Purchase Decision Type Influences on Consumers' Reliance: Brand-Related User-Generated Content

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DEDICATION

This dissertation is dedicated to Dr. Margaret A. Morrison, my former advisor, who passed away while chairing my dissertation. She had been my mentor, instructor, colleague, and best friend since I met her at the University.

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ABSTRACT

Consumers use brand-related user-generated content (UGC), such as online consumer reviews, for their pre-purchase information seeking. However, previous research on consumer information seeking has scarcely explored how purchase situations and product type influence consumers' use of brand-related UGC. The purpose of this dissertation is to shed light on this area of research. In the first part of the study, Vaughn's (1980; 1986) Foote, Cone, and Belding (FCB) grid, a popular product classification theory in advertising and consumer research, was updated based on a set of online surveys (N=1,104) that measured three purchase dimensions [i.e., purchase decision involvement (PDI), think/feel purchase, online/offline purchase context]. Multiple research hypotheses relevant to how purchase type influences one's brand-related UGC seeking were explored, based on another set of online surveys (N=391) in the second part of the study. A Cronbach's alpha test revealed that the think/feel purchase dimension of the FCB grid measured two purchase constructs, rather than measuring a single construct. The grid model now consists of 118 up-to-date product examples and 35 categories, and has improved usability for research in other fields, because the study altered the theory's dichotomous-looking dimensions into non-dichotomous variables. To examine the hypotheses, a linear mixed effect model was utilized for analysis, and the results indicated that the four dimensions (PDI, think purchase, feel purchase, online/offline purchase context) are all positively associated with one's reliance on brand-related UGC. Furthermore, the study found several more associations between demographic factors and consumers' reliance on brand-related UGC. Age, gender,

marital status, number of children in a household, and employment status showed significant associations, whereas education, household income, and ethnicity did not. The dissertation has several implications. First, ad practitioners may use the updated product grid to define overall themes of advertising (e.g., informative vs. emotional theme). Second, marketers can use the study results to determine their budgets for online brand promotions. Finally, the study may also provide implications to scholars whose research explores pre-purchase information-seeking, influences of product type on decision-making, consumer involvement, emotional/rational purchase decisions, and brand-related UGC.

Keywords: FCB grid, product categories, pre-purchase information-seeking, brand-related UGC, hedonic/utilitarian consumer attitude, online/offline shopping preference.

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CHAPTER 1: INTRODUCTION

RESEARCH PROBLEM

With the rapid growth of user-generated content (UGC) websites, the Internet has become a common place to find user-generated information on a variety of topics. Even though the topics on UGC websites may cover virtually any type of interest (Dhar & Chang, 2009), they have become popular online destinations for brand conversations and consumer insights (Christodoulides, Jevons, & Bonhomme, 2012). Through UGC websites consumers share brand-related information such as product purchase experiences and recommendations for brands, which may be useful for others' purchase decisions.

Wielding the power of brand-related UGC consumers now can evaluate various products and brands, based both on product information generated by companies and generated by consumers' opinions, prior to their purchase decisions (Riegner, 2007). Before the platforms for UGC were available online, consumers were likely to make purchase decisions based on product information and advertisements offered by marketers or on their peers' opinions of brands, which they typically gathered through face-to-face (FtF) or telephone-based word-of-mouth (WOM) conversations (Brooks, 1957; Katz & Lazarsfeld, 1955; Keller & Fay, 2011).

Consumers' use of brand-related UGC is now one of the imperative factors that marketers consider when they develop and implement their marketing communications plans. An increasing portion of UGC involves product-related information (Burmann & Arnhold, 2008; Dhar & Chang, 2009), and many consumers deem online brand content

generated by their peers, such as consumer reviews or brand recommendations, to be more trustworthy than online advertisements or other types of product information generated by marketers (e.g., Cheong & Morrison, 2008; Goldsmith & Horowitz, 2006; Shu-Chuan & Kamal, 2008).

Some consumers have become very influential on their peers' brand choices outside the context of FtF or telephone-based WOM communications because the influence of UGC websites on the Internet extends well beyond the circle typically exhibited in traditional conversations (Smith, 2009). Moreover, unlike typical FtF or telephone-based WOM communications, electronic-WOM (eWOM) conversations may have a more lasting impact on consumers' purchase decisions. Once expressed online, consumer UGC can remain online for longer durations and have the potential to impact mass audiences (Graham & Havlena, 2007). For instance, a consumer review that compares the iPhone 6s and the Samsung Galaxy S6 on YouTube.com has accumulated approximately 2.6 million views in about five months since it was first posted (Morrison, 2015), and a review on the Nintendo DS Lite (a portable game player) on the same website has been available online for ten years; the review has gained more than 1.6 million views (Sasser, 2006).

Notwithstanding the high impacts of brand-related UGC on consumer decision-making and researchers' increasing interest in such content (Park, Park, & Ghosh, 2011), an important area of research still remains underexplored to date: purchase decision type influences on the consumers' level of reliance on brand-related UGC. This dissertation explores this area of research, using an existing product classification theory that has

been widely used in the fields of advertising and media research: the FCB Grid (Vaughn, 1980; 1986). This dissertation also explores an update to the grid model because the product theory in this model was developed more than three decades ago (Ratchford, 1987; Vaughn, 1980; 1986).

Justification for the Use of the FCB Grid

Using two basic purchase dimensions (i.e., high/low purchase decision involvement and think/feel purchase decision type), the FCB grid cross-classifies product purchase situations into four quadrants, and suggests approximately 60 product types that fit into the four types of purchase decisions (See Appendix A). This classic decision-making classification theory was chosen for the current dissertation because it offers a very useful (but relatively simple) diagram that provides conceptual guidance to advertising practitioners and other marketing communications planners (Vaughn, 1986; Weinberger & Spotts, 1989).

In particular, the theory suggests that advertisers should use informative advertising strategies for high involvement and rationally purchased products (e.g., health insurance, prescription medicines), and affective advertising strategies for high involvement and emotionally purchased product types (e.g., sports cars, luxury watches) (Kantanen & Tikkanen, 2005; Vaughn, 1980). In contrast, for the low involvement product types, exploratory trials or other point-of-purchase advertisements are recommended for practitioners to market cognitively-oriented products (e.g., household cleaners, trash bags) because purchase decisions in that category may be habitual (Kantanen & Tikkanen, 2005). Advertisements that stimulate the five senses of

consumers are recommended for affectively purchased and low involving products (e.g., fast foods, perfumes) because consumers affectively approach those purchase decisions and emotionally evaluate brands (Vaughn, 1980; 1986).

The grid theory has added interesting and valuable discussions to other classic theories such as the hierarchy of effects model (Lavidge & Steiner, 1961; Palda, 1966) and the brain hemispheric theory (Katz, 1983; Weinstein, 1982). The hierarchy of effects model describes a sequence of consumers' purchase decisions. The model postulates that consumers follow three sequential stages to purchase (i.e., *learning, feeling, and doing* – purchasing) and recommends advertisers create advertising campaigns that encourage consumers to follow the stages in a purchase sequence (Palda, 1966; Robertson, 1968). However, Vaughn's (1980; 1986) FCB grid claims that the order of purchase stages in which consumers engage may vary based on product type. For instance, when purchasing a low involvement and 'feel' product (e.g., chocolate bar), consumers may purchase (*do*) first, then *feel* and *learn* about various brands and the product category, because a cost of a product purchase is not very high. For some product types, a purchasing cost is sometimes even lower than a cost of searching product information. In addition, consumers may have *feelings* and form attitudes about various brands in a product category prior to *learning* about the brands and the product category, such as when they shop for a high involvement and 'feel' product (e.g., expensive designer purses or luxury watches), because the product's affective aspects are more critical considerations than its functional benefits (Ratchford, 1987; Vaughn, 1980; 1986).

The brain hemispheric theory assumes that the two cerebral hemispheres of the brain respond differently to stimuli, and that the left hemisphere processes verbal and rational information and the right hemisphere processes spatial and emotional information (Katz, 1983; Weinstein, 1982). Based on this assumption of the theory, researchers examined several topics in the field of advertising. For example, by comparing two media types (i.e., television and print media), Krugman (1979) found that television is a 'right-brained' medium and print media are 'left-brained' media. In his study, the right hemisphere responded more to advertising messages on television and the left hemisphere reacted more to advertisements on print media. Weinstein (1982) also discovered interesting findings about brain hemispheres and affects in advertising. According to his study, negative affects of advertisements are associated more with the left brain, whereas positive affects (such as laughter) are associated more with the right brain. Vaughn's (1980; 1986) FCB grid also added interesting discussions to the brain hemispheric research in advertising by extending the brain hemispheric theory to product type and purchase decision-making situations; the grid divides various purchase types and their product examples using purchase decision involvement (PDI) and left-right brain specialization (Vaughn, 1986).

Because of these contributions that the theory has made, the FCB grid has become one of the most popular product classification theories in advertising and mass media research (e.g., Choi, Yoon, Paek, & Reid, 2012; Kantanen & Tikkanen, 2005; Weinberger & Spotts, 1989; Yoon & Kim, 2001). In fact, the theory was selected as one of the most invaluable classic advertising theories in the special 50th Advertising

Research Foundation anniversary issue of the *Journal of Advertising Research* (Ratchford, 1987). Detailed descriptions of the two dimensions used by the theory to form the four purchase decision quadrants are presented in Chapter Two.

THE PURPOSE OF THE STUDY

The purpose of this study is two-fold. First, the study attempts to update the FCB grid because the product examples provided by the grid model have been considered outdated; the theory was developed about three decades ago (Ratchford, 1987). As seen in Appendix A (the original FCB grid), product types on the grid model do not acknowledge the current product environment, and the grid includes several discontinued products such as console televisions and low tar cigarettes. Moreover, the theory does not incorporate newly emerged products such as flat screen televisions or cell phones, and several types of products need to be renamed, as their names have changed over time (e.g., salad oil).

Second, in addition to updating the FCB grid, online/offline shopping contexts were added to the grid model to further divide purchase situations and product types into twelve categories. Instead of binary online vs. offline shopping contexts, trinary contexts (i.e., online shopping, online or offline shopping, and offline shopping) were used to classify the products and purchase types, because many consumers do not prefer one shopping method than another for many product types (e.g., small furniture, laptop computers, auto insurance).

The data collected in this dissertation through online surveys with 1,104 U.S. consumers indicate that consumers do not have a preference for either shopping online or offline for approximately 70 product types. This dimension was measured with a seven-point semantic differential scale, so products within the scores 2.33 to 4.66 were considered online or offline shopping products. When testing one of the research hypotheses that compares pre-purchase information-seeking behaviors relative to online versus offline shopping, only the product types in the online shopping or offline shopping category were used, to avoid the products frequently purchased both on- and off-line. The researcher added these purchase contexts because purchase decision-making may vary when shopping online or offline because of the unique characteristics of each shopping method (Danaher, Wilson, & Davis, 2003; Dawes & Nenycz-Thiel, 2013; Degeratu, Rangaswamy, & Jianan, 2000), and consumers' pre-purchase information-seeking behaviors also vary when shopping online or offline. When shopping online, consumers tend to use the same medium for pre-purchase information (Detlor, Sproule, & Gupta, 2003; Phau & Poon, 2000), whereas they use more varied information sources (such as FtF WOM, traditional broadcast and print media, direct experience of products at traditional brick-and-mortar stores, and the Internet using mobile phones) when shopping offline (Choi & Park, 2006; Moon, 2004).

To update the product types on the FCB grid, focus groups and a set of online surveys using Ratchford's (1987) original scale items that measured survey participants' PDI and thinking/feeling purchase-decision types were utilized. To add the online/offline shopping contexts, a scale that measured consumers' preferences to shop online or offline

was borrowed from a previous electronic commerce (e-commerce) study (Levin, Levin, & Weller, 2005). The wording for the scales was modified relative to product types.

Second, this dissertation explores several research hypotheses that pertain to the influences of purchase decision type on consumers' level of reliance on brand-related UGC. The hypotheses were constructed based on previous literature relevant to brand-related UGC: the theory of involvement, such as Petty and Cacioppo's (1981; 1984) Elaboration Likelihood Model (ELM) studies; hedonic vs. utilitarian dimensions of consumer attitudes (e.g., Spangenberg, Voss, & Crowley, 1997; Voss et al., 2003); the FCB grid development studies (e.g., Ratchford, 1987; Vaughn, 1980; 1986); consumers' information-seeking behavior while shopping online vs. offline; and online and offline shopping preferences (e.g., Levin et al., 2005).

Implications of the Study

The dissertation has several implications, both for scholars and practitioners. First, the study could benefit future research in consumer involvement (especially PDI), think/feel purchase decisions, and e-commerce, because it provides a consumer behavior model that classifies various purchase decision-making situations into twelve types of purchase decisions, based on the three product purchase dimensions: high/low PDI, think/feel purchase decisions, and online/online or offline/offline shopping.

Second, because the study attempts to update the FCB grid model, a 'classic' product classification theory that offers approximately 60 product types based on product purchase situations, researchers in the fields of advertising, marketing, and consumer behavior can use an up-to-date product grid that acknowledges the current marketplace.

Third, the study also has implications for researchers interested in brand-related UGC and online information-seeking behaviors, because it offers one of the first research studies to explore how different purchase situations and product types can influence consumers' information-seeking behavior in the context of brand-related UGC.

Finally, advertising practitioners and marketing managers can also use this study for their advertising and marketing plans, as the study provides guidelines that describe what attributes of purchase situations may determine consumers' reliance on brand-related UGC. This may help practitioners to make better decisions on how much of their marketing budgets they should allocate to online brand promotions that utilize brand-related UGC, in order to achieve their desired goals. The newly updated product types of the FCB grid may be beneficial for practitioners as well.

In this chapter, brief descriptions of the research problem, background information of the study (e.g., FCB grid), research purposes, and the study's implications for scholars and practitioners have been provided. In the next section, literature relevant to brand-related UGC, the theory of PDI, the two types of purchase decisions (i.e., think/feel purchase decisions), and online/online or offline/offline shopping is reviewed. Finally, several research hypotheses are posed.

CHAPTER 2: LITERATURE REVIEW

BRAND-RELATED UGC

Definitions and Characteristics

Given the fast growth of UGC-based websites and consumers' use of brand-related UGC for their purchase decision-making, researchers from both the industry and academia have attempted to provide definitions of UGC (e.g., Daugherty, Eastin, & Bright, 2008; Park et al., 2011; US Interactive Advertising Bureau, 2008).

The US Interactive Advertising Bureau (2008), a self-regulatory organization in the advertising industry that focuses on Internet advertisements and other online promotions, described UGC as "…any material created and uploaded to the Internet by non-media professionals…" (p. 1), and Daugherty et al. (2008) defined UGC as "media content created or produced by the general public rather than by paid professionals and primarily distributed on the Internet" (p. 16) in their research that examined motivational factors that may determine consumers' creation of UGC. In addition, the Organisation for Economic Co-operation and Development (OECD, 2006-7) described UGC as "i) content made publicly available over the Internet, ii) which reflects a certain amount of creative effort, and iii) which is created outside of professional routines and practices" (p. 4).

Although the three definitions have several aspects in common and provide useful descriptions of UGC, one of the most noteworthy ideas that runs through what online content qualifies as UGC is that the content must be created by "the general public" rather than by paid professionals. This makes brand-related UGC unique from other marketer-generated brand content that exists online.

Second, brand-related UGC may run a spectrum from extremely positive to extremely negative, and companies do not have direct control over the messages embedded in UGC (Johnson & Kaye, 2004). Positive brand information in UGC may involve favorable brand reviews and direct (or indirect) brand recommendations, whereas negative content in brand-related UGC may contain rumors, consumer complaints, and product denigrations (Liu, 2006). Moreover, the impacts of negative WOM messages in brand-related UGC are much stronger and more critical than those of positive comments (Anderson, 1998). Damaged brand equity from negative WOM messages is extremely hard to recover from, and the recovery takes much more time and effort than building positive brand equity (Bowman & Narayandas, 2001).

Third, brand-related UGC may cover a wide range of product types; topics in brand-related UGC may range from cheap household products to expensive products such as cars and appliances. Indeed, whether or not the product in a consumer review is a common type of product is not a crucial issue that determines whether a consumer posts the product review. Consumers post reviews on less common and less popular products almost as much as they do for more common product types that have often been reviewed by other consumers (Dellarocas, Gao, & Narayan, 2010). Furthermore, the effects of consumer reviews on their peers' brand choices are much stronger when the product in the review is a less popular product than a more popular product (Duan, Gu, & Whinston, 2008).

Last, the interactions between posters and readers of brand-related UGC may involve *hyperpersonal communications,* where the strategic self-presentation of the

posters can be optimized; posters have increased opportunities to self-censor and thus can more selectively present themselves rather than while they are engaging in FtF communications (Okdie, Guadagno, Bernieri, Geers, & Mclarney-Vesotski, 2011; Walther, 1996). Therefore, the readers of brand-related UGC may idealize the posters' intellectual abilities and expertise on the topics, even though they lack the demographic and nonverbal cues of the posters (Okdie et al., 2011; Walther, 1996). The *hyperpersonalizing* that occurs in the context of UGC may be attributed to the unique characteristics of computer-mediated communication (CMC); the Internet provides its users with relative anonymity, attenuated importance of physical appearance and visual cues, reduced importance of physical proximity between posters and readers, and greater control over the time of interactions (e.g., durations of the act of writing the messages or when the messages are opened) (McKenna & Bargh, 2000; Okdie & Guadagno, 2008).

Growth of UGC Websites

Since its emergence, UGC has rapidly gone mainstream. Nearly 74% of U.S. Internet users, ages 18 or more, used at least one type of social networking site (SNS) in 2014, and 52% indicated that they were users of multiple SNSs (Duggan et al., 2015; Pew Research Center, 2014). Social networking has become one of the most popular online activities as well. In 2014, U.S. Internet users spent approximately 24.6% of their time online using online social networks, whereas their time spent online for gaming was about 12.6% and for reading newspapers and magazines was 5.3% (Nones, 2014).

Furthermore, UGC-based websites are no longer deemed a niche online medium used only by younger generations (Swedowsky, 2009). Approximately 59% of U.S. older

adults, ages 65 and older, used the Internet or email as of September 2013, and 46% of the online seniors used SNS; the U.S. older adults' usage rate of online social networks grew by 253% from 13% in 2009 (Smith, 2014). In particular, Facebook attracted a large number of U.S. seniors. More than half (56%) of U.S. Internet users, ages 65 and older, used Facebook in 2014, while the number of older Facebook users was about 45% in 2013 – an increase of 24.4% in one year (Duggan et al., 2015). Twitter also gained in popularity in 2014 among the U.S. older adults, compared to the year before. Around 10% of the U.S. older Internet users, in the same age bracket, used Twitter in 2014, while only 5% used the website in 2013 (Duggan & Smith, 2013). The actual proportion of the website users may not be impressive, but the growth rate was significant: about 200%.

Along with the rapid increase in U.S. UGC website users and their time spent on online social networks, many types of UGC-based websites have rapidly become popular online destinations for global Internet users as well. Facebook, one of the most popular SNSs in the U.S., gathered more than 160.7 million unique visitors globally in June 2015 (Compete, 2015), and has become the second-most-visited website in the world since it began its services in 2004 (Alexa, 2015a). Facebook is even the most popular website if time spent is considered; Internet users spent around 21.15 minutes a day on Facebook in August 2015, while they spent approximately 17.48 minutes on Google, the number one Internet site in terms of the number of unique visitors (Alexa, 2015, 2015b). Other types of UGC websites have gained in popularity also. As of August 2015, four out of the top ten most-visited websites are UGC-based websites; YouTube is ranked third, Wikipedia is ranked seventh, and Twitter is ranked ninth (Alexa, 2015c).

Typology of UGC Websites and Brand-Related UGC

UGC-based websites take many forms and each website shows unique characteristics and provides its own goals for use. For instance, Facebook is normally used to build and maintain social capital, and it attracts slightly more female audiences and younger generations, ages 18-29, than male users or those in other age groups (Duggan & Brenner, 2013). In contrast, LinkedIn, a professional networking website to find job candidates and business partners, has gathered those who have a post graduate degree approximately three times more than have other UGC websites (Alexa, 2013; Nielsen, 2011). MySpace, a UGC-based website, which offers diverse music-related content, has attracted a unique user group as well – teen music-lovers (Nielsen, 2011).

Based on what services the websites provide and who are the major users of the websites, UGC websites may be classified into several types: SNS (e.g., Facebook), blog, micro-blog (e.g., Twitter), video-sharing website (e.g., YouTube), photo-sharing website (e.g., Flickr), collaborative project (e.g., Wikipedia), virtual social world (e.g., Second Life), and virtual gaming world (e.g., World of Warcraft) (Godwin, 2008; Kaplan & Haenlein, 2010). Because the users' goals for the uses and the services provided by each UGC website vary, brand-related UGC appear more on certain types of UGC websites than on others. For instance, user-generated videos that contain product demonstrations or brand reviews appear more on video-sharing websites (e.g., YouTube.com), and consumer reviews that include product photos or brand recommendations based on purchase experiences are more often observed on a blog, a micro-blogging website (e.g., Twitter.com), or a brand community (e.g., Hells-angels.com – Harley Davidson brand

community) than on other types of UGC websites (Jansen, Zhang, Sobel, & Chowdury, 2009; Keller & Fay, 2012; Russ, 2010). Although websites such as online retail stores (e.g., Amazon.com, Zappos.com) and product manufacturer-run websites are not typically deemed to be UGC-based websites, brand-related UGC is frequently observed on those types of websites as well, as long as the websites provide a platform for UGC such as product rating boards and brand forums.

Because a considerable amount of brand-related UGC appears on UGC-based websites and consumers perceive UGC as a credible source of information for their decision-making (Cheong & Morrison, 2008; Swedowsky, 2009), individuals who consider making a purchase decision often visit UGC-based websites and read brand-related information generated by other consumers (Christodoulides et al., 2012). According to a Nielsen industry report in 2012, approximately 70% of U.S. UGC website users read other consumers' brand experiences online in 2012, and 65% felt that they learned about brands or products (Nielsen, 2012). Furthermore, a considerable number of U.S. consumers also contributed to creating brand-related UGC posts. Around 50% of U.S. UGC website users posted concerns or complaints about brands or products, and 47% shared money incentives with their friends and acquaintances, using online social networks (Nielsen, 2012).

Research Streams in Brand-Related UGC

Because of those unique characteristics of interpersonal communications in the context of brand-related UGC and the fast-growing popularity of UGC-based websites researchers in diverse fields of study, such as marketing communications and consumer

behavior, have explored various topics relevant to brand-related UGC. Specifically, there have been several major research streams, according to Smith, Fischer and Yongjian (2012): (1) Consumer-oriented branding and advertising, (2) consumers' perceived credibility of electronic-WOM (eWOM) messages, (3) UGC's predictive values on sales, and (4) the protection of intellectual properties in the context of UGC.

First, a considerable amount of research effort was made with regard to consumer-oriented branding and advertising (Burmann, 2010; Ertimur & Gilly, 2012). For instance, consumers' motivational factors for participating in online brand content creation (e.g., Christodoulides et al., 2012; Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004), consumers' responses to consumer-generated ads (e.g., Ertimur & Gilly, 2012), and the articulated conversations regarding consumer-oriented advertisements that appear on UGC websites (e.g., Campbell, Pitt, Parent, & Berthon, 2011) have been examined in various UGC studies. Moreover, co-creating perspectives in consumer-oriented branding has been explored by advertising researchers, using vigilante ads that consumers post in online brand communities (e.g., Muñiz & Schau, 2007). Managerial implications and strategic recommendations for marketing managers and advertising practitioners relevant to consumer-generated ads and user-generated branding have also been suggested by several research studies (e.g., Berthon, Pitt, & Campell, 2008; Deiser & Newton, 2013).

Second, consumers' perceived credibility of eWOM messages embedded in brand-related UGC and their impacts on consumers' decision-making processes were explored by numerous research studies (e.g., Cheong & Morrison, 2008; Goldsmith & Horowitz, 2006; Liu, Karahanna, & Watson, 2011). Using in-depth interviews, Cheong

and Morrison (2008) examined how credible the Internet users find the brand recommendations and product-relevant information that consumers encounter in UGC by comparing such content to online brand content generated by marketers. They found that consumers deem UGC to be a much more credible source of information than marketer-generated brand content, because consumers believe there is nothing to gain by posting WOM messages online. A study by Liu et al. (2011) supports this idea: Online consumer reviews help other consumers to have unbiased understanding of brands and to make accurate brand choices. However, according to Kulmala, Mesiranta, and Tuominen (2013), there are fewer differences between the perceived trust in organic WOM (i.e., consumers' voluntary WOM messages) and in amplified WOM (i.e., marketer-influenced WOM messages).

The third research stream on brand-related UGC is more industry-oriented than the other two; it explores UGC's predictive values on sales (e.g., Chevalier & Mayzlin, 2006; Dellarocas, Zhang, & Awad, 2007; Dhar & Chang, 2009). Focusing on 'hedonic' products such as music, movies, and books, which are relatively hard to evaluate without experiencing them, those studies examined whether consumer reviews in the context of UGC can be used as a determinant in estimating the volume of sales. The studies found that future sales may be estimated by measuring the volume of online posts and by analyzing the valence of user ratings (i.e., whether the content of user ratings is positive or negative). Specifically, at least in the music and movie markets, sales can be estimated when consumer reviews are used with other traditional metrics, such as marketing budget, theatrical availability, whether the music or the film is produced by major labels

or productions, and how positive the critics' reviews are (Dellarocas et al., 2007; Dhar & Chang, 2009). In addition, the impact of negative reviews on hedonic products such as books was also examined, and the book sales were more affected by negative consumer reviews than by positive ones (Chevalier & Mayzlin, 2006).

In addition to those three current research streams, there have been many other research studies pertaining to other UGC-related research phenomena: the influences of eWOM messages on the tourism industry (e.g., Ayeh, Au, & Law, 2013; Duverger, 2013; Wilson, Murphy, & Fierro, 2012), the protection of intellectual properties and privacy on SNSs (e.g., Hugenholtz, 2013; Jamar, 2012; Kaupins & Reed, 2012), and the influences of interpersonal communications in the context of UGC on health-related behaviors (e.g., Miller & Tucker, 2013; Villiard & Moreno, 2012). In spite of researchers' increasing interest in diverse research topics in brand-related UGC, to the author's knowledge no existing research study has explored how purchase decision type affects consumers' reliance on WOM messages in brand-related UGC. This dissertation sheds light on this area of research.

DIMENSIONS AND HYPOTHESES

In order to examine the research phenomenon of this dissertation (i.e., the influence of purchase decision type on consumers' level of reliance on brand-related UGC), several hypotheses were posed using the theory of the FCB grid and the three purchase dimensions: high/low purchase decision involvement (PDI), think/feel purchase types, and online/online or offline/offline shopping contexts. The first two dimensions are

used by the FCB grid in classifying various products into four purchase decision types, and they abound in existing advertising and information-processing research. However, the third dimension, online/online-or-offline/offline shopping, was unique to the grid and is added by the current dissertation. As described in the previous Chapter, binary online and offline shopping contexts were used to test hypotheses because some consumers do not prefer one shopping method to another for many product types. The FCB grid model was updated with the trinary shopping contexts (i.e., online shopping, online or offline shopping, and offline shopping).

Conceptualization of Involvement

It is widely accepted that consumers have different tendencies to make purchase decisions and varied buying motives, often based on the product type and the level of involvement that they have with the purchase situation. In fact, involvement is one of the key elements that determine consumers' decision-making processes (Samson, 2010; Weinberger & Spotts, 1989; Yoon & Kim, 2001). Involvement refers to "a person's relevance of the object [or the situation] based on inherent needs, values, and interests" (Zaichkowsky, 1985, p. 342), and was first incorporated into advertising by Krugman (1965). He noted that consumers receive advertising messages differently when they are in high- or low-consumer involvement situations (Yoon & Kim, 2001).

In general, researchers (e.g., Laurent & Kapferer, 1985; Mittal, 1989; 1995; Mittal & Lee, 1989) acknowledge that there are two types of involvement in consumer behavior: product-class involvement and PDI. Product-class involvement and PDI are both related to one's involvement with a stimulus (a product class or a purchase situation), and are

continuums with high and low involvements as the two extremes of the continuums (Laurent & Kapferer, 1985; Mishra & Kumar, 2012; Zaichkowsky, 1985). Despite these similarities, these two consumer involvement types differ in several aspects. First, product-class involvement is the interest an individual finds in an object (i.e., a product class), while PDI is the concern that an individual brings to bear upon an activity (i.e., a purchase-decision task) (Mittal, 1989; Mittal & Lee, 1989).

Second, product-class involvement reflects a consumer's general and relatively permanent interest with regard to a product-class and is deemed one's long-term attachment to the product-class. In contrast, PDI reflects a consumer's situational concern over a purchase decision task and is often expressed as one's short-term attachment to the purchase decision task (Bloch, 1981; Laurent & Kapferer, 1985; Michaelidou & Dibb, 2008; Mittal, 1989).

Finally, one's level of PDI tends to be more affected by situations and, thus, varies more than one's level of product-class involvement (Bloch & Richins, 1983; Mittal, 1989). For example, the level of a consumer's product-class involvement with wines might remain the same, but the person's level of PDI with wines may vary based on occasions. A purchase of wines for a wedding ceremony or for a party is perhaps a more important task than a purchase of wines for an ordinary occasion (Mittal, 1989).

Scales of Product-Class Involvement and PDI

In previous consumer research, product-class involvement and PDI were measured with various involvement scales (Mittal, 1995). However, four involvement scales have been used most frequently by researchers when measuring consumer

involvement: Laurent and Kapferer's (1985) Consumer Involvement Profile (CIP), Mittal's (1989) Purchase-Decision Involvement, Vaughn's (1980; 1986) FCB grid PDI scales, and Zaichkowsky's (1985; 1994) Personal Involvement Inventory (PII).

Scales of Product-Class Involvement

A number of studies (e.g., Bloch, 1981; Hupfer & Gardner, 1971; Lastovicka & Gardner, 1977) developed product-class involvement scales. However, two involvement scales, created by Laurent and Kapferer (1985) and Zaichkowsky (1985; 1994), have been most frequently used by researchers when conducting studies relative to product-class involvement in consumer behavior (Mittal, 1989).

Beginning from a list of 168 word pairs, Zaichkowsky (1985) and her colleagues initially developed a 20-item involvement scale by eliminating irrelevant words. She developed the scale with various product types (e.g., watches, athletic shoes, calculators, mouthwash, breakfast cereals, red wine, 35mm cameras, bubble bath, facial tissue, jeans, automobiles, instant coffee, laundry detergent, color televisions) and used numerous scale tests – content validity, internal consistency, inter-item correlation, test-retest reliability tests, criterion-related validity, and construct validity. Approximately a decade after she developed the scale, Zaichkowsky (1994) revisited her study and modified the PII scale by reducing the number of items from 20 to 10 (See the modified PII scale in Table 1).

Although Zaichkowsky (1985; 1994) claimed that her PII scale was context-free and could be applied to any involvement-related research phenomena, such as one's involvement with a product-class, with a purchase decision task, or with an advertisement. However, other researchers noted that the subscales of the PII were

applicable to product-class involvement or involvement with advertisements but not to purchase decision tasks, because the scale was not empirically tested with purchase decision tasks and some items (e.g., relevant/irrelevant, appealing/unappealing, worthless/valuable) were irrelevant to purchase decision situations (Mittal, 1989).

Table 1. Personal Involvement Inventory (PII) Scale - Zaichkowsky (1994)

Scale Items		Scale Type	Research that Used the Scale
To me (object to be judged) is:		Semantic Differential (7-point)	Buˇsljeta Banks & De Pelsmacker (2014); Cilingir & Basfirinci (2014); George & Edward (2009)
1. Important	Unimportant		
2. Boring	Interesting		
3. Relevant	Irrelevant		
4. Exciting	Unexciting		
5. Means nothing	Means a lot to me		
6. Appealing	Unappealing		
7. Fascinating	Mundane		
8. Worthless	Valuable		
9. Involving	Uninvolving		
10. Not needed	Needed		

In the same year that Zaichkowsky (1985) developed her initial PII scale, Laurent and Kapferer (1985) created a consumer involvement scale. They developed their scale with a review of early involvement literature and data collected through in-depth interviews (N=307) of French housewives. The study generated an involvement scale that included four antecedents: imporisk (i.e., a combination of perceived importance/interest of a product and risk-importance of a poor product decision), a product's hedonic value, sign-value, and risk-probability of making a poor product decision. Mittal (1989) noted that the scale should be deemed a product-class involvement scale, not a PDI scale,

because most subscales correspond to one's enduring, non-situational involvement with product classes (Laurent & Kapferer, 1985). The subscales of Laurent and Kapferer's (1985) CIP scale are listed in Table 2.

Scales of PDI

Mittal (1989) developed a scale of PDI because there was no clear distinction between PDI and product-class involvement, and because the literature on consumer involvement lacked an accurate measure of one's involvement with purchase decision tasks. Some scales of consumer involvement existed, but most of them were related to product-class involvement or enduring involvement (e.g., Bloch, 1981; Hupfer & Gardner, 1971; Lastovicka & Gardner, 1977; Laurent & Kapferer, 1985; Traylor & Joseph, 1984; Zaichkowsky, 1985).

Mittal's (1989) PDI scale was initially developed with four subscales: one's degree of caring about a purchase decision, importance of the right product choice, concern with the outcome of a purchase, and ability to differentiate brands in a product category. However, in his 1995 study, Mittal eliminated the final subscale (i.e., ability to differentiate brands in a product category) because the item did not pass a unidimensionality test. Mittal (1995) conducted a series of validity tests: content validity, unidimensionality, convergent validity, discriminant validity, and nomological validity. A list of the items of Mittal's (1989; 1995) PDI scale is presented in Table 3.

Table 2. Consumer Involvement Profiles (CIP) Scale - Laurent and Kapferer (1985)

Scale Items*	Scale Type	Research that Used the Scale
1. Importance; Interest - I attach great importance to _____. - _____ interests me a lot. - _____ leaves me totally indifferent.** 2. Pleasure - It would give me pleasure to purchase _____ for myself. - When you buy _____, it is a bit like giving a gift to yourself. - Having _____ is a pleasure for me. 3. Sign - You can tell something about a person by the _____ (s)he picks out. - The _____ you buy tells a little bit about you. - The _____ I buy shows what type of man/woman I am. 4. Risk probability - When you purchase _____, you are never certain you made the right choice. - Whenever you buy _____, you never really know whether it is the one you should have bought. - When I can select from several _____, I always feel a bit at a loss in making my choice. - Choosing _____ is rather complicated. 5. Risk importance - When you choose a _____, it is not a big deal if you make a mistake.** - It certainly is annoying to purchase _____ that doesn't meet my needs. - I would be really upset if, after I bought some _____ I found I had made a poor choice.	Likert (5-point)	Jain & Srinivasan, (1990); Mishra & Kumar (2012)

* Rodgers and Schneider's (1993) English-translated scale items are provided.
** These items (interest 3, risk importance 1) are negatively worded.

Table 3. Purchase-Decision Involvement (PDI) - Mittal (1989; 1995)

Scale Items	Scale Type	Research that Used the Scale
1. In selecting from the many types and brands of this product available in the market, would you say that: I would not care at all as to which one I buy. I would care a great deal as to which one I buy. 2. Do you think that the various types and brands of this product available in the market are all very alike or are all very different?* They are alike. They are all very different. 3. How important would it be to you to make a right choice of this product? Not at all important. Extremely important. 4. In making your selection of this product, how concerned would you be about the outcome of your choice? Not at all concerned. Very much concerned.	Semantic differential (7-point)	Beatty, Kahle, & Homer (1988); Kim & Sung (2009)

* This item was deleted by Mittal's 1995 study.

Vaughn's (1980; 1986) FCB grid cross-classifies various purchase decision situations along two purchase dimensions: PDI and think/feel purchase decision. The PDI scale of the FCB grid model was initially developed with eleven items, but the number of items was reduced to three by three pilot studies (Ratchford, 1987). The items were verified with two more pilot studies and a final study, because the researchers conducted the fourth and the fifth pilot studies for developing subscales of the think/feel dimension of the theory and did the main study for testing the subscales of both the dimensions. The first three pilot studies were conducted with a total number of 110 adult samples from the New York and Chicago areas (Study 1—30, Study 2—50, Study 3—30), and the main study was implemented with a total number of 1,792 nonstudent consumer samples

through mail surveys (Mittal, 1995; Ratchford, 1987). The questionnaire for the final study was measured with 254 product types, but only 60 product types were specified on the FCB grid model because the researchers believed a purchase decision grid with 254 products could be too complex. A list of the FCB grid's PDI scale items is provided in Table 4.

Table 4. FCB Grid's PDI Scale - Ratchford (1987); Vaughn (1980; 1986)

Scale Items		Scale Type	Research that Used the Scale
Please rate the process of choosing a brand of (product) on each of the following scales. Please base your rating on your most recent choice of a brand of (product).		Semantic differential (7-point)	Claeys, Swinnen, &Abeele (1995); Putrevu & Lord (1994)
1. Very important decision	Very unimportant decision		
2. Decision requires a lot of thought	Decision requires little thought		
3. A lot to lose if you choose the wrong brand	Little to lose if you choose the wrong brand		

In order to inquire how PDI was measured by previous research, and whether there are PDI measures which have been developed that would be more appropriate for updating the grid theory, the four most widely used consumer involvement scales (Zaichkowsky's PII, Laurent and Kapferer's CIP, Mittal's PDI, and Vaughn and Ratchford's PDI scales) were reviewed.

PDI and Consumer Information-Seeking Behavior

Literature notes that the extent of one's consumer information search is one of the most noteworthy consequences of high involvement with a purchase decision task (Bloch

& Richins, 1983; Houston & Rothschild, 1977; Mittal, 1989). For example, when consumers make a high-involvement purchase, such as a purchase of a car, they tend to seek product information more actively and engage in extensive brand comparisons, as opposed to when their purchase situation involves a low involvement purchase, such as a purchase of chocolate bars or toothpaste (Hansen, 2005; Houston & Rothschild, 1977; Lee & Marlowe, 2003). In particular, the level of PDI significantly influences one's width of information seeking (that is, the number of information sources) and also the depth of information-seeking (that is, the extent to which information is sought from each source) (Mishra & Kumar, 2012). According to Mishra and Kumar (2012), the participants of their research indicated that, when the participants were highly involved with a purchase of mutual funds, they attempted to seek product information from numerous information sources and relied heavily on information sources that offered detailed information on the product. This consumers' tendency to make extensive efforts to seek product information for high-involvement purchases remains the same for purchases of products that express one's lifestyle and personality characteristics (Assael, 1981; Laurent & Kapferer, 1985). Those who make a purchase decision of value-expressive products or ego-defensive products, such as automobiles or luxury watches, engage more in information seeking in the contexts of the Internet, newspapers, and magazine media (Yoon & Kim, 2001). High-involvement purchase decisions are more enduring and stronger, while low-involvement purchases are likely to be less strong and to change more easily with simple cues (Petty & Cacioppo, 1984; Rucker & Petty, 2006; Wang, Wang, & Farn, 2009).

Elaboration Likelihood Model and Consumer Involvement

The decision-making processes for both high- and low-involvement purchases are well described by Petty and Cacioppo's (1981; 1984) Elaboration Likelihood Model (ELM), a seminal persuasion theory that divides purchase decisions into high- and low-involvement purchase situations. According to the theory of ELM, when people are confronted with a persuasive message that evokes their motivations and curiosity to ponder and they are able to process the message, they take a "central route," considering the message cautiously, and making a careful purchase decision. In contrast, if a persuasive message is not interesting enough to think through or if the consumers are unable to process the message, people take a "peripheral route" and follow a simple cognitive "short cut" to purchase decisions. In this route, heuristic cues, such as source credibility (e.g., expertness of the source) and liking heuristics (e.g., a speaker's appearance), are more important decision factors than informative persuasion messages (Anderson, 1971; Petty & Cacioppo, 1984).

An experimental study examining relationships between print advertising media and consumer involvement (Petty, Cacioppo, & Schumann, 1983) supports the theory of ELM. In this study, 160 participants were provided with two magazine ads of high- and low-quality arguments and two magazine ads with and without product endorsers, and the participants were asked which magazine ads were more influential. Through the experiment, the researchers found that subjects were more affected by argument quality (i.e., central information-processing) than by product endorsers (i.e., a peripheral cue) when they were exposed to high-involvement product magazine ads, whereas product

endorsers much more influenced the participants than did argument quality when they saw low-involvement product magazine ads (Petty et al., 1983). The involvement was manipulated by the value of the participation rewards (i.e., a brand of free razor vs. a brand of free toothpaste) and the relevance of the advertising messages (i.e., potential availabilities of the advertised products in the subjects' city).

Another research study by Yoon and Kim (2001) pertaining to advertising media and product categories also validates the assumptions behind the ELM model. Online advertising media, which can contain large amounts of information and are generally accessible for a long period of time, were found to be more suitable than traditional advertising media, such as television or newspapers, for high-involvement purchase decisions versus low-involvement purchase decisions because consumers want greater amounts of brand information when they are considering high-involvement purchases (Yoon & Kim, 2001). The implication here is that online media, which endure and are often searchable, may provide a more appropriate environment for purchases of high-involvement products.

Because brand-related UGC involves a considerably large amount of product- and brand-relevant information and peer-generated brand recommendations (Burmann, 2010) and is more trusted by consumers than are advertisements or other marketer-generated product information (Goldsmith & Horowitz, 2006; Shu-Chuan & Kamal, 2008), consumers may search brand-related UGC when they need brand information for their purchase decisions; particularly when the decision task involves a high-involvement purchase situation. However, to date, brand-related UGC has not been closely studied by

researchers relative to purchase decision involvement. With that in mind, the following hypothesis is posed:

> **H1:** Consumers are more likely to engage in brand-related UGC-seeking when they make high-involvement purchase decisions, than when they make low-involvement purchase decisions.

Conceptualization of Think/Feel Purchase Dimension

Based on the idea that advertising messages should vary based on the levels of consumers' involvement with purchase situations, the FCB grid includes PDI to classify products into high- versus low-involvement purchase situations (Rossiter, Percy, & Donovan, 1991; Vaughn, 1986). In addition to the PDI dimension, Vaughn (1980; 1986) and his colleagues added another dimension, the think/feel purchase decision, to the grid model, and divided purchase types into four quadrants: 'high-involvement and think purchase decision,' 'high-involvement and feel purchase decision,' 'low-involvement and think purchase decision,' and 'low-involvement and feel purchase decision' (Ratchford, 1987; Vaughn, 1980; 1986).

The think/feel purchase dimension of the FCB grid refers to the "modes of information processing in the grid model" (Ratchford & Vaughn, 1989, p. 293) or the "categories of motives" (Ratchford, 1987, p. 25). The buying motives for 'think' products (i.e., the products that show on the left side of the grid; see Appendix A) are more related to instrumental and utilitarian reasons, while the buying motives for 'feel' products (i.e., the products that show on the right side of the grid) focus more on consumers'

consummatory affective gratification (Batra & Ahtola, 1990; Dhar & Wertenbroch, 2000). Because of the differences in buying motives for both types of products, consumers make purchase decisions of 'think' products more rationally and based more on evaluations of utilitarian benefits offered by different brands in a product category, and make purchase decisions of 'feel' products more emotionally and based more on evaluations of hedonic/affective attributes of various brands in the product category (Vaughn, 1980; 1986). A product's utilitarian benefits may include functional, practical values of a product, and affective attributes may be sensory, experiential attributes of a product (Batra & Ahtola, 1990; Dhar & Wertenbroch, 2000; Strahilevitz & Myers, 1998).

It is also well documented that various product types are categorized as either 'feel' or 'think' products in a consumer's mindset (Ratchford, 1987; Vaughn, 1980; 1986; Voss et al., 2003). For example, Vaughn and his colleagues (1980; 1986) acknowledge that products, such as sports cars, perfume, wines for a dinner party, and wallpapers, are deemed to be 'feel' products in consumers' mindsets because those product types offer hedonic/value-expressive benefits. Product types, such as auto insurance, credit cards, car batteries, and insecticide, are perceived to be 'think' products by consumers, as purchase decisions of those product types are made logically and based more on objective judgment (Ratchford, 1987). Voss et al. (2003) also claimed that product types such as video games, beer, tobacco, and glass figurines fall into the 'feel' product category, whereas paper clips, shoelaces, alkaline batteries, and disposable baby diapers should fall into the 'think' product category.

However, Voss et al. (2003) also noted that one's evaluation of a product type reflects a summary construct of the brands in the product category. For instance, one's evaluation of alkaline batteries is a summary construct of the evaluations of Duracell, Energizer, and other battery brands, and an evaluation of athletic shoes is based on aggregate assessments of Nike, Adidas, Reebok, and other sneaker brands. This is in line with Chitturi's (2008) research that noted that not only product types but also brands offer hedonic/utilitarian benefits and that consumers make purchase decisions based both on hedonic and on utilitarian attributes offered by various brands in a product category. He also reported that the strengths of brands affected the survey participants' perceptions of brands' hedonic and utilitarian values. The respondents indicated that they perceived brands such as BMW (a strong brand) to be brands that offer a greater level of hedonic values than utilitarian values, and that brands such as Hyundai Motors (a weak brand) were perceived to be brands that offer a greater level of utilitarian values than hedonic ones. Strong brands were also perceived as offering both hedonic and utilitarian benefits that were significantly greater than those of weak brands (Chitturi, 2008).

Notwithstanding the fact that numerous product types fall into the categories of 'think' products or 'feel' products and that consumers' buying motives and how they make purchase decisions are dependent on product type, one's purchase decision for a brand of a product is not made solely either on a hedonic or a utilitarian evaluation of the brands in the product category (Holbrook & Hirschman, 1982). Instead, consumers tend to make both hedonic and utilitarian considerations when shopping for a product, though the degrees of both forms of considerations may vary according to the product type. Levy

(1959) even argued that all product types, no matter how mundane they are, have a symbolic meaning and thus one's buying process must include some degree of symbolic considerations (e.g., whether a choice of a brand well represents one's personality or socioeconomic status).

Another notable difference between a purchase of 'think' products and of 'feel' products is that one's purchase decision of a 'feel' product is more discretionary in nature, and thus requires more justification, which is a more difficult task. Conversely, a purchase decision of a 'think' product is more necessary, and thus requires less justification and the justification task is easier than that for a 'feel' product purchase (Okada, 2005; Prelec & Loewenstein, 1998; Thaler, 1980). Literature notes that this discrepancy in purchase justification for 'feel' and 'think' products should be attributed to the fact that a 'feel' product is perceived as a "want" (i.e., what people want to buy) and that a 'think' product is perceived as a "should" (i.e., what people think they should buy) (Bazerman, Tenbrunsel, & Wade-Benzoni, 1998; Dhar & Wertenbroch, 2000; Okada, 2005). This is consistent with previous research that a purchase of a hedonic product (i.e., a 'feel' product) may generate a greater level of a sense of guilt than a purchase of a utilitarian product (i.e., a 'think' product) (Kivetz & Simonson, 2002; Okada, 2005; Prelec & Loewenstein, 1998), and that a hedonic purchase is deemed wasteful more often than a utilitarian purchase (Lascu, 1991).

In line with these research findings, Okada (2005) investigated whether consumers chose 'feel' products over 'think' products or chose 'think' products over 'feel' products when they were faced with a separate evaluation (i.e., when an individual

makes a purchase decision of a single item without any other alternatives available), versus when they were in a joint evaluation situation (i.e., when an individual makes a purchase decision of a single item with one or more alternatives available) (Hsee, Loewenstein, Blount, Bazerman, 1999). She acknowledged that the research participants tended to purchase a product more when only a 'feel' product was offered than when only a 'think' product was offered (a separate evaluation condition), and that a 'think' product was preferred to a 'feel' product when both types of products were offered to the participants (Okada, 2005). Okada's research findings are in line with the ideas that a 'feel' product is considered a "want" and a 'think' product is deemed more a "should". In other words, when a 'feel' product and a 'think' product compete in a consumer's mindset (because the consumer has limited resources, such as money or time), the 'think' product may end up winning because it is what people think they should buy (Bazerman et al., 1998; Okada, 2005).

It is also worthy of noting that the FCB grid's think/feel dimension is not a dichotomy but a continuum (Ratchford, 1987). It is very rare that one's purchase decision excludes one form of product evaluation and evaluates the product type based only on hedonic or utilitarian considerations (Batra & Ahtola, 1990; Dhar & Wertenbroch, 2000; Vaughn, 1980; 1986). Furthermore, whether a consumer views a product type as a 'think' product or a 'feel' product depends on the individual's lifestyle, personality type, consumption history, and even the person's worldview (Ratchford, 1987; Vaughn, 1980; 1986; Yoon & Kim, 2001).

Scales of the Think/Feel Purchase Dimension

The term 'think/feel' purchase dimension has been used only by the researchers that utilized or created the theory of the FCB grid (e.g., Choi et al., 2012; Dubé, Chattopadhyay, & Letarte, 1996; Kantanen & Tikkanen, 2005; Kim & Sung, 2009; Ratchford, 1987; Rossiter et al., 1991; Vaughn, 1980; 1986; Yoon & Kim, 2001). In addition, to the best of the author's knowledge, no existing scale directly measures consumers' hedonic or utilitarian purchase decision, based on an on- and off-line literature search using two marketing scales handbooks (Bruner, 2009; Bearden & Netemeyer, 1999) and online databases such as the Business Source Elite (EBSCO) database and Google Scholar. For the online search, various keywords, such as 'think/feel purchase,' think/feel product,' 'hedonic/utilitarian purchase,' 'hedonic/utilitarian product,' and 'cognitive/affective purchase,' were used. Although the author's search did not yield a satisfying result, he found two noteworthy scales that measure hedonic/utilitarian consumer attitudes (Batra & Ahtola, 1990; Voss et al., 2003).

Scales of Hedonic/Utilitarian Consumer Attitude

Batra and Ahtola (1990) created a scale of hedonic/utilitarian dimensions of consumer attitudes. They conducted three studies with a total number of 332 student participants (Study 1 – 59, Study 2 – 180, Study 3 – 93), and the respondents were asked a series of questions relevant to real brands. Although the scale was created with adequate reliability, convergent validity, and nomological validity, and it also offers subscales of overall consumer attitudes (i.e., the subscales that can be used to measure both the utilitarian and hedonic consumer attitudes) (Batra & Ahtola, 1990), the scale

seems to be problematic, as nearly all the studies that used the scale (e.g., Chaudhuri & Holbrook, 2001; Crowley, Spangenberg, & Hughes, 1992) reported that there were errors when measuring hedonic and utilitarian consumer attitudes. For instance, Crowley et al. (1992) argued that Batra and Ahtola's (1990) scale items could not adequately measure consumers' hedonic/utilitarian attitudes relative to product categories, because the scale was developed based on studies that used real brands. Furthermore, researchers claimed that Batra and Ahtola's scale did not have proper discriminant validity from Zaichkowsky's (1985) PII subscales (Voss et al., 2003). See the scale in Table 5.

Table 5. Hedonic/Utilitarian Consumer Attitude - Batra and Ahtola (1990)

Scale Items		Scale Type	Research that Used the Scale
Utilitarian Attitudes		Semantic	Chaudhuri &
1. Useful	Useless	Differential	Holbrook
2. Valuable	Worthless	(7-point)	(2001);
3. Beneficial	Harmful		Crowley et al.
4. Wise	Foolish		(1992)
Hedonic Attitudes			
1. Pleasant	Unpleasant		
2. Nice	Awful		
3. Agreeable	Disagreeable		
4. Happy	Sad		
Overall Attitudes			
1. Good	Bad		
2. Positive	Negative		
3. Like	Dislike		
4. Favorable	Unfavorable		

Voss et al. (2003) also created a scale of hedonic/utilitarian consumer attitudes. They developed the scale items with real brands as well but, unlike Batra and Ahtola

(1990), Voss et al. (2003) examined their scale items with both brand names and product categories. They found that the research participants perceived a product type based either on aggregate evaluations of the brands in a product category or an evaluation of a prototypical brand of the category. The authors conducted six studies with more than 2,000 student subjects, and provided empirical data that supported that their scale was superior to Batra and Ahtola's 1990 hedonic and utilitarian scale. See Table 6 for Voss et al.'s scale of hedonic/utilitarian consumer attitudes.

Table 6. Hedonic/Utilitarian Consumer Attitude - Voss et al. (2003)

Scale Items		Scale Type	Research that Used the Scale
Utilitarian Attitude		Semantic	Chitturi,
1. Effective	Ineffective	Differential	Raghunathan,
2. Helpful	Unhelpful	(7-point)	& Mahajan
3. Functional	Not functional		(2008); López
4. Necessary	Unnecessary		& Ruiz (2007)
5. Practical	Impractical		
Hedonic Attitude			
1. Not fun	Fun		
2. Dull	Exciting		
3. Not delightful	Delightful		
4. Not thrilling	Thrilling		
5. Enjoyable*	Unenjoyable		

* This item is negatively worded. Needs to be reverse-scored.

Literature notes that the hedonic/utilitarian scales of Batra and Ahtola (1990) and Voss et al. (2003) both were designed to measure objects such as goods and services, not to measure consumer activities such as purchase behavior (Voss et al., 2003). For example, among Batra and Ahtola's (1990) twelve scale items, useful/useless,

valuable/worthless, beneficial/harmful, nice/awful and agreeable/disagreeable, do not seem to be appropriate to measure consumers' purchase behaviors, and Voss et al.'s (2003) scale items such as effective/ineffective, helpful/unhelpful, functional/not functional, and dull/exciting, also will not be able to capture purchase activities appropriately.

FCB Grid's Scale of Think/Feel Purchase Decision

Although Vaughn and his colleagues (1980; 1986) were able to develop their PDI scale through three pilot studies, the researchers conducted two more pilot studies to generate scale items for the 'think/feel' purchase dimension. A total number of 249 female consumers participated in the fourth pilot study by mall intercept interviews, and 50 consumers participated in the fifth pilot study; the researchers also conducted 20 additional qualitative interviews during the fifth pilot study.

Although the researchers attempted to create a 'think/feel' purchase scale that reflects the three key components of 'feeling' (i.e., ego gratification, social acceptance, and sensory) (McGuire, 1974; 1976), they failed to generate subscales for the social aspect of one's purchase decisions, because the research participants tended not to admit that what brands/products they chose were based on *what others thought* (Ratchford, 1987). However, the items of the 'think/feel' scale are still deemed to be good measures of consumers' 'think/feel' purchase decisions, because empirical data that Vaughn and his colleagues provided indicated that the items had very high reliability, content validity, trait/convergent validity, criterion validity, and predictive validity (Ratchford, 1987). See the FCB grid's 'think/feel' scale in Table 7.

In order to inquire how the think/feel purchase dimension was measured by previous research, and whether there are scales that can better measure the think/feel dimension than can the FCB grid's original think/feel measure, the two hedonic/utilitarian consumer attitude scales (Batra & Ahtola, 1990; Voss et al., 2003) and the FCB grid's think/feel scale (Vaughn, 1980; 1986) were reviewed.

Table 7. FCB Grid's 'Think/Feel' Scale - Ratchford (1987); Vaughn (1980; 1986)

Scale Items		Scale Type	Research that Used the Scale
Please rate the process of choosing a brand of (product) on each of the following scales. Please base your rating on your most recent choice of a brand of (product).		Semantic Differential (7-point)	Claeys et al. (1995)
Think			
1. Decision is not mainly logical or objective.	Decision is mainly logical or objective.		
2. Decision is based mainly on functional facts.	Decision is not mainly on functional facts.		
Feel			
1. Decision expresses one's personality.	Decision does not express one's personality.		
2. Decision is based on a lot of feeling.	Decision is based on little feeling.		
3. Decision is based on looks, taste, touch, smell or sounds.	Decision is not based on looks, taste, touch, smell or sounds.		

Think/Feel Purchase Decision and Consumer Information-Seeking

Literature notes that a purchase of a think product is more rational in nature, while a purchase of a feel product is more emotional in nature (Kronrod & Danziger, 2013). As a consequence, cognitive information seeking and information processing tend to prevail

in a purchase decision of a think product, whereas affective information seeking and information processing take place more in a purchase of a feel product (Ratchford, 1987; Vaughn, 1980; 1986; Yoon & Kim, 2001).

In line with these ideas, researchers explored several phenomena relevant to relationships between product type and information processing for the purchase decisions of those products. Using four product examples that represent each quadrant of the FCB grid model (automobiles, luxury watches, fast food, and shampoos), Yoon and Kim (2001) examined the effectiveness of diverse advertising media (the Internet, television, radio, newspapers, and magazines) on consumers' purchase behavior with various product types (i.e., automobiles, luxury watches, fast food, shampoos). They found that product information on online media were more influential on purchases of think products such as automobiles than for feel products such as fast food, whereas commercials on radio were more influential on purchases of feel products such as fast food than for think products such as automobiles and shampoos. Yoon and Kim (2001) also found that more rationally-oriented consumers were more receptive to the product information online than less rationally-oriented consumers. These findings may be attributed to the fact that the Internet advertising is a medium that can involve more information than radio commercials, and that the Internet is an active medium, where the users actively search product information, and the radio is a passive medium, where the listeners are passively exposed to the product information (Rosengren, 1974).

More recently, Choi et al. (2012) examined whether product messages in primetime TV commercials match up with the characteristics of think and feel product

types. The authors found that commercials for think products included more utilitarian appeals than commercials on feel products, whereas the advertisements on feel products included more value-expressive appeals—one of McGuire's (1976) affective motives—than the commercials on think product types (Choi et al., 2012). Kronrod and Danziger (2013) also explored the relationships between commercial messages and product types. They examined whether uses of figurative language in advertising and online consumer reviews have effects on consumers' purchases of hedonic and utilitarian products. Based on a series of experiments, they found that purchases of hedonic products are more affected by figurative language embedded both in advertisements and online consumer reviews than are purchases of utilitarian products, and that figurative language is more used by online reviewers when describing hedonic products than when writing on utilitarian products. The authors also found that the research participants chose hedonic products more when they read figurative online reviews than when they read literal reviews. Figurative language was also more contained in headlines of online reviews for hedonic products than for utilitarian products (Kronrod & Danziger, 2013).

Different advertising tactics are also recommended, based on the product type of each purchase quadrant (Ratchford, 1987; Yoon & Kim, 2001). For the purchases of products in the first quadrant (Q1), informative advertising, where numerous product details and specifications are available, is recommended, rather than for products involved in the other three quadrants. This is because purchase decisions on products such as houses and life insurance pertain to consumers' need for information.

For the products in the second quadrant (Q2), affective advertising is most recommended by the theory of the FCB grid, as the purchase situations in this quadrant are based more on emotions versus rationality. Purchases on Q2 products often express the purchasers' personalities and are also dependent on whether the image of the products is accepted by their communities (Ratchford, 1987; Vaughn, 1980; 1986).

For the purchases of the products in the third quadrant (Q3), habitual ad strategies are most recommended, because the purchase decisions on products such as household products and insecticides are usually routinized (Taylor, 1999). For the products in the fourth purchase quadrant (Q4), slice-of-life ads, where real-life product consumption situations are presented, and advertisements that emphasize the products' hedonic attributes are recommended. This is because consumers do not tend to invest much time and effort in searching product information before making purchase decisions for products in this quadrant, and the purchases can be made based on affective cues (Ratchford, 1987; Rossiter et al., 1991; Vaughn, 1986).

In short, it can be said that those who make purchase decisions for products in Q1 and Q3 tend to seek more product information prior to making the brand decisions than do those who buy products in Q2 and Q4. However, this assertion has been applied in the context of brand-related UGC. With that in mind, the second hypothesis is proposed:

> **H2:** Consumers are more likely to engage in brand-related UGC-seeking when they make 'think' purchase decisions, than when they make 'feel' purchase decisions. (In Chapter Four, this hypothesis will be divided into two separate hypotheses, because the FCB grid update reveals that the 'think/feel' purchase

decisions are, actually, two separate dimensions. See Chapter 4 for more information.)

Conceptualization of Online/Offline Shopping

In the current dissertation, another dimension, online/offline shopping, is added to the FCB grid; a trinary dimension (i.e., online/online or offline/offline shopping) is added instead of the binary online/offline shopping dimension, because of consumers' tendencies to purchase certain product types (e.g., digital gadgets, small furniture) both on- and off- line. The grid's four purchase situations are thus further divided into twelve purchase situation types, and twelve categories of product types are generated. The addition of this dimension to the grid is unique to the dissertation, and the author of the current dissertation chose the online/offline shopping dimension because consumers tend to choose which shopping context they would prefer, depending on various factors such as convenience of shopping channels, the prices of products, and product categories (Burke, 1998; Chiang & Dholakia, 2003; Levin et al., 2005; Peterson, Balasubramanian, & Bronnenberg, 1997). Although there are other shopping contexts such as TV home shopping and mail/catalog ordering, only the online and offline shopping contexts are included in the current study because these two predominate in the business-to-consumer (B2C) markets. In 2013, approximately 45% of the U.S. consumers purchased products in conventional retail stores, and about 30% made purchases online; only 10% of the U.S. consumers made product purchases via catalogue/mail ordering, and 5% used television to purchase products (Richards, 2013).

Factors that Affect Choice of Online/Offline Shopping

One's choice of shopping contexts (between online and offline shopping) depends on various factors, such as personal factors that include one's personality traits, shopping habits, and Internet literacy; and situational variables, including information search cost, price differences, product type, brand availability, delay between purchase and consumption, and the absence of sales tax (Chiang & Dholakia, 2003; Lieber & Syverson, 2012).

For example, the product search cost, such as time and cost of travel, varies based on the shopping contexts. Despite the fact that online search cost cannot be completely free because information search requires some levels of time and effort, searching information related to product categories and brands within those categories on the Internet is generally considered lower than the search cost in offline shopping contexts (Brynjolfsson, Dick, & Smith, 2010; Lieber & Syverson, 2012). The lower cost of online information searching has allowed consumers to have better capabilities of comparing prices and finding alternatives, and has allowed the distant stores and small brands to be reachable by consumers as well (Alba et al., 1997; Burke, 1998).

However, greater information asymmetry also exists on the Internet than when shopping at conventional brick-and-mortar stores. Although there are numerous online videos and product reviews posted by consumers to help others to learn about their post-purchase experiences with various products, consumers have limited opportunities to physically examine the products when they shop online (Lieber & Syverson, 2012). Thus, one's preference to seek product-related information online or offline depends on other

variables such as product involvement, convenience to travel to offline retail stores, and the degree of easiness to learn product characteristics with/without physical examination (Chiang & Dholakia, 2003; Yoon & Kim, 2001).

Product type also influences consumers' choice of online vs. offline shopping contexts (Chiang & Dholakia, 2003; Levin et al., 2005; Peterson et al., 1997). One of the most frequently used product classifications when exploring one's preferences for shopping online/offline is the typology of 'search goods' and 'experience goods' (Chiang & Dholakia, 2003). Nelson (1970, 1974) developed these categories based on the idea that complete information regarding product attributes can be known online for certain product types (e.g., life insurance), while the information about the attributes of other products (e.g., sweaters, perfumes) can only be learned by tactile or personal experience with the products (Chiang & Dholakia, 2003; Lynch, Kent, & Srinivasan, 2001).

It is generally accepted that consumers tend to shop more online when they consider search goods, rather than experience goods, whereas they shop more at conventional retail stores when they consider experience goods rather than search goods (Alba et al., 1997; Chiang & Dholakia, 2003; Klein, 1998). An exception to this is in the area of repeat purchases – when the product has already been experienced by the purchaser (Chiu, Wang, Fang, & Huang, 2014).

Factors such as price differences between online and offline retail stores, a waiting cost (i.e., the delay between a purchase of a product and its consumption), and the absence of online sales tax may also influence one's choice of an online/offline shopping context (Chen, 2011; Chiang & Dholakia, 2003; Lieber & Syverson, 2012).

Price refers to "what is given up or sacrificed to obtain a product" (Zeithaml, 1988, p. 10), and is one of the most crucial determinants that affect consumers' choice of shopping contexts (Chiang & Dholakia, 2003); if one finds a product for a lower price either in an online or offline retail store than in its counterpart, the person will probably purchase the product at the store where the lower price is offered. However, given the facts that one's perception of the price of a product is subjective in nature (Jacoby & Olson, 1977), and that the perceived price is much more important than the product's actual price (Monroe, 1973; 1990), other factors such as a waiting cost for the product's delivery or the absence of sales tax on the Internet can be also major factors that determine one's perception of the price of a product, and consequently influence the person's choice of shopping channels (Loginova, 2009).

Personal factors such as personality traits also affect one's preference for shopping online/offline. Literature notes that one's levels of need for cognition (i.e., "individual's tendency to engage in and enjoy effortful cognitive endeavors," Cacioppo, Petty, & Kao, 1984, p. 306), innovativeness, propensity to trust, value consciousness (i.e., "a concern for paying low prices, subject to some quality constraint," Litchtenstein, Netemeyer, & Burton, 1990, p. 56), and impulsive buying tendency [i.e., a personality trait that influences one's level of impulse purchase (Rook & Fisher, 1995)] positively affect the person's intention to purchase online (Chen, 2011; Donthu & Garcia, 1999; Goldsmith, 2002; Tan & Sutherland, 2004; Zhang, Prybutok, & Koh, 2006). By using the "Big Five" personality dimension, one of the most popular taxonomies of personality traits (John & Srivastava, 1999), Chen (2011) also investigated personality factors that

underlie one's intention to buy online. Among the five personality traits (i.e., extraversion, agreeableness, conscientiousness, neuroticism, openness), openness positively affects one's innovativeness and need for cognition, which leads to higher online purchase intention. Conscientiousness also positively influences one's need for cognition, as well as value consciousness.

Online/Offline Shopping and Consumer Information-Seeking

When shopping for a product, consumers need to choose what shopping contexts they are going to utilize for pre-purchase information seeking and for a product purchase itself. In some cases, consumers use only one form of shopping context for both the product purchase and the information seeking, but, in some cases, they use a combination of both. For example, when someone finds a product that arouses his/her interest at a conventional brick-and-mortar store, the consumer may purchase a brand of the product online after comparing prices at several online retail stores, or buy the product at an offline retail store after visiting several other offline retailers nearby. However, if someone encounters a product that he/she found interesting while browsing the Internet, the person might get a brand of the product after brief research of online consumer reviews and online price comparisons. The consumer might also purchase a brand of a product at a conventional retail store after trying several different brands in person.

One's choices of an online or offline shopping context for a product purchase and pre-purchase information seeking are closely related, and several factors, such as personal traits, product type, and situational factors, may influence those choices (Alba et

al., 1997; Chiang & Dholakia, 2003; Shim, Eastlick, Lotz, & Warrington, 2001; Zhou, Dai, & Zhang, 2007).

Personal traits, such as demographic factors (e.g., household income, education level), psychological factors (e.g., personal innovativeness), and personal history of shopping contexts (e.g., one's experiences with online shopping), influence one's choice of shopping contexts for product-related information-seeking and product purchases (Chiang & Dholakia, 2003; Lieber & Syverson, 2012; Zhou et al., 2007). Literature notes that, when one's household income is relatively high and one has received at least a high school diploma, the person's intention to shop online and intention to search for pre-purchase information online tend to be high as well (Lieber & Syverson, 2012; Zhou et al., 2007). Personal history of online shopping, such as the frequency of online purchases and satisfactory levels of past online shopping experiences, and one's innovativeness, such as openness to new technologies, may also affect one's attitudes toward the Internet for product purchase and information-seeking, and intentions to shop online and search pre-purchase information online (Cho, 2004; Donthu & Garcia, 1999; Hammond, McWilliam, Narholz Diaz, 1998; Shih, 2004; Zhou et al., 2007).

Product type affects one's online purchase and information-seeking behavior as well (Huang, Lurie, & Mitra, 2009; Levin et al., 2005; Lieber & Syverson, 2012). For example, whether complete information on a product category can be known with (or without) direct experience of brands of the product can affect not only one's choice of context for the product purchase, but also the choice of information-seeking context (Chiang & Dholakia, 2003; Huang et al., 2009; Levin et al., 2005). Whether a product

type is available online or offline, or both, may also affect one's information-seeking behavior (Huang et al., 2009). The availability of online consumer reviews also affects one's product-related information-seeking behavior (Large, Tedd, & Hartley, 2009). If there is not much information relative to the product type available on the Internet, consumers may have to rely heavily on information they can obtain at conventional retail stores.

Situational factors, such as the availability of computers or mobile devices that allow consumers to access the Internet, credibility of online retail stores, and convenience of the user interfaces of consumer review websites and retail websites, are also crucial factors that determine one's choices of shopping online/offline and online/offline pre-purchase information-seeking. Using the theory of the technology acceptance model (TAM, Davis, 1989), several research studies explored how the situational factors affected one's attitudes toward online shopping, intentions to shop online, and intentions to seek product information online (e.g., Heijden, Verhagen, & Creemers, 2003; Shih, 2004; Zhou et al., 2007). According to Heijden et al. (2003) and Zhou et al. (2007), one's *trust in store*, *perceived usefulness* and *perceived ease-of-use* positively influence the person's attitudes toward shopping online and intentions to shop online, whereas *perceived risk* of the technology in e-commerce influences the two negatively. These factors also determine consumers' online information-seeking behavior. According to previous research regarding online information utilization behavior, *perceived usefulness*, *utility* (that includes *perceived ease-of-use*), *satisfaction* with past experiences, and

attitudes of judges are key factors that determine one's use of online information for product purchase (Shih, 2004).

Based on the assertions of these studies, I hypothesize that, when shopping for products that are purchased mostly online, consumers search product information online as well, because the *perceived usefulness* of the shopping context (i.e., the Internet) and *satisfaction* with online shopping may be at optimum levels. Perhaps whether a product type falls into online-purchased products or offline-purchased products is a more important determinant of online/offline information-seeking than whether the product is a search product or an experience product. A recent study that compared one's online information search, using the search and experience product types noted that consumers spent similar amounts of time on online pre-purchase information search for both search and experience products; they viewed more webpages for search products and spent more time per webpage for experience products (Huang et al., 2009). With that in mind, the following hypothesis is posed:

> **H3:** Consumers are more likely to engage in brand-related UGC-seeking when they make online purchase decisions, than when they make offline purchase decisions.

In this chapter, several research hypotheses were developed, based on a review of literature relevant to UGC websites, the influences of brand-related UGC on consumer decision-making processes, the theory of PDI, the think/feel purchase dimension, the

online/offline shopping dimension, and product-related information-seeking behavior. In the next Chapter, research methodologies are described.

CHAPTER 3: METHODS

UPDATE OF THE FCB GRID

Prior to testing the research hypotheses, a set of online surveys was conducted to update the product types on the FCB grid. (See the survey instrument in Appendix B.) An online survey was chosen as the main data-collecting method, because an update of product classification theory should be conducted based on data that can 'generalize' consumers' views of product types. Moreover, this theory update is a precursory study of the main study that examines the proposed research hypotheses. Participants of the survey, measurements, methods to select product types for the study, the study procedure, and the data analysis methods are noted.

Participants

A total of 1,104 U.S. consumers, aged 21 or older, participated in the survey. Consumers were recruited in that age category, instead of recruiting those who were aged 18 or older, because three products in the survey were alcoholic beverages. The participants were recruited from a U.S. consumer panel operated by Research Now, Inc., which provides access to geographically dispersed consumer samples (Research Now, 2015). The participants were incentivized with 'points' that can be exchanged for various goods and services, and except for the age criterion, no other screening criteria were used during the recruitment process; this allowed the researcher to update the product types with insights from general consumers.

The ages of the participants ranged from 21 to 90, and the average age was 49 (*SD*=15.68). Although the average age of the participants is higher than the median age of

the U.S. population (37.6 years in 2014) (Central Intelligence Agency, 2014), the data still represent the general population in the U.S. because the samples did not include those who were aged 20 or younger (See Table 8 for the demographic characteristics of the survey participants).

The participants were almost evenly split by gender as well; 551 were female (49.9%), and 534 were male (48.4%). Similar to the ethnic composition of the United States (U.S. Census Bureau, 2015), Caucasian (80.9%) was the predominant ethnic group of the participants, followed by Asian/Pacific Islander (7.1%), African-American (5.2%), Hispanic (3.6%), Multiracial (1.6%), and Native American (0.7%). Twenty-two participants did not indicate their ethnicity; 19 did not specify their genders, and 22 failed to report their ages.

The educational backgrounds of the samples ranged from those who did not finish high school (1.2%) to those who had a doctorate (1.6%). The majority of the samples had either a bachelor's degree (30.9%) or some college but no degree (20.6%). Nearly half of the participants were employed for wages (49.5%), and about 7.1% were either self-employed (6.5%) or in the military (.6%). Approximately 41.4% were either out-of-work (5.4%), a homemaker (6.8%), a student (2.4%), retired (23.7%), or unable to work (3.1%). Twenty-two did not specify their employment status. Household incomes ranged from less than $25,000 (15.2%) to more than $200,000 (2.6%), and about 43.7% had household incomes between $25,000 and $74,999. Twenty-nine participants did not report their household incomes.

Table 8. Demographic Characteristics of Survey Participants (FCB grid update)

Characteristics	Frequency	Percent
Gender		
Male	534	48.4%
Female	551	49.9%
No Response	19	1.7%
Age		
21-29	163	14.8%
30-39	199	18.0%
40-49	182	16.5%
50-59	189	17.1%
60-69	261	23.6%
70 +	88	8.0%
No Response	22	2.0%
Race/Ethnicity		
Caucasian	875	79.3%
African-American	56	5.1%
Native American	8	0.7%
Asian/Pacific Islander	77	7.0%
Hispanic	39	3.5%
Multiracial	17	1.5%
Other	10	.9%
No response	22	2.0%
Educational Background		
Didn't finish high school	13	1.2%
Completed high school	172	15.6%
Some college but no degree	227	20.6%
Associate's degree (e.g., AA, AS)	115	10.4%
Bachelor's degree (e.g., BA, BS)	341	30.9%
Master's degree (e.g., MA, MBA)	163	14.8%
Professional degree (e.g., JD, MD)	27	2.4%
Doctorate degree (e.g., PhD, EdD)	18	1.6%
Other	10	.9%
No Response	18	1.6%

Table 8. Continued.

Characteristics	Frequency	Percent
Employment Status		
Employed for wages	546	49.5%
Self-employed	72	6.5%
Out of work and looking for work	46	4.2%
Out of work but not currently looking for work	13	1.2%
A homemaker	75	6.8%
A student	27	2.4%
Military	7	.6%
Retired	262	23.7%
Unable to work	34	3.1%
No Response	22	2.0%
Household Income		
Less than $25,000	168	15.2%
$25,000 - $49,999	245	22.2%
$50,000 - $74,999	237	21.5%
$75,000 - $99,999	181	16.4%
$100,000 - $124,999	96	8.7%
$125,000 - $149,999	52	4.7%
$150,000 - $174,999	41	3.7%
$175,000 - $199,999	17	1.5%
More than $200,000	38	3.4%
No Response	29	2.6%

Measures

The participants rated scale items that measured (1) their levels of PDI with each product type, (2) whether they perceive their purchases of each product type to be a purchase of a think product or a feel product, (3) and their preference for shopping online or offline for that product. The first and second variables were measured using the scale items generated by the original FCB grid studies (Ratchford, 1987; Vaughn, 1986), and the third variable was measured with the scale developed by an e-commerce preference

study (Levin et al., 2005). The wording and formatting of the items was modified with a pretest.

Two sets of paper-based surveys with 52 undergraduate students were conducted. A total of 24 students participated in the first survey, and 28 students participated in the second survey. The students were recruited from two introductory advertising and public relations courses at a major university in the eastern south central area of the U.S; those who participated in the first set of surveys were excluded from the second set of pilot surveys. The students were offered extra credit to encourage their participation, and, akin to the original FCB grid studies, each variable was rated on seven-point semantic differential scales (See Table 2). The data were reviewed by the author of the dissertation with his colleagues (i.e., three Ph.D. students in communication), and the author made a change on the second item of the think purchase measure. The original item was 'decision is based mainly on functional facts/decision is not mainly on functional facts,' and the item was changed to 'decision is based mainly on functionality/decision is not mainly on functionality.' (Original items are available in Table 7.) Other than the change in the wording, another change was made on the formatting of the survey questionnaire; the author grouped the measurement items that had redundant phrases (See Tables 4, 7, and 9 for comparison). This formatting change was made based on a few comments from the survey participants. Several of the students indicated that the survey questionnaire was too long, because they were asked to answer the same questionnaire for 25 product types. This change was also based on discussions with the author's colleagues. (See Table 9 for the measures of the three dimensions.)

Table 9. Scale Items: PDI, Think/Feel Purchase, Preference for Shopping Online/Offline

Variables	Scale Items	
Directions: Please rate the process of choosing a brand of (product) on each of the following scales. Please base your rating on your most recent choice of brand of (product). If you have not previously purchased (product), please skip this section of the questionnaire and move on to the next product type.		
Purchase Decision Involvement	1. Choosing a brand of (product) is a: Very unimportant decision __:__:__:__:__:__:__	Very important decision
	2. Choosing a brand of (product) requires: Little thought __:__:__:__:__:__:__	A lot of thought
	3. If you choose the wrong brand, there is a: Little to lose __:__:__:__:__:__:__	Lot to lose
Think/Feel Purchase Decision	4-7. Decision is: Not mainly logical or objective __:__:__:__:__:__:__	Mainly logical or objective
	Not mainly on functionality __:__:__:__:__:__:__	Based mainly on functionality
	Not based on looks, taste, touch, smell or sounds __:__:__:__:__:__:__	Based on looks, taste, touch, smell or sounds
	Based on little feeling __:__:__:__:__:__:__	Based on a lot of feeling
	8. Decision: Does not express one's personality __:__:__:__:__:__:__	Expresses one's personality
Online/Offline Shopping	9. I prefer to purchase (product): Offline __:__:__:__:__:__:__	Online
	10. I search for information about (product) Offline __:__:__:__:__:__:__	Online

Procedure

Selection of Products

While developing the survey instruments, product types were also selected for the grid update. The selection of the products was conducted through two phases: focus groups and a review of relevant literature and product listings on major retailers' websites. First, three focus groups with 29 undergraduate students were conducted; nine students participated in FG1; ten, in FG2, and another ten, in FG3. The participants were recruited through an advertising course in the same university where the survey pretest was conducted; the course was different from the advertising course where the survey participants were recruited to modify the measures. The participants were also offered extra credit for their participation.

The interviews were conducted in a focus group room, and the interview sessions were audio recorded and transcribed verbatim. (See one of the transcripts in Appendix C.) The interviews were conducted in November 2010, and the lengths of the interviews ranged from approximately 54 minutes to 65 minutes. The author of the current dissertation moderated the interviews, and an informal focus group guide was used during the interviews. The initial purpose of the focus groups was to update the FCB grid by renaming product types and relocating them on the FCB grid; the author was not aware that an update of the product classification theory of the grid model required a generalization perspective when planning the focus groups. An updated grid based on the focus groups was generated, but was not utilized for the present dissertation. (See Appendix D for the updated grid generated by the focus groups.)

Although the initial purpose of the focus groups differs from the purpose of the use of the focus group data, the author chose to use them because the interviews generated a list of updated product types. Furthermore, focus groups were the appropriate method to identify various products because a product classification could be better conducted in an open-ended environment where researchers have an opportunity to observe the participants' social interactions around the meanings of products and relevant purchase behaviors (Morgan, 1997). However, the interviews generated some undesired results for the product selection as well. First, because the focus groups were conducted with student participants, the list of product types generated by the focus groups did not fully acknowledge the product types commonly used by consumers in various generations. For example, the list does not include maternal products, such as 'diapers,' 'strollers,' or other baby supplies; office supplies, such as 'office furniture,' 'toners,' or 'paper'; and gardening products, such as 'mowers' or any other types of 'landscaping tools' (See the product types generated by the focus groups in Table 10).

Second, the focus groups failed to offer a product list organized by product types and examples. As seen in Table 10, the list provides both product categories (e.g., electronics and furniture) and product examples (e.g., flat screen TV, cell phone, smartphone, and mattress) without any separation. The failure to generate a list of products that can distinguish product types and their examples might be attributed to the 'open-ended,' 'unstructured' nature of focus group methodology. Except for a short presentation regarding the key concepts of the FCB grid (e.g., PDI and think/feel dimensions), the interviews were performed unstructured, and the interview moderator

did not attempt to influence the participants' opinions. During the interviews, participants could add any products to the grid if the products were not observed on the grid and drop any if the participants perceived the products were no longer in the current market place; changing the names of products was also allowed if they had been altered over time. The creation of the unorganized product list may also be attributed to the fact that the original FCB grid only provides product examples without presenting any overarching product categories, such as electronics, clothes, furniture, and groceries.

Table 10. List of Products

Type of Products			
Backpack	Delivery pizza	Leather goods	Designer purse
Bedding	Dress shoes	Life insurance	Razor
Beer	Education	Light beer	Reorder of checks
Body wash	Electronics	Liquor	Salad dressing
Book	Eyeglasses	Luxury car	Smartphone
Candy	Family restaurant	Luxury watch	Sneakers
Car	Fast food	Magazine	Soda
Battery	Flat screen TV	Mattress	Software
Car insurance	Frozen food	OTC medicine	Sporting equipment
Cell phone	Furniture	Prescription medicine	Sporting event
Cereal	Gas	Motorcycle	Sun block
Cigarettes	Hair care	Movie	Sunglasses
Cheap clothes	High-end jewelry	Musical instrument	Toilet paper
Designer clothes	House	Newspaper	Toothpaste
Coffee	House appliance	Paper towels	Tourism product
Computer	Insect repellent	Perfume	Travel
Contact lenses	Cheap jewelry	Pet supplies	transportation
Credit card	Laundry detergent	Cheap purse	Video game
			Wine

Because of these challenges in the product list generated by the focus groups, research studies that explored product types in various marketing and consumer behavior

contexts and product lists on major retailers' websites (e.g., Amazon, BestBuy, Walmart) were reviewed. To search the studies that utilized product types, the author used databases such as Business Source Elite, JSTOR, and Science Direct (Elsevier), and confined the search to peer-reviewed academic journals and conference proceedings. Several key words were searched, including: 'product type,' 'product category,' 'search product,' 'experience product,' 'high-touch product,' 'low-touch product,' and 'product category and example,' and the search generated approximately 3,000 research studies. The author narrowed them down to about 90 studies by reviewing the titles of the studies, the fields of the journals and conference proceedings, and the years of publication; the studies that had irrelevant titles, published by journals in irrelevant fields of study, and the research published before the FCB grid was developed were removed. The content of the remaining studies was further reviewed, and seven studies that provided full lists of product types were selected for further review. See Table 11 for the details of the studies.

After the focus groups and reviews of the research studies and product lists presented by online retailers, a new product list, which involves product types used by diverse generations and separates product categories from their examples, was generated (See Table 12). The list involves a total number of 35 product categories and 125 examples. In order to minimize the number of survey questionnaires, similar products were grouped and the products rarely purchased were not included.

Table 11. Details of the Research Studies

Research Study	Research Topic	Product Types Used
Chaudhuri (1998)	Product type effects on consumers' negative emotions and perceived risk of purchase decisions	• A total of 89 product examples were used (e.g., sunglasses, cameras). • Products were categorized as necessities and luxuries.
Eramus, Donoghue, & Dobbelstein (2014)	Product type effects on perceived complexity of product purchase processes	• A total of 17 product types were used (e.g., career wear, cell phone, furniture, car). • Product categories and examples were used without separation.
Gooner, Morgan, & Perreault (2011)	Retailers' category management effects on consumers' choice of brands	• A total of 35 most purchased products of product resellers (e.g., Walmart) were used (e.g., snacks/salty snacks, disposable diapers). • The products were categorized into either food or nonfood product categories
Koschate-Fischer, Cramer, & Hoyer (2014)	Relationships between retailers' store brand share and store loyalty	• A total of 35 consumer goods product categories were used (e.g., beer, deodorant, pasta, shower gel). • Product categories and examples were used without separation.
Kushwaha & Shankar (2013)	Moderating effects of product characteristics on relationships between consumers' preferences for shopping channels (i.e., single vs. multichannel) and monetary values	• A total of 22 product categories were used (e.g., electronics, jewelry, beauty & cosmetics, office supplies). • Products were categorized with utilitarian vs. hedonic product value and high vs. low risk of a wrong product choice.
Mochimaru, Takahashi, Hatakenaka, & Horiuchi (2012)	Development of customer satisfaction measures	• A total of 6 product categories were used (e.g., consumer electronics, daily commodities, information system, cars).

Table 11. Continued.

Research Study	Research Topic	Product Types Used
Voss et al. (2003)	Development of hedonic and utilitarian consumer attitude measures	• A total of 16 product types were used (e.g., tobacco, blue jeans, glass figurines, television sets). • Voss et al. also measured hedonic/utilitarian consumer attitude with brands to investigate whether one's evaluation of a product type reflects a summary construct of various brands within the product category.

Conduct of the Survey

The survey questionnaires were posted online, and the participants completed the survey between April 29, 2015, and May 2, 2015. Akin to the original FCB grid studies (e.g., Ratchford, 1987; Vaughn, 1980; 1986), the survey participants did not respond to questionnaires with regard to all the product examples; they were randomly assigned 25 products. The survey instruments were split because the large number of survey questionnaire items could burden the participants and consequently reduce the data quality. When a survey is extensive, split questionnaires effectively improve data quality by reducing participants' fatigue, drop-out rate, and possible information loss (Adigüzel & Wedel, 2008); out of the 1,104 survey participants, no one dropped out of the survey during their participation.

Table 12. List of Product Categories and Examples

Product Category	Examples
Alcoholic Beverages	Beer, Wine, Liquor
Apparel	Formal Wear, Casual Clothes, Sportswear
Art	Paintings/Drawings, Ceramics, Sculptures, Stained Glass
Automotive Accessories	Automotive Body Parts, GPS Navigation & Accessories, Car Cleaning Supplies
Baby Supplies	Baby Food, Diapers, Baby Car Seats, Strollers, Cribs
Beauty & Cosmetics	Skin Care, Cosmetics, Fragrances
Body & Bath	Body Wash, Shampoos, Hand Soap/Bar Soap, Body Lotions
Books	Books, Textbooks, Electronic Books (eBooks)
Cars	Family Cars, Economy Cars, Sport Utility Vehicles (SUVs), Electric/Hybrid Cars, Luxury Cars, Sports Cars, Pick-up Trucks
Collectibles	Coins, Stamps, Dolls
Craft Supplies	Painting Supplies, Knitting/Quilting/Sewing Supplies, Woodworking Supplies
Electronics	TVs, Computers (e.g., Desktops, Laptops), Cellphones, Smartphones, Photography (e.g., Digital Cameras, Camcorders), Video Games, Home Theater Systems
Glasses & Contacts	Eyeglasses, Contact Lenses, Sunglasses, Over-the-counter Reading Glasses
Financial Services	Banking, Credit Cards, Loans, Investment Products
Gifts & Holidays	Gifts, Greeting Cards, Holiday Products & Decorations
Groceries	Produce (e.g., Vegetables/Fruits), Canned/Packaged Foods, Dairy Products, Drinks (e.g., Water, Juice, Sodas), Snacks (e.g., Salty Snacks, Chocolates, Candy), Condiments/Salad Dressing/Oils
Home & Garden	Tools, Gardening Supplies (e.g., Mowers), Landscaping Tools
Home Furnishings	Furniture, Bedding/Pillows/Rugs/Curtains, Kitchenware/Eating Utensils/China
Homes	House/Condo/Apartment to Own, House/Condo/Apartment to Rent
Household Appliances	Refrigerators, Washers/Dryers, Microwave Ovens, Vacuum Cleaners, Fans/Air Conditioners
Household Products	Household Cleaners, Laundry Supplies (e.g., Laundry Detergents, Fabric Softeners), Toiletries, Trash Bags, Air Fresheners
Insurance	Health Insurance, Life Insurance, Auto Insurance
Jewelry	Wedding Jewelry, Fashion Jewelry & Accessories
Medicines	Prescription Medicines, Over-the-counter Medicines
Music & Movies	CDs/DVDs, MP3s/Streaming Video Services
Musical Instruments	String Instruments (e.g., Guitars, Violins, Cellos), Electronic Instruments, Pianos, Percussion Instruments (e.g., Drums), Wind Instruments (e.g., Flutes, Clarinets)

Table 12. Continued.

Product Category	Examples
Office Supplies	Office Furniture (e.g., Chairs, Desks, Cubicles), Office Supplies (e.g., Pens/Paper, Post-it Notes, Staplers), Office Equipment (e.g., Computers, Fax Machines, Photocopiers)
Pet Supplies	Pet Food, Pet Toys, Pet Grooming
Private Transportation	Automobiles, Motorcycles, Bicycles
Public Transportation Tickets	Airline Tickets, Bus Passes, Train Tickets
Restaurants	Family Restaurants, Fast Food Restaurants, Coffee Shops, Fine Dining Restaurants
Shoes	Dress Shoes, Sneakers
Sports Equipment	Cardio/Weight Training Equipment, Individual Sports Equipment (e.g., Golf Clubs, Bikes, Bike Helmets), Team Sports Equipment (e.g., Bats, Mitts)
Toys & Games	Video Games, Dolls, Puzzles, Toy Trains & Vehicles, Early Learning Toys, Bath Toys
Watches	Luxury Watches, Fashion Watches, Smartwatches

- N of Product Categories: 35
- N of Product Examples: 125
- Some products were included in two product categories because they could be examples of both (Dolls – Collectibles, Toys & Games; Video games – Toys & Games, Electronics).

In order to further reduce the participants' fatigue and to generate a data set based on their actual purchase experiences, the participants were asked whether they had previously purchased the product type for each product, and those who had not skipped the questionnaire items and moved on to the next product example. The least number of responses for a product was 12 (smartwatches), and the largest number of responses was 218 (dairy products). Due to the low number of responses for some product examples, the products that had gathered fewer than 30 responses were excluded from the analysis

(smartwatches—12 responses, sculptures—18, percussion instruments—19, electric/hybrid cars—23, wind instruments—29, luxury watches—29, and pianos—29).

Data Analysis Methods

The data generated by the main surveys were analyzed relative to the survey participants' responses with regard to the 118 product examples. Akin to the method of data analysis of the original FCB grid studies (e.g., Ratchford, 1987), each product example's scores on the three purchase dimensions (i.e., PDI, think/feel, online/offline shopping) were calculated by averaging the survey participants' responses to the product example. After the calculation of the product examples' scores, the scores of the 35 product categories on each purchase dimension were also generated by averaging the scores of the product examples within a product category. To examine the scale reliability of each dimension, the internal consistency of subscales was measured with Cronbach's alpha, and the data were analyzed with SPSS 22. Updated FCB grids were visualized with Microsoft Excel.

HYPOTHESIS-TESTING

To explore the proposed hypotheses, another set of online surveys was conducted. (See the survey instrument to test hypothesis in Appendix E.) General consumers were recruited to the surveys as well, and the surveys were collected after the data of the FCB grid update surveys were analyzed by the author; product types for the hypothesis-testing surveys were selected based on each product's positions on the three purchase dimensions (i.e., PDI, think/feel purchase, online/offline shopping).

Survey Participants

A total of 391 U.S. consumers, aged 18 plus, participated in the survey. Unlike the set of surveys conducted for the FCB grid theory update, those aged between 18 and 20 were invited to participate in the surveys because no questionnaires were relative to alcoholic beverages. The participants were recruited from a U.S. consumer panel with Research Now, Inc.; the same research company that was used to recruit participants in the main surveys of the theory update. Except for the age criterion, recruiting was conducted with no further screening criteria because the hypotheses, which pertain to the influences of PDI, think/feel purchase decisions, and online/offline purchases on consumers' reliance on brand-related UGC, can be better explored with data that reflect views of general consumers. Similar to the incentivizing method of the grid update study, the participants were incentivized with points that can be used for various goods and services, and data from 391 participants were used for the analysis because eight surveys were found incomplete.

The participants' ages ranged from 18 to 79 with the average age of 42.17 (*SD*=16.30). The gender ratio was almost evenly split; 199 were male (50.9%), and 192 were female (49.1%). In terms of the ethnicity, 251 were Caucasian (64.2%); 66 were African-American (16.9%); 2 were Native American (.5%); 6 were Asian/Pacific Islander (1.5%); 53 were Hispanic (13.6%); 6 were multiracial (1.5%), and 7 were other (1.8%). The participants' educational backgrounds ranged from those who did not finish high school (2.0%) to those who had a doctorate (1.0%), and the majority of the participants either completed high school (20.5%), had some college but no degree (25.8%), or had a

bachelor's degree, such as a B.A. or B.S. (27.9%). Approximately 59.1% were employed for wages (51.4%), self-employed (7.2%), or in the military (.5%), and about 33.5% were out of work (5.9%), a homemaker (7.4%), a student (7.2%), retired (16.1%), or unable to work (4.1%). Household incomes ranged from less than $25,000 (18.9%) to more than $200,000 (2.6%), and about 62.3% had annual household incomes between $25,000 and $99,999. See the demographic information of the survey participants in Table 13.

Measure

To measure the independent variables (i.e., PDI, think/feel purchase decision, online/offline shopping) and the dependent variable (i.e., likelihood to rely on brand-related UGC), participants were asked to rate the subscales used to update the FCB grid (See Table 9.) and a scale item that pertained to their likelihood to read *online consumer reviews*. Initially, two more UGC types (i.e., *product unpacking videos* and *consumer-generated advertisements*) were included in the survey instruments to measure the dependent variable, but the items were dropped during a pretest because some of the participants responded that they were not familiar with them. The students, recruited from an advertising class at the same university for the pretest of the grid update study, also participated in this set of pretest surveys relative to hypothesis testing. The number of respondents was 28, and they were provided with extra credit. The author of the dissertation verbally collected comments from the survey participants after the students completed the surveys. The pretest survey was conducted on March 30, 2015, and no audio/video was recorded.

Table 13. Demographic Characteristics of Survey Participants (Hypothesis-Testing)

Characteristics	Frequency	Percent
Gender		
Male	199	50.9%
Female	192	49.1%
No Response	0	0%
Age		
18-29	114	29.2%
30-39	78	19.9%
40-49	59	15.1%
50-59	64	16.4%
60-69	61	15.6%
70 +	15	3.8%
No Response	0	0%
Race/Ethnicity		
Caucasian	251	64.2%
African-American	66	16.9%
Native American	2	.5%
Asian/Pacific Islander	6	1.5%
Hispanic	53	13.6%
Multiracial	6	1.5%
Other	7	1.8%
No response	0	0%
Educational Background		
Didn't finish high school	8	2.0%
Completed high school	80	20.5%
Some college but no degree	101	25.8%
Associate's degree (e.g., AA, AS)	38	9.7%
Bachelor's degree (e.g., BA, BS)	109	27.9%
Master's degree (e.g., MA, MBA)	41	10.5%
Professional degree (e.g., JD, MD)	7	1.8%
Doctorate degree (e.g., PhD, EdD)	4	1.0%
Other	3	.8%
No Response	0	0%

Table 13. Continued.

Characteristics	Frequency	Percent
Employment Status		
Employed for wages	201	51.4%
Self-employed	28	7.2%
Out of work and looking for work	19	4.9%
Out of work but not currently looking for work	4	1.0%
A homemaker	29	7.4%
A student	28	7.2%
Military	2	.5%
Retired	63	16.1%
Unable to work	16	4.1%
No Response	1	.3%
Household Income		
Less than $25,000	74	18.9%
$25,000 - $49,999	103	26.3%
$50,000 - $74,999	87	22.3%
$75,000 - $99,999	51	13.0%
$100,000 - $124,999	27	6.9%
$125,000 - $149,999	18	4.6%
$150,000 - $174,999	9	2.3%
$175,000 - $199,999	8	2.0%
More than $200,000	10	2.6%
No Response	4	1.0%

In addition to the item of the UGC scale, the participants of the main survey rated three more items pertaining to their likelihood to rely on other types of product information (i.e., advertisements, expert reviews on third-party websites, WOM messages in person or by phone). These items were used to compare the participants' reliance on consumer reviews to other types of product information. Seven-point Likert scales that ranged from *Strongly Disagree* to *Strongly Agree* were used. (See Table 14.)

Table 14. Scale Items: Brand-Related Information-Seeking

Variables	Scale Items
Directions: Next, please select the button that most appropriately describes your pre-purchase information-seeking behavior with regard to the product type (i.e., product type).	
Advertisements	1. I get brand information from advertisements (including TV, radio, newspaper, magazine, and online ads).
Brand-Related UGC	2. I read online consumer reviews.
Expert Reviews	3. I read expert reviews on third-party websites.
WOM Messages (FtF or by Phone)	4. I ask my friends or family members in person or by phone for product information.

Although the number of product combinations that could be generated with the four independent variables was 16, the survey instruments were created with 10 product examples (i.e., automobiles, airline tickets, over-the-counter medicines, wedding jewelry, pet food, train tickets, tools, fast food restaurants, eBooks, toiletries), because some combinations were not available in the updated FCB grid study. For example, no product type scored high on all the measures of PDI, think purchase, feel purchase, and online purchase. Similar to the way that the original FCB grid research (e.g., Ratchford, 1987; Vaughn, 1980; 1986) measured the think/feel purchase dimension, think and feel purchases were measured separately in the present dissertation. Items 4 and 5 in Table 9 measured the participants' think purchase, and the items 6 to 8 measured feel purchase with regard to each product type. The author could not find a product type that scored high on all three measures of PDI, feel purchase, and online purchase at the same time,

either. A product type that scored low on PDI but high both on think and feel purchases was not available as well. (See Table 15 for the products used to test the research hypotheses.)

Table 15. Product Types Used for Hypothesis Testing

PDI	Think Purchase	Feel Purchase	Online Purchase[2]	Product
High	High	High	High	N.A.[1]
High	High	High	Low	Automobiles
High	High	Low	High	Airplane Tickets
High	High	Low	Low	OTC Medicines
High	Low	High	High	N.A.[1]
High	Low	High	Low	Wedding Jewelry
High	Low	Low	High	N.A.[1]
High	Low	Low	Low	Pet Food
Low	High	High	High	N.A.[1]
Low	High	High	Low	N.A.[1]
Low	High	Low	High	Train Tickets
Low	High	Low	Low	Tools
Low	Low	High	High	N.A.[1]
Low	Low	High	Low	Fast Food Restaurants
Low	Low	Low	High	eBooks
Low	Low	Low	Low	Toiletries

[1.] These products were not available in the FCB grid update study.
[2.] 'Online or offline' purchase was not used for hypothesis-testing.

Procedure

The survey questionnaires were posted online, and the respondents participated in the surveys between June 5, 2015, and June 15, 2015. Similar to the surveys used to update the FCB grid, the respondents were asked to rate the questionnaires only when they had previously purchased the product type. Otherwise, they were asked to skip those questionnaires and proceed to the next product example. The order of product types was

randomized, and, unlike the surveys used for the grid update, the participants were exposed to questionnaires with regard to all the 10 product examples. The least number of responses for a product type was 139 (train tickets), and the largest number of responses was 364 (fast food restaurants) The numbers of responses to other product types are as follow: toiletries—322, OTC medicines—315, automobiles—276, pet food—249, airline tickets—247, tools—198, eBooks—148, wedding jewelry—144.

Data Analysis Methods

The data collected by the second set of main surveys were analyzed by using a linear mixed effect model. A mixed effect model approach was utilized for the analysis, instead of other data analysis techniques, such as repeated measures multiple regression, because a mixed effect model does not treat multiple responses from a participant as multiple independent responses. The use of other techniques would significantly inflate the number of respondents because there are more than 2,400 rows in the data set, and other techniques might not be able to handle missing cells. The subjects skipped questionnaire items regarding products that they had not previously purchased.

For fixed effects, the author entered the independent variables (i.e., PDI, think purchase, feel purchase, online/offline purchase), and product type was entered for the random effect; linear mixed effect models allow researchers to put variables randomly assigned to survey participants as random effects. The dependent variable was ‘likelihood to read online consumer reviews,’ and the demographic variables were also examined relative to the dependent variable. The same as with the FCB grid update study, the analysis was conducted with SPSS 22.

In this chapter, the participants of the two sets of surveys (i.e., surveys used to update the FCB grid and the surveys to test research hypotheses), the measures, how those surveys were conducted, and the data analysis methods used for the dissertation were described. In the following chapter, the results of the surveys are provided, along with several updated FCB grids. The original grid was developed into several versions, using the dimensions of purchase decision.

CHAPTER 4: RESULTS

UPDATE OF THE FCB GRID

PDI

The PDIs of product examples range from 3.56 (puzzles) to 6.62 (loans); survey participants were asked to rate the three subscales of PDI from 1 to 7 (1=lowest PDI, 7=highest PDI). The first item measured the 'purchase decision importance'; the second item measured the amount of one's 'cognitive effort' relative to a purchase of a product, and the third item measured the 'perceived risk' of a wrong brand choice (See Table 9). A Cronbach's alpha of .89 indicates that the three subscales measure the same construct; in general, a Cronbach's alpha of .7 is deemed the cutoff value for being acceptable (George & Malley, 2003; Santos, 1999). See Table 16 for a complete list of the PDIs relative to product examples.

The PDIs of product categories were also analyzed by averaging the PDIs of the product examples within each product category. The product category with the highest PDI is homes (6.56), followed by insurance (6.40), cars (6.21), financial services (6.19), and private transportation (6.10), while the lowest PDI product category is household products (4.23), followed by groceries (4.45), music & movies (4.47), toys & games (4.51), and body & bath (4.56). See Table 17 for the PDIs of the product categories.

Table 16. PDIs of Product Examples

Product Example	PDI	Product Example	PDI
Loans	6.62	Cardio/Weight Training Equipment	5.32
House/Condo/Apartment to Rent	6.59	Team Sports Equipment	5.28
Health Insurance	6.56	Paintings/Drawings	5.26
House/Condo/Apartment to Own	6.54	Painting Supplies	5.22
Economy Cars	6.45	Train Tickets	5.22
Automobiles	6.45	Early Learning Toys	5.22
Family Cars	6.39	Produce	5.21
Motorcycles	6.34	Tools	5.19
Auto Insurance	6.33	Office Furniture	5.18
Cribs	6.32	Fashion Watches	5.15
Life Insurance	6.31	Fragrances	5.1
Luxury Cars	6.28	Dress Shoes	5.07
Investment Products	6.23	Stained Glass	5.06
Baby Car Seats	6.2	OTC Reading Glasses	5.04
SUVs	6.18	Car Cleaning Supplies	5.03
Banking	6.18	Wine	5.01
Eyeglasses	6.16	Landscaping Tools	4.98
Contact Lenses	6.15	Ceramics	4.97
Computers	6.09	Stamps to Collect	4.97
Pick-up Trucks	6.06	Greeting Cards	4.92
Smartphones	6.05	Toy Trains & Vehicles	4.92
Airline Tickets	6.04	Fashion Jewelry & Accessories	4.91
Strollers	5.99	Bedding/Pillows/Rugs/Curtains	4.84
Prescription Medicines	5.98	Video Games	4.83
Refrigerators	5.95	Sportswear	4.8
Baby Food	5.92	Family Restaurants	4.8
Gifts	5.92	Body Lotions	4.79
Washers/Dryers	5.92	Books	4.79
Wedding Jewelry	5.92	Sunglasses	4.78
Sports Cars	5.91	Beer	4.73
Formal Wear	5.88	Knitting/Quilting/Sewing Supplies	4.68
String Instruments	5.88	Casual Clothes	4.61
Office Equipment	5.85	Household Cleaners	4.61
Cellphones	5.81	MP3s/Streaming Video Services	4.6
TVs	5.74	Shampoos	4.59
Pet Grooming	5.74	Body Washes	4.57
Credit Cards	5.72	eBooks	4.55
Electronic Instruments	5.69	Canned/Packaged Foods	4.55

Table 16. Continued.

Product Example	PDI	Product Example	PDI
Pet Food	5.68	Dolls	4.52
Furniture	5.63	Kitchenware/Eating Utensils/China	4.5
OTC Medicines	5.6	Liquor	4.48
Home Theater Systems	5.58	Laundry Supplies	4.48
Skin Care	5.57	Dairy Products	4.46
Coins to Collect	5.56	Fast Food Restaurants	4.37
Vacuum Cleaners	5.54	Toiletries	4.34
Bicycles	5.51	CDs/DVDs	4.34
Woodworking Supplies	5.5	Pet Toys	4.34
Photography	5.5	Drinks	4.32
Fans/Air Conditioners	5.47	Holiday Products & Decorations	4.31
Diapers	5.46	Hand Soap/Bar Soap	4.3
Microwave Ovens	5.45	Bus Passes	4.3
Gardening Supplies	5.44	Condiments/Salad Dressing/Oils	4.22
Sneakers	5.43	Coffee Shops	4.06
Automotive Body Parts	5.42	Bath Toys	4.03
Textbooks	5.41	Air Fresheners	3.97
GPS Navigation & Accessories	5.4	Snacks	3.92
Cosmetics	5.37	Office Supplies	3.91
Fine Dining Restaurants	5.37	Trash Bags	3.74
Individual Sports Equipment	5.33	Puzzles	3.56

Table 17. PDIs of Product Categories

Product Category	PDI
Homes	6.56
Insurance	6.4
Cars	6.21
Financial Services	6.19
Private Transportation	6.1
Baby Supplies	5.98
Medicines	5.79
Musical Instruments	5.79
Household Appliances	5.67
Electronics	5.66
Glasses & Contacts	5.53
Jewelry	5.41
Beauty & Cosmetics	5.35
Sports Equipment	5.31
Automotive Accessories	5.28
Pet Supplies	5.25
Shoes	5.25
Home & Garden	5.2
Public Transportation Tickets	5.18
Watches	5.15
Craft Supplies	5.13
Apparel	5.1
Art	5.1
Gifts & Holidays	5.05
Collectibles	5.01
Home Furnishings	4.99
Office Supplies	4.98
Books	4.92
Alcoholic Beverages	4.74
Restaurants	4.65
Body & Bath	4.56
Toys & Games	4.51
Music & Movies	4.47
Groceries	4.45
Household Products	4.23

Think/Feel Purchase Decision

Before testing the reliability of the think/feel purchase decision scale, the subscales of the think purchase were reverse-coded, as high scores on both sets of scale items would indicate high levels on both types of purchase decisions. A Cronbach's alpha test revealed that think and feel purchase subscales do not measure the same purchase dimension; the Cronbach's alpha for the five subscales is .55, below the recommended cutoff value of .7 (George & Malley, 2003; Santos, 1999). The low value of the Cronbach's alpha test means that at least one scale item does not measure the same construct. In order to ensure that the scale items of the think purchase measure the same construct and the items of the feel purchase measure the same construct, further Cronbach's alpha tests and a factor analysis using principal components extraction and Direct Oblimin rotation were conducted. A Cronbach's alpha for the measurement items 4 and 5 (i.e., think purchase scale items 1 and 2) was .79, above the recommended value of .7, and a Cronbach's alpha for the items 6 to 8 (i.e., feel purchase items 1, 2, and 3) was .76, also above the recommended cutoff value of .7. In agreement with the Cronbach's alpha tests, two components emerged with eigenvalues of 1.0 or higher from the principal component factor analysis test. As expected, items 4 and 5 loaded on the think purchase construct and items 6 to 8 loaded on the feel purchase construct fairly tightly. The two components explain approximately 74.19% of the variance. (See Table 18 for the component loadings.)

Table 18. Factor Analysis of Think and Feel Purchase Constructs

Measurement Items		Think	Feel
Decision is not mainly logical or objective.	Decision is mainly logical or objective.	.91	
Decision is not mainly on functionality.	Decision is mainly on functionality.	.91	
Decision is not based on looks, taste, touch, smell or sounds.	Decision is based on looks, taste, touch, smell or sounds.		.79
Decision is based on little feeling.	Decision is based on a lot of feeling.		.86
Decision does not express one's personality.	Decision expresses one's personality.		.83

Because the Cronbach's alpha tests and the factor analysis indicate that think purchase and feel purchase should be perceived as separate purchase dimensions, the results regarding the two purchase types should be presented separately. In addition, the FCB grid will be updated with the two dimensions separately as well.

Think Purchase Decisions

Think purchase decisions for product examples range from 3.97 (paintings/drawings) to 6.51 (pick-up trucks); the survey participants rated two scale items (i.e., items 4 and 5) from 1 to 7 (1=lowest think purchase, 7=highest think purchase). Item 4 measured the 'objectivity of purchase' of a brand of a product, and item 5 measured 'purchase based on functionality' (See Table 9). For a complete list of the think purchase decisions of product examples, see Table 19.

Table 19. Think Purchase of Product Examples

Product Example	Think	Product Example	Think
Pick-up Trucks	6.51	Eyeglasses	5.74
Health Insurance	6.48	Trash Bags	5.73
Banking	6.38	Individual Sports Equipment	5.73
Office Equipment	6.37	MP3s/Streaming Video Services	5.72
Baby Car Seats	6.36	Pet Food	5.67
Contact Lenses	6.36	Pet Grooming	5.67
Loans	6.36	String Instruments	5.64
Fans/Air Conditioners	6.35	Office Supplies	5.64
Auto Insurance	6.34	Painting Supplies	5.6
Office Furniture	6.31	Dress Shoes	5.52
Refrigerators	6.3	Laundry Supplies	5.49
House/Condo/Apartment to Rent	6.29	Knitting/Quilting/Sewing Supplies	5.47
Cellphones	6.28	Kitchenware/Eating Utensils/China	5.4
Economy Cars	6.27	Body Lotions	5.39
Computers	6.27	Coins to Collect	5.39
Cardio/Weight Training Equipment	6.27	Cosmetics	5.38
Family Cars	6.25	Toiletries	5.37
Smartphones	6.23	Sunglasses	5.34
Prescription Medicines	6.21	Sportswear	5.33
Textbooks	6.2	Toy Trains & Vehicles	5.32
SUVs	6.2	Shampoos	5.31
Washers/Dryers	6.2	Bedding/Pillows/Rugs/Curtains	5.31
TVs	6.19	Body Washes	5.27
Motorcycles	6.19	Produce	5.26
Automobiles	6.18	Canned/Packaged Foods	5.26
Cribs	6.17	Hand Soap/Bar Soap	5.25
GPS Navigation & Accessories	6.16	Formal Wear	5.21
Life Insurance	6.16	Fashion Watches	5.21
Luxury Cars	6.15	Casual Clothes	5.19
Gardening Supplies	6.14	Video Games	5.18
Vacuum Cleaners	6.13	Gifts	5.07
Credit Cards	6.12	Ceramics	5.03
Airline Tickets	6.11	Pet Toys	4.99
Microwave Ovens	6.1	Family Restaurants	4.96
Landscaping Tools	6.08	Air Fresheners	4.92
OTC Medicines	6.08	Fine Dining Restaurants	4.9
Train Tickets	6.06	Stained Glass	4.86
Woodworking Supplies	6.04	eBooks	4.86

Table 19. Continued.

Product Example	Think	Product Example	Think
House/Condo/Apartment to Own	6.03	Stamps to Collect	4.84
Bicycles	6.02	Dairy Products	4.83
Strollers	6.00	Wedding Jewelry	4.8
Sneakers	5.98	Bath Toys	4.73
Bus Passes	5.96	Books	4.7
Diapers	5.95	Condiments/Salad Dressing/Oils	4.64
Car Cleaning Supplies	5.94	Fast Food Restaurants	4.63
Early Learning Toys	5.94	Fashion Jewelry & Accessories	4.62
Automotive Body Parts	5.93	CDs/DVDs	4.61
Baby Food	5.9	Drinks	4.54
Tools	5.9	Dolls	4.52
Electronic Instruments	5.9	Puzzles	4.51
Household Cleaners	5.89	Beer	4.48
Skin Care	5.87	Coffee Shops	4.47
Team Sports Equipment	5.86	Fragrances	4.45
Sports Cars	5.84	Greeting Cards	4.45
OTC Reading Glasses	5.84	Wine	4.4
Furniture	5.83	Liquor	4.37
Home Theater Systems	5.82	Holiday Products & Decorations	4.37
Investment Products	5.81	Snacks	4.22
Photography	5.75	Paintings/Drawings	3.97

The think purchases of product categories were also generated by averaging the scores of the product examples. The most think-purchased product category is insurance (6.33), followed by household appliances (6.22), cars (6.20), financial services (6.17), and homes (6.16), while the least cognitively-purchased product category is alcoholic beverages (4.42), followed by art (4.62), gifts & holidays (4.63), jewelry (4.71), and restaurants (4.74). See Table 20 for think purchase scores of product categories.

Feel Purchase Decisions

In terms of product examples, the feel purchase decisions range from wedding jewelry (6.30) to trash bags (3.04): '1' as the lowest feel purchase, '7' as the highest feel purchase. Item 6 measured participants' 'sensory purchase' of a brand of a product using the five senses (i.e., looks, taste, touch, smell, and sounds); item 7 measured 'purchase based on feeling,' and the item 8 measured 'personality expressive purchase.' See the levels of feel purchase of product examples in Table 21.

The average scores of the feel purchase decisions of product examples indicate that jewelry (6.19) is the most feeling-purchased product category, followed by gifts & holidays (5.87), watches (5.84), art (5.81), and homes (5.80), while the least affectively-purchased product category is medicines (3.43), followed by public transportation tickets (3.49), insurance (3.50), financial services (3.54), and home & garden (3.97). See Table 22 for the feel purchase scores of product categories.

Table 20. Think Purchase of Product Categories

Product Category	Think
Insurance	6.33
Household Appliances	6.22
Cars	6.2
Financial Services	6.17
Homes	6.16
Medicines	6.15
Private Transportation	6.13
Office Supplies	6.11
Baby Supplies	6.08
Home & Garden	6.04
Public Transportation Tickets	6.04
Automotive Accessories	6.01
Electronics	5.96
Sports Equipment	5.95
Glasses & Contacts	5.82
Musical Instruments	5.77
Shoes	5.75
Craft Supplies	5.7
Home Furnishings	5.51
Household Products	5.48
Pet Supplies	5.45
Body & Bath	5.31
Books	5.25
Apparel	5.24
Beauty & Cosmetics	5.23
Watches	5.21
Music & Movies	5.17
Toys & Games	5.03
Collectibles	4.92
Groceries	4.79
Restaurants	4.74
Jewelry	4.71
Gifts & Holidays	4.63
Art	4.62
Alcoholic Beverages	4.42

Table 21. Feel Purchase of Product Examples

Product Example	Feel	Product Example	Feel
Wedding Jewelry	6.3	Office Furniture	5.00
Formal Wear	6.26	Coins to Collect	4.98
Paintings/Drawings	6.21	Individual Sports Equipment	4.97
Motorcycles	6.2	Electronic Instruments	4.95
Luxury Cars	6.13	Pet Toys	4.92
Fragrances	6.09	Stamps to Collect	4.91
Fashion Jewelry & Accessories	6.08	Painting Supplies	4.9
Sports Cars	5.99	Books	4.88
Greeting Cards	5.96	Kitchenware/Eating Utensils/China	4.88
Gifts	5.93	Team Sports Equipment	4.86
House/Condo/Apartment to Rent	5.85	Hand Soap/Bar Soap	4.83
Fashion Watches	5.84	Condiments/Salad Dressing/Oils	4.8
Fine Dining Restaurants	5.83	Pet Food	4.78
Dress Shoes	5.78	Strollers	4.77
House/Condo/Apartment to Own	5.74	eBooks	4.77
Eyeglasses	5.72	TVs	4.77
Holiday Products & Decorations	5.72	Shampoos	4.74
Automobiles	5.7	Cellphones	4.73
Stained Glass	5.68	Contact Lenses	4.72
String Instruments	5.67	Puzzles	4.72
Economy Cars	5.65	Baby Car Seats	4.68
Furniture	5.65	Canned/Packaged Foods	4.68
Dolls	5.62	MP3s/Streaming Video Services	4.64
Cosmetics	5.59	Toiletries	4.6
Sunglasses	5.59	Dairy Products	4.53
Family Cars	5.58	Cardio/Weight Training Equipment	4.48
Wine	5.57	Photography	4.45
Ceramics	5.56	Refrigerators	4.39
Bedding/Pillows/Rugs/Curtains	5.48	Car Cleaning Supplies	4.38
Casual Clothes	5.46	Woodworking Supplies	4.37
Family Restaurants	5.43	Computers	4.37
SUVs	5.42	Microwave Ovens	4.34
Sneakers	5.42	Washers/Dryers	4.29
Baby Food	5.38	Automotive Body Parts	4.23
Sportswear	5.36	Laundry Supplies	4.18
Pick-up Trucks	5.36	Household Cleaners	4.14
Body Washes	5.34	Diapers	4.13
Liquor	5.33	Tools	4.03

Table 21. Continued.

Product Example	Feel	Product Example	Feel
Home Theater Systems	5.32	Gardening Supplies	4.03
Bicycles	5.32	Vacuum Cleaners	4.02
Beer	5.3	GPS Navigation & Accessories	4.01
Skin Care	5.28	Office Equipment	3.96
Coffee Shops	5.22	Fans/Air Conditioners	3.91
Video Games	5.2	Landscaping Tools	3.85
Snacks	5.2	Investment Products	3.73
Pet Grooming	5.18	Credit Cards	3.7
Air Fresheners	5.17	OTC Medicines	3.7
Smartphones	5.15	Office Supplies	3.68
Cribs	5.14	Life Insurance	3.67
Produce	5.1	Airline Tickets	3.62
Fast Food Restaurants	5.1	Banking	3.58
Knitting/Quilting/Sewing Supplies	5.08	Train Tickets	3.52
Body Lotions	5.07	Auto Insurance	3.49
OTC Reading Glasses	5.07	Health Insurance	3.35
CDs/DVDs	5.07	Bus Passes	3.33
Toy Trains & Vehicles	5.07	Textbooks	3.23
Bath Toys	5.07	Loans	3.17
Early Learning Toys	5.06	Prescription Medicines	3.16
Drinks	5.02	Trash Bags	3.04

Table 22. Feel Purchase of Product Categories

Product Category	Feel
Jewelry	6.19
Gifts & Holidays	5.87
Watches	5.84
Art	5.81
Homes	5.8
Private Transportation	5.74
Apparel	5.7
Cars	5.69
Beauty & Cosmetics	5.65
Shoes	5.6
Alcoholic Beverages	5.4
Restaurants	5.39
Home Furnishings	5.34
Musical Instruments	5.31
Glasses & Contacts	5.28
Collectibles	5.17
Toys & Games	5.12
Body & Bath	4.99
Pet Supplies	4.96
Groceries	4.89
Electronics	4.86
Music & Movies	4.85
Baby Supplies	4.82
Craft Supplies	4.78
Sports Equipment	4.77
Books	4.29
Household Products	4.23
Office Supplies	4.21
Automotive Accessories	4.2
Household Appliances	4.19
Home & Garden	3.97
Financial Services	3.54
Insurance	3.5
Public Transportation Tickets	3.49
Medicines	3.43

Online vs. Offline Shopping

The literature notes that online shopping consists of online purchase and online information seeking (Levin et al., 2005). However, a scale reliability test of the two subscales, (1) 'preference to purchase (product) online/offline,' and (2) 'tendency to search information about (product) online/offline,' uncovers that those two scale items do not measure the same dimension; the Cronbach's alpha for the two subscales is .65, still below the recommended value of .7. Therefore, only the first item (i.e., online/offline purchase preference) was used for reporting the results; purchasing is more relevant to shopping than is searching information.

The surveys indicate that preference to purchase product examples online/offline ranges from 1.43 (canned/packaged foods) to 6.42 (eBooks); high values on the scale represent high levels of preference to make an online purchase. Compared to the other three purchase dimensions (i.e., PDI, think purchase, feel purchase), the range of the online/offline purchase preferences is much wider; the lowest score on the dimension is 1.43 out of a 7-point scale, whereas the lowest scores on the other three dimensions all exceed 3. This can perhaps be attributed to the fact that a purchase of some product types almost always happens either online or offline. For example, product examples such as eBooks, airline tickets, and MP3s/streaming video services are typically purchased online, whereas products such as produce (e.g., vegetables, fruits), beer, and dairy products are usually purchased at conventional brick-and-mortar stores. See Table 23 for the survey participants' preferences to purchase product examples online/offline.

Table 23. Preference to Purchase Product Examples Online/Offline

Product Example	Online Purchase	Product Example	Online Purchase
eBooks	6.42	Bicycles	2.58
Airline Tickets	6.42	Formal Wear	2.53
MP3s/Streaming Video Services	5.52	Cosmetics	2.53
Train Tickets	4.91	Microwave Ovens	2.51
Textbooks	4.32	Dress Shoes	2.51
Credit Cards	4.22	Home Theater Systems	2.46
CDs/DVDs	4.17	OTC Reading Glasses	2.46
Video Games	4.16	Kitchenware/Eating Utensils/China	2.43
Books	4.15	Fans/Air Conditioners	2.38
Investment Products	3.96	Pet Toys	2.38
Coins to Collect	3.92	Paintings/Drawings	2.36
Office Equipment	3.88	House/Condo/Apartment to Rent	2.36
Bus Passes	3.85	Landscaping Tools	2.31
Photography	3.77	Motorcycles	2.29
Computers	3.73	Tools	2.27
Health Insurance	3.71	Furniture	2.25
Bath Toys	3.68	Prescription Medicines	2.25
Stained Glass	3.67	SUVs	2.22
GPS Navigation & Accessories	3.63	Sunglasses	2.22
Dolls	3.57	Pet Grooming	2.2
Stamps to Collect	3.55	Pick-up Trucks	2.15
Contact Lenses	3.49	Body Washes	2.12
Cardio/Weight Training Equipment	3.48	Body Lotions	2.1
Gifts	3.47	Economy Cars	2.07
Smartphones	3.37	Refrigerators	2.07
Automotive Body Parts	3.31	Fast Food Restaurants	2.07
Auto Insurance	3.31	Baby Food	2.06
Fashion Watches	3.28	Shampoos	2.06
Sportswear	3.16	Wedding Jewelry	2.06
Electronic Instruments	3.14	Family Restaurants	2.06
Toy Trains & Vehicles	3.1	Car Cleaning Supplies	2.05
Strollers	3.08	Gardening Supplies	2.05
Life Insurance	3.04	Toiletries	2.02
Early Learning Toys	3.03	Pet Food	1.97
Baby Car Seats	2.94	Wine	1.95
Casual Clothes	2.91	Luxury Cars	1.95
Individual Sports Equipment	2.9	Washers/Dryers	1.95

Table 23. Continued.

Product Example	Online Purchase	Product Example	Online Purchase
Diapers	2.87	Air Fresheners	1.95
Office Supplies	2.87	Laundry Supplies	1.9
String Instruments	2.86	House/Condo/Apartment to Own	1.89
Ceramics	2.85	Painting Supplies	1.88
Cellphones	2.84	OTC Medicines	1.87
Office Furniture	2.82	Automobiles	1.87
Bedding/Pillows/Rugs/Curtains	2.81	Family Cars	1.83
Sports Cars	2.79	Hand Soap/Bar Soap	1.82
Fashion Jewelry & Accessories	2.79	Liquor	1.81
Knitting/Quilting/Sewing Supplies	2.76	Household Cleaners	1.81
Cribs	2.75	Greeting Cards	1.78
Vacuum Cleaners	2.74	Trash Bags	1.77
Puzzles	2.7	Fine Dining Restaurants	1.7
Skin Care	2.69	Coffee Shops	1.68
Sneakers	2.69	Eyeglasses	1.67
Woodworking Supplies	2.68	Snacks	1.64
Loans	2.68	Dairy Products	1.61
Holiday Products & Decorations	2.66	Condiments/Salad Dressing/Oils	1.61
Fragrances	2.65	Beer	1.56
Team Sports Equipment	2.65	Drinks	1.53
Banking	2.64	Produce	1.48
TVs	2.6	Canned/Packaged Foods	1.43

Preferences to purchase a brand of a product online/offline relative to the product categories were also generated by averaging the survey participants' responses to product examples. The product category most likely be purchased online is public transportation tickets (5.06), followed by books (4.96), music & movies (4.85), and collectibles (3.68), while the product category most likely to be purchased offline is groceries (1.55), alcoholic beverages (1.77), restaurants (1.88), and household products (1.89). See the survey participants' preferences to purchase product categories online/offline in Table 24.

FCB Grid Updates

The data regarding the four purchase dimensions generated eight product grids: six about product examples and two about product categories. For the creations of the updated FCB grids, binary categories were utilized for purchase dimensions such as PDI, think purchase and feel purchase dimensions. However, trinary categories (i.e., offline purchase, online/offline purchase, and online purchase) were used for the online/offline purchase dimension, instead of binary purchase categories. The rationale behind the use of trinary online/offline purchase classifications can be attributed to the nature of consumers' use of online and offline shopping contexts. They do not tend to prefer one shopping context over another for some product types (e.g., small furniture, laptop computers). In fact, the use of the trinary categories for the online/offline purchase dimension is in line with the data of the main survey; 70 products (out of 118 product examples) were rated between 2.33 and 4.66 on the 7-point semantic differential online/offline purchase scale. (See Table 23.)

Table 24. Preference to Purchase Product Categories Online/Offline

Product Category	Online Purchase
Public Transportation Tickets	5.06
Books	4.96
Music & Movies	4.85
Collectibles	3.68
Financial Services	3.38
Toys & Games	3.37
Insurance	3.35
Electronics	3.28
Watches	3.28
Office Supplies	3.19
Sports Equipment	3.01
Musical Instruments	3.00
Automotive Accessories	2.99
Art	2.96
Apparel	2.87
Baby Supplies	2.74
Gifts & Holidays	2.64
Beauty & Cosmetics	2.62
Shoes	2.6
Home Furnishings	2.5
Glasses & Contacts	2.46
Craft Supplies	2.44
Jewelry	2.43
Household Appliances	2.33
Private Transportation	2.24
Home & Garden	2.21
Pet Supplies	2.18
Cars	2.17
Homes	2.13
Medicines	2.06
Body & Bath	2.03
Household Products	1.89
Restaurants	1.88
Alcoholic Beverages	1.77
Groceries	1.55

Although purchase types and ‘product categories’ were used to update the FCB grid model, the dotted lines that had divided the grid into quadrants are removed in order to create grids that include continuums rather than dichotomous-looking dimensions. There have been a series of criticisms (e.g., Rossiter et al., 1991) that the two dimensions of the original FCB grid model (i.e., PDI, think/feel purchase decision) were visualized as dichotomous variables notwithstanding that they were, in fact, continuums (Mishra & Kumar, 2012; Ratchford, 1987; Vaughn, 1980).

Furthermore, when visualizing the updated FCB grids, dimensions that started with 3 as the lowest points were used in the figures, because, in the main survey data, there were no product examples that scored less than 3 on PDI, think purchase, or feel purchase dimensions. (Puzzles were the lowest PDI product—3.56; paintings/drawings were the lowest think product—3.97; and trash bags were the lowest feel product—3.04.)

In all the eight figures, PDI was used for the y-axes; thinking and feeling purchase decisions were used for the x-axes, and lists of product examples were created if some areas of the grids had too numerous product examples. (See Figures 1-8 for the updated FCB grids offered by the current dissertation.)

The blue diamonds in Figure 1 represent scores of product examples, mainly purchased offline, on PDI and think purchase dimensions. A total of 47 product examples were included in the figure, and the product example rated highest on PDI was ‘house/condo/apartment to own’ (PDI=6.54), and the one rated lowest on the dimension was ‘trash bags’ (PDI=3.74). Relative to the think purchase dimension, ‘pick-up trucks’ were rated the highest (Think=6.51), and ‘snacks’ were rated the lowest (Think=4.22).

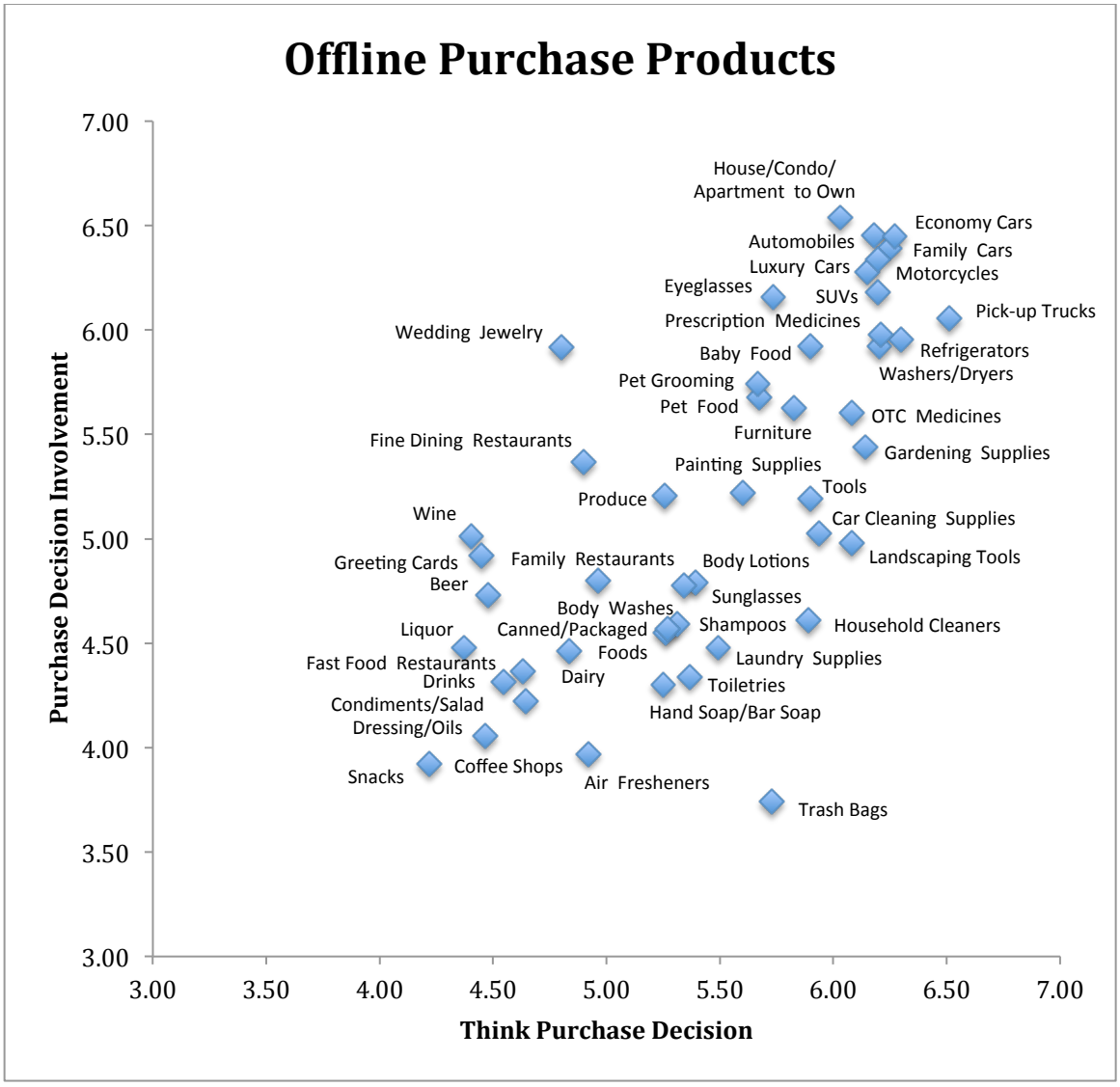


Figure 1. Think Purchase Decisions - Mainly Offline Purchased Product Examples



Figure 2. Think Purchase Decisions - Online or Offline Purchased Product Examples



Figure 3. Think Purchase Decisions - Mainly Online Purchased Product Examples

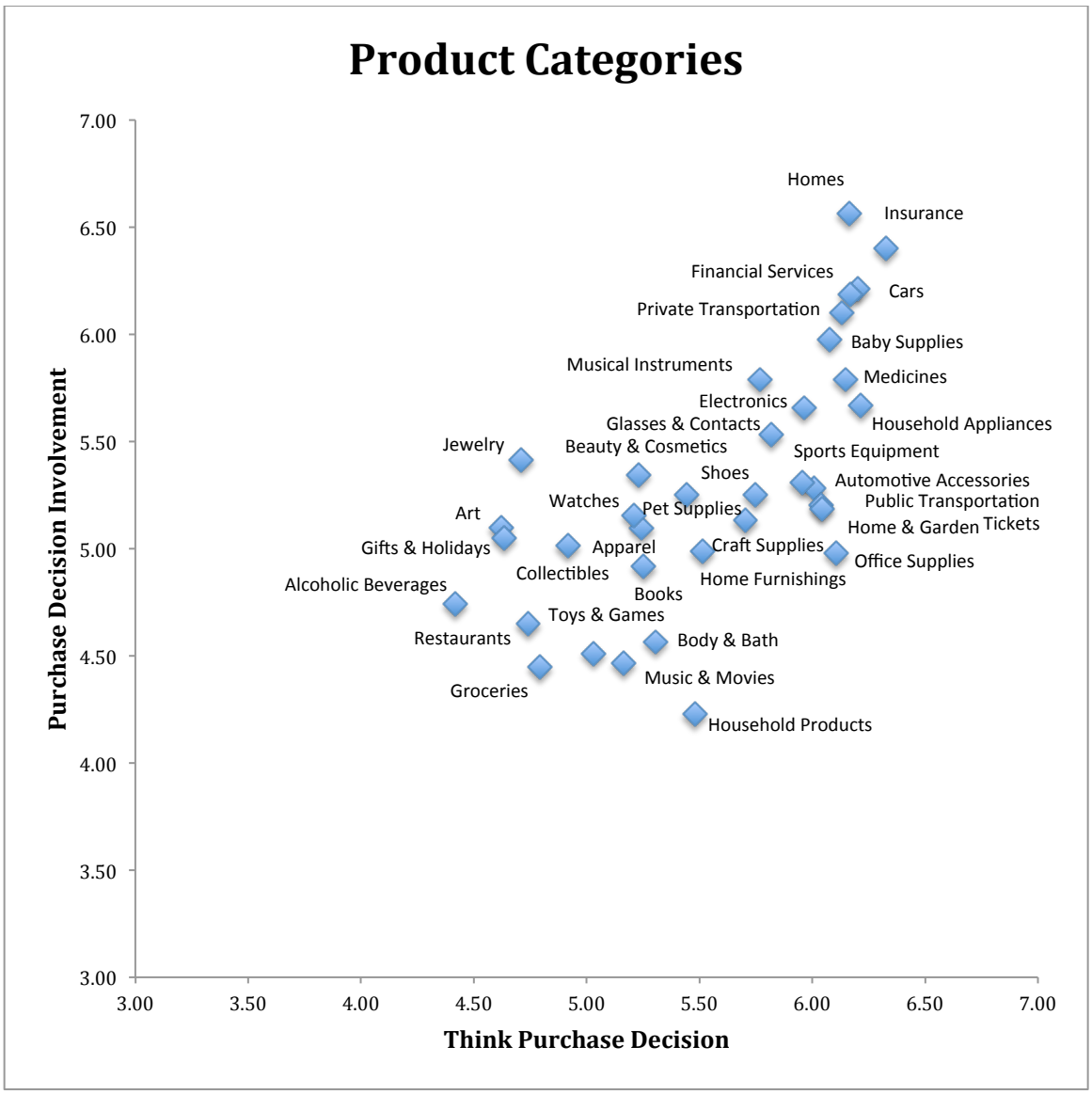


Figure 4. Think Purchase Decisions - Product Categories



Figure 5. Feel Purchase Decisions - Mainly Offline Purchased Product Examples



Figure 6. Feel Purchase Decisions - Online or Offline Purchased Product Examples



Figure 7. Feel Purchase Decisions - Mainly Online Purchased Product Examples

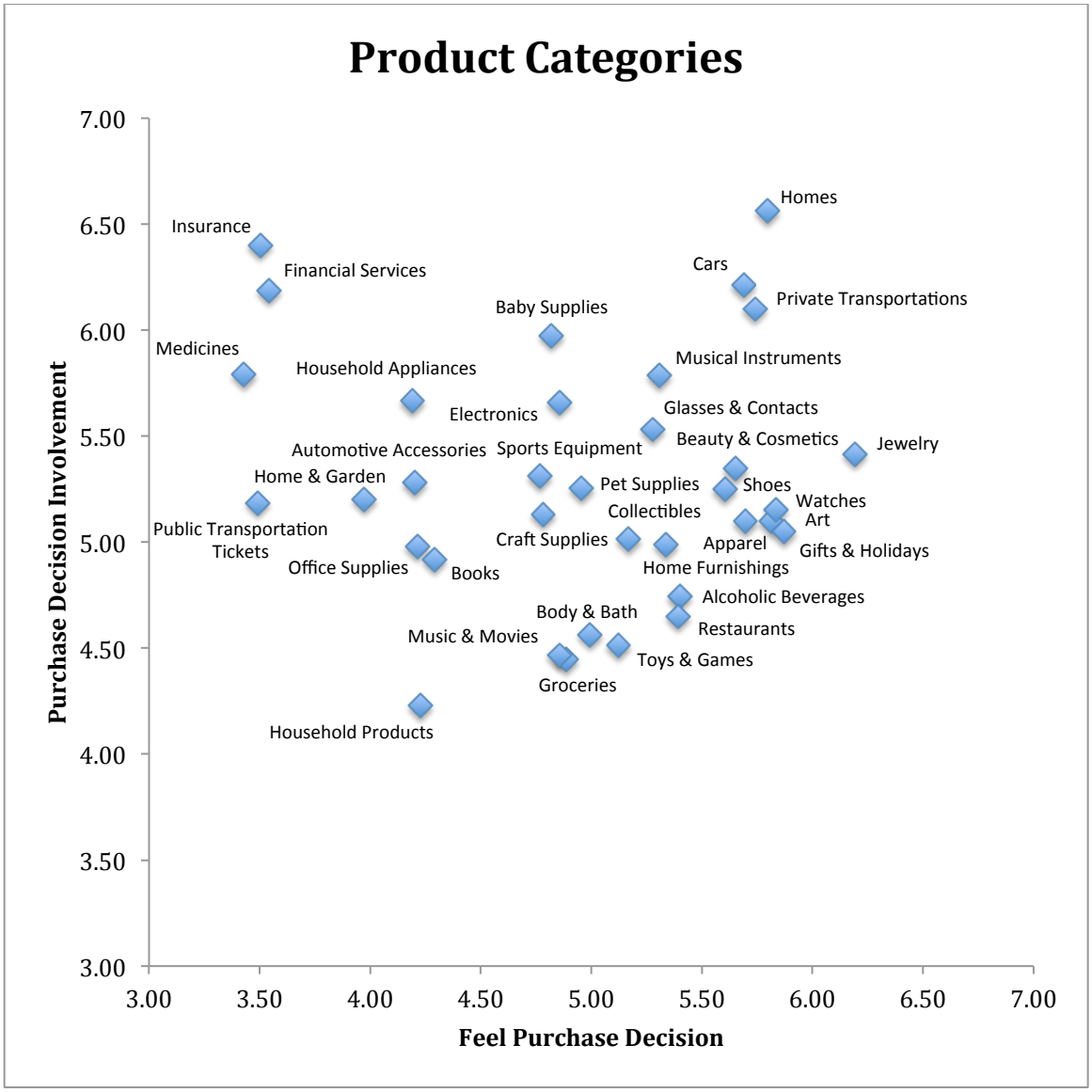


Figure 8. Feel Purchase Decisions - Product Categories

The product examples in Figure 2 represent the products likely to be purchased both on- and off-line. A total of 67 product types were included in the figure, and the product type rated highest on PDI was ‘loans’ (PDI=6.62); the one rated the lowest on PDI was ‘puzzles’ (PDI=3.56). ‘Health insurance’ scored the highest on the think purchase dimension (Think=6.48), but ‘paintings/drawings’ scored the lowest (Think=3.97).

Only four product examples were included in Figure 3 because the survey participants indicated that they almost exclusively bought those products online: airline tickets, eBooks, MP3s/streaming video services, and train tickets. Airline tickets scored the highest both on PDI (6.04) and think purchase (6.11); train tickets scored the second highest on both the dimensions (PDI=5.22, Think=6.06), followed by MP3s/streaming video services (PDI=4.6, Think=5.72) and eBooks (PDI=4.55, Think=4.86).

Figure 4 reports the levels of PDI and think purchase decisions of the 35 product categories. The product category rated the highest on PDI was ‘homes’ (PDI=6.56), and the one rated the lowest was ‘household products’ (PDI=4.23). The ‘insurance’ product category scored the highest on the thinking purchase dimension (Think=6.33), and the ‘alcoholic beverages’ category scored the lowest on the dimension (Think=4.42).

Figure 5 provides the levels of PDIs and feel purchase decisions of the 48 product types that were mainly purchased offline. ‘House/condo/apartment to own’ was rated the highest on PDI (PDI=6.54), whereas ‘trash bags’ were rated the lowest (PDI=3.74). ‘Wedding jewelry’ scored the highest on the feel purchase dimension (Feel=6.30), while ‘trash bags’ scored the lowest (Feel=3.04).

Figure 6 indicates the levels of PDIs and feel purchase decisions of the 67 product examples that were purchased both on- and off-line. 'Loans' were rated the highest on PDI (PDI=6.62), while 'puzzles' were rated the lowest (PDI=3.56). 'Formal wear' scored the highest on the feeling purchase dimension (Feel=6.26), and 'loans' scored the lowest (Feel=3.17).

The product examples in Figure 7 represent the products that were purchased mainly online. 'Airline tickets' were rated highest on PDI (PDI=6.04), while 'eBooks' were rated lowest (PDI=4.55). However, 'eBooks' scored the highest on feel purchase (Feel=4.77), whereas train tickets scored the lowest (Feel=3.52).

The blue diamonds in Figure 8 indicate the levels of PDIs and feel purchase decisions of the 35 product categories. 'Homes' were rated highest on PDI (PDI=6.56), while 'household products' were rated lowest (PDI=4.3). 'Jewelry' scored highest on feel purchase (Feel=6.19), while 'medicines' scored lowest (Feel=3.43).

TEST OF RESEARCH HYPOTHESES

H1 hypothesizes that consumers, when making high-involvement purchase decisions, are more likely to engage in brand-related UGC-seeking than when making low-involvement purchase decisions. The results of the linear mixed effect model indicate that there is a significant main effect of PDI on consumers' reliance on brand-related UGC ($F(1,2308)=301.35$, $p<.001$). The parameter estimate is positive, which indicates that, as the involvement with a purchase decision increases, consumers' level of reliance on brand-related UGC also increases (See Table 25). Therefore, H1 is supported.

Table 25. Linear Mixed Model - PDI

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	2.045931	.185289	56.196	11.042	.000***	1.674781	2.417081
PDI	.469815	.027064	2308.447	17.359	.000***	.416743	.522887

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Prior to examining H2, the hypothesis was divided into two separate hypotheses as the results of the FCB grid update study, which indicated that the think and feel purchase decisions differ and thus cannot be used to measure a single purchase construct. In order to divide the hypothesis, a review of relevant literature is provided in support of this decision.

Think and Feel Purchase Decisions as Two Purchase Constructs

Vaughn (1980) and Ratchford (1987) noted that consumers have different motives when purchasing products in the think and feel purchase categories. For example, when buying products in the think category, utilitarian or functional benefits are crucial factors that determine one's purchase decision-making process, while ego gratification (i.e., need to defend, express, and enhance one's basic personality), social acceptance (i.e., sign-values) and sensory pleasure (i.e., desire for pleasure to any of the five senses) are more critical considerations when buying products in the feel purchase category. In addition, one's pre-purchase information-seeking behaviors also vary when purchasing think and feel products. When a consumer considers purchasing a think product, his/her

information seeking tends to be more rational and cognitive, while the information seeking tends more to be emotional and affective when the consumer considers buying a feel product.

This logic seems to be plausible when hypothetically thinking about purchasing situations. However, in an actual purchase setting, consumers often engage both in rational and emotional purchase decisions simultaneously, because more than one buying motive can be operational (Kim & Sung, 2009; Ratchford, 1987). For instance, when shopping for a brand of car, a consumer may evaluate various car brands, based on multiple evaluative criteria such as sales price, reliability, gas efficiency, safety, comfort, style, and brand image. The former four attributes are generally accepted as rationally-evaluating criteria, but the latter three are deemed emotionally-evaluating criteria (Dhar & Wertenbroch, 2000). The data of our FCB grid update study backs up this idea. The study indicates that consumers do not choose a brand of car only rationally or affectively, and this does not excessively differ, regardless of vehicle type (See Table 26).

Table 26. Think & Feel Purchase Decision Levels - Cars

Product Category	Product Example	Cognitive Purchase	Affective Purchase
Cars	Family Cars	6.25	5.58
	Economy Cars	6.27	5.65
	SUVs	6.2	5.42
	Luxury Cars	6.15	6.13
	Sports Cars	5.84	5.99
	Pick-up Trucks	6.51	5.36

Furthermore, when Vaughn and his colleagues developed the theory of the FCB grid, they found that the two purchase types were "separate dimensions," and that products should be located on both the think and feel purchase continuums (Ratchford, 1987, p. 26). However, they combined the dimensions into a single purchase dimension because the think/feel subscales for product means were internally consistent ($\alpha = .76$) (Yoon & Kim, 2001). Taking into account that the alpha value was computed with product means, not with the raw data (the alpha value for the raw data was .50; see Ratchford, 1987, pp. 31-32), this dimension should be regarded as two separate purchase dimensions, and products should be placed on each continuum. (Our FCB grid update study's alpha value for the think and feel purchase decisions computed with raw data was .55.)

Modification of Hypothesis

H2 examines whether consumers, when making think purchase decisions, are more likely to engage in brand-related UGC-seeking than when making feel purchase decisions. The literature notes that thinking-purchase decisions usually require extensive information seeking and elaboration, because of elevated levels of the need for cognition (i.e., an individual's tendency to engage in and enjoy thinking) and the importance of acquiring brand- or product-related information (Cacioppo & Petty, 1982; Vaughn, 1980). However, consumers rarely engage in extensive information searches to acquire brand-relevant information when making feeling-purchase decisions, as formations of brand attitudes and holistic feelings about the brands are more influential on consumers'

brand choices than evaluating the brands' functional benefits (Vaughn, 1980). Therefore, Hypothesis 2 can be divided into the following two hypotheses:

H2a: Consumers are more likely to engage in brand-related UGC-seeking when they make highly 'thinking' purchase decisions, than when they make less 'thinking' purchase decisions.

H2b: Consumers are less likely to engage in brand-related UGC-seeking when they make highly 'feeling' purchase decisions, than when they make less 'feeling' purchase decisions.

An analysis of the results of the mixed effect model indicates that there is a significant main effect of the level of think purchase decision on the level of reliance on brand-related UGC ($F(1,2338)=144.01$, $p<.001$). The parameter estimate is positive, which suggests that, as the degree of thinking purchase decision increases, the degree of reliance on brand-related UGC also increases (See Table 27). Thus, H2a is supported.

Table 27. Linear Mixed Model - Think Purchase Decision

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	2.765144	.183295	77.933	15.086	.000***	2.400228	3.130061
Think	.325628	.027126	2338.193	12.004	.000***	.272433	.378822

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.

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

H2b examines whether consumers, when making highly feeling purchase decisions, are less likely to engage in brand-related UGC-seeking than when making less feeling purchase decisions. The results of the mixed effect model also indicate that the independent variable and the dependent variable are significantly related ($F(1,2363)=354.53$, $p<.001$). However, the direction of the relationship is the opposite of the hypothesis, as the positive parameter estimate suggests that, as the level of feeling purchase decision increases, the level of reliance on brand-related UGC increases as well (See Table 28). Thus, H2b is rejected.

Table 28. Linear Mixed Model - Feel Purchase Decision

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	2.364935	.194308	21.398	12.171	.000***	1.961307	2.768563
Feel	.465371	.024716	2363.006	18.829	.000***	.416904	.513839

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*$p<.05$. **$p<.01$. ***$p<.001$

H3 hypothesizes that consumers, when making online purchase decisions, are more likely to engage in brand-related UGC-seeking than when making offline purchase decisions. The linear mixed effect model indicates that there is a significant main effect of online purchase preference on consumers' reliance on brand-related UGC ($F(1,1863)=110.62$, $p<.001$). The parameter estimate is also positive, which indicates

that, as the preference for making an online purchase increases, the reliance on brand-related UGC increases (See Table 29). H3 is thus supported.

Table 29. Linear Mixed Model - Online Purchase

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	3.833911	.172287	12.337	22.253	.000***	3.459664	4.208157
Online	.205953	.019582	1862.848	10.517	.000***	.167548	.244359

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Brand-Related UGC and Other Information Types

Correlation tests were conducted to find the associations between the consumers' reliance on brand-related UGC and their reliance on other types of product information (i.e., advertisements, expert reviews on third-party websites, FtF or telephone-based WOM conversations). The tests reveal that the reliance on brand-related UGC is significantly related to reliance on the other three information types. Specifically, the participants' reliance on UGC and their reliance on online expert reviews on third-party websites were strongly correlated (r=.76, p<.001). This result seems to be very intuitive, because they both are online information. Reliance on advertisements (r=.46, p<.001) and FtF or phone-based WOM conversations (r=.54, p<.001) are also correlated with reliance on brand-related UGC, although the associations are not as strong as the association with online expert reviews. These results may imply that consumers rely on multiple

information sources when they require brand- or product- related information.

Demographic Factors

The demographic factors of the research participants were analyzed using linear mixed effect models as well. The demographic variables were entered for fixed effects, and the product type was entered for the random effect. Prior to the analysis, some variables (i.e., marital status, employment status, education, and ethnicity) were grouped into several categories to be eligible for analysis.

Employment status, age, gender, marital status, and the number of children in a household are found to be significantly associated with the dependent variable (i.e., the level of reliance on brand-related UGC). In particular, the associations of the participants' employment status ($F(1,2381)=13.77$, $p<.001$) and age ($F(1,2386)=17.96$, $p<.001$) with the dependent variable were highly significant; gender ($F(1,2387)=6.83$, $p=.009$) and the number of children ($F(1,2380)=4.96$, $p=.026$) were found moderately associated with the dependent variable, and the marital status ($F(1,2355)=3.89$, $p=.049$) was on the borderline of statistically significant.

Specifically, the participants seem to be more likely to rely on brand-related UGC as their ages go down or they have fewer children (See Tables 30 and 31), and unmarried participants responded that they relied more on brand-related UGC than those who were married (See Table 32). Those who were employed at the time of participating in the survey and those who identified themselves as females also reported that they relied more on brand-related UGC than their counterparts (See Tables 33 and 34).

Table 30. Linear Mixed Model - Age

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	4.992058	.165766	25.212	30.115	.000***	4.650802	5.333315
Age	-.010179	.002402	2385.563	-4.238	.000***	-.014888	-.005469

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 31. Linear Mixed Model - Number of Children

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	4.684020	.140705	13.818	33.290	.000*	4.381863	4.986177
Children	-.059935	.026917	2380.834	-2.227	.026*	-.112718	-.007152

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 32. Linear Mixed Model - Marital Status

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	4.805249	.175855	33.944	27.325	.000*	4.447846	5.162652
Marriage	-.156312	.079266	2355.138	-1.972	.049*	-.311751	-.000873

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 33. Linear Mixed Model - Employment Status

						95% Confidence Interval	
						Lower	Upper
Parameter	Estimate	Std. Error	df	t	Sig.	Bound	Bound
Intercept	4.389875	.133882	11.669	32.789	.000***	4.097250	4.682501
Employ	.292591	.078860	2380.618	3.710	.000***	.137950	.447232

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 34. Linear Mixed Model - Gender

						95% Confidence Interval	
						Lower	Upper
Parameter	Estimate	Std. Error	df	t	Sig.	Bound	Bound
Intercept	4.242340	.174640	32.511	24.292	.000**	3.886830	4.597850
Gender	.205810	.078745	2386.715	2.614	.009**	.051394	.360225

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 35. Linear Mixed Model - Education

						95% Confidence Interval	
						Lower	Upper
Parameter	Estimate	Std. Error	df	t	Sig.	Bound	Bound
Intercept	4.788879	.177609	34.392	26.963	.000	4.428086	5.149672
Education	-.149505	.079446	2370.438	-1.882	.060	-.305297	.006287

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 36. Linear Mixed Model - Household Income

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	4.563142	.143233	15.186	31.858	.000	4.258173	4.868112
Income	-.002603	.020335	2366.360	-.128	.898	-.042479	.037273

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Table 37. Linear Mixed Model - Ethnicity

						95% Confidence Interval	
Parameter	Estimate	Std. Error	df	t	Sig.	Lower Bound	Upper Bound
Intercept	4.481781	.136806	12.080	32.760	.000	4.183926	4.779637
Ethnicity	.037841	.025029	2386.538	1.512	.131	-.011241	.086923

Note. Dependent Variable: I read online consumer reviews. Strongly Disagree-Strongly Agree.
*p<.05. **p<.01. ***p<.001

Neither education (F(1,2370)=3.54, p=.060), nor household income (F(1,2366)=.016, p=.898), nor ethnicity (F(1,2387)=1.38, p=.240) has significant associations with the dependent variable (See Tables 35, 36, and 37).

Overall, the results of the analysis are in line with H1, H2a, and H3, but not with H2b. The relationship between the independent variable (i.e., the level of feel purchase) and the dependent variable (i.e., the level of reliance on brand-related UGC) of H2b includes the opposite direction of the hypothesis; one's level of feel purchase is positively

associated with the level of brand-related UGC-seeking. One's reliance on brand-related UGC is also found positively associated with reliance on online expert reviews, advertising, and FtF or phone-based WOM conversations; and several demographic variables (i.e., employment status, age, gender, marital status, and the number of children in a household) are found to be positively associated with one's reliance on brand-related UGC as well.

CHAPTER 5: CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

DISCUSSIONS OF MAIN FINDINGS

As described in the Introduction Chapter, the purposes of this dissertation were two-fold. The first part of the study was to update Vaughn's (1980, 1986) FCB grid, one of the most widely studied product classification theories in advertising and media studies, by revisiting the theory with product categories and examples that reflect the current market environment. That was followed by an application of the updated product classification theory of the FCB grid model to the consumer pre-purchase information-seeking behaviors in the context of brand-related UGC.

By utilizing qualitative and quantitative research methods, the FCB grid update study generated eight product grids that classify various purchase situations and product types, based on four purchase dimensions (i.e., PDI, think purchase, feel purchase, and online/offline purchase). The qualitative focus groups and the analyses of product categories, both in peer-reviewed published academic research and in product menus on major online retail stores, were utilized to select product examples and categories for the theory update. Two sets of paper-based pilot surveys were also conducted to pretest the survey instruments before implementing the main surveys. Finally, a set of online surveys with 1,104 U.S. consumer panelists was utilized to categorize those product types in the new product grids.

Results demonstrated that the subscales used by the original FCB grid studies to measure think/feel purchase decisions do not measure a single purchase dimension. Rather, they measure two separate purchase constructs: think purchases and feel

purchases. This finding is in line with various research studies that treat the think/feel dimension as two separate purchase dimensions (e.g., Kim, 1991; Kim & Sung, 2009; Park & Young, 1986; Putrevu & Lord, 1994) and with the research that suggests that thinking and feeling are independent and may occur simultaneously (e.g., Park & Young, 1986; Zaichkowsky, 1994; Zajonc, 1980; Zajonc & Marcus, 1982). This finding is perhaps one of the most meaningful updates that the current dissertation offers for the body of FCB grid-relevant literature because the theory was often criticized as being 'overly simplistic' to understand complex consumer decision-making systems that include both rationality and emotions (Choi et al., 2012; Dubé et al., 1996). In the original theory, the two dimensions were combined into a single purchase scale "for parsimony" (Ratchford, 1987, p. 26).

In addition to separating the two purchase dimensions, this study also manages to alter the dichotomous-looking dimensions to continuous-looking variables, by removing the lines that divide the PDI and think/feel dimensions, which categorize purchase decisions of various products into one of the four purchase quadrants: 'high PDI/think,' 'high PDI/feel,' 'low PDI/think,' and 'low PDI/feel.' This alteration of the theory is also consistent with the views of the researchers who originally developed the FCB grid (e.g., Vaughn, 1980; Ratchford, 1987), on the two dimensions as continuums, and is in agreement with the previous studies that argue that consumer involvement should be expressed as a continuum rather than treating it as a dichotomy or categories (e.g., Krugman, 1965; Laurent & Kapferer, 1985; Rossiter et al., 1991). These studies also advocate the proposition that 'utilitarian' and 'hedonic' consumption motives are two

separate buying motives and may be pursued at the same time for a purchase of a brand of product (e.g., Batra & Ahtola, 1990; Voss et al., 2003). These changes in the FCB grid's representations of the three variables are expected to improve the theory's compatibility with other theories that deem attitude changes or information-processing to be a continuum variable (e.g., Converse, 1970; Fiske & Neuberg, 1990; Petty & Wegener, 1999).

The study also attempted to improve the theory of the FCB grid by separating product categories from their examples; the original grid model included only product examples. The theory now consists of eight product grids that specify 118 product examples and 35 categories. Another important change that this study made in the model of the FCB grid is that the theory now has the third purchase dimension that determines what shopping contexts (i.e., online, offline, or both) consumers generally engage in when buying a specific type of product. In general, consumers are likely to purchase a product online if the product is generally distributed to consumers on the Internet (e.g., eBooks, MP3s/streaming video services, and airline tickets) or the product is easily deliverable (e.g., textbooks, CDs/DVDs).

The second part of the dissertation examined several research hypotheses relative to the relationships among the four purchase dimensions (i.e., PDI, think purchase, feel purchase, online/offline purchase) of the updated FCB grids, and consumers' reliance on brand-related UGC. Linear mixed effect models indicate that the four independent variables and the dependent variable are positively related. These findings are in support of H1, H2a, and H3, but not of H2b; H2b hypothesizes a negative association. The

rejection of this hypothesis is perhaps the most interesting and valuable discovery that the study made with regard to consumers' pre-purchase information-seeking behaviors, because prior research on the influences of product type (e.g., hedonic vs. utilitarian products; search vs. experience products) on information-seeking behaviors has been suggesting that feel purchase decisions require affective brand evaluations and sensory product experiences, rather than cognitive evaluations and searching product information (Dhar & Wertenbroch, 2000; Taylor, 1999; Vaughn, 1980). However, taking the unique characteristics of UGC and social media into consideration, this result, which indicates that higher levels of consumers' feeling purchase decisions increase their likelihood to search product information in the context of UGC for their purchase decisions, should not be indecipherable.

First, UGC is online information. This means that consumers, except for only a few limitations (such as tasting foods or feeling the texture of products), can find almost any kinds of product information in the context of UGC (Huang, Lurie, & Mitra, 2009). For example, using the platforms of UGC, consumers now can learn what content is inside a product package before purchase by viewing product unpacking videos on websites such as YouTube. Also, consumers can make rough estimations on the service qualities of many types of service products with no need for direct experiences by searching WOM messages on blogs and SNSs. Researchers believe that this change of consumers' information-seeking processes is attributable to the fact that the Internet has changed most of the attributes of all kinds of products to being *searchable* (Huang et al., 2009). Some researchers even claim that UGC and the Internet have changed 'experience

goods' into 'search goods' (Huang et al., 2009; Klein, 1998). Experience goods refer to the goods whose dominant attributes cannot be learned without a purchase (or a direct experience), whereas search goods are the goods whose dominant attributes can be easily known and evaluated prior to a purchase (Nelson, 1970; 1974).

Second, UGC is created by general consumers rather than by marketing professionals or advertising agencies. Because of this, UGC provides subjective opinions about brands as well as objective information. When making a purchase decision for a utilitarian product, the acquisition of objective information is much more important than subjective opinions or feelings because of the product's elevated importance of functional benefits. In contrast, when making a buying decision for hedonic products, acquiring subjective information about brands is more crucial than objective information because many attributes of hedonic products are vague and assessed subjectively.

Except for the rejection of H2b, the findings about the other hypotheses seem to be intuitive and intelligible. Consumer involvement with a purchase decision, the degree of thinking in a purchase task, and the preference to shop online are all positively related to the consumer's reliance on brand-related UGC. In addition, the results about the demographic factors are mostly comprehensible as well; those who are younger, unmarried, females, or have no or fewer children rely more on social media and UGC for pre-purchase information seeking than do their counterparts. However, why the employment status and the reliance on brand-related UGC are positively related is still questionable. Most of the research in both the industry and academia does not analyze this association, and one study that presents the same finding does not provide rationales

behind this association either (Morrison et al., 2013). It may be that a consumer's socio-economic status, which consists of the individual's education, employment status, and household income, positively affects Internet literacy (i.e., capabilities of accessing the Internet, interpreting the content, and creating messages) and the degree of Internet use for purchase-related tasks (Livingstone, Bober, & Helsper, 2005). However, the results about education and household income indicate that the two variables are not statistically associated with the reliance on brand-related UGC. Future studies might need to investigate what factors affect this association.

The correlation tests conducted to explore the associations between one's use of brand-related UGC and one's use of other forms of product information reveal that consumers tend to use more the four types of product-related information for purchase tasks when the product is high on any variable of the four purchase dimensions. These findings are in line with previous research that explored how consumers use the Internet and traditional media for purchase decisions of various product types; consumers use all the five media types to make purchase decisions of a brand of product, with varying degrees of use of each medium (Yoon & Kim, 2001).

OVERALL IMPLICATIONS OF THE DISSERTATION

This dissertation provides implications for academics and practitioners. First, the current study's endeavor to update the product types on the FCB grid model generates several advantages for practitioners and researchers in diverse fields of study. First, the update of the product grids may benefit advertisers and marketing practitioners, as the

grids provide an up-to-date product classification theory that specifies how much consumers are involved with each product type, to what extent a purchase decision of each product type is made based on emotional (and functional) attributes, and whether a purchase of each product type is made mostly online/both online and offline/mostly offline. These findings, specified in the new grid theory, should help the practitioners to determine their overall marketing plans.

Second, marketing managers and advertising practitioners may also use the newly added online/offline purchase dimension and the findings of the hypothesis-testing study for their online brand promotion plans, because they may suggest brief guidelines to determine how much marketing budget they should allocate to online promotions based on what product type they promote. For example, a firm should provide a large amount of product information through UGC if the product category, where the firm's brand competes with other companies, is either a high PDI product, highly-thinking product, highly-feeling product, or the majority of its products are sold online. In particular, the firm may use online brand communities, brand pages on websites such as Facebook and Twitter, online video-sharing websites such as YouTube, and the blogs of key bloggers. Although it is generally accepted that firms can have only a limited influence on consumers' online WOM conversations because the messages of those conversations are typically generated by end-users of products, firms are nonetheless also capable of creating WOM conversations relative to their brands by encouraging consumers to post their experiences with the firms' brands online. This type of WOM message is called 'amplified WOM' and is known to have levels of effects on consumers' brand attitude

formation similar to those with ‘organic WOM’ (i.e., WOM messages posted voluntarily by consumers). According to Kulmala et al. (2013), consumers use both the amplified WOM and organic WOM when searching for pre-purchase brand-related information, as they perceive both types of WOM messages to be credible.

Third, it is also noteworthy that demographic variables, such as age, gender, marital status and employment status, may influence one’s level of reliance on brand-related UGC for his/her purchase decisions. An analysis of the dissertation’s second set of main survey data indicates that younger generations, females, those who are unmarried, and those who are employed for wages/self-employed are more likely to be influenced by product information in UGC on their purchase decisions than are their counterparts (e.g., older generations, males, those who are married, and those who are unemployed). These findings are mostly in line with previous research relative to the demographic information of social media users (e.g., Duggan, 2013; Duggan & Brenner, 2013); whether one’s employment status may determine the person’s reliance on brand-related UGC might be relatively incomprehensible. Nonetheless, practitioners should not ignore this factor when planning online brand promotions because at least two research studies, including this dissertation and Morrison et al.’s 2013 study on UGC user types, found that there is a statistically significant association between one’s employment status and pre-purchase information-seeking behaviors in the context of UGC. A strategic recommendation that this dissertation may suggest is that, when the target audience of the firm’s marketing communications plan includes those who are employed for wages or

self-employed, the plan should include online brand promotions that utilize social media and UGC.

The product classification theory of the updated FCB grids may have implications for scholars in various fields of study as well. In particular, the theory may be beneficial to those who are in consumer behavior, marketing, advertising, and media studies because the influences of product type on consumer decision-making processes and pre-purchase information-seeking behaviors are widely studied areas of research in those fields, and the researchers require an up-to-date product theory. The researchers interested in the FCB grid, consumer involvement, hedonic/utilitarian buying motives, e-commerce, and online retailing may also use the product theory offered by the current dissertation for studying various research phenomena relevant to the four purchase dimensions of the updated FCB grids.

The findings of the hypothesis-testing study on the associations between feel purchase decisions and UGC-related information-seeking behavior may also have implications for researchers interested in relationships between emotional purchase decisions and other elements of consumer decision-making processes, such as stages of need recognition, alternative evaluations, and post-purchase behaviors (Kotler & Armstrong, 2013). In particular, future researchers that explore how consumers' recognition of a need for a product differs, based on different product types, and how consumers resolve post-purchase cognitive dissonances (i.e., a buyer's mental discomfort caused by anxiety and psychological tension after purchasing a product, Festinger, 1957) after buying a think product and a feel product may use this dissertation.

Strategic Guidance for Online Brand Promotions

The new product theory of the updated FCB grids may be used as strategic guidance for marketing managers and advertising practitioners in planning online brand promotions as well. However, this dissertation does not provide strategic suggestions relative to traditional media advertising because the classic FCB grid studies provide detailed guidelines on traditional media advertisements (See Ratchford, 1987; Vaughn, 1986).

First, professionals may need to use the locations of the product types on the updated FCB grids for deciding whether the content of the online brand promotions should focus more on rational brand information or provide more emotional information. If a firm's product is a rationally-purchased product (i.e., a think product), focusing on rational information may better suit the objectives of online brand promotions, while providing emotional information may work better with the promotional objectives if the firm's product is an emotionally-purchased product (i.e., a feel product). However, if the firm's product type is high both on the think and feel purchase dimensions, both forms of brand information should be offered for consumers by the materials of the firm's online brand promotions. Products such as cars, private transportation, glasses and contacts are typical examples of product categories that scored high on both the dimensions.

Second, the PDI level of a firm's product type may also be utilized by marketing and advertising professionals as guidance on choosing online media for their marketing communications plans. The literature notes that, when one's PDI with a product type is relatively high, the consumer's attitude toward a firm's brand may be formed by being

exposed to product information on multiple media rather than by exposure to a single medium (O'Guinn, Allen, Semenik, & Close, 2014). Furthermore, when one's purchase decision is relative to a high PDI product, the consumer's purchase decision of a brand of product may be decided based more on product information on the Internet than marketing information conveyed via traditional media advertising (Yoon & Kim, 2001). Thus, it is recommended that when a firm's product type is a high PDI product, the firm should utilize multiple media for its marketing communications plan and the plan should include online brand promotions.

Finally, it is also recommended that a firm should use the Internet for its marketing communications plan when most of the firm's product sales are made on the Internet because consumers tend to use product information online when they shop for a brand of product on the Internet (Detlor et al., 2003; Phau & Poon, 2000). However, online brand promotions should be implemented for products mostly sold offline as well, because consumers now can access the Internet at traditional brick-and-mortar stores and read consumer reviews and other product information by using their mobile devices.

LIMITATIONS AND FUTURE STUDIES

Notwithstanding the implications offered by the current study for researchers and professionals, this dissertation also has several limitations in the research methodologies used to update the FCB grid and to examine the research hypotheses. Some limitations were new to the current study, and some were attributed to the fact that the first part of

the study followed the approaches of the original grid model studies (e.g., Ratchford, 1987; Vaughn, 1980).

First, akin to the original FCB grid studies, this study does not include a possible brand's effect, which may influence a consumer's purchasing decisions. The literature notes that product decisions and brand decisions differ (Bearden & Etzel, 1982; Mittal, 1989), and that an individual's involvement with a purchase decision on a particular product varies based on the brand type (e.g., luxury brands vs. non-luxury brands) that the consumer is considering for purchase (Kim & Sung, 2009). Furthermore, brands may affect what product values (e.g., utilitarian values vs. sign values) a consumer can achieve when purchasing a product. For example, a consumer may have a bigger satisfaction in sign values if the person buys a designer's brand, whereas a cheap brand can barely provide sign values and simply satisfies one's utilitarian needs. Future research might want to explore how brand types influence product meanings in a consumer's mind relative to the four purchase dimensions, and relocate the products of the FCB grids suggested by the current dissertation.

This dissertation also does not take account of personal differences, similar to the original grid studies, although the meanings of a product type differ from person to person (e.g., experienced vs. inexperienced consumers), and variables such as personal involvement and personal preference for shopping online/offline can be more important factors than those variables at an aggregate level, to understand a consumer's purchasing behaviors (Gensch & Javalgi, 1987; Rossiter et al., 1991). However, personal variances in the four purchase dimensions were not considered when designing the present

dissertation, because the primary purposes of the FCB grid model are to help advertising and marketing practitioners to create effective campaigns that reach a large number of audiences, and to provide researchers with a consumer theory that can serve as a theoretical background for their research studies whose goals are to provide generalized findings about purchase behaviors (Ratchford, 1987; Vaughn, 1980).

According to Kotler's (1965) buying model, people are social animals, and many of their consumption behaviors can be explained with the social-approval motives (i.e., sign values). Thus, Vaughn and his colleagues tried to develop scale items that measure this buying motive when they developed the scale that measures the feeling purchase decisions (Ratchford, 1987; Taylor, 1999). However, they could not measure this purchasing motive because the survey participants were reluctant to report that their purchase decisions were made based on 'what others think' (Ratchford, 1987; Rossiter et al., 1991). The present study also did not measure this social-approval motive to update the theory, because the main purpose of the study was not to develop a social-approval scale but to match the product types of the FCB grid to the meanings of the products in the minds of contemporary consumers. Future research might need to develop the scale and confirm the findings of the current dissertation.

To update the product theory of the FCB grid, the author split questionnaire items and randomly distributed them to the survey participants. From a statistical standpoint, this is not an ideal way to collect quantitative data because a generalization should be based on the responses from the same samples. However, this was the only way to gather the data because of the large number of questionnaire items; they numbered more than

1,380. Moreover, if a participant had to respond to all of the questionnaire items, the participant would have seen the same set of questionnaire items that repeated more than a hundred times (the only difference between the questionnaire sets was product type). This would have generated more misleading data than collecting data with split questionnaires, because the fatigue rates would have been extremely high (Adigüzel & Wedel, 2008). To avoid generating statistically misrepresenting data, more than 1,100 respondents participated in the survey.

The study also failed to use a multi-item scale to measure the online/offline purchase dimension. When initially measuring the survey participants' responses with regard to their preferences to shop online/offline, the author attempted to use a multi-item scale (one item measuring 'preference to purchase (product) online/offline,' and another measuring 'tendency to search information regarding (product) online/offline.'), but the study had to utilize only one of the scale items for the analysis because a reliability test of the items indicated relatively low internal consistency. The alpha value of the test was .65, lower than the recommended value of .7 (George & Malley, 2003; Santos, 1999). Although measuring a purchase dimension with multiple subscales would provide a better statistical analysis than the use of a single-item scale, (Diamantopoulos, Sarstedt, Fuchs, Wilczynski, & Kaiser, 2012), this issue might not significantly damage the results, because the straightforwardness of the scale item might increase the survey participants' understanding of the survey questionnaire.

The hypothesis-testing study of the dissertation also has several limitations. First, even though the four purchase dimensions could make sixteen product combinations, the

study used only ten product types for creating the survey instruments, because the products of six combinations were not available in the updated FCB grids. For example, there were not any products that are highly involved, emotionally purchased, and mainly purchased online. This seems to be very natural because consumers usually prefer shopping at traditional retail stores for products that are pricey and whose hedonic attributes are critical considerations. Moreover, there was no product example that was both rationally and emotionally purchased as well as low involving. This is also very comprehensible because when consumers perceive both the hedonic and utilitarian attributes of a product to be critical, a purchase decision of that product should be highly involving. However, the lack of these product combinations should not affect the examinations of the hypotheses, because all ten products cover both the extremes of the four purchase dimensions (See Table 15 on page 73 for not available products.).

Second, it is generally acknowledged that the use of a multi-item scale should outperform a single-item scale in terms of predictive reliability (Diamantopoulos et al., 2012). However, the study used a single-item scale (i.e., 'I read online consumer reviews') to measure the dependent variable instead of a multi-item scale because the scale item was made of a very clear and straightforward statement. In addition, the use of a single-item scale might have effectively increased the data quality because the survey instruments consisted of ten product types; the same set of survey questionnaires repeated ten times. A long simple survey may drop response rates and eventually lower the data quality (Rogelberg & Stanton, 2007). However, this might be another weakness of the present study, because the study could not measure the internal consistency or

unidimensionality of the scale (Clark & Watson, 1995). Future research might need to search for scales that measure the same variable (i.e., the level of one's reliance on brand-related UGC) or develop a multi-item scale and replicate the current dissertation to confirm the research findings regarding the hypothesis testing.

Finally, although the two sets of the main surveys were collected using the same seven-point scales, the scale types did not match between the surveys; the survey used to update the FCB grid theory utilized semantic differential scales, while the survey used to examine the research hypotheses utilized both semantic differential and Likert scales. A use of two forms of scales between two sets of surveys might not considerably harm the data quality because the survey participants of the two surveys differed. However, a use of two different types of survey questionnaires in a set of surveys might not be an ideal choice for a survey design. Future research might need to revisit the second part of the study and confirm the findings of the study by measuring the same variables using a unified scale design.

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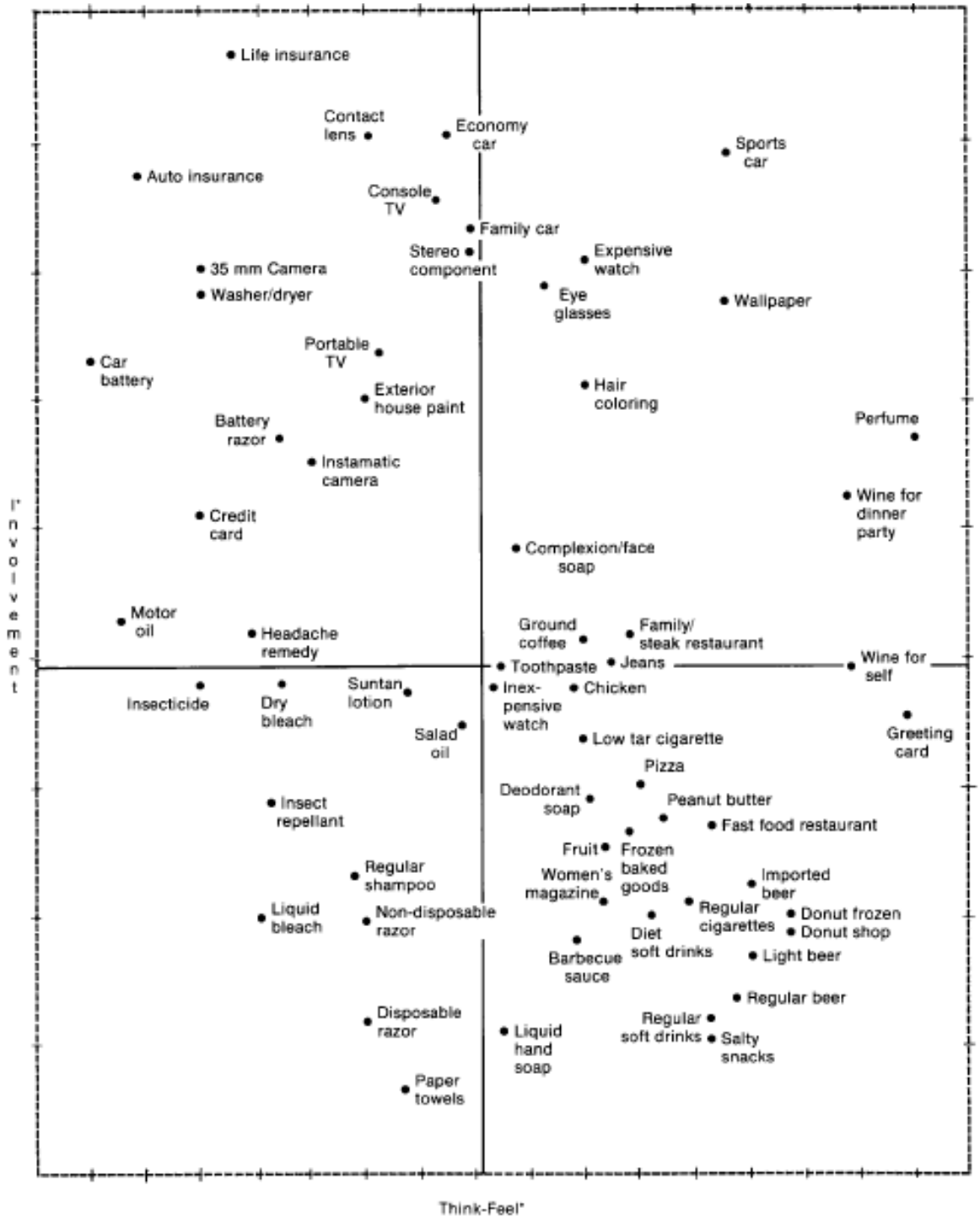
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APPENDICES

Appendix A – FCB Grid (Ratchford, 1987, p. 31)



* Numbers are scale values × 100.

Appendix B – Survey Instrument (FCB Grid Update)

INFORMED CONSENT

Thank you for your willingness to participate in this study of product classification. Your participation will help researchers better classify product types. The information you provide will be treated in confidence, and you will not be identified individually at any stage of the study. Your participation is completely voluntary. You may decline to participate or change your mind later and stop participating without penalty.

There are no foreseeable risks greater than those encountered in everyday life involved with participating in this research. If at any time you wish to quit the project, simply close the survey. If you do not wish to answer a question, you may skip it. If you have questions about the study or the procedures, you may contact the lead researcher, Hyuk Jun Cheong, at 476 Communications Building, Knoxville, TN 37996-0343, by phone at 865-974-3048, or by e-mail at hcheong@utk.edu. If you have questions about your rights as a participant, contact Research Compliance Services at 865-974-7697.

By continuing to the next page I am indicating I have read the consent form and am voluntarily agreeing to participate, and that I am at least 21 years of age.

Beer

Directions: Please rate the process of choosing a brand of beer on each of the following scales. Please base your rating on your most recent choice of brand of beer.

If you have not previously purchased beer, please skip this section of the questionnaire and move on to the next product type.

Have you previously purchased beer?

Yes ____
No ____

Choosing a brand of beer is a:

Very unimportant decision	____:____:____:____:____:____:____	Very important decision

Choosing a brand of beer requires:

Little thought	____:____:____:____:____:____:____	A lot of thought

If you choose the wrong brand, there is a:

Little to lose	____:____:____:____:____:____:____	Lot to lose

Decision is:

Not mainly logical or objective	____:____:____:____:____:____:____	Mainly logical or objective
Not mainly on functionality	____:____:____:____:____:____:____	Based mainly on functionality
Not based on looks, taste, touch, smell or sounds	____:____:____:____:____:____:____	Based on looks, taste, touch, smell or sounds
Based on little feeling	____:____:____:____:____:____:____	Based on a lot of feeling

Decision:

Does not express one's personality	____:____:____:____:____:____:____	Expresses one's personality

I prefer purchase beer:

Offline	____:____:____:____:____:____:____	Online

I search for information about beer:

Offline	____:____:____:____:____:____:____	Online

In order for us to analyze the data obtained from this survey, we need to aggregate the answers along some demographic criteria. Your answers to the following questions will assist us to do so. Please be assured that your answers will be kept strictly confidential.

---

1) What is your gender?
    - Male
    - Female

2) What is your age?

3) In what country do you live?

4) If you live in the USA, in what state do you live?

5) How would you classify yourself?
    - Caucasian
    - African-American
    - Native American
    - Asian/Pacific Islander
    - Hispanic
    - Multiracial
    - Other_____

6) What is the highest level of education that you have completed so far?
    - Didn't finish high school
    - Completed high school
    - Some college but no degree
    - Associate's degree (e.g., AA, AS)
    - Bachelor's degree (e.g., BA, BS)
    - Master's degree (e.g., MA, MBA)
    - Professional degree (e.g., JD, MD)
    - Doctorate degree (e.g., PhD, EdD)
    - Other_____

7) Are you currently…?
    - Employed for wages
    - Self-employed

- Out of work and looking for work
- Out of work but not currently looking for work
- A homemaker
- A student
- Military
- Retired
- Unable to work

8) What is your annual household income in U.S. dollars?
   - Less than $25,000
   - $25,000 - $49,999
   - $50,000 - $74,999
   - $75,000 - $99,999
   - $100,000 - $124,999
   - $125,000 - $149,999
   - $150,000 - $174,999
   - $175,000 - $199,999
   - More than $200,000

9) What is your marital status?
   - Single, never married
   - Married or domestic partnership
   - Widowed
   - Divorced
   - Separated

10) How many children to you have?
   - None
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 or more

THANK YOU FOR PARTICIPATING IN THE SURVEY

Appendix C – A Focus Group Transcript

I: My name is Hyuk Jun Cheong. I am a doctoral student at the Department of Communication. I am working on a research study that updates a product classification theory. Today, we are going to learn about the theory, its dimensions, and update the locations of product types on the theory. The theory uses the high/low involvement dimension and think/feel purchase types as the dimensions. I am also classifying product types, based on whether consumers purchase each product type online or offline. Let me first create online/offline purchase categories by asking you to put product types on this whiteboard, and then we will update the product theory with the involvement and think/feel purchase dimensions. Okay, let me start. Do you buy furniture online or offline?

R: Offline.

I: Offline. Okay, do you always purchase furniture offline or often offline?

R: Always offline.

I: How about digital cameras? Where do you buy cameras?

R: Maybe online.

I: Maybe online. So, do you buy digital cameras offline, too?

R: Yes.

I: Okay. Then I think it should be put in online or offline. Okay, let's move on to cars.

R: Offline.

I: Offline. Sometimes offline or always offline?

R: Always offline.

I: Okay, what about a house?

R: Always offline.

I: What about an iPod or mp3 player?

R: Maybe online.
I'd say often online.

I: Okay. Luxury watches?

R: Offline.

I: Always offline or often offline?

R: Always offline.

I: Okay. What about the next one, perfumes?

R: Offline.

I: Always offline?

R: Always.

I: What about eyeglasses?

R: Offline.

I: Offline. Sometimes? Always?

R: Always.

I: Okay. Do you think you buy eyeglasses offline because you need to see an eye doctor? What about cereals?

R: Always offline.

I: Okay. Wines?
R: Always offline.
I: Beer?
R: Offline.
I: Coffee, like Starbucks?
R: Offline.
I: What about instant coffee?
R: Offline.
I: Batteries?
R: Offline.
I: Relatively offline or always?
R: Always.
What if you're searching for batteries online, and then you go to the store and buy them?
I: That's actually what I'm going to explore in my research.
R: Okay, because I've done that before; I've researched about car batteries online and then went to the store to buy it.
I: Okay. I will put the batteries in the offline because this product categorization is about where consumers make purchases.
I: Pens?
R: Offline.
I: Medicines?
R: Offline.
I: Offline. TV? Like flat-screen TVs?
R: Both.
I: Both. Okay, I will put the TVs in the online or offline category. Computers?
R: Either one.
I: Either one. Wallpaper? Did you guys ever buy wallpaper?
R: Mom and Dad.
I: Okay, what if you need to buy some?
R: Offline.
I: Razors?
R: Always off.
I: Socks?
R: Offline. Always offline.
I: Okay. Sunblock?
R: Offline.
I: Clothes?
R: Both.
I: Shampoos?
R: Offline.
I: Okay. What about something like toilet paper and deodorants?
R: Offline.
I: What about delivery pizzas?

R: Both.
I: Frozen pizzas?
R: Offline.
I: Greeting cards?
R: Offline.
I: Offline. Always or sometimes?
R: Always.
I: Fast food?
R: Offline.
I: Definitely?
R: Yes.
I: Salty snacks?
R: Offline.
I: Okay. Sodas?
R: Offline.
I: What about magazines?
R: Both. I'm always online.
I: Always?
R: Yeah, because to subscribe you need to get it online.
I: Okay. Subscribing magazines is online. Newspapers?
R: Both.
I: Both?
R: Yeah.
I: Okay. Bread, milk, or cigarettes?
R: Offline.
I: Household appliances like a refrigerator or washer and dryer?
R: Offline.
I: Always or sometimes?
R: I'd say often offline.
I: Okay, moving boxes?
R: Offline.
I: Okay. Bed?
R: Offline.
I: What about gas?
R: Offline.
I: Computer software?
R: Offline and online.
Often offline, I'd say.
I: Okay. Here or there?
R: Often offline.
I: Sporting equipment?
R: Both.
I: Video games?
R: Both.

I: Car insurance?
R: Offline.
They do both now.
I: Yeah. I bought my insurance online.
Would you say you buy car insurance always offline or often offline?
R: Often offline.
I: What about house insurance or life insurance?
R: Offline.
I: Offline, always?
R: Always.
I: Movies.
R: Both.
I: CDs
R: Both.
I: Mp3?
R: Always online.
I: Books?
R: Both.
I've never gotten a book online, though. I just get them in the store.
You can get your textbooks online.
I: Okay. So, do you think we should put them in online or offline?
R: Both.
I: Okay, eBooks.
R: Online.
I: Always? Personal checks?
R: Like a book of checks, do you mean? You can do that online.
I: Okay. So would that be online or offline?
R: Online.
I: What about credit cards?
R: Getting a credit card?
I: Yeah, getting a credit card. You know people can apply for a credit card online.
R: I guess you could do both.
I: Okay. Should a credit card go into online or offline or often offline?
R: Often offline.
I: Okay. I think often offline makes more sense. Car tires?
R: Offline.
Both.
I: Jewelry.
R: You can do both.
I: Motorcycles?
R: Offline.
I: Hair coloring?
R: Offline.
I: Sunglasses?

R: Both.
I: Luxury cars?
R: Offline.
I: Food?
R: Offline.
I: Household products?
R: Always offline.
I: Okay. Tea?
R: Offline.
I: Okay, laundry detergents?
R: Offline.
I: Liquor?
R: Offline.
I: Candies?
R: Offline.
I: Okay. Cell phones?
R: Both.
I: Smartphones?
R: Both.
I: Key ring?
R: Offline.
I: Always or sometimes?
R: I got a key ring that was online once.
I: Okay. Should I put it here?
R: Yes. Often offline.
I: Okay. DVD players?
R: Both.
I: Stereo systems?
R: Both.
I: Travel products such as hotels and travel destinations?
R: Mostly online.
I: Okay. Here or here?
R: Often online.
I: Airplane tickets?
R: Online. Always online.
I: Dress shoes?
R: Both.
I: What about sneakers?
R: Both.
I: Both. What do you think?
R: I'd say both.
I: Okay. Paper towels.
R: Always offline.
I: Backpack?

R: Both.
Offline.
I: Offline?
R: Both. Does that include a camping backpack and stuff?
I: I think it won't matter. Woman's purse?
R: Both.
I: Leather goods?
R: Like belts? Offline.
I: Belt. Wallets, offline?
R: Yeah.
I'd say often offline.
I: Now, let's move on to the product classification theory and its two purchase dimensions: think/feel and high/low involvement. A researcher called Vaughn created this product grid in the 1980s. He worked for Foote, Cone, and Belding Advertising, which was a major advertising agency. He divided this product map with these two product dimensions: think/feel and high/low involvement. According to his research, when you buy a think product, your purchase decision tends to be logical and objective, and the product's functionality is an important aspect that you would consider when making the purchase decision. So the products like cars and laundry detergents are typical examples of think products. In contrast, purchase decisions of a feel product are more based on feelings and affections. The product's taste, smell, sound, texture, and the design are important, and consumers hardly care about the product's functionality. Perfumes and wines could be good examples of this type of product. Involvement refers to product importance. So a purchase decision of a type of product is very important to you; you can say that you are highly involved with this type of product. Product involvement also includes the degree of risk of a wrong brand choice. Let's assume that you were buying a car, but you ended up buying a wrong brand of a car. You won't probably be able to replace your car for several years and need to spend much money again when you get the next car. However, the story will be completely different if you were buying something like a toothbrush. If you bought a wrong brand of a toothbrush, you can just throw it away and get a new one. You don't have to break your wallet, right? Okay, does everyone understand what these two dimensions mean? Good. Now, let's relocate the locations of the products on the grid. Vaughn, the researcher who developed the grid theory, located the motor insurance here. Do you guys agree that motor insurance is a high involvement and a think product?
R: Yeah.
I: What about car batteries?
R: Yeah.
I: What about perfumes?
R: Yeah. I agree with the location.
I: What about peanut butter?
R: I feel like it's low involvement.

I: Okay. Low involvement and…?
R: Think.
I: Okay. Then we're going to move the peanut butter to here. This is what I am doing with this product grid. If the locations of products are different now, I will move the locations. You know, the theory was developed more than two decades ago. So peanut butter, where? Here?
R: Yes. It would be low involvement because it's not expensive.
I: Okay. Do you think it is more think or more feel product?
R: I think it's more about how you feel. Peanut butter, right?
I: Okay.
R: It's more about how you feel. It's a basic household item. How do you like it? Do you want it smooth on your tongue or do you want that crunch thing?
I: Okay. What about furniture?
R: High involvement, think--all the way to the top left.
I: Here, is it really high involvement or somewhat high involvement?
R: I would say its high involvement. Price fluctuates on furniture.
R: I think it's a feel.
I: Okay, it's a feel, so it goes here. So where?
R: Number two.
I: Number two or number one?
R: I think it's a feel.
R: I think it should be a think.
R: Me, too; you should just put it where the peanut butter is.
I mean it's more function than think, but, if you're looking for a piece that you really want…
I: It can go anywhere. I'm going to do three focus groups, so I will get the average scores. So, just middle?
R: Yeah.
I: Okay. Cars?
R: High involvement, think.
Higher than furniture.
I: Higher than furniture--here?
R: Yeah.
I: Okay. House?
R: Super high, right top corner.
House would be higher than cars.
I: Higher than cars?
R: Yeah, like as high as you can go.
I: Okay. Is it more think or more feel?
R: More think.
I: Okay, digital cameras?
R: I'd say it's a little less than furniture, but think.
I: Okay.
R: I think it's a little lower than furniture.

I: Just a little lower…. What about iPod or mp3 players?
R: I think it's more on feel, because iPod is brand image-ranked very highly.
I: Okay. Then, let's think about the product category only. The mp3 player category.
R: Leave it there.
I: The same spot?
R: Yeah.
I: Luxury watches?
R: Feel, high involvement.
I: Here?
R: I think it's high feel.
I: Perfumes?
R: Feel. I'd say probably more low, feel.
I: In the middle of the three.
R: I think its low involvement, because you don't really go until you get to the perfume counter, and then you're like "Oh, like I kind of want some."
I: Okay. Low in the middle?
R: Middle is good.
I: Eyeglasses?
R: Think and probably less expensive than digital cameras.
I: Really?
R: I'd say yeah.
I: Here or here?
R: Leave it there.
I: Cereal, wine, beer, and coffee…Is cereal think or feel?
R: Right down by the peanut butter.
I: Think, right?
R: Low, feel.
I: Low, feel; low, think.
R: Put it in the middle next to the peanut butter.
I: Wines?
R: Like feel, high. In between furniture and the camera.
What if I'm just getting some box wine?
I'd say low involvement, but like high low involvement.
I: Higher than perfume?
R: Yeah, right there.
I: You mean a table wine, which is a cheap wine?
R: Yeah.
I: What about wine for a party?
R: Then it's higher involvement. Then its high, feel, below furniture.
I: Beer?
R: Beer could go by wine, because you can get natty or you can get some imported.
I still make a lot of decisions when I'm getting it, though.
Definitely high involvement.
I: Okay. Is beer feel or think?

R: Like in the middle, more feel.
I: Okay. What I'm asking is whether your decision is based on your feelings like taste.
R: Oh, I never think about that when I'm getting beer.
I: Okay, I'm going to put beer here.
R: Yes.
I: What about light beers?
R: Oh, that just goes down quicker, low involvement--very, very low involvement.
I: Starbucks coffee?
R: It's low involvement, feel.
I: Near perfumes?
R: Lower than that.
Close to table wines.
In the middle of those two.
I: Okay, batteries?
R: Low, think.
I: Higher than peanut butter?
R: Yeah.
I: What about car batteries?
R: Car battery would probably be in the middle of high and low.
Your battery is going to run you around $100, so probably below eyeglasses.
I: Maybe we need to move these a little bit higher.
R: Sure.
I: Pen?
R: Low, think.
I: Lower than batteries?
R: Yeah, it's like super low, think.
I: Medicines?
R: High, think.
I: High, think, but lower than furniture?
R: Yeah. It would take me longer to choose furniture than some medicine, because, if I'm choosing medicine… Okay, I'm sick; this will work all right.
I: Okay. You can decide the location.
R: Below furniture; right where your hand is.
I: Flat-screen TVs?
R: High involvement, like in the middle.
I feel like it's in the middle between think and feel.
High, feel, because TV sometimes is also about style, and it's how you feel about the look of your pad.
I think it should go with furniture.
I: Higher than furniture or lower than furniture?
R: No. Equal to furniture.
Because they've got different colors of TVs. Like in the middle.
I: What about think and feel? Furniture is in the middle.

R: I'd say it goes right with the furniture, because you might get your TVs based on what your furniture looks like.
Computer would almost be similar, too.
I: Computers?
R: Yeah. More involvement, though. Like a laptop or desktop?
I: It doesn't matter.
R: It's a think thing. High involvement.
I think it would be even with furniture, under cars.
I: Okay, under cars. Razors?
R: Low involvement, low think, right down there with the pen.
I: Higher than batteries or lower than batteries?
R: Lower.
I: Okay, sunblock?
R: Low, think.
I: Okay, higher than batteries?
R: Lower.
Well, like sunblock has SPF 10 all the way to like 45, though, so you've got a lot of options.
It's a think, but it's not--it's cheap; it's probably as cheap as a razor.
I: Okay, so sunblock goes here. What about soaps? I mean face soaps.
R: That's feel. That's higher.
I think face soap is feel, because think about the body washes--like how do I feel about… how do I smell?
I guess, if I'm getting face soap, I'm also saying body wash as well.
Yes. So body wash--I think that's a feel, because I always buy at the same time, because I like the way it smells and makes me smell like that.
I'd put it by perfume, except lower than perfume.
I: Okay. Clothes?
R: Feel, high.
I: Okay. Higher than furniture?
R: No, clothes are such a wide variety, though; I could say go dead center with everything.
I: What was that?
R: Clothes could go dead center, because you want to cover yourself up; you want to wear something, and then you want to pay attention to how you look, and depending on the price.
That's fine; clothes are fine right there.
I: Toilet paper?
R: Low, by the sunblock and razor--all of that like household items.
I: Deodorant?
R: Same.
I: What about delivery pizzas?
R: Feel, like beer.
I: Greeting cards?

R: Low, think, by the pen.
Maybe low, feel, though, because how do you feel about that person?
Okay, put it in the middle; you do spend a lot of time reading greeting cards.
Fast food would be like feel, low involvement.
I: Okay. Salty snacks?
R: Yeah, the same and soda and magazines, too.
I feel like you just pick up the magazine when you go into the grocery store.
I would read certain magazines. Yeah, it's by fast food and soda.
I: Okay. Would you say higher than soda or lower than soda?
R: Higher than soda, because it's by light beer. Newspapers, same thing.
I: Newspaper is the same?
R: I think it would be like more of a think, like right there.
Then bread and milk down there.
I: Is bread and milk think or feel?
R: Think. Bread, milk, yeah.
That's like a basic; it's kind of a necessity. Right there by delivery.
I: Okay. How about cigarettes?
R: A little higher and feel.
I: Low involvement?
R: It's by perfume. Yeah, right there with perfume and wine.
I: Household appliances?
R: High involvement and in the middle of think and feel; it's by like furniture and TV.
Like toaster and blender?
I: More expensive than that, a fridge or washer/dryer.
R: That's up there with furniture, because that's also another thing with appliances.
Now you can stylize your kitchen.
I: Is it in the middle or more think or more feel?
R: It's in the middle, right by furniture.
I: Bed?
R: Furniture, feel and high.
I: Higher than TVs?
R: Yeah, because you have a mattress for a long time; you could have a TV for a long time, too.
TV outdates faster than beds.
Again, bed is also a style thing, too, I mean.
Your bedframe is not your bed.
Are we talking about the mattress or are we talking about buying it all together?
I: All together.
R: All together. I think it's right there with furniture; you've gotta match it with your furniture.
I: Is it more think than mattress?
R: Yeah, it's more of a think thing.
I: Okay, mattress goes here.

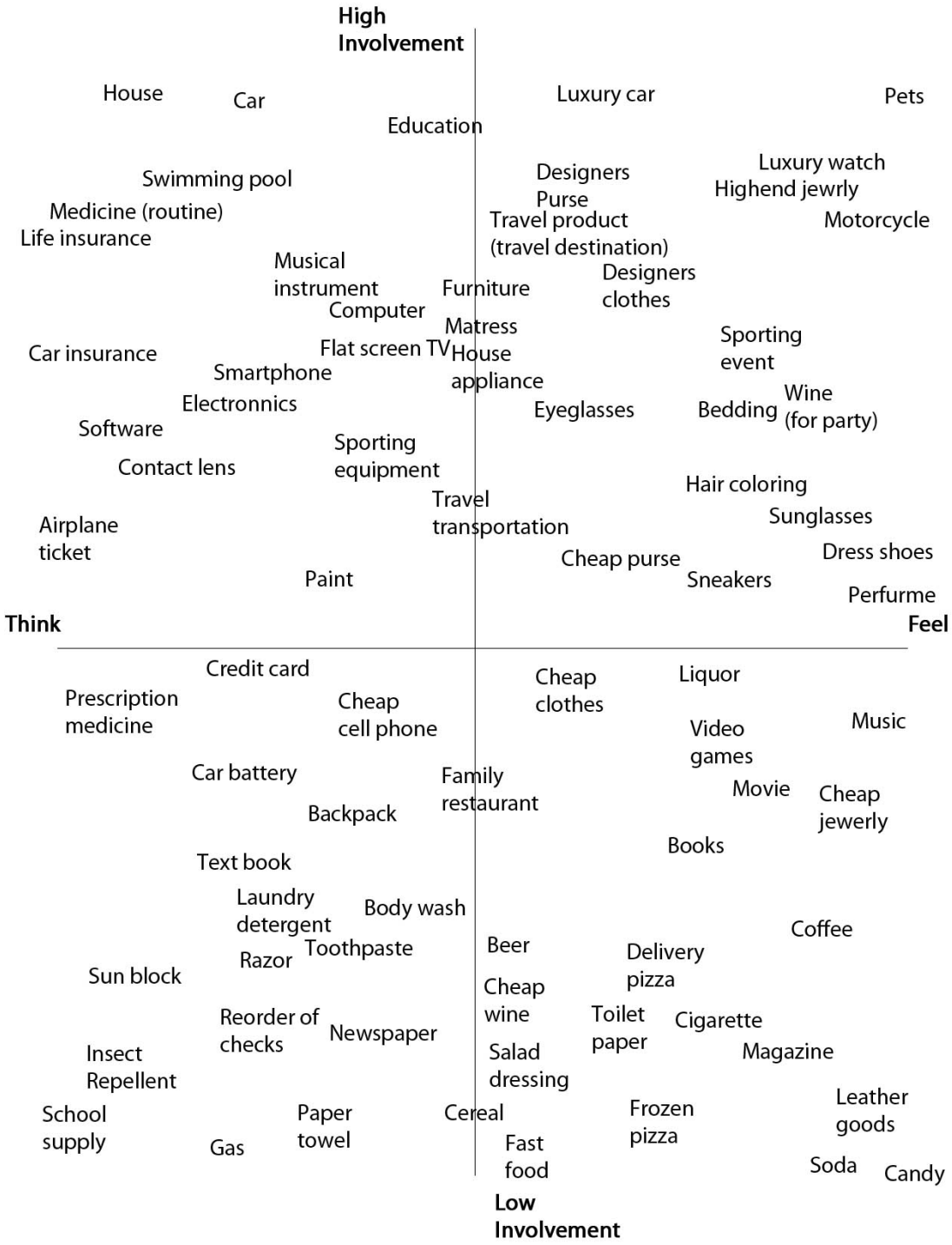
R: But how does it make me feel?
The bed would go on the other side.
I: Okay. Gas?
R: Low, think.
I: Okay, computer software?
R: Higher, think, by computer. Lower than computer, next to mattress.
I: Sporting equipment?
R: Up high like in the middle, lower than medicine.
I: More think or more feel?
R: Think.
I: Video games?
R: Low, feel.
I: Car insurance?
R: High, think.
I: High, think, about here?
R: That looks good.
I: Life insurance?
R: Same.
I: Movies.
R: Low, feel.
I: Music like CDs and mp3?
R: Low, feel.
I: Books?
R: Low, feel
I: Lower than movie or higher than movie?
R: Probably higher than movie. If you're getting a hard back, that's--you get more involved with a book than a movie.
I: Personal check?
R: Low, think. It's up there on low, think, though.
I: Credit card?
R: High, think.
Are you talking about the style of the credit card or like?
I feel like it would be right under car batteries.
I: What I mean is applying for credit cards. High, think?
R: Yeah.
I: Okay.
R: Right there by insurance. Like what's the limit? payments, things like that.
I: Is it higher than insurance or lower than insurance?
R: Lower than insurance.
I: The next ones are car tires?
R: Low, think, but higher, like the top of the low.
I: Top of the low, okay.
R: Because if you want a better brand, they can run a little higher.
I: So they are kind of expensive.

R: Especially if you drive an SUV.
I: Okay. Jewelry?
R: High, feel, by luxury watch.
I: High, feel?
R: High, feel.
I: Okay. Motorcycles?
R: High, feel.
I: High, feel. Okay.
I: Hair coloring?
R: Low, feel.
I: Sunglasses?
R: High, feel, below clothes.
It might be equal to. Yeah, it's probably below clothes because you can get expensive pairs.
I: Okay. Is it think or feel?
R: Feel.
I: Luxury cars?
R: High, feel, think.
I: High, think?
R: I'd put it more in the middle.
I: Like here?
R: Yeah.
If you're buying a luxury car, you have the money to get it; you can tell them what you want, so it's all about what do you feel?
I: Household products?
R: All the way at the bottom. Low, think.
I: Teas?
R: Low, think.
I: Low, think or feel?
R: Low, think.
I: Laundry detergents?
R: Low, think.
I: Liquor?
R: Low, feel.
I: What if you're buying some good scotch?
R: By the table wine.
I: Candy?
R: Low, feel.
I: Cell phone?
R: High, think/feel.
I: High, feel?
R: Yeah, closer to low.
It could be to the right of computer.

I: Are you talking about smartphones? Did you mean a cheap cellphone or an expensive smartphone?
R: A smartphone would be high, feel, and then I think a regular phone would be low, think, because cheap cellphones--you usually get them for free. You pay for your plan.
I: Okay. Cellphone goes here, and smartphone goes here.
R: Key ring? Low, think.
I: Low, think?
R: Yeah.
I: DVD players?
R: High involvement, by digital camera. Yeah.
I: Light bulbs?
R: They are household products. Low, think.
I: Stereo systems?
R: By electronics, high, feel.
I: Travel products such as travel destinations and hotels?
R: High, feel.
That could be in the middle, because you want to think about your pricing. Also, where do you want to go?
I: So is it lower than furniture or higher than furniture?
R: Higher.
I: Higher than furniture, okay. Airplane tickets?
R: More of a think. High, think.
I: High, think…okay. Dress shoes, sneakers, any shoes?
R: High, feel.
I: High, feel. Is it different between dress shoes and sneakers?
R: A good pair of dress shoes can be up there in price; sneakers--but you also care about how they look.
So it's high, feel, by clothes. Yes.
I: Dress shoes go a little bit higher, right?
R: Sure.
I: Okay, backpack?
R: Low, think.
I: Purses?
R: High, feel.
I: Leather goods?
R: Low, feel.
I: Low, feel, okay. Can you come up with any other products to go into any areas, any locations?
R: Jackets.
That could go under like leather goods and stuff.
R: I guess that goes with clothes.
R: What about tuition or something like education?
R: What about pets? High, feel.

I: Okay. Do you guys think pets high, feel?
R: Yeah.
I: What about education, like choice of a college?
R: That's high, think.
I: Higher than computers?
R: Yeah.
I: Do you think education should go higher than cars?
R: Yeah.
I: Okay. I think education is a good one. Ma'am, what did you say?
R: Pets should be high, feel.
I: Is that a product?
R: You buy it.
I: So where do you think pets should go?
R: High, feel.
R: Grill?
R: Swimming pools?
I: Swimming pools…
R: That's like house.
It's more like a feel, high involvement, by luxury cars.
I: Okay. Any other things?
R: Entertainment. Feel, high involvement.
I: Feel, high involvement. Okay. Any other things?
R: Maybe like instruments, guitars or something.
I: Musical instruments. Okay. Are they high involvement products?
R: High involvement, kind of in the middle.
I: Okay. More feel or more think?
R: It could be both.
I would say somewhere in the middle.
I would say in between clothes and sunglasses.
I: Any other suggestions?
R: No.
I: Is that it?
R: Yeah.
I: Thank you so much.

Appendix D – An Updated FCB Grid based on Focus Group



Appendix E – Survey Instrument (Hypothesis-Testing)

INFORMED CONSENT

Thank you for your willingness to participate in this study of product classification and pre-purchase information-seeking behavior. Your participation will help researchers better classify product types and explore the influences of product type on consumers' use of various types of brand information. The information you provide will be treated in confidence, and you will not be identified individually at any stage of the study. Your participation is completely voluntary. You may decline to participate or change your mind later and stop participating without penalty.

With your participation in this research, there are no foreseeable risks greater than those encountered in everyday life. If at any time you wish to quit the project, simply close the survey. If you do not wish to answer a question, you may skip it. If you have questions about the study or the procedures, you may contact the lead researcher, Hyuk Jun Cheong, at 476 Communications Building, Knoxville, TN 37996-0343, by phone at 865-974-3048, or by e-mail at hcheong@utk.edu. If you have questions about your rights as a participant, please contact Research Compliance Services at 865-974-7697.

By continuing to the next page I am indicating I have read the consent form and am voluntarily agreeing to participate, and that I am at least 18 years of age.

Wedding Jewelry

Directions: Please rate the process of choosing a brand of wedding jewelry on each of the following scales. Please base your rating on your most recent choice of brand of wedding jewelry.

If you have not previously purchased wedding jewelry, please skip this section of the questionnaire and move on to the next product type.

Have you previously purchased wedding jewelry?

Yes ____
No ____

Choosing a brand of wedding jewelry is a:

Very unimportant decision	____:____:____:____:____:____:____	Very important decision

Choosing a brand of wedding jewelry requires:

Little thought	____:____:____:____:____:____:____	A lot of thought

If you choose the wrong brand, there is a:

Little to lose	____:____:____:____:____:____:____	Lot to lose

Decision is:

Not mainly logical or objective	____:____:____:____:____:____:____	Mainly logical or objective
Not mainly on functionality	____:____:____:____:____:____:____	Based mainly on functionality
Not based on looks, taste, touch, smell or sounds	____:____:____:____:____:____:____	Based on looks, taste, touch, smell or sounds
Based on little feeling	____:____:____:____:____:____:____	Based on a lot of feeling

Decision:

Does not express one's personality ____:____:____:____:____:____:____ Expresses one's personality

I prefer to purchase wedding jewelry:

Offline ____:____:____:____:____:____:____ Online

I search for information about wedding jewelry:

Offline ____:____:____:____:____:____:____ Online

Next, please select the button that most appropriately describes your pre-purchase information-seeking behavior with regard to the product type (i.e., wedding jewelry).

I get brand information from advertisements (including TV, radio, newspaper, magazine, and online ads).

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I read online consumer reviews.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I read expert reviews on third-party websites.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

I ask my friends or family members in person or by phone for product information.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

In order for us to analyze the data obtained from this survey, we need to aggregate the answers along some demographic criteria. Your answers to the following questions will assist us to do so. Please be assured that your answers will be kept strictly confidential.

---

11) What is your gender?
- Male
- Female

12) What is your age?

13) In what country do you live?

14) If you live in the USA, in what state do you live?

15) How would you classify yourself?
- Caucasian
- African-American
- Native American
- Asian/Pacific Islander
- Hispanic
- Multiracial
- Other_____

16) What is the highest level of education that you have completed so far?
- Didn't finish high school
- Completed high school
- Some college but no degree
- Associate's degree (e.g., AA, AS)
- Bachelor's degree (e.g., BA, BS)
- Master's degree (e.g., MA, MBA)
- Professional degree (e.g., JD, MD)
- Doctorate degree (e.g., PhD, EdD)
- Other_____

17) Are you currently…?
- Employed for wages
- Self-employed

- Out of work and looking for work
- Out of work but not currently looking for work
- A homemaker
- A student
- Military
- Retired
- Unable to work

18) What is your annual household income in U.S. dollars?
- Less than $25,000
- $25,000 - $49,999
- $50,000 - $74,999
- $75,000 - $99,999
- $100,000 - $124,999
- $125,000 - $149,999
- $150,000 - $174,999
- $175,000 - $199,999
- More than $200,000

19) What is your marital status?
- Single, never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

20) How many children to you have?
- None
- 1
- 2
- 3
- 4
- 5
- 6
- 7 or more

THANK YOU FOR PARTICIPATING IN THE SURVEY

VITA

Hyuk Jun Cheong is a doctoral candidate studying advertising at the University of Tennessee. He is currently a tenure-track instructor for the University of Scranton. Cheong's research line focuses on social media and user-generated content that includes: (1) the influences of brand-related user-generated content on consumer decision-making; (2) the impacts of social media on traditional advertising media; and (3) the development of theories devoted to interpersonal communication in the context of social media. Before joining the doctoral program at the University of Tennessee, Cheong was an advertising instructor at Keimyung University, Daegu, Korea, and also worked as a marketing manager, an export manager and a military web designer for various organizations in Korea. Cheong earned his Master's of Science degree in Communication with an advertising focus at the University of Tennessee, and a Bachelor's degree in law at Keimyung University in Daegu, Korea.