all that apply.

- Keeping in touch with people
- Self-expression
- Making new contacts (getting new friends, joining groups, communication with like-minded people)
- Getting information
- Social surveillance (virtual people-watching, looking up people, viewing other people's friends)
- Entertainment (playing games, apps within Facebook)

3. Are you following any **brand** on Facebook?

*Brand: a type of product manufactured by a particular company under a particular name (ex: Apple, Nike, BMW).

- Yes
- No

4. Approximately how many **brands** are you following on Facebook?

5. Are you following any **fashion brand** on Facebook?

*Fashion brand: a trademark or distinctive name identifying any apparel, accessory, or cosmetic product/manufacture (ex: H&M, Louis Vuitton, TOMS).

- Yes
- No

6. Approximately how many **fashion brands** are you following on Facebook?

7. Have you posted any brand-related content (e.g., product reviews, experience with a brand or product, a picture of yourself that highlights branded merchandise) on Facebook?

- Yes
- No



8. If you answered "yes" to question 7, where did you post the brand-related content? Please select all that apply.

- Brand fan pages
- Personal wall pages (Timeline)

9. If you answered "yes" to question 7, how did you post brand-related contents? Please select all that apply.

- Narrative form (written text)
- Photos of consumption
- Likes ("Liking" a brand)

<<

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0%  100%

The progress bar is a horizontal line with a dark grey segment on the left and a white segment on the right, indicating the current progress level.

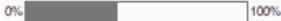
Section 2. This section is concerned with SPERRY TOP-SIDER brand.



Direction

Please indicate to what extent you agree or disagree with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. I have heard of this brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
2. I know what this brand stands for.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
3. I have an opinion about the brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
4. This brand is likely to be one of the fashion brands I can recall.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
5. This brand is important to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
6. This brand is of concern to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
7. This brand is relevant to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
8. This brand means a lot to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
9. This brand matters to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
10. I have a strong interest in this brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Section 3. This section is concerned with your attitude and behavioral intentions toward the brand featured on the Facebook fan page below.

Direction

Please review the Facebook fan page and read the postings made by other Facebook users. When you are done, please proceed to answering the questions.





Peter Campos
3 hours ago

That Carolina weather was perfect this weekend for a good ol' pair of Sperry. Rocking out with Sperry Top-Sider by the beach!



Like · Comment · Share



Tiffany McNeal
19 hours ago

I am a college student and I wear mine almost everyday. If you are looking for versatile comfortable shoes that can be worn year around, whether you own a boat or not I would highly recommend these to anyone. If you happen to get a little dirt on them it is easily wiped off with damp cloth. They are boat shoes so if they do get wet, it's no big deal. I just let them dry. The only suggestion I would make would be to make sure you tie the strings tight so they don't drag and get dirty.



Like · Comment · Share



Jeff Johnson
Yesterday

I have been wearing topsiders since I was a kid and they are worth every penny. They last a long time and I am rough on shoes. They are my go to shoes for work now. I work in a garden center and they are so comfortable. I have tried numerous shoes for work and these are the best things ever!!!

Like · Comment · Share



Erik Niehoff
10 hours ago

I just got my fifth pair of Sperry boat shoes. These shoes are great for everyday wear. All my friends wear them too. You can get them covered in natty light, spray them off, and be good for church the next morning. They are comfortable and come in many styles and colors. They are quite versatile and great for all weather. I especially love them for casual outdoor activities like biking and walking when sneakers aren't totally necessary. They are more fashionable closed-toe option. These shoes are generally worn without socks and they do not have an odor if you do!



Like · Comment · Share



Clara Lauren
23 hours ago

I am a 45-year-old housewife and bought my first pair of Sperry Top-Siders for an upcoming cruise. For so many years I have seen others wear them and preach to me about their comfort. I put them on out of the box to break them in and OMG, immediately they were incredibly comfortable. The first time you slip your foot into a Sperry you understand what all the fuss is about. They are also very attractive. I love them!!!

Like · Comment · Share



Tammy Zhao
Yesterday

We love Sperry and can't wait for our first little baby to wear them too! Thanks for making great shoes!



Like · Comment · Share



Direction

Please indicate to what extent you agree or disagree with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. I would click "like" on the some of the postings.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
2. I would share the postings on my own timeline.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
3. I would share the postings on a friend's timeline.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
4. I would pass along the postings to contacts on my Facebook friends list.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
5. I would pass on the information along using other forms of social media (e.g., Twitter, Pinterest, Instagram).						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
6. I will visit the brand's online store to purchase the product appear on this fan page right away.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
7. I intend to purchase the product featured on this fan page immediately.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
8. The likelihood of purchasing the product featured on the fan page is high.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
9. If I were going to buy the style of shoes featured on this fan page, I would consider buying them from this brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

10. I would consider buying the product featured on this fan page.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

11. The probability that I would consider buying products from this brand is high.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

12. My willingness to buy the product featured on this fan page is high.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

13. I would like to talk about this brand with others.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

14. I am interested in learning more about this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

15. I would be interested in other products offered by this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

16. I would be proud to have others know that I use this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

17. I like to visit the website for this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

18. I would closely follow news about this brand.

<< >>

0% 100%

Section 4. This section is concerned with your feelings after you viewed the Facebook Fan Page in the previous section.

Direction

Please read [the adjectives](#) on each side of the boxes.

Next, select the number that indicates how you feel about the content of the postings that appear on the brand's fan page.

[You may refer back to the Facebook fan page if you need.](#)

To go back to the previous section to view the Facebook fan page, please click the double arrow button "<<" located at the bottom left corner of this page.

The postings appear on the Facebook fan page make me feel ...

	1	2	3	4	5	6	7	
Unhappy	<input type="radio"/>	Happy						
Annoyed	<input type="radio"/>	Pleased						
Dissatisfied	<input type="radio"/>	Satisfied						
Melancholic	<input type="radio"/>	Contented						
Despairing	<input type="radio"/>	Hopeful						
Bored	<input type="radio"/>	Relaxed						
Sluggish	<input type="radio"/>	Frenzied						
Dull	<input type="radio"/>	Jittery						
Unaroused	<input type="radio"/>	Aroused						
Relaxed	<input type="radio"/>	Stimulated						
Calm	<input type="radio"/>	Excited						
Sleepy	<input type="radio"/>	Wide awake						



Section 5. This section is concerned with postings located on the Facebook fan page you viewed in the previous section.

Direction

Please review the content of the postings that appear on the brand's fan page. Next, indicate to what extent you agree or disagree with the following statements. You may refer back to the Facebook fan page if you need.

To go back to the previous section to view the Facebook fan page, please click the double arrow button "<<" located at the bottom left corner of this page.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. The information contained in the postings is relevant.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
2. The information contained in the postings is up-to-date.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
3. The information contained in the postings provides valuable tips on the featured brand and products.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
4. The information contained in the postings is unique.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
5. The postings that appear on the Facebook fan page describe functions of the featured brand and product.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
6. The postings that appear on the Facebook fan page describe values of the featured brand and product.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
7. The postings that appear on the Facebook fan page describe benefits of the featured brand and product.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

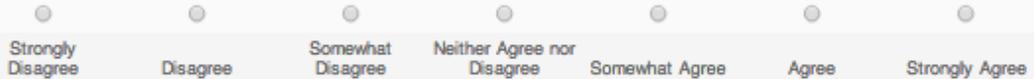
8. The postings that appear on the Facebook fan page create a positive atmosphere about the featured brand and product.



9. The postings that appear on the Facebook fan page create positive emotions about the featured brand and product.



10. The postings that appear on the Facebook fan page create positive feelings about the featured brand and product.



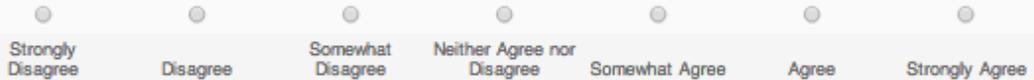
11. In general, the people who made the postings think like me.



12. In general, the people who made the postings behave like me.



13. In general, the people who made the postings are similar to me.



14. In general, the people who made the postings are like me.



<<

>>



Section 6. This section is concerned with your demographic information. Please select one that best describes you.

1. What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55 and up

2. What is your gender?

- Male
- Female

3. What is your marital status?

- Married / Living with partner
- Divorced / Separated / Widowed
- Never married single

4. What is your ethnicity?

- Caucasian
- Asian
- African American
- Hispanic
- Bi-racial / Mixed race
- Other

5. Please indicate the highest level of education completed.

- High school or less
- Vocational / technical school (2 year)
- Some college
- College graduate (4 year)
- Master's degree
- Doctoral Degree
- Professional Degree (MD, JD, etc.)
- Other

6. Including yourself, how many people live in your household?

7. What is your annual household income (before taxes)?

- Under \$20,000
- \$20,000 to 39,999
- \$40,000 to 59,999
- \$60,000 to 79,000
- \$80,000 to \$99,999
- Over \$100,000

<<

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0%  100%

Thank you very much for your participation.

Would you like to submit your survey?

- Yes
- No

Please make sure to click the double arrow button ">>" located at the bottom right corner of this page to submit your survey.



APPENDIX B
Questionnaire Type B (Sebago Docksides)

Greetings!

You are invited to participate in a research study investigating consumer response to user-generated content (UGC) shared via Facebook Fan Page. You were selected as a possible participant because you are identified as a general consumer in the US with a Facebook account.

Please access this survey using your desktop or laptop computer. Images contained in this survey may not appear properly on small mobile devices.

By participating in this online questionnaire, you are providing your consent for your data to be included in this research. Please read this form before agreeing to participate.

Consent Form

Thank you in advance for your participation. This study is concerned with consumer response to user-generated content (UGC) shared via Facebook Fan Page. UGC refers to media content created by general public rather than paid professionals in this survey.

Confidentiality. Any information you provide will not be directly tied to you as an individual. In reports that may be published or publicly presented, we will not include any information that will make it possible to identify you as a participant. The records of this study will be kept completely confidential.

Voluntary Nature of the Study. Your participation in this survey is completely voluntary. If you decide to participate, you are welcome to refuse any answer or withdraw your participation at any time.

Procedures. If you agree to participate, we would like you to complete the accompanying questionnaire concerning your thoughts, feelings, and behaviors in response to UGC appear on a Facebook Fan Page. A Facebook Fan Page will be provided within the questionnaire. Please complete this survey to the best of your ability. It takes about 10-15 minutes to complete the questionnaire.

Contacts and Questions. This online survey is being conducted by Angella Kim in the Retail Merchandising program at the University of Minnesota. Any questions you may have about the study may be directed to the researcher at kimx3119@umn.edu. If you have any questions or concerns of the study that you would like to discuss with someone other than the researcher, please contact Research Subject Advocate Line, (612) 625-1650.

We greatly appreciate your sharing opinions and participating in this research.

Are you at least 18 years old and have an active Facebook account?

- Yes
- No

Do you agree to participate in this study?

- Yes
- No



0% 100%

Section 1. This section is concerned with your Facebook experience.

Direction

Please respond by selecting one answer for each of the following unless otherwise indicated.

1. How often do you use Facebook?

- Continuously using Facebook
- Multiple times a day (more than once)
- Once a day
- A couple of times a week
- Once a week
- Occasionally (once every two weeks)

2. Why do you use Facebook? Please select all that apply.

- Keeping in touch with people
- Self-expression
- Making new contacts (getting new friends, joining groups, communication with like-minded people)
- Getting information
- Social surveillance (virtual people-watching, looking up people, viewing other people's friends)
- Entertainment (playing games, apps within Facebook)

3. Are you following any **brand** on Facebook?

*Brand: a type of product manufactured by a particular company under a particular name (ex: Apple, Nike, BMW).

- Yes
- No

4. Approximately how many **brands** are you following on Facebook?

5. Are you following any **fashion brand** on Facebook?

*Fashion brand: a trademark or distinctive name identifying any apparel, accessory, or cosmetic product/manufacture (ex: H&M, Louis Vuitton, TOMS).

- Yes
- No

6. Approximately how many **fashion brands** are you following on Facebook?

7. Have you posted any brand-related content (e.g., product reviews, experience with a brand or product, a picture of yourself that highlights branded merchandise) on Facebook?

- Yes
- No



8. If you answered "yes" to question 7, where did you post the brand-related content? Please select all that apply.

- Brand fan pages
- Personal wall pages (Timeline)

9. If you answered "yes" to question 7, how did you post brand-related contents? Please select all that apply.

- Narrative form (written text)
- Photos of consumption
- Likes ("Liking" a brand)

<<

>>

0%  100%

The progress bar is a horizontal line with a dark grey segment on the left and a white segment on the right, indicating the current progress level.

Section 2. This section is concerned with SEBAGO DOCKSIDES brand.



Direction

Please indicate to what extent you agree or disagree with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. I have heard of this brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I know what this brand stands for.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I have an opinion about the brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. This brand is likely to be one of the fashion brands I can recall.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. This brand is important to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. This brand is of concern to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. This brand is relevant to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. This brand means a lot to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. This brand matters to me.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I have a strong interest in this brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Section 3. This section is concerned with your attitude and behavioral intentions toward the brand featured on the Facebook fan page below.

Direction

Please review the Facebook fan page and read the postings made by other Facebook users. When you are done, please proceed to answering the questions.





Peter Campos
3 hours ago

That Carolina weather was perfect this weekend for a good ol' pair of Sebago. Rocking out with Sebago by the beach!



Like · Comment · Share



Tiffany McNeal
19 hours ago

I am a college student and I wear mine almost everyday. If you are looking for versatile comfortable shoes that can be worn year around, whether you own a boat or not I would highly recommend these to anyone. If you happen to get a little dirt on them it is easily wiped off with damp cloth. They are boat shoes so if they do get wet, it's no big deal. I just let them dry. The only suggestion I would make would be to make sure you tie the strings tight so they don't drag and get dirty.



Like · Comment · Share



Jeff Johnson
Yesterday

I have been wearing Sebago boat shoes since I was a kid and they are worth every penny. They last a long time and I am rough on shoes. They are my go to shoes for work now. I work in a garden center and they are so comfortable. I have tried numerous shoes for work and these are the best things ever!!!

Like · Comment · Share



Erik Niehoff
10 hours ago

I just got my fifth pair of Sebago boat shoes. These shoes are great for everyday wear. All my friends wear them too. You can get them covered in natty light, spray them off, and be good for church the next morning. They are comfortable and come in many styles and colors. They are quite versatile and great for all weather. I especially love them for casual outdoor activities like biking and walking when sneakers aren't totally necessary. They are more fashionable closed-toe option. These shoes are generally worn without socks and they do not have an odor if you do!



Like · Comment · Share



Clara Lauren
23 hours ago

I am a 45-year-old housewife and bought my first pair of Sebago for an upcoming cruise. For so many years I have seen others wear them and preach to me about their comfort. I put them on out of the box to break them in and OMG, immediately they were incredibly comfortable. The first time you slip your foot into a Sebago you understand what all the fuss is about. They are also very attractive. I love them!!!

Like · Comment · Share



Tammy Zhao
Yesterday

We love Sebago and can't wait for our first little baby to wear them too! Thanks for making great shoes!



Like · Comment · Share



Direction

Please indicate to what extent you agree or disagree with the following statements.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. I would click "like" on the some of the postings.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
2. I would share the postings on my own timeline.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
3. I would share the postings on a friend's timeline.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
4. I would pass along the postings to contacts on my Facebook friends list.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
5. I would pass on the information along using other forms of social media (e.g., Twitter, Pinterest, Instagram).						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
6. I will visit the brand's online store to purchase the product appear on this fan page right away.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
7. I intend to purchase the product featured on this fan page immediately.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
8. The likelihood of purchasing the product featured on the fan page is high.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
9. If I were going to buy the style of shoes featured on this fan page, I would consider buying them from this brand.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

10. I would consider buying the product featured on this fan page.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

11. The probability that I would consider buying products from this brand is high.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

12. My willingness to buy the product featured on this fan page is high.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

13. I would like to talk about this brand with others.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

14. I am interested in learning more about this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

15. I would be interested in other products offered by this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

16. I would be proud to have others know that I use this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

17. I like to visit the website for this brand.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

18. I would closely follow news about this brand.

0% 100%

Section 4. This section is concerned with your feelings after you viewed the Facebook Fan Page in the previous section.

Direction

Please read [the adjectives](#) on each side of the boxes.

Next, select the number that indicates how you feel about the content of the postings that appear on the brand's fan page.

[You may refer back to the Facebook fan page if you need.](#)

To go back to the previous section to view the Facebook fan page, please click the double arrow button "<<" located at the bottom left corner of this page.

The postings appear on the Facebook fan page make me feel ...

	1	2	3	4	5	6	7	
Unhappy	<input type="radio"/>	Happy						
Annoyed	<input type="radio"/>	Pleased						
Dissatisfied	<input type="radio"/>	Satisfied						
Melancholic	<input type="radio"/>	Contented						
Despairing	<input type="radio"/>	Hopeful						
Bored	<input type="radio"/>	Relaxed						
Sluggish	<input type="radio"/>	Frenzied						
Dull	<input type="radio"/>	Jittery						
Unaroused	<input type="radio"/>	Aroused						
Relaxed	<input type="radio"/>	Stimulated						
Calm	<input type="radio"/>	Excited						
Sleepy	<input type="radio"/>	Wide awake						



Section 5. This section is concerned with postings located on the Facebook fan page you viewed in the previous section.

Direction

Please review the content of the postings that appear on the brand's fan page. Next, indicate to what extent you agree or disagree with the following statements. You may refer back to the Facebook fan page if you need.

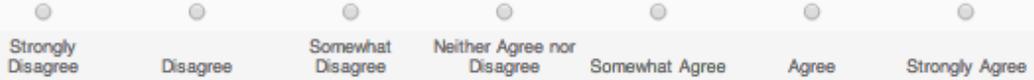
To go back to the previous section to view the Facebook fan page, please click the double arrow button "<<" located at the bottom left corner of this page.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. The information contained in the postings is relevant.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
2. The information contained in the postings is up-to-date.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
3. The information contained in the postings provides valuable tips on the featured brand and products.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
4. The information contained in the postings is unique.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
5. The postings that appear on the Facebook fan page describe functions of the featured brand and product.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
6. The postings that appear on the Facebook fan page describe values of the featured brand and product.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
7. The postings that appear on the Facebook fan page describe benefits of the featured brand and product.						
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree

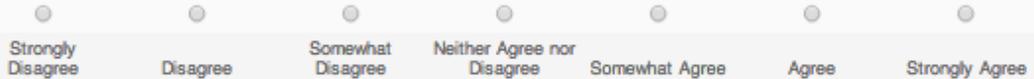
8. The postings that appear on the Facebook fan page create a positive atmosphere about the featured brand and product.



9. The postings that appear on the Facebook fan page create positive emotions about the featured brand and product.



10. The postings that appear on the Facebook fan page create positive feelings about the featured brand and product.



11. In general, the people who made the postings think like me.



12. In general, the people who made the postings behave like me.



13. In general, the people who made the postings are similar to me.



14. In general, the people who made the postings are like me.



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Section 6. This section is concerned with your demographic information. Please select one that best describes you.

1. What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55 and up

2. What is your gender?

- Male
- Female

3. What is your marital status?

- Married / Living with partner
- Divorced / Separated / Widowed
- Never married single

4. What is your ethnicity?

- Caucasian
- Asian
- African American
- Hispanic
- Bi-racial / Mixed race
- Other

5. Please indicate the highest level of education completed.

- High school or less
- Vocational / technical school (2 year)
- Some college
- College graduate (4 year)
- Master's degree
- Doctoral Degree
- Professional Degree (MD, JD, etc.)
- Other

6. Including yourself, how many people live in your household?

7. What is your annual household income (before taxes)?

- Under \$20,000
- \$20,000 to 39,999
- \$40,000 to 59,999
- \$60,000 to 79,000
- \$80,000 to \$99,999
- Over \$100,000

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0%  100%

Thank you very much for your participation.

Would you like to submit your survey?

- Yes
- No

Please make sure to click the double arrow button ">>" located at the bottom right corner of this page to submit your survey.



APPENDIX C
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: 1403E48842

Principal Investigator: Angella Kim

Title(s):

Examining the influence of brand-related user-generated content on consumer response

This e-mail confirmation is your official University of Minnesota HRPP 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 value your feedback. We have created a short survey that will only take a couple of minutes to complete. The questions are basic, but your responses will provide us with insight regarding what we do well and areas that may need improvement. Thanks in advance for completing the survey. <http://tinyurl.com/exempt-survey>