COLLEGE CONSUMERS'APPAREL BRAND KNOWLEDGE: AN EXPLORATORY

STUDY OF BRAND AWARENESS AND PERCEIVED BRAND CATEGORY

STRUCTURES

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Leah Kristin Dew

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THESIS ABSTRACT

COLLEGE CONSUMERS' APPAREL BRAND KNOWLEDGE: AN EXPLORATORY

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Consumers' brand knowledge is composed of two constructs - brand awareness and brand image. Brand awareness can be demonstrated in the forms of brand recall and brand recognition. If a consumer is able to recall a brand outside a store when given the product category as a cue, then the consumer surely can recognize the brand when exposed to it in a store. However, it is unclear whether this relationship remains at the

market level. In other words, the question of whether the brands recalled by more consumers are also recognized by more consumers has not been addressed in the literature.

Brand image is reflected by the brand associations in a consumers' memory. In order to develop a set of associations about a brand, a consumer must first be aware of the brand. However, there has been little research about the relationship between brand awareness on the favorability of brand associations. The amount of time spent by a consumer to process information about a brand is known to positively influence the consumer's response to the brand. Given that consumers' brand awareness is achieved when they become familiar with the brand through repeated direct or indirect experiences with it, there may be a relationship between brand awareness and favorability of brand associations.

The categorization theory explains that people use classifications to help distinguish similarities and differences among unique objects. Researchers have proposed three psychological models to explain the mechanisms people use to categorize objects - the prototype model, exemplar model, and classical model. Marketing researchers have often assumed one of the three models of categorization in their research without examining how they may differently influence brand-category structures in their participants' responses.

Four phases of research were conducted. Phase 1 used a survey with a convenience sample to explore the relationship between the two brand awareness constructs, recall and recognition. Phase 2 used a survey incorporating a brand sorting

task with a convenience sample, and identified four major apparel brand categories commonly perceived by these consumers. In Phase 3, using the brand association scale developed from verbal descriptions of brand categories provided by Phase 2 participants, an online survey was conducted with a random sample of students from a Southeastern university. Finally, in Phase 4, an online experiment with three groups was conducted, with each group induced to use one of the three psychological models of categorization.

This study provided insight to researchers in that models of categorization used in a sorting task has an effect on a participant's response. It also addressed a gap in the literature by providing insight into the relationship between the brand awareness constructs and that between brand awareness and brand association favorability.

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CHAPTER I. INTRODUCTION

Background and Objective Statement

Branding has become a quintessential element in production, distribution, and
consumption (Davies & Ward, 2005). Consumers look to branded products to help them
define their self-image and as a point of reference when making purchasing decisions
(Sirgy, 1982). Today, there are very few products that remain unbranded, and firms
make efforts to associate their brand name with a specific and clear set of values and
characteristics that are unique from the competition (Davies & Ward, 2005).

Researchers have investigated the value of a brand otherwise known as brand
equity (Faircloth, Cappella, & Alford, 2001). Keller (1993) defined customer-based
brand equity as differential effects of a firm's marketing activity due to the consumer's
brand knowledge. Brand knowledge can be conceptualized as a combination of brand
awareness, or "likelihood that a brand name will come to mind and the ease to which it
does so," and brand image, or "perceptions about a brand as reflected by the brand
associations held in consumer memory" (Keller, 1993, p. 3).

Aaker (1991) explains brand awareness as having many levels ranging from
recognition (being identified as seen or heard previously) at the lowest level, to brand
recall (being evoked in a response to a cue such as product category) at mid level, to the
highest level, the dominant brand or the only brand that can be recalled by a consumer
directly from memory (high level of awareness), it can be assumed that the consumer

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should be able to recognize the brand when exposed to a brand (the low level of awareness). Brand recall and brand recognition provide cues to the consumer which aid determining the set of brands to be considered for consumption (Baker, Hutchinson, Moore, & Nedungadi, 1986). Brand recall and brand recognition have been explored to determine a general understanding of the brand awareness construct. However, the relationship that may exist between brand recall and brand recognition is yet to be determined (Axelrod, 1968; Baker et al., 1986). Therefore, the first objective of this study is to examine the relationship between consumers' recall and recognition performances for apparel brands.

Brand image, another component of brand knowledge, is shaped by the associations made by consumers and used to differentiate brands in a product category. Aaker (1991) defines brand associations as anything that is linked in memory to the brand including attitudes, beliefs, and attributes. Brand associations may be examined in terms of their ability to contain brand meaning for consumers (Keller, 1993). Brand associations help the consumer process, organize, and retrieve information in memory to aid product choice (Aaker, 1991). Brand associations seen as favorable by consumers provide added value to the brand by forming strong, positive attitudes and emotions toward the brand (Aaker, 1991).

According to Aaker (1991), there is an intimate relationship between brand awareness and brand associations because brand awareness must precede brand associations. In other words, "consumers must first be aware of the brand in order to develop a set of associations" (Washburn & Flank, 2002, p. 58). In addition to the relationship between brand awareness and brand associations, that between brand

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familiarity, or "the amount of time that has been spent processing information about the brand" and brand association favorability has been explored in past literature indicating that the two constructs may have a positive relationship (Baker et al., 1986, p. 637). Consumers develop brand familiarity once they have developed an awareness of the brand. In other words, consumers must be aware of the brand before they can become familiar with it. Baker et al. (1986) argue that brand familiarity may directly influence brand favorability by generating a positive affective response when exposed to the brand. By linking the constructs of brand familiarity with brand associations, the literature implies that a relationship may exist between brand awareness and brand association favorability. That is, a brand that is recalled and recognized by more consumers may be one that is favored by the consumers. However, little research has been conducted to determine a direct relationship between brand awareness and the favorability of brand associations. Therefore, the second objective of this study is to explore the relationship between levels of brand awareness and favorability of associations for apparel brands.

Understanding how consumers organize brands in their memory is an important topic in branding research. People have an ability to group similar objects together in their mind, known as 'categorization' (Braisby, 2005). Consumers classify products and brands by using mental categories based on their commonalties (Johnson & Lehmann, 1997; Posavac, Sanbonmatsu, Cronley, & Kardes, 2001). Three categorization models have been suggested in the literature as mechanisms by which people categorize objects. For example, consumers may classify a brand based on how similar it is to the best exemplar of each brand category existing in memory (prototype model), or based on its comparison to members of each category that have similar characteristics (exemplar

model). On the other hand, the classical model suggests that a brand may be classified

into a category based on the common descriptors the brand has with the category rather

than with specific exemplars of the category (Barsalou, 1992; Kellogg, 1995). These

models of categorization give understanding to the consumer's categorization processes.

However, previous research has failed to address how the use of different models of

categorization may result in different category structures in the consumer's perceptions.

Therefore, the last objective of the research is to explore the effect of the use of different

mental models of categorization on consumers' perceptions of brand-category

membership structures.

<center>Research Questions</center>

The aforementioned objectives were met in this study by answering the following three

research questions:

RQ1. Are consumers' apparel brand recall and recognition performances related?

RQ2. Do brands that have higher awareness among consumers have more favorable
    brand associations?

RQ3. Do different categorization processes (i.e. prototype model, exemplar model,
    classical model) cause consumers to perceive different category structures of
    apparel brands?

<center>Significance of the Study</center>

This study is expected to present a unique perspective of the consumer's decision-

making process. Past research has explored various methods to understanding brand

awareness and brand associations, but little research has examined the relationships

formed within these branding constructs. This research contributes to the brand literature

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by exploring the brand awareness constructs and their relationships with the favorability of brand associations.

This study contributes to the marketing literature especially for brand categorization research. Researchers have explored various methods to analyze consumers' perceptual maps of brands in a product market, and one method that has been favored in such research is sorting techniques (Solomon & Ashmore, 1992; Sujan & Bettman, 1989; Urban, Hulland, & Weinberg, 1993). Sorting is a process of arranging objects in various sequences and/or in different sets (Sorting, 2007). Sorting techniques may have two components: 1) ordering, which refers to arranging items of the same kind, class, and nature in some ordered sequence, and 2) categorizing, which is defined as grouping and labeling items with similar properties together (by sorts) (Sorting, 2007).

Researchers have analyzed ordering data (e.g. level of similarity among brands) or category data (e.g. category labels) to understand consumers' brand categorization. However, there has been controversy among brand categorization researchers regarding how to frame their participant instructions since the instructions may inadvertently induce participants to use one of the three models of categorization during their brand sorting tasks. This study was expected to provide insight into the potential impact of using different models of categorization during brand sorting tasks, contributing to the methodological advance of research in marketing and other fields that use sorting techniques. Furthermore, knowledge of the impact the different categorization models may have on consumers' perceptions of similarities among brands could be useful for marketers in developing their brand communication strategies. For example, the knowledge of how the exemplar model of categorization works in the consumer's mind

may help marketers develop a comparative advertising strategy that can enhance the possibility of consumers assimilating their brand with the other brands representing a desirable brand category.

<p style="text-align:center">Definition of Terms</p>

The following terms were commonly used throughout this study.

Brand - "name, symbol, term, or sign that are intended to identify the goods and services of one particular firm" (Kotler, 1991, p. 442).

Brand equity - "marketing effects that are uniquely attributable to the brand" (Keller, 1993, p. 1).

Brand awareness - "likelihood that a brand name will come to mind and the ease to which it does so" (Keller, 1993, p. 3).

Brand recall - "consumers' ability to retrieve the brand in a given product category" (Keller, 1993, p. 3).

Brand recognition - "consumers' ability to confirm prior exposure to the brand when given the brand as a cue" (Keller, 1993, p. 3).

Brand image - "perceptions about a brand as reflected by the brand associations held in consumer memory" (Keller, 1993, p. 3).

Brand association - anything that is linked in memory to the brand (Aaker, 1991).

A brand's association favorability - level of positivity or negativity of a combination of associations linked in memory to a brand.

Brand category - a set of brands that share a common membership in a class due to similarities in characteristics.

Categorization - cognitive process in which brands are grouped into subsets (categories) that share common characteristics (Braisby, 2005).

Prototype model of categorization – process in which objects are classified into a category based on how similar it is to the ideal or best example of a given category (Kellogg, 1995).

Exemplar model of categorization - process in which objects are classified into a category based on how similar it is to the members of a given category (Kellogg, 1995).

Classical model of categorization - process in which objects are classified into a category based on the common descriptors the object has with the category rather than with specific exemplars of the category (Barsalou, 1992; Kellogg, 1995).

CHAPTER II. LITERATURE REVIEW

To date, there have been a number of studies that have attempted to examine how consumers think about, respond to, and classify brands within their minds. Branding literature has provided theoretical perspectives to help marketers understand the construct of brand. The following sections will discuss the underlying dimensions of brand including the constructs of brand awareness and brand image. Furthermore, the researcher discusses three psychological models of categorization, which may be used by consumers to categorize various brands in their memories.

Brand

Brands can be defined as a "name, symbol, term, or sign that are intended to identify the goods and services of one particular firm" (Kotler, 1991, p. 442). Consumers' consumption choices are often based on brand names that help to differentiate one product from another. Branding researchers have tried to conceptualize the value of a brand or brand equity (Faircloth et al., 2001). In the general sense, brand equity can be defined as the "marketing effects that are uniquely attributable to the brand" (Keller, 1993, p. 1). In other words, because of the product or service's brand name, different outcomes may result from the same marketing activity (Keller, 1993). Customer-based brand equity is centered on the idea of how a consumer's knowledge of the brand affects the consumer's response to the brand's marketing activity (Aaker, 1991; Keller, 1993). A consumer's brand knowledge is formed by memories made through

experiences with the brand (Keller, 1993). Applying the "associative network memory model", researchers have viewed consumers' brand knowledge as semantic memory or knowledge that consists of a set of memory nodes (e.g. brand name, specific associations) and links that connect the nodes (Keller, 1993). The strength of the brand-related memory nodes and their links is known to determine the strength of a consumer's brand knowledge (Collins & Loftus, 1975). Keller (1993) suggests that brand knowledge consists of two components - brand awareness and brand image – which are discussed in detail in the next two sections.

<div align="center">Brand Awareness: Recall and Recognition</div>

The ease and likelihood to which a brand name comes to mind describes the concept of brand awareness (Keller, 1993). Brand awareness reflects the strength of a brand's presence in the consumer's minds (Pappu, Quester, & Cooksey, 2005), and it is related to the strength of the brand node or trace in memory in relation to the consumer's ability to identify the brand in various conditions (Rossiter & Percy, 1987). Brand awareness can be demonstrated in the forms of brand recall and brand recognition (Keller, 1993). Brand recall occurs when the brand name is evoked by memory in response to a cue such as a product category name (e.g., When you think of clothing, what brands come to mind?) (Hutchinson & Raman, 1994). Distinguishable from brand recall, brand recognition can be conceptualized as the consumer's ability to verify previous exposure to the brand when the brand is given as a cue (Keller, 1993). In other words, brand recognition occurs when the consumer is exposed to the brand and is able to identify it as being seen or heard previously (Hutchinson & Raman, 1994; Keller, 1993). Researchers have considered recall as a higher level of memory performance than

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recognition (Aaker, 1991, Washburn & Plank, 2002). In other words, if a consumer is able to recall a brand outside a store when given the product category as a cue, then the consumer surely can recognize the brand when exposed to it in a store (Keller, 1993, Rossiter & Percy, 1987). However, it is unclear whether this relationship between recall and recognition remains true at the market level. In other words, the question of whether the brands recalled by more consumers are also recognized by more consumers has not been addressed in the literature. This study attempted to address this gap by examining the relationship between a group of apparel brands' recall and recognition performances in a selected market.

Brand Image

Along with brand awareness, brand image is an important component of brand knowledge (Keller, 1993). Brand image has been conceptualized as perceptions about a brand as reflected by the brand associations or anything that is linked to the brand in a consumers' memory (Aaker, 1991; Keller, 1993). Brand image is shaped by the associations made by consumers and is used to differentiate brands in a product category.

Brand associations contain meanings about a brand for the consumer (Keller, 1993). A brand's image results from the favorability, strength, and uniqueness of brand associations that are held by the consumer (Grace & O'Cass, 2002; Keller, 1993). Positive and unique brand associations that are strongly held by consumers enable consumers to build strong, favorable attitudes and emotions toward a brand (Aaker, 1991).

Brand associations may include attitudes, attributes, and benefits about a brand (Faircloth et al., 2001; Keller, 1993). First, brand attitude, or the overall evaluation a

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consumer has of a brand (Wilkie, 1986), may result from the consumer's perceptions of brand associations in regards to the brand (Aaker, 1991; Keller, 1993). Beliefs related to product/non-product attributes, brand benefits, and quality perceptions have been discussed as primary influences of brand attitude (Zeithaml, 1988). Brand attitude functions as a point of reference when the consumer is exposed to the brand by having a direct influence on consumption (Lutz, 1991).

Next, what a consumer thinks the product is or descriptive features that characterize the product are referred to as attributes (Keller, 1993). Attributes can be grouped into two types: product-related and non-product related. Product related attributes are those that "relate to a product's physical composition," (Keller, 1993, p. 4). Product-related attributions could be directly linked to the product performance. Non-product related attributes have been defined as "external aspects of the product or service that relate to its purchase or consumption" (Keller, 1993, p. 4). For example, user imagery is a non-product related attribute that a brand might posses when associated with characteristics such as user demographics and psychographics (Keller, 1993). Another non-product attribute example is usage imagery, which allows the consumer to associate the brand with the typical situation in which the product would be used such as time of day, the location, or particular activities (Keller, 1993). User and usage imagery attributes may help to formulate brand personality, which is a type of brand association that captures "human characteristics that are associated with a brand" (Aaker, 1997, p. 347). Personality descriptors given to the brand are often an outcome of inferences that are made about the users or usage of the brand or a combination of both (Plummer, 1985).

Finally, brand benefits are what consumers think the product or service can do for them and reflect the personal value that consumers attach to the brand (Keller, 1993). Benefits may be functional, symbolic, or experiential (Park, Jaworski, & MacInnis, 1986). Functional benefits more commonly satisfy needs associated with problem removal or prevention (Kim, Forsythe, Gu, & Moon, 2002). Symbolic benefits tend to be related to non-product related attributes and often associated with underlying needs of social approval, self-esteem, and self-concept (Keller, 1993; Solomon, 1983). Experiential benefits relate specifically to how a consumer feels when using the product and often satisfy cognitive stimulation and sensory pleasure needs (Orth & De Marchi, 2007).

Relationship between Brand Awareness and Favorability of Brand Associations

Past research has examined both brand awareness and brand associations and deemed it necessary that the two constructs remain separate, yet highly correlated, entities (Aaker, 1991; Keller, 1993; Washburn & Plank, 2002). The literature has suggested that in order to develop a set of associations about a brand, a consumer must be aware of the brand (Washburn & Flank, 2002), indicating that brand awareness must precede the formation of brand associations. However, little research has examined the effect brand awareness may have on the favorability of brand associations or brand image among consumer markets. For example, whether brands with higher awareness in the current market are associated with a more positive brand image has not directly been addressed in research. Some indirect evidence for this type of speculation has been found in a few studies that examined the relationship between brand associations and brand familiarity. For example, Baker et al. (1986) argue that the amount of time spent by a

consumer to process information about a brand positively influences the consumer's response to the brand. Positive associations about the brand may be formed as a result of increased familiarity with the brand. Considering that consumers' brand awareness is achieved when they become familiar with the brand through repeated direct or indirect experiences with it, it is plausible that there may be a positive relationship between brand awareness and favorability of brand associations. The second research question in this study specifically addressed this relationship.

<div align="center">Categorization Models</div>

Classifying objects in groups is known as categorization (Braisby, 2005). Over time, a person develops natural categories along with a multitude of memories for their exemplars (Barsalou, 1992). Bunner, Goodnow, and Austin (1956) suggested that "to categorize is to render discriminably different things equivalent, to group objects and events and people around us into classes and respond to them in terms of their class and membership rather than their uniqueness" (p. 1). This description of categorization explains that classifications are used to help people distinguish similarities and differences among unique objects (Braisby, 2005). Researchers have proposed three psychological models to explain the mechanisms people use to categorize objects. They include the prototype, exemplar, and classical models which are explained below.

Prototype Model

The prototype model explains categories with prototypes. Prototypes are defined as a "single, centralized, category representation" (Barslaou, 1992, p. 28) or the ideal or best example of a given category (Kellogg, 1995). Braisby (2005) suggested that the prototype may be formed by "statistically aggregating" over the category examples a

person encounters" (p. 175). Averages of particular dimensions across exemplars and the most frequent properties across exemplars may be assimilated to form a category prototype through abstractions. Through this abstraction process, an existing exemplar of the category may be selected or an ideal exemplar may be conceptualized as the prototype that possesses the most frequently associated properties across members of the category and thus is considered to represent the category. For example, when exposed to the brand *The North Face*, using the prototype model, the consumer may compare this brand to the best exemplar brand in the outdoor jacket category such as *Mountain Hardware* or to an ideal brand of the category they imagine in their minds. If *The North Face* is deemed by the consumer to be similar to the prototype (i.e., the best exemplar or ideal brand), it will be classified as an outdoor jacket brand.

The prototype model assumes that in order to categorize a new object, the first step is to evaluate the new object's properties by comparing them to those of the prototype associated with each likely category (Barsalou, 1992). Once the prototype with the most similar properties is found, the prototype's category will be assigned to the new object (Barsalou, 1992). Basically, an object falls within the category if it achieves a precise criterion of similarity to the prototype (Braisby, 2005). In order for all members to be classified correctly, they should be more similar to their prototype than the prototypes of different categories (Barsalou, 1992). One problem with this model may be that it fails to use information regarding specific exemplars that are not the prototype (Barsalou, 1992). The prototype alone may not provide a full account of category knowledge (Barsalou, 1992).

Exemplar Model

Another way to represent a category is through memories of its various specific exemplars (Barsalou, 1992). The term exemplar refers to either the specific instance or the subset of that concept (Levitin, 2002; Smith & Medin, 1981). For example, the category 'apparel brands' may be a representation of the memories of particular examples of clothing brands a consumer is aware of. This view assumes that people do not abstract generalizations from example memories to form category knowledge of a prototype member of the category (Barsalou, 1992). Consequently, this model argues that people do not compare an object to the best exemplar but to many exemplars that have similar characteristics to determine the best category to classify the object. For instance, when a consumer is exposed to the brand, *The North Face*, he or she would compare it to various exemplar brands of the outdoor jacket category such as *Columbia, Mountain Hardware*, and *Patagonia*.

This model explains that exemplar memories are important to the categorization of unknown entities. The exemplar model posits that by comparing the structural description of an unfamiliar entity to all exemplar memories across all categories simultaneously, the cognitive system is able to pair a category with the unknown entity based on which category has the most similar exemplar memories (Barsalou, 1992).

This method of categorization assumes that people rely on more than just one best exemplar memory and, thus, provides insight to obtaining new information through categorization by their ability to encounter exemplars and recall similar exemplar memories as to where the new entity should be placed in a corresponding category (Barsalou, 1992). However, one problem with this model is the assumption that the

cognitive system stores immense amounts of idiosyncratic exemplar information for categories (Barsalou, 1992). This is problematic because consumers may not be capable of remembering so much information. In addition, this model does not explain the use of summary information such as category descriptors (Levitin, 2002; Medin & Schaffer, 1978). This model explains that exemplars are used as aids in the categorization process because they are more accessible than summary information in the consumer's mind (Smith & Medin, 1981).

Classical Model

The classical model is based on the foundation that rules underlie categorization. The ideal rule dictates that properties must be individually necessary and mutually sufficient for category membership (Barsalou, 1992; Katz, 1972; Smith & Medin, 1981). In other words, an object must possess the common properties necessary for category membership (Braisby, 2005), and the possession of the common properties is a sufficient condition for membership. This rule implies that an object must perfectly match the properties/characteristics required in a category to become a member of the category (Braisby, 2005). Unlike the exemplar and prototype models, similarity does not underlie categorization in the classical model (Barsalou, 1992). This model is based on the foundation that an entity belongs to a category only if it perfectly, not just 'similarly' satisfies the category's rule (Barsalou, 1992). Upon matching on any and every condition (satisfying all the category's rules), the object can be placed in that category; otherwise, it will not be a member of the category (Braisby, 2005). In other words, it either satisfies the condition or it does not. Based on this concept, it can be assumed that all entities in a

category are equal in membership because they all strictly satisfy the definitional rule of the category (Barsalou, 1992).

The classical model has raised many doubts as to its viability as an account of human categorization (Barsalou, 1992). A disadvantage to this model is that there can be several categories with only one member, causing many useless categories and uncertainty for classifying a new object. In addition, according to the classical model, some exemplars from a category maybe very similar, others maybe moderately similar, and some others maybe dissimilar to the category's prototype, although all the exemplars may perfectly satisfy the given category rule (Barsalou, 1992; McCloskey & Glucksberg, 1978). For example, if a consumer classified brands based on the category rule of high price, The *Northface* and *Seven for all Mankind* may be classified together. If using another category rule such as fashionability, the brands may not be classified into the same category because they may be more comparable to exemplars in other categories. Another problem faced by the classic model is that it does not properly explain the categorization process in situations where categories do not have a specific and clear set of properties that define them (Barslaou, 1992).

Categorization Research in Branding

Past research has indicated that consumers categorize products or brands based on their common associations (Posavac et al., 2001). However, no agreement has been reached as to how this process occurs. For example, consumers may classify a brand into a category because it is perceived to satisfy a certain set of rules to be a member of the category in their mind (classical model), because it is similar to many other members in the category (exemplar model), or because it is similar in its properties to the single best

exemplar brand of the category (prototype model). Nevertheless, many researchers have often assumed one of the three models of categorization in their research without examining how they may differently influence brand-category structures in their participants' responses. In this study, the researcher assumes that all three models of categorization are valid accounts of consumers' brand categorization processes, and that the decision of which model was used is dependent upon the situation (e.g. experimental design that induces one of the three models). Based on these assumptions, the researcher explored how different models of categorization induced by experiment participant instructions may affect resulting brand category structures.

CHAPTER III. PHASE 1

Phase 1 explained consumers' levels of awareness for specific apparel brands.

This phase acted as a pretest for the brand selection for the experiment in Phase 4 so that

brands with various levels of consumer awareness could be included in the experiment.

In addition, results from Phase 1 were used to answer RQ 1 by examining the relationship

between recall and recognition performances of the apparel brands.

Sample

Fifty-seven female college students enrolled in an undergraduate consumer

behavior class (i.e., Global Consumer Culture) in the Department of Consumer Affairs at

Auburn University were recruited on a voluntary basis. Only female college students

were chosen due to the uneven ratio between men and women enrolled in the course.

The majority of the sample consisted of Caucasian females with an average age of 20

years and currently enrolled in the College of Human Sciences. A summary of the

sample descriptive statistics is presented in Table 3.1.

Instrument

A survey procedure using a self-administered questionnaire was used to collect

data from the sample. The questionnaire contained three sections: (1) brand recall, (2)

brand recognition, and (3) general demographic items (see Appendix A for the

questionnaire). Detailed explanations of each section of the questionnaire are as follows.

Table 3.1. Descriptive Statistics of Phase 1 Sample Characteristics

	f	*%*	*M*	*SD*
Age:			20.0	1.95
19-20 years old	44	78.0%		
21-22 years old	9	16.0%		
23 years old	3	5.0%		
30 years old	1	1.0%		
Race:				
African American	4	7.0%		
Asian/Pacific-Islander	2	3.0%		
Caucasian/Non-Hispanic	49	86.0%		
Hispanic	1	2.0%		
Other	1	2.0%		
Class Status:				
Freshman	19	33.0%		
Sophomore	22	39.0%		
Junior	8	14.0%		
Senior	8	14.0%		
College/School:				
Architecture	1	2.0%		
Business	6	10.0%		
Human Sciences	45	79.0%		
Liberal Arts	4	7.0%		
Sciences/Math	1	2.0%		

n = 57

Brand Recall

The first section of the questionnaire presented participants with an open-ended question pertaining to brand recall. Respondents were asked to write down all clothing brands that came to mind that were marketed to college-aged consumers like themselves.

The participants were given a blank space and allowed to write down as many brands as they could recall. Once the participants had completed the first section, they were to un-staple the questionnaire packet and move on the next section. The questionnaire packet was stapled to prevent participants from flipping over the page, looking at the list of pre-selected clothing brands in the brand recognition section and writing them down as brands they recalled.

Brand Recognition

The second section of the questionnaire addressed brand recognition. This section contained a pre-selected list of 192 clothing brands provided in an alphabetical order using a checklist format. Respondents were asked to put a check if they have seen or heard of the brand before. A check indicated a 'recognized' brand.

The apparel brands used in this section were selected among those considered to be marketed to the population of interest to this study and to which the potential sample of this study may be frequently exposed. The apparel brands were obtained through a combination of a pre-test with merchandising students in the Department of Consumer Affairs and a series of market research performed by the researcher. First, for the pre-test, a convenience sample of 31 students enrolled in an introductory merchandising course in the Department of Consumer Affairs was asked to write down any clothing brands that came to mind for their shopping preference. A total of 147 brands were recalled from the respondents in the pre-test. Among the 147 brands, brands that were not considered to be clothing brands such as cosmetic brands and strictly footwear brands, brands that were thought not to be marketed to college-aged consumers, and brands the respondents considered to be clothing brand names but actually were retail

store names were eliminated, leaving a total of 134 brands retained to be used in the brand recognition question. Next, for the market research, the researcher then visited locally owned boutiques in the Auburn downtown area including The Buzz, Elle, and Purse Pi-Cas-It-Y. These boutiques were selected based on their location, their target market (i.e., college students), and the fact that each carried a wide variety of brands. Twenty seven new brands were obtained from the boutiques visited and added in the questionnaire. The researcher also visited surrounding areas including the River Chase Galleria in Birmingham, AL and Lennox Square in Atlanta, GA. Brands listed in the junior section of each mall's directory were scrutinized and six new brands were selected and added to the brand recognition question. Finally, for further market research, junior sections of fashion apparel websites including Nordstrom.com, Belk.com, Dillards.com, Urbanoutiffters.com, and Anthropologie.com were scrutinized and obtained 25 new brands, which were added in the questionnaire.

Demographic Items

The third section of the questionnaire consisted of demographic items including gender, age, race, class status within the university, college/school enrolled in, and major.

Data Collection Procedure

Instructions were given to the students in an introductory consumer behavior course (Global Consumer Culture) to remain seated after class for participation in a research study for extra credit. Once the students who chose not to participate had exited the classroom, the researcher handed out a questionnaire packet including an information sheet, questionnaire, and an extra credit slip. Then, the participants were instructed to read and detach the information sheet and complete the questionnaire to the best of their

ability. Upon completing the questionnaire, they were to walk the questionnaire and the extra credit slip to the front of the classroom, detach the extra credit slip, place each of the questionnaire and extra credit slip in the boxes labeled correspondingly, and exit the classroom.

<div align="center">Data Analysis and Results</div>

Recall Frequencies

For the analysis of Phase 1 data, first, the brands recalled in section 1 of the questionnaire were counted for frequencies. Among a total of 105 brands that were recalled, 42 brands were brands that were not included in the recognition list in Section 2. Gap was the most frequently recalled brand ($f = 37$), and 46 brands were recalled by only one respondent ($f = 1$). Table 3.2 presents the brand recall frequencies along with example brands that were recalled (see Appendix B for the full list of brands recalled and their recall frequencies).

Recognition Frequencies

Brand recognition performance for each brand in section 2 was analyzed by the number of respondents who recognized it. The most frequently recognized brands were Abercrombie and Fitch, Adidas, American Eagle, Banana Republic, Bebe, Calvin Klein, DKNY, Express, Gap, Gucci, Guess, Hollister Co., Levi's, Lucky, Mudd, Nike, Northface, Ralph Lauren, Tommy Hilfiger, Victoria's Secret, and XOXO, which were recognized by all of the 57 respondents in the sample. On the other hand, A.N.A., As You Wish, Beaubious, DVF, Entro, Miyake, Primp, and Random Points were brands that were recognized by only one respondent, showing the lowest recognition

<div align="center">23</div>

Table 3.2. Brand Recall Frequencies and Example Brands

Brand Recall Frequencies[a]	Number of Brands	Example Brands
1-3	69	New York & Company, Adidas, Tommy Hilfiger, Ann Taylor, DKNY, Zara, Rock and Republic, Isaac Mizrahi, Esprit, Volcom
4-8	15	H&M, Free People, Nike, Juicy Couture, Chaco, Columbia, New Balance, True Religion
9-14	10	Charlotte Russe, BCBG, Limited, Banana Republic, Lucky Brand, Bebe
15-22	7	Hollister Co., Victoria's Secret, Northface, Abercrombie and Fitch, Express, Seven for all mankind, Polo Ralph Lauren
28-30	3	American Eagle, Forever 21, Old Navy
37	1	Gap
TOTAL	105	

[a] The number of respondents who recalled the brand

performance besides two brands, Rachael Pally and O Casuals, which were neither recognized in section 2 nor recalled in section 1 by any participants. Table 3.3 presents the brand recognition frequencies along with example brands (see Appendix B for the full list of recognized brands and their recognition frequencies).

Research Question 1

In order to answer RQ1, the researcher tested the possible association between recall and recognition performances of the brands included in the questionnaire using Spearman's rank correlation coefficient (ρ). Except for the two non-recognized brands, all brands listed in the recognition checklist in section 2 of the questionnaire were used for this test. A significant positive correlation was found between the brands' recall

Table 3.3. Brand Recognition Frequencies and Example Brands

Frequency of Recognition [a]	Number of Brands	Example Brands
1-10	51	Nanette Lapore, Soulmates, Kay Unger, Cherish, As you wish, Project E Vintage, Nolita, B. Darlin, DVF, Love Tease
11-21	22	L.A.M.B., George, American Apparel, Miss Me, Daniel Cremieux, Karlie, Necessary Objects, French Kiss
22-33	19	Ocean Pacific, Volcom, My Michelle, Tilt, Betsey Johnson, French Connection, Zara, Nicole Miller, Life is good
35-45	17	Roca Wear, Chaco, Sean John, Columbia, Arden B, Seven for all mankind, Tommy Bahama, Kavu, Marc Jacobs
46-53	28	Marc Jacobs, , Baby Phat, Billabong, Xhilaration, Faded Glory, Brooks Brothers, Quiksliver, Vans, Jordache
54-57	53	Abercrombie and Fitch, American Eagle, New York & Company, Adidas, Tommy Hilfiger, Ann Taylor, DKNY, North Face, Hanes, Candie's,
TOTAL	190	

[a] The number of respondents who recognized the brand

and recognition performances (ρ = .604, p < .001, n = 190). This result indicates that a moderate, positive relationship exists between a brand's recall and recognition performance ranks in the market. In addition, Pearson product correlation between the brand recall and recognition frequencies further illustrated a positive relationship between the brands' recall and recognition performances (r = .391, p < .001, n = 190).

CHAPTER IV. PHASE 2

Phase 2 of this research identified mental structures of apparel brand categories and criteria (i.e., descriptors of the categories) that college consumers use to classify apparel brands. Based on the analysis of words/phrases used to label and describe the brand categories in this phase, the researcher developed a brand association scale, which was tested in Phase 3. In addition, the categories and category descriptors identified in this phase became the basis on which scenarios were developed to manipulate experimental conditions in Phase 4.

Sample

Sixty-five female college students enrolled in an undergraduate consumer behavior class (i.e., Global Consumer Culture) in the Department of Consumer Affairs were recruited on a voluntary basis. The majority of the sample consisted of Caucasian females with an average age of 20 years and currently enrolled in the College of Human Sciences. A summary of the descriptive statistics for demographic characteristics of the sample is presented in Table 4.1.

Instrument

A survey procedure using a self-administered questionnaire was used to collect data from the sample. The questionnaire contained three sections: sorting task, category labeling and descriptions, and general demographic items (see Appendix A for the questionnaire).

Table 4.1. Descriptive Statistics of Phase 2 Sample Characteristics

	f	%	M	SD
			20.1	1.10
Age:				
19-20 years old	46	71.0%		
21-22 years old	17	26.0%		
23 years old	1	1.5%		
24 years old	1	1.5%		
Race:				
African American	1	1.0%		
Asian/Pacific-	1	1.0%		
Islander	62	97.0%		
Caucasian/Non-	1	1.0%		
Hispanic				
Hispanic				
Other				
Class Status:				
Freshman	15	23.0%		
Sophomore	29	45.0%		
Junior	16	25.0%		
Senior	5	7.0%		
College/School:	1	1.5%		
Architecture	6	9.0%		
Business	51	79.0%		
Human Sciences	6	9.0%		
Liberal Arts	1	1.5%		
Nursing				

n = 65

Sorting Task

The first section of the questionnaire presented the sample with a list of 30 brands selected from those identified in Phase 1. For the brand selection, first a total of 65 brands that were both recalled and recognized by at least one participant in Phase 1 were divided into three groups based on their recall and recognition frequencies. The brands recalled by 15-37 respondents were classified as 'high recall', those by 4-14 respondents

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as 'medium recall', and those by 1-3 respondents as 'low recall' brands. In addition, the brands that were recognized by 52-57 respondents were classified as 'high recognition', those by 15-51 respondents as 'medium recognition' and those by 1-14 respondents as "low recognition' brands. Among the 65 brands, a cross-tabulation of the high, medium, and low recall and recognition performances was created (see Table 4.2), and ten brands from the high-recall/high-recognition cell, nine from the medium-recall/high-recognition cell, two from the low-recall/high-recognition cell, one from the high-recall/medium-recognition cell, five from the medium-recall/medium-recognition cell, and three from the low-recall/medium recognition cell were selected for Phase 2. As evident by the selection process, the 30 brands chosen for Phase 2 represented varying levels of awareness performance.

Section 1 of the questionnaire, first, instructed the respondents to sort the 30 brands into three categories using whatever criteria they deemed appropriate. There were no restrictions about the number of brands each category could have. The 30 brands were listed in an alphabetical order at the top of the page. The respondents were restricted to use all and only three categories for the sorting brand task to be consistent with the number of categories that would be used in the experiment in Phase 4. It was considered necessary to restrict the number of brand categories to enhance the controllability in the experiment. The respondents were presented with three boxes labeled Category 1, Category 2, and Category 3 in which they classified each of the 30 clothing brands. A fourth box was provided and labeled "Brands I don't know" so that respondents could place brands they did not recognize.

Table 4.2. Cross-Tabulation of Recall and Recognition Frequencies

	High Recognition[a]	Medium Recognition[a]	Low Recognition[a]
High Recall	*Gap (37, 57) *American Eagle (30, 57) *Forever 21 (29, 56) *Old Navy (28, 56) *Abercrombie and Fitch (22, 57) *Express (22, 57) *Northface (19, 57) *Polo Ralph Lauren (16, 56) *Victoria's Secret (16, 57) *Hollister Co. (15, 57)	*Seven for all mankind (21, 39)	
Medium Recall	*Charlotte Russe (14, 53) *BCBG (13, 53) *Limited (13, 55) Banana Republic (12, 57) Bebe (10,57) *J Crew (10, 56) Lucky (9, 57) *Lacoste (8, 55) *Juicy Couture (7, 51) Nike (6, 57) Ann Taylor (5, 55) Ann Taylor Loft (5, 55) *Ralph Lauren (5, 57) *New Balance (4, 56) *Delia's (4, 54)	*Citizens of Humanity (13, 30) *H&M (8, 43) *Free People (6, 29) Chaco (5, 36) *Columbia (4, 47) *True Religion (4, 43)	
Low Recall	Coach (3, 56) New York & Company (3, 54) Nine West (3, 56) Tommy Hilfiger (3, 57) Adidas (2, 57) Billabong (2, 53) Chanel (2, 56) *DKNY (2, 57) *Levi's (2, 57) Calvin Klein (1, 57) Esprit (1, 56) Gucci (1, 57) Guess (1, 57) Quiksilver (1, 52) Roxy (1, 56) Sofee (1, 52) Steven Madden (1, 53) Versace (1, 55)	*Reef (3, 51) *Pacific Sunwear (3, 51) *Zara (2, 22) Arden B (1, 42) Costa del Mar (1, 45) Isaac Mizrahi (1, 51) Life is Good (1, 27) Under Armor (1, 51) United Colors of Benetton (1, 28) Vans (1, 49) Vineyard Vines (1, 32) Volcom (1, 33)	Joe's Jeans (1,9) Karlie (1,11) Michael Stars (1, 14)

[a] First number in the parentheses is the recall frequency which is followed by the recognition frequency.
* Brands that were selected for Phase 2.

Category Labeling, Descriptions, and Prototypes

In the second section of the questionnaire, the respondents were asked to label each category using words or phrases that best described the categories or clothing brand groupings they created. Then, the respondents were asked to further describe the categories using any descriptive characteristics other than those already used for the category labels. Finally, the respondents were asked to select a clothing brand from each category that they felt best represented the category.

Demographic Items

The third section of the questionnaire consisted of demographic items. These items included gender, age, race, class status within the university, college/school enrolled in, and major.

Data Collection Procedure

Students in an introductory consumer behavior course (Global Consumer Culture) who volunteered to participate in the study for extra credit were handed a questionnaire packet including an information sheet, questionnaire, and an extra credit slip. After reading the information sheet explaining the purpose and procedure of the study, the participants were instructed to complete the questionnaire. Upon completing the questionnaire, they walked the questionnaire and the extra credit slip to the front of the classroom, detached the extra credit slip, placed each of the questionnaire and extra credit slip in the boxes labeled correspondingly, and exited the classroom.

Data Analysis and Results

The data analysis of Phase 2 included several types of analyses including the analysis of brand sorting data and the content analysis of the brand category labels and

descriptors provided by the respondents.

Brand Sorting Data Analysis

For identifying common brand categories from the brand sorting data, each pair out of the 30 brands was counted in terms of the number of respondents who classified them into the same category. Frequencies of each pair of brands being grouped in the same category was created in a symmetric matrix with the brands for the column and row labels of the matrix (see Table C.1. in Appendix C for the data matrix). The researcher then analyzed this brand-pair matrix to see common patterns of brand-category memberships in two ways: manual analysis and statistical analysis using multidimensional scaling (MDS).

First, the frequency data constituting the matrix were scrutinized to identify the brand pairs that were frequently placed in the same category. It was assumed that brands could be considered more similar if placed within the same category by more respondents. As a result of this analysis, the researcher identified a total of four categories (see Table 4.3).

To supplement the manual analysis of brand-category membership, the researcher ran a MDS analysis (applying the PROXSCAL procedure with the simplex initial configuration) on the brand-pair matrix. The MDS allowed the researcher to statistically explore similarities between brands and provided a graphical presentation of the brand grouping structure. Based on the MDS results, the brands were grouped into four basic categories (see Table 4.4 and Figure 1), which were similar to the brand categories identified from the manual analysis. Both analyses had identical brand groupings for Category 1 and Category 3. For Category 2, both analyses had a similar grouping of nine

brands including Abercrombie and Fitch, American Eagle, Hollister, Co., Limited, Old

Navy, Gap, Express, Levi's, and Pacific Sunwear. However, the MDS results (see Figure

1) revealed that two brands - J Crew and Victoria's Secret – had unclear brand category

membership because these two brands were located somewhere between Categories 2

Table 4.3. Manual Analysis of Brand Category Membership

	Brands
Category1	Columbia, New Balance, Northface, Reef
Category2	Abercrombie and Fitch, American Eagle, Hollister, Co., Limited, Old Navy, J Crew, Gap, Express, Levi's, Victoria's Secret, Pacific Sunwear
Category3	Charlotte Russe, Forever21, H&M, Delia's, Zara
Category4	BCBG, Citizens of Humanity, DKNY, Free People, Juicy Couture, Lacoste, Ralph Lauren, Polo Ralph Lauren, Seven for all mankind, True Religion

Table 4.4. Brand Category Distinction MDS

Category Number	Category Label	Brands
1	Sporty/Outdoorsy	Northface, New Balance, Columbia, Reef
2	Casual/Moderately Priced	Abercrombie and Fitch, Hollister Co., American Eagle, Levis, Old Navy, Express, Limited, Gap, Pacific Sunwear
3	Trendy/Affordable	H&M, Forever 21, Charlotte Russe, Delia's, Zara
4	Pricey/Upscale	Ralph Lauren, Seven for all mankind, DKNY, True Religion, Citizens of Humanity, BCBG, Juicy Couture, Lacoste

and 4 on the multidimensional scaling graph. Last, for Category 4, both analyses had a similar grouping of eight brands including BCBG, Citizens of Humanity, DKNY, Juicy Couture, Lacoste, Ralph Lauren, Seven for all mankind, and True Religion. However, MDS results again yielded an unclear brand grouping for two brands: Free People and Polo Ralph Lauren (see Figure 1). Free People and Polo Ralph Lauren as portrayed by the graph have isolating positions meaning the coordinates for these brands were not located close to any specific brand category (see Table C.2. in Appendix C for brand dimension coordinate scores). Thus, the four brands whose group membership was unclear were not categorized into any of the four common categories. To identify labels for the four brand categories commonly found from the manual and MDS analyses results, descriptors most frequently used by Phase 2 respondents to label their brand categories were referred to. More detailed explanation of the four most common brand category labels is provided after the content analysis results are discussed below.

Content Analysis

A content analysis was conducted on the verbal data the respondents provided as the labels and descriptors for their brand categories. After eliminating 13 comments that did not address specific brand associations (e.g., "Brands I wear", "Brands I don't like", "Brands I never wore", and "Brands I used to wear"), a total of 774 comments including 287 non-repetitive comments were collected. Through a preliminary analysis of the comments, the researcher developed a coding frame consisting of 12 themes including Sporty/Outdoors, Fashionable/Trendy, Pricey, Affordable, Level of Quality, User Demographic, Social Class, Causal Style, Classic/Basic Style, Purchase Options and
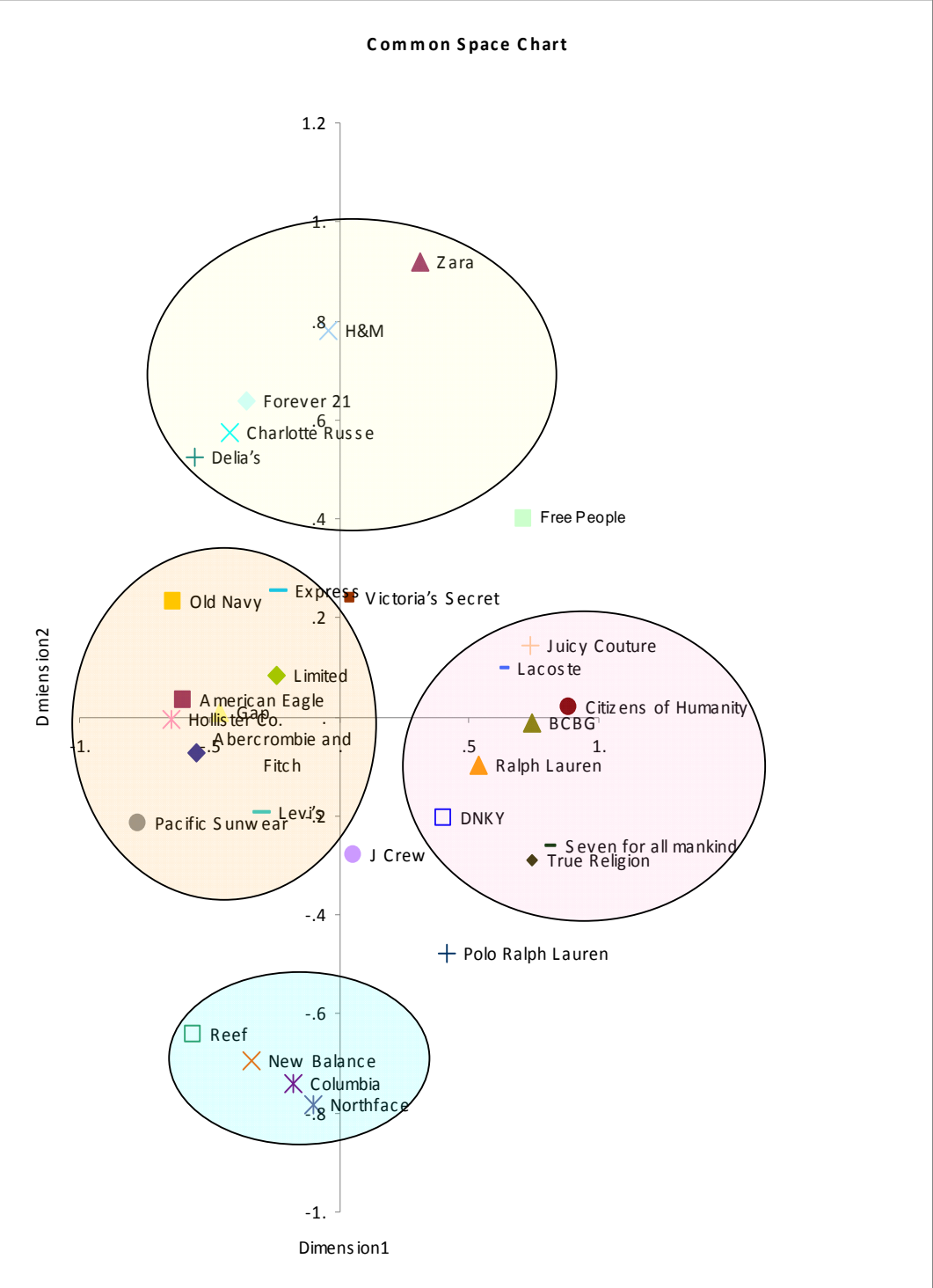
33

Figure 1. Common Space Graph from MDS Analysis

Availability, Unique Design Points, and Other (see Table 5.5 for detailed explanation of the themes.) The researcher then hired two outside coders (graduate students) who independently coded the 287 non-repetitive comments using the 12 themes. For a pretest to check whether the coders had a clear understanding of the coding frame, the coders were first asked to code the first 50 comments. The level of agreement between the two coders for these initial 50 comments was 46%, posing the need for further training of the coders on the coding frame. Therefore, the researcher gave further explanation to the coders and clarified their questions to ensure that meanings of the coding themes were clear. Then, the coders independently coded the entire comments. The researcher observed each coder's coding process and answered any questions if she needed help understanding a coding category while coding the remainder of the comments. Through this process, an inter-coder reliability of 74% was reached. For all the disagreed-upon comments, two coders negotiated to finalize the theme that fit the comments the best. The researcher acted as the third judge when agreement between the two coders was not achieved through this negotiating process. Using the final coding results, frequencies for each theme were calculated (see Table 4.5).

The theme with the highest frequency of comments was the Fashionable/Trendy theme, followed by Casual Style, Pricey, Affordable, Level of Quality, Social Class, and Sporty/Outdoorsy. The Fashionable/Trendy theme related specifically to comments about a category of brands being in the current trend or fashion. The Causal Style theme included comments relating to product styles that were commonly used by consumers for everyday wear and use. The Pricey theme consisted of comments that associated a

category of brands with a high-end price levels, where, the Affordable theme, included

comments related to brands' price levels that ranged from low to moderate.

Table 4.5. Coding Theme Descriptions and Frequencies

Theme	Description	Non-repetitious Comments f	Total Comments f	Example Comments
Fashionable/ Trendy	Comments indicating the brands are in the current trend or fashion in a particular time	24 (8.0%)	119 (16.0%)	"Trendy", "Fashionable", "In style", "Stylish", "Hip"
Casual Style	Comments regarding the brands' product styles that are appropriate for everyday use and wear.	28 (10.0%)	96 (13.0%)	"Wear more often", "Everyday clothing", "Comfortable", "Casual", "Laid-back", "Practical"
Pricey	Comments associating the brands with a high price	24 (8.0%)	84 (11.0%)	"Expensive", "Higher end", "High Fashion", "Pricey"
Affordable	Comments associating the brands with a low to moderate price	26 (9.0%)	81 (11.0)	"Moderately Priced", "Average", "Reasonable", "Inexpensive"
Level of Quality	Comments related to the quality of the products from the brands.	31 (11.0%)	70 (9.0%)	"High quality", "Good quality", "Durable", "Reliable clothing", Well-made"
Social Class	Comments regarding the brands as a symbol of particular social classes based on income, power, occupation and status.	27 (10.0%)	61 (8.0%)	"High class", "Upscale", "Status oriented", "Business/Work wear"
Sporty/ Outdoorsy	Comments associated with outdoor and sporting purposes and use	15 (5.0%)	61 (8.0)	"Sporty", "Outdoors", "Adventure Clothing", "Athletic clothing"
Unique Design Point	Comments regarding particular design points frequently used by the brands or the fact that the brands have uniqueness	35 (13.0%)	49 (7.0%)	"Specific image", "Wild prints and colors", "Variety", "Unique Look"

(Continued)

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Table 4.5 (Continued)

Theme	Description	Non-repetitive Comments f	Total Comments f	Example Comments
User Demographic	Comments regarding characteristics of the user of the brands including age, gender, education level and sub-cultures	32 (11.0%)	38 (5.0%)	"Youthful", "Middle-aged", "Women", "Punk"
Purchase Options and Availability	Comments regarding places for the consumer to be exposed to the brand or product or a way the consumer is able to purchase the product according to a level of accessibility.	26 (9.0%)	36 (5.0%)	"Available", "Casual stores", "Online", "Mall brands", "Browse through"
Classic/ Basic Style	Comments regarding the brands' product styles that are considered to be timeless and traditional regardless of the latest trends in fashion by members of a society	10 (3.0%)	36 (5.0%)	"Classic", "Familiar", "Not trendy", "Similar styles"
Other	Comments that do not fit any of the above themes	9 (3.0%)	13 (2.0%)	"Serve a purpose", "Don't wear often", "Uncommon", "Favorite Brand"
TOTAL		287	744	

The next theme, Level of Quality also, had a high frequency and was specific to the quality level the products from the brand was thought to have. The sixth theme was labeled Social Class that included comments relating to income, power, occupation, and status associated with a group of brands as a member of a particular social class. The Sporty/Outdoorsy theme included comments associating a brand with outdoor and sporting purposes and use.

Labeling the Four Most Common Brand Categories

The category label of Sporty/Outdoorsy was selected for Category 1 (see Table 4.4) because the brands in this category were frequently associated with labels such as "sporty", "outdoor" and "activewear". Category 2 was labeled as Casual/Moderately Priced because brands in this category were most frequently associated with labels such as "causal", "comfortable", "common", "everyday", "moderately priced", and "reasonably priced". Category 3 was labeled as Trendy/Affordable because the brands grouped in this category mostly addressed these two themes. The respondents provided labels such as "stylish", "fashionable", "popular", "affordable", and "inexpensive" for these brands. For the last category, Pricey/Upscale was selected because of the high frequency of labels provided by the respondents such as "high price", "expensive', "designer", "high class" and "upscale" which were associated with the brands in this category.

CHAPTER V. PHASE 3

In Phase 3, the researcher developed a brand association scale based upon the most commonly mentioned category labels and descriptors from Phase 2. In addition, the researcher examined how favorably consumers viewed each of the associations included in this scale and how strongly respondents perceived these associations to describe a set of selected apparel brands. The goal of this phase was to choose brands for the main experiment (Phase 4) that possess different associations with varying levels of favorability. Another goal of this phase was to answer RQ 2 by examining the relationship between the brands' awareness performances and how favorable the associations were perceived by consumers.

Instrument

A survey using an online questionnaire was conducted to collect data. The questionnaire contained three sections: (1) favorability of brand associations, (2) brands' association ratings, and (3) general demographic items (see Appendix A for the questionnaire).

Favorability of Brand Associations

The first section measured how favorable or unfavorable it was for a brand to possess certain brand associations. The development of the brand association items was based on the brand category labels and descriptors collected in Phase 2. In order to construct the brand association scale items, first the researcher chose the meaningful

words/phrases with high frequencies from each theme identified through the content analysis in Phase 2. The researcher then re-examined the selected words/phrases to merge those that had similar meanings through an iterative process, resulting in a total of 33 words/phrases representing varying coding themes from Phase 2. Finally, the 33 brand association words/phrases were rephrased so that they could be put in a statement form (e.g., "A brand is sporty", "A brand is trendy").

An instruction was provided to the respondents that they were to rate how favorable or unfavorable it was for a brand to possess each of the 33 brand associations. Respondents assessed favorability of each association using a 5-point Likert-type scale with -2 for 'very unfavorable', -1 for 'unfavorable', 0 for 'neither favorable nor unfavorable', '+1 for 'favorable', and +2 for 'very favorable'.

Brands' Association Ratings

In the second section of the questionnaire, 15 apparel brands were rated in terms of how strongly the respondent believed the brands possessed the characteristics described by each brand association item using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). For this section, brand association items used in Section 1 were modified by using the 15 specific brand names instead of the neutral statement form. For example, "A brand is sporty" from section 1 was modified as "Gap is sporty", "Ralph Lauren is sporty", and so on. The 15 brands were selected from those used in Phase 1 so that they would represent varying levels of brand awareness.

In order to prevent respondents' tedium, the researcher created three versions of this section of the questionnaire, each containing a subset of the 15 brands. Three brands (Gap, Ralph Lauren, Pacific Sunwear) were repeatedly included in all the three versions

and the remaining 12 brands were randomly divided into three sub-groups of four brands, each of which was included in one of the three versions of the questionnaire. Therefore, each respondent rated only seven brands' associations. In doing so, the researcher attempted to obtain sufficient data to run a factor analysis for exploring the dimensionality of the brand association rating responses while avoiding respondents' tedium.

Demographic Items

The third section of the questionnaire consisted of demographic items including gender, age, race, class status within the university, and college/school enrolled in.

Sampling Procedure and Sample Characteristics

A sample of 3600 undergraduate students who were enrolled at Auburn University were selected through a systematic random sampling procedure and contacted for soliciting participation in this phase of the study. For the systematic random sampling, first, all undergraduate students enrolled at Auburn University (about 18,000 students) were listed alphabetically by their first names. Starting from a randomly selected number, every 15th name was selected for each version of the survey, resulting in 1200 students for each version. Among the contacted, a total of 196 students responded and provided usable data. To ensure the consistency among the data, only female respondents' data were used for the analysis, eliminating 59 male responses. Therefore, a total of 137 female students constituted the final sample for Phase 3, 51 of whom participated in Version 1, 44 in Version 2, and 42 in Version 3. The sample consisted of mainly Caucasian females (84%), whose average age was 20 years old and class status was at the

junior level (27%). Demographic characteristics of respondents to each version of the questionnaire were similar (see Table 5.1).

Data Collection Procedure

The potential participants were solicited on a voluntary basis. First, an e-mail containing the purpose of the study, online survey procedure, URL link to the assigned survey, and privacy and confidentiality statement was sent to the potential respondents (see Appendix D). Students who decided to participate clicked on the URL link to the survey website and completed the questionnaire on their own. Two follow-up emails were sent to the potential respondents reminding them to participate in the survey. The first reminder email was sent one week after the first solicitation email and the final reminder email was sent two weeks after the first solicitation email.

Data Analysis and Results

The data analysis of Phase 3 included exploratory factor analysis, and Kendall's tau and Spearman's rho correlations to answer RQ 2.

Exploratory Factor Analysis

Exploratory factor analysis (EFA) was conducted using the brands' association rating data (i.e., how strongly the respondent believes a given brand possesses each association) from the three brands that were commonly included in all three versions of the questionnaire. Only 31 out of the 33 items were subjected to the EFA because two associations were determined to be neither favorable nor favorable (i.e., neutral) in their valence as a result of the one-sample t-test with a null hypothesis that the association

Table 5.1. Descriptive Statistics of Phase 3 Sample Characteristics

		Version1 f	Version2 f	Version3 f
Gender	Female	48	42	39
	Missing	3	2	3
Age	19	9	8	9
	20	5	11	11
	21	11	8	4
	22	6	2	4
	23	3	0	0
	24	1	0	0
	25	0	2	0
	Missing	16	13	14
Race	African- American	4	4	2
	Asian, Pacific Islander	1	0	1
	Caucasian, Non-Hispanic	41	37	36
	Hispanic	2	0	0
	Native American	0	0	0
	Other	0	1	0
	Missing	3	2	3
Class	Freshman	11	10	9
	Sophomore	10	10	7
	Junior	8	11	15
	Senior	16	10	6
	Graduate or Professional Student	3	1	1
	Missing	3	2	4
College	Agriculture	3	2	1
	Architecture, Design, Construction	1	3	1
	Business	8	8	6
	Education	5	7	5
	Engineering	1	0	0
	Forestry/Wildlife Sciences	1	0	0
	Human Sciences	9	3	12
	Liberal Arts	10	12	7
	Nursing	5	2	2
	Sciences/Mathematics	5	5	5
	Missing	3	2	3
	n	51	44	42

favorability mean equals zero. The two eliminated items were "[Brand] is cheap" (M = .11, SD = 1.28) and "[Brand] is common" (M = .05 SD = .95). This step was necessary because the researcher intended to use only the non-neutral associations for the calculation of each brand's association favorability score (see Table E.1 in Appendix E).

A principal components analysis with varimax rotation was run with the brand rating data from each of the three brands (Gap, Ralph Lauren, Pacific Sunwear) that were commonly included in all the three versions of the questionnaire. For each data set, three steps were taken to determine the appropriate number of components and items explaining each component. First, Kaiser's Criterion (extracting factors whose eigenvalues are greater than 1.0) was used to obtain an initial component solution (Thompson, 2004). Then, the researcher examined the scree plot to examine the number of significant drops on the scree plot as an indication of the number of components to retain. Finally, items that had high loadings on each component were examined and compared across the three brands' solutions in order to understand meanings of the extracted components and determine the items to retain for further analysis.

According to the initial run of EFA from the three brands' data sets, the researcher decided to delete nine items because their factor loadings were equivalently high for multiple components. The initial EFA comparisons across the three brands also revealed a possibility of seven common components. Therefore, the researcher ran a second principal component analysis with a varimax rotation for the 22 remaining items with a seven component solution. After comparing the component loadings, one more item was eliminated due to its unclear meaning, resulting in the final set of 21 items constituting seven components (see Table 5.3).

The first component, "Quality", included three items representing characteristics that were specific to the level of product quality and how strongly the respondents believed the brand possessed a certain level of quality. The next component, labeled "Price", included four items corresponding to various price ranges. "Fashion", the third component, contained three items describing the brand as being in the current trend or fashion in a particular time. The fourth component, labeled "Uniqueness", consisted of three items representing how strongly the respondents believed the brand has characteristics that make it stand apart from other brands. Next, the component, "Casual", was composed of three items representing brand characteristics associated with casual everyday use and wear. "Traditional" was used to label the fifth component, which included three items related specifically to brand characteristics that were timeless and traditional regardless of the latest trends in fashion. The last component, "Outdoorsy", was represented by two items brand characteristics associated with outdoor and sporting uses. The reliability of each brands' component items was calculated using Cronbach's *alphas*. Components with a Cronbach's *alpha* of .7 or higher were found to have internal consistency (Nunnally & Bernstein, 1994). All seven components maintained a Cronbach's *alpha* that was above .70 for all the three brands except for only one incident (Gap's Outdoors items had an *alpha* of .675), indicating reasonable reliability of the brand association scale (see Table 5.3).

Brands' Association Favorability Score Calculation

Each brand's brand association favorability score (A_j) was calculated following three steps: 1) calculate the brand's association component scores (B_i) by averaging the brand's association ratings from each component, 2) calculate each brand association

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Table 5.3. Principal Components Analysis Results: Seven-Component Solutions

Component	Items	Component Loadings		
		Gap	Ralph Lauren	Pacific Sunwear
Quality	[Brand] is well-made.	.924	.891	.811
	[Brand] has reliable clothing.	.911	.835	.850
	[Brand] is durable.	.900	.860	.874
	Eigenvalue	5.11	6.69	6.7
	Variance	24.3%	31.9%	32.1%
	Cronbach's *alpha*	.958	.938	.957
Price	[Brand] is reasonably priced.	.842	.811	.840
	[Brand] is affordable.	.836	.648	.858
	[Brand] is expensive.	-.791	-.648	-.701
	[Brand] is inexpensive.	.636	.766	.814
	Eigenvalue	3.72	2.21	3.6
	Variance	17.7%	10.5%	17.0%
	Cronbach's *alpha*	.825	.723	.839
Fashion	[Brand] is stylish.	.839	.821	.802
	[Brand] is fashionable.	.832	.839	.835
	[Brand] is trendy.	.734	.870	.789
	Eigenvalue	2.12	1.2	1.6
	Variance	10.1%	5.9%	7.8%
	Cronbach's *alpha*	.833	.876	.851
Uniqueness	[Brand] is different from other brands.	.820	.880	.803
	[Brand] is unique.	.798	.862	.848
	[Brand] has a variety of assortment.	.683	.679	.765
	Eigenvalue	1.59	1.49	1.2
	Variance	7.6%	7.1%	5.8%
	Cronbach's *alpha*	.740	.827	.847
Casual	[Brand] is simple.	.788	.785	.653
	[Brand] is comfortable.	.718	.563	.750
	[Brand] is casual.	.570	.624	.772
	Eigenvalue	1.44	2.7	1.1

(Continued)

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Table 5.3. (Continued)

Component	Items	Component Loadings		
		Gap	Ralph Lauren	Pacific Sunwear
Casual (con't)	Variance	6.9%	12.9%	5.2%
	Cronbach's *alpha*	.726	.737	.727
Traditional	[Brand] is preppie.	.845	.535	.814
	[Brand] is classic.	.703	.726	.883
	[Brand] is traditional.	.617	.763	.916
	Eigenvalue	1.09	2.7	2.1
	Variance	5.2%	12.9%	10.0%
	Cronbach's alpha	.715	.824	.879
Outdoorsy	[Brand] is outdoorsy.	.851	.868	.824
	[Brand] is sporty.	.793	.849	.853
	Eigenvalue	.92	.95	.94
	Variance	4.4%	4.5%	4.5%
	Cronbach's alpha	.675	.734	.765

component's favorability score (C_i) by averaging the favorability scores of the associations from each component, and 3) sum the products of B_i and C_i for each brand. Thus, the formula used to calculate a brand's association favorability score was:

$$A_j = \Sigma \ B_{ij}C_i, \text{ where } i = \text{brand association component and } j = \text{brand}$$

All of the 15 brands' association favorability scores were calculated using this formula. H&M, Polo Ralph Lauren, Columbia, and J Crew were brands that showed the highest brand favorability score means, while Seven for all mankind, Pacific Sunwear, True Religion, and Express showed the lowest brand association favorability score

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Table 5.4. Brand Favorability Descriptive Statistics

	Min.	*Max.*	*M*	*SD*
Seven for all Mankind	1.50	45.64	23.18	8.80
Pacific Sunwear	3.17	46.74	23.43	9.01
True Religion	8.28	44.92	24.13	7.38
Express	7.53	38.67	24.14	7.79
BCBG	8.50	45.22	24.55	7.67
Old Navy	3.72	45.25	24.65	8.91
NorthFace	3.28	55.17	25.46	10.07
Gap	3.28	54.88	25.54	9.21
Victoria's Secret	8.28	45.36	26.42	8.89
Ralph Lauren	3.39	54.44	26.51	9.45
Limited	8.92	45.08	27.00	9.63
J Crew	8.80	45.08	27.85	9.09
Columbia	6.00	46.73	28.01	9.16
Polo Ralph Lauren	9.80	55.10	29.10	10.16
H&M	10.94	51.43	30.42	9.36

means (see Table 5.4).

Research Question 2

Kendall's tau and Spearman rho rank-order correction analyses were run to answer RQ 2 which addressed the association between the 15 brands' rank orders according to their recall and recognition performances from Phase 1 (i.e., the number of respondents who recalled and recognized the brands, respectively) and their rank orders according to the brands' association favorability scores calculated in Phase 3 (i.e., brands with the highest to the lowest brand association favorability mean scores). Results from both Kendall's ($T = -.135$, $p = .49$) and Spearman ($\rho = -.170$, $p = .54$) rank-order

correlations indicated a non-significant relationship between the brand association favorability component score and recall performance. In addition, Kendall's (T = .092, p =.65) and Spearman (ρ =. 14, p = .63) rank-order correlations between the brands' recognition performance and association favorability ranks also were non-significant. Therefore, no evidence was found that brands with higher levels of brand awareness were associated with more favorable brand associations as proposed in RQ 2.

CHAPTER VI. PHASE 4

In Phase 4, an experiment using a between-subjects design was conducted to explore how college-aged consumers classify apparel brands using the three different cognitive models of categorization. The independent variable of the study was the models of categorization manipulated by the researcher which included three levels - the prototype model, the exemplar model, and the classical model, while the dependent variable of the study was the structure of the brand-category membership resulting from the respondents' sorting task.

Experimental Manipulations

The three levels of the independent variable, models of categorization, were operationalized by manipulating instructions provided to participants in order to purposefully induce them to engage in one of the three mental models of categorization processes to sort given brands. In the experiment, respondents were asked to classify a set of apparel brands into three categories. From the four distinct brand categories identified from the analysis of the brand sorting data in Phase 2 (i.e., Sporty/Outdoorsy, Casual/Moderately Priced, Trendy/Affordable, Pricey/Upscale), three categories were selected for this experiment, the Sporty/Outdoorsy category was not used because it had only four brands (see Table 4.4). A total of 26 apparel brands were chosen for the brand sorting task of the experiment because they represented varying levels of brand awareness and brand association favorability through Phases 1 and 3.

First, for the prototype model condition, the researcher provided a prototype brand for each of the three categories. The brands most frequently selected to represent the three categories by Phase 2 participants were used as the prototype brands in this experiment. They include *American Eagle* for Casual/Moderately Priced, *Forever 21* for Trendy/Affordable, and *BCBG* for Pricey/Upscale. Along with the three prototype brands, respondents were given a description in the instructions of the questionnaire that stated:

> Suppose there are only three categories of clothing brands in the market. The first category is represented by AMERICAN EAGLE, the second category is represented by BCBG, and the last category is represented by FOREVER 21. Based on the characteristics of these representative brands, please imagine what kinds of brands would fit in each of the categories. Please evaluate each brand listed here below by thinking about which of the three categories it fits the best and choose the best-fitting category for each brand.

Based on these instructions, the respondents were asked to classify the remaining 23 brands into one of the three categories they feel best represented each brand. Neither the category descriptions nor other exemplar brands for the categories were given to the respondents in this condition to illustrate the categories (see Appendix A for the questionnaire).

For the exemplar model condition, two exemplar brand names were provided for each of the three categories. The exemplar brands were selected among the brands that were determined to fit to the categories well but were not most commonly selected as prototypes of the categories in Phase 2. *Abercrombie & Fitch* and *Gap* were the exemplar brands provided for the Casual/Moderately Priced category, *Charlotte Russe* and *H&M* were the exemplars provided for the second category, Trendy/Affordable, and *Juicy Couture* and *Ralph Lauren* were the exemplars provided for the remaining

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category, Pricey/Upscale. Using the six brands given as exemplars, respondents were asked to group the remaining 20 brands into the category they see fit. Respondents were given a description in the instructions in the questionnaire that stated:

> Suppose there are only three categories of clothing brands in the market. The first category is represented by ABERCROMBIE & FITCH and GAP, the second category is represented by CHARLOTTE RUSSE and H&M, and the last category is represented by JUICY COUTURE and RALPH LAUREN. Based on the characteristics of these representative brands, please imagine what kinds of brands would fit in each of the categories. Please evaluate each brand listed here below by thinking about which of the three categories it fits the best and choose the best-fitting category for each brand.

The exemplar model group was not provided with the prototype brands or the category descriptions.

The third experimental group was given instructions constructed based on the classical model of categorization. The respondents were given the three categories with verbal descriptions of characteristics of the categories which were created based on the most common category labels and descriptors found in Phase 2 and brand association items developed in Phase 3. The three verbal descriptions of the categories included, Casual/Moderately Priced, Trendy/Affordable, and Pricey/Upscale. Respondents were given a description in the instructions of the questionnaire that stated:

> Suppose there are only three categories of clothing brands in the market. The first category is represented by CASUAL/MODERATELY PRICED, the second category is represented by TRENDY/AFFORDABLE, and the last category is represented by PRICEY/UPSCALE. Based on these characteristics, please imagine what kinds of brands would fit in each of the categories. Please evaluate each brand listed here below by thinking about which of the three categories it fits the best and choose the best-fitting category for each brand.

Using the given descriptors of the three categories, respondents were asked to group the entire 26 brands into the category they see fit. The classical model group was not

provided with any prototype or exemplar brands.

Dependent Variable

The dependent variable of the research was the brand-category membership resulting from the respondents' brand sorting task (categorization task). The sorting results were coded so that for each respondent, each pair of brands was recorded in terms of whether or not the respondent classified them into the same category. The frequency with which each pair of two brands was coded in the same category was counted for each experimental condition.

Sampling Procedure and Sample Characteristics

A random sample of 3600 undergraduate students enrolled at Auburn University were contacted for soliciting participation in this phase of the study. The systematic random sampling procedure, which was used in Phase 3 of the research, was again employed for Phase 4. Starting from a randomly selected number, every 15th name was selected for each version of the survey, resulting in 1200 students for each condition. The random start number differed from that of Phase 3, assuring that no one from the Phase 3 sample would be contacted again for Phase 4. Among the contacted, a total of 308 responded and provided usable data. To ensure the consistency among the data, only female respondents' data were used for the analysis, eliminating 103 male responses. Therefore, a total of 205 female students constituted the final sample. Seventy four participated in the Prototype condition, 73 in the Exemplar condition, and 58 in the Classical condition. Demographic characteristics of each condition of the questionnaire were similar, consisting of mainly Caucasian females with the average age of 20.0 years

(SD = 1.49) and most common class status at the junior level (26.3%) (see Table 6.1 for the descriptive characteristics of the Phase 4 sample).

Instrument

An experiment using experimental websites incorporating the three models of the brand sorting task and an online questionnaire was used to collect data. Three versions of the online experiment website were created to address the three experimental conditions. The website contained three sections: (1) sorting task, (2) manipulation check, and (3) demographic items.

Sorting Task

In the first section, the respondents were asked to classify given brands using the three categories following the instructions provided according to the experimental condition they were assigned to. The names of the brands to be sorted were listed in a random order. Further explanations of the sorting task instructions were described in the experimental manipulations section above.

Manipulation Check

In section 2, three manipulation check questions were asked to assure the success of the experimental manipulations. That is, the participants self-reported the degree to which they were engaged in the three models of categorization during their brand sorting tasks in section 1.

It was predicted that participants would be more likely to acknowledge that they used the model of categorization assigned in the experimental group they belong to than the other two models. For each experimental condition, wording of the three

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Table 6.1. Descriptive Statistics of Phase 4 Sample Characteristics

		Prototype f	Exemplar f	Classical f
Gender	Female	71	66	55
	Missing	3	7	3
Age	19	17	14	14
	20	16	15	14
	21	13	18	6
	22	6	7	10
	23	2	4	3
	24	0	1	0
	25	1	2	0
	26	0	0	1
	Missing	19	12	10
Race	African- American	4	4	3
	Asian, Pacific Islander	0	2	0
	Caucasian, Non-Hispanic	64	62	50
	Hispanic	3	0	1
	Native American	0	0	0
	Other	0	0	1
	Missing	3	5	3
Class	Freshman	24	13	12
	Sophomore	17	15	10
	Junior	12	22	17
	Senior	17	16	14
	Graduate or Professional Student	1	2	2
	Missing	3	5	3
College	Agriculture	2	4	1
	Architecture, Design, Construction	4	6	3
	Business	9	12	12
	Education	6	6	4
	Engineering	1	6	3
	Forestry/Wildlife Sciences	0	0	1
	Human Sciences	9	10	6
	Liberal Arts	1	0	2
	Nursing	22	15	15
	Pharmacy	4	1	1
	Sciences/Mathematics	0	0	0
	Veterinary	13	8	7
	Missing	3	5	3
	n	74	73	58

questions were slightly adjusted to fit their unique situations (see Table 6.2 for the manipulation check questions used for each condition). The manipulation check questions were answered using a 5-point Likert-type scale with 1 for 'Never', 2 for 'Rarely' 3 for 'Sometimes', 4 for 'Very Often' and 5 for 'Always'.

Demographic Items

The third section of the questionnaire consisted of demographic items including gender, age, race, class status within the university, and college/school enrolled in.

Data Collection Procedure

The potential participants were solicited on a voluntary basis. First, an e-mail was sent to the potential respondents that included the purpose of the study, online experiment procedure, URL link to assigned experimental website, and privacy and confidentiality statement (see Appendix D). Students who decided to participate clicked on the URL link provided in the email, which led them to the assigned experimental website that was designed for the condition to which they were assigned. The respondents completed the survey on their own. Two follow-up emails were sent to the potential respondents reminding them to participate in the survey. The first reminder email was sent four days after the first solicitation email and the final reminder email was sent one week after the first solicitation email.

Data Analysis and Results

The data analysis of Phase 4 included ANOVA for manipulation check and chi-square analysis to answer RQ3.

ANOVA for Manipulation Checks

To examine if the respondents were in fact induced to use their assigned model of

Table 6.2. Manipulation Check Questions

	Prototype Model Condition	Exemplar Model Condition	Classical Model Condition
Prototype Model Question	While deciding the category for a given brand, how often did you compare the brand to the example brand that represented each category?	While deciding the category for a given brand, how often did you compare the brand to a brand you imagined may have represented each category?	While deciding the category for a given brand, how often did you compare the brand to a brand you imagined may have represented each category?
Exemplar Model Question	While deciding the category for a given brand, how often did you compare the brand to the other brands that you already classified into the categories?	While deciding the category for a given brand, how often did you compare the brand to each category's example brands provided in the instructions?	While deciding the category for a given brand, how often did you compare the brand to the other brands that you already classified into the categories?
Classical Model Question	While deciding the category for a given brand, how often did you imagine specific characteristics of the category and compare the brand's characteristics to the category characteristics?	While deciding the category for a given brand, how often did you imagine specific characteristics of the category and compare the brand's characteristics to the category characteristics?	While deciding the category for a given brand, how often did you imagine and compare the brand's characteristics to each category's characteristics provided in the directions?

categorization for the brand sorting task more than the other two models of

categorization, first data from each of the manipulation check questions were compared

among the three conditions. For the prototype model manipulation check question, the

Prototype condition participants had a significantly higher score than those from the other two conditions, whereas the Exemplar condition participants showed a significantly higher score on the exemplar model question than the other two condition participants (see Table 6.3). These results confirmed successful manipulation of the Prototype and Exemplar conditions. However, the classical model manipulation check question results revealed that the Classical condition participants actually scored significantly lower than the Prototype participants.

In addition, results from the three questions were compared within each condition, revealing that participants in the Prototype model and Exemplar model conditions scored higher on their corresponding model question than the other two questions, again confirming the success of the manipulation of these two conditions. On the other hand, the Classical model condition participants' scores on the classical question were higher than those on the exemplar question, but not significantly different from those on the prototype question, indicating that these participants used both classical and prototype models of categorization to similar extents during their brand sorting tasks (see Table 6.3).

The unexpected manipulation check results obtained from the Classical model condition indicate that although Classical condition participants were only given information about characteristics of the three brand categories with no exemplar brand names, they naturally came up with a prototype brand for each category on their own based on the given category characteristic descriptions and used them as a basis for the other brands' category membership decisions. These results appear to indicate the relative power of the prototype model as a more valid account for natural human categorization

Table 6.3. Manipulation Check Descriptive Statistics and ANOVA Results

	M (SD)			F^2	p^2
	Prototype Question	Exemplar Question	Classical Question		
Prototype Condition	4.2 (.96)[a, d]	3.5 (1.01)[a, e]	4.0 (.87)[a, d]	16.53	.000
Exemplar Condition	3.6 (.99)[b, d]	3.9 (.92)[b, e]	3.8 (1.17)[a, c, d, e]	2.46	.089
Classical Condition	3.3 (1.17)[b, d, e]	3.1 (.96)[a, d]	3.4 (.95)[b, c, e]	4.07	.020
F^1	12.18	12.95	5.29		
p^1	.000	.000	.006		

[1] Results from the one-way ANOVA for each question with the three experimental conditions as a between-subjects factor. $df = (2, 193)$, $(2, 194)$, and $(2, 194)$ for the prototype, exemplar, and classical questions, respectively.
[2] Results from the repeated measure ANOVA for each condition with the three questions as a within-subjects factor. $df = (2, 138)$, $(2, 138)$, and $(2, 110)$ for the prototype, exemplar, and classical conditions, respectively.
[a, b, c] For each manipulation check question, the means with the same superscript from the three conditions were not significantly different according to the post-hoc comparison results.
[d, e, f] For each experimental condition, the means with the same superscript among the three questions were not significantly different according to the post-hoc comparison results.

than the classical model. Furthermore, the Classical condition participants seem to have

used the category characteristic descriptors provided to them less frequently than the

Prototype condition participants used category characteristics that they came up with on

their own based on the properties of the prototype brands given to them. That is,

attributes and benefits associated with one brand (i.e., prototype brand) in a consumer's

mind seemed to provide richer ideas of a brand category than the couple of category

descriptors that summarized the most common characteristics of the brands that were

supposed to belong to the category. Therefore, although the classical model manipulation

check questions did not yield the intended results, it is not clear if it was because the

manipulation failed to induce the classical model of categorization, or because the

classical model is naturally not a good theory to explain human beings' cognitive process

of categorization. Therefore, the researcher decided to continue including the Classical

condition in further analysis to explore differences among results from all three

experimental conditions.

Research Question 3

To answer RQ3, which addressed possible differences among brand-category

membership structures created from the three models of categorization, a series of chi-

square tests were conducted for the association between the independent variable (the

categorization models) and the frequency with which each pair of brands was grouped

together in the same category (see Table F.5. in Appendix F for brand pair grouping

frequencies).

The results from the chi-square tests indicated that out of the 326 possible brand

pairs, grouping of 121 pairs (37%) was significantly impacted by the categorization

models that the respondents were induced to use. In other words, whether or not these

pairs of brands were grouped in the same category was significantly associated with

which model of categorization was used. Even after excluding results from the 15 pairs

among the six brands used as the category exemplar brands since their categorization

results were predetermined in the Exemplar condition, 106 (34%) out of the remaining

311 pairs still revealed a significant chi-square test results, indicating the impact of the categorization models on the respondents' brand categorization outcome. The complete listing of the frequency of brand pairs being sorted in the same category from each experimental condition and the chi-square test results is presented in Appendix F.

To explore which of the three conditions produced the most difference, post-hoc chi-square tests were conducted for the brand pairing results from each pair of the three conditions. Between the Prototype and Exemplar conditions, the categorization model affected the likelihood of the brand pairs being put in a same category for 101 (31%) out of the 326 brand pairs. The comparable number for the Prototype and Classical condition comparison was 151 pairs (46%), while that for the Exemplar and Classical condition comparison was 116 (36%) pairs. These results indicate that consumers' brand category structures produced by the prototype and exemplar models were more similar to each other, while the classical condition generated the greatest difference from the other two conditions. However, since a significantly large number of inconsistent brand groupings were produced between every pair of conditions, it can be concluded that all categorization models (not only the classical model) can cause different brand categorization.

To supplement the chi-square analysis results, a MDS analysis was run for the brand pair matrix from each condition. This allowed the researcher to examine visually the similarities and differences between the experimental conditions in their brand category memberships (see Figures 2-4). Some similarities may be found among particular brands which appear to be classified together in all three conditions. For example, American Eagle, Hollister Co., Levi's, New Balance, and Reef appear to have

been perceived as a group, and BCBG, Citizens of Humanity, DKNY, and Seven for all

mankind seemed to be generally considered to belong to the same group by participants

from all three conditions. However, the MDS results also revealed significant distinctions

in the brand groupings from the three conditions. The degrees of dispersion of the brands'

locations in the common space indicate that the Exemplar Model condition produced the

most consistent brand groupings among the participants. On the other hand, the classical

condition participants' brand groupings were very incongruent with each other's,

resulting in the most scattered brand locations in the common space where no two brands

were located very close. For example, Hollister, Abercrombie & Fitch (AF), and

American Eagle (AE) were perceived to be so similar that these three brands' locations

were overlapped on the common space graphs from both the Prototype and Exemplar

Model conditions. However, this level of similarity among the three brands was not

observed on the MDS graph from the Classical Model condition. This result again

confirms that the classical model instruction did not provide as clear an explanation about

the brand categories as the other two models did with the prototype or exemplar brands.

This result seems to be consistent with the literature on the classical model of

categorization which pointed out the inconsistency often observed among objects

classified in the same category because this model assumes that any objects that satisfy

the rule (i.e., the given category characteristic descriptors) can be categorized together

(Barsalou, 1992; McCloskey & Glucksberg, 1978).
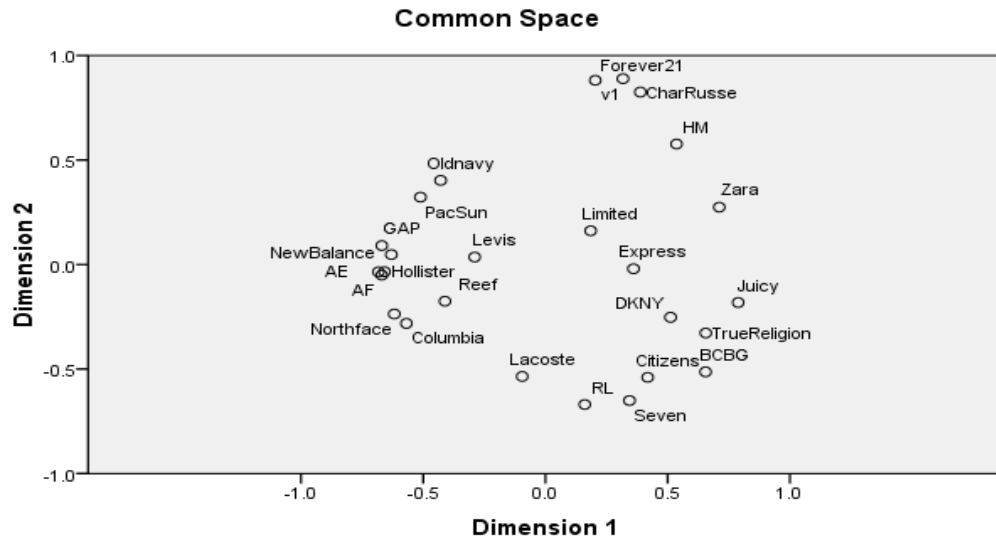
Figure 2. Prototype Condition Common Space Graph from MDS Analysis.
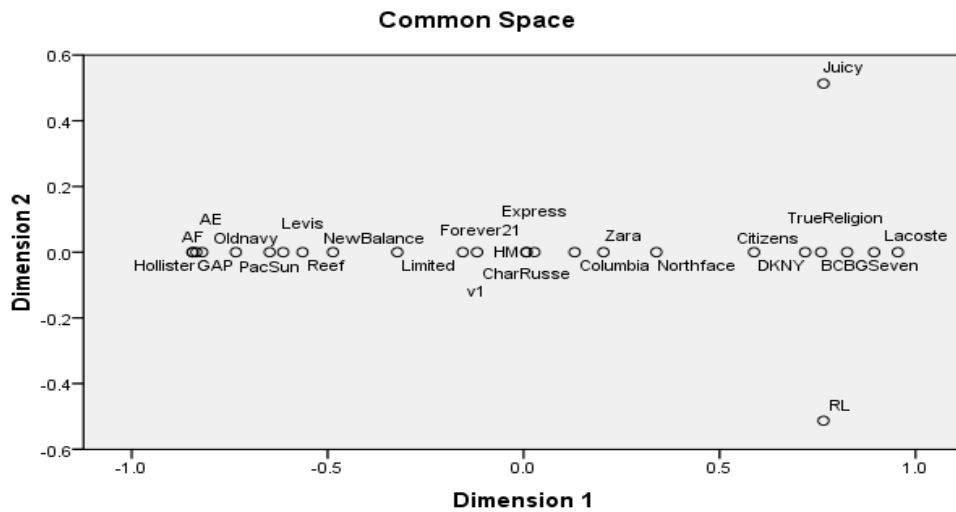
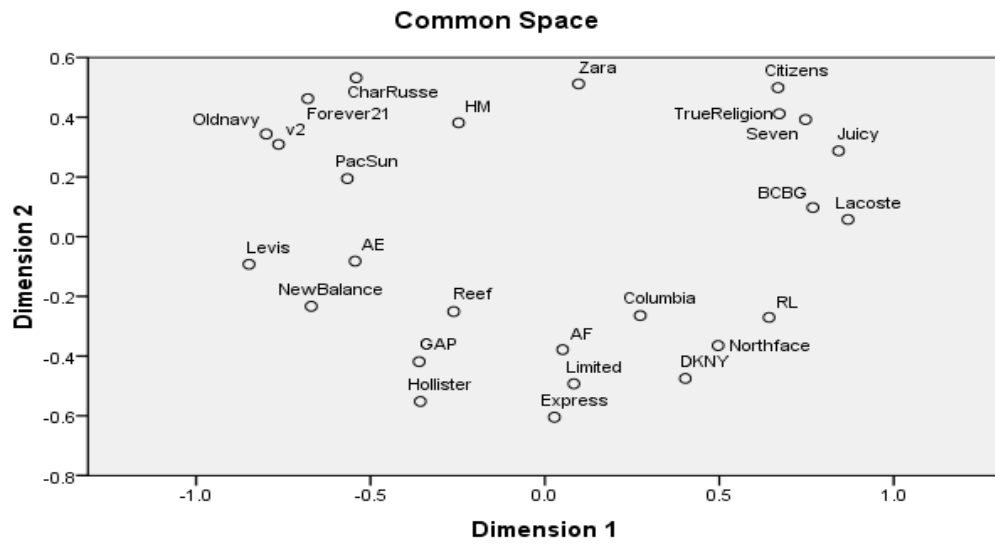Figure 3. Exemplar Condition Common Space Graph from MDS Analysis.

Figure 4. Classical Condition Common Space Graph from MDS Analysis.

CHAPTER IV. DISCUSSION

This chapter discusses the findings from the four phases of this study. Theoretical implications are discussed in relation to the literature on brand awareness, brand associations, and the categorization models. In addition, managerial implications of the findings for apparel marketers are discussed. Finally, limitations of the study are presented along with recommendations for future research.

Discussion of Findings

Research Question 1: Are Consumers' Apparel Brand Recall And Recognition Performances Related?

A consumer's brand knowledge is composed of two constructs - brand awareness and brand image (Keller, 1993). A brand's awareness performance (i.e., how many consumers are aware of the brand) can be assessed at different levels such as recognition and recall (Aaker, 1991), but the relationship between these two brand awareness performance constructs at the market level has remained unknown. To address this gap, Phase 1 of this study explored a college consumer sample's levels of brand awareness for selected apparel brands in the current market and found a positive relationship between the apparel brands' recall and recognition performances among these consumers. Specifically, we found a moderate positive correlation between apparel brands' recall and recognition frequencies as well as between the orders in which apparel brands were ranked according to their recall and recognition frequencies. However, despite the

significant correlation found between the recall and recognition frequencies of apparel brands, it should be noted that the correlation coefficient was only moderately high, ranging between .39 and .60 depending on the kinds of tests used. That is, it was not always the case that more frequently recognized brands were also more frequently recalled by the same group of consumers, suggesting that some brand marketing activities may increase consumers' awareness of the brand at the recognition level but not at the recall level.

Past studies have indicated that brand recall and recognition collectively can be called brand awareness. However, there has been a lack of research on how these two constructs work together at the market level (Aaker, 1991; Keller 1993). The moderate relationship between the two brand awareness constructs found in this study provides a basis for further research and discussions on this topic. For example, future research is needed to compare brands whose recall and recognition performances coincide and ones whose recognition is high but recall is low among consumers. Characteristics and marketing practices of such brands need to be compared in order to understand how a brand can enhance its brand awareness at both recall and recognition levels.

Research Question 2: Do Brands That Have a Higher Awareness Have More Favorable Brand Associations?

Brand image relates to the associations made by a consumer and directly affects how a consumer may differentiate a brand from its competition in the market place (Aaker 1991). Strong, positive attitudes and emotions toward the brand may be the result of brand associations that are seen as favorable by consumers (Aaker, 1991). Built upon the literature that links brand familiarity to favorable brand responses (Baker et al., 1986),

Phase 3 of this study explored a possible relationship between a brand's awareness level and its association favorability, and found no significant support for the idea that brands with higher levels of brand awareness are associated with more favorable brand associations.

Past research has indicated that consumers must first be aware of the brand before they can develop associations about the brand (Washburn & Flank, 2002). However, this study showed that being aware of the brand (i.e., being able to recognize or recall the brand name) is not enough to make a consumer develop favorable brand associations. As the literature suggests, as consumers become more familiar with a brand beyond the mere awareness level through diverse direct or indirect experiences with it, their associations with the brands may become richer and possibly more favorable if the experiences have been positive (Baker et al., 1986). Brand marketing activities are sometimes focused on enhancing a brand's awareness level, rather than building brand associations. The finding from this study implies that brand managers need to pay particular attention to developing positive associations and ensuring that they are linked with their brand node in the consumer's memory. By doing so, they create more favorable associations of their brand in consumers' minds as well as enhancing their brand awareness.

Research Question 3: Do Different Categorization Processes Cause Consumers to Perceive Different Category Structures of Apparel Brands?

Past research has indicated that consumers categorize products or brands based on their common characteristics (Posavac et al., 2001). However, no agreement has been reached as to how this process occurs. Many marketing researchers have often assumed one of the three models of categorization in their research without examining how they may differently influence brand-category structures in their participants' responses.

Therefore, Phase 4 of this study addressed this issue by examining how consumers classified apparel brands using the different models of categorization through an experimental approach. The findings indicated that the model of categorization the respondents were induced to use had a direct effect on the brand-category membership sorted by the respondents. Especially, the classical model of categorization resulted in many brand pairs sorted differently than they were when the prototype or exemplar models were used. The literature has indicated that the classical model is too restrictive and thus may not be the most practical model of categorization for human categorization (Barsalou, 1992). The findings from this study appear to be supportive of this literature. Participants in the classical model condition were not given any brand names as prototypes or exemplars for the brand categories and were instructed to use only given brand category descriptors for their brand sorting task. However, the two descriptors given for each category did not seem to provide as rich information as one or two example brand names for the category would have, despite the fact that they were descriptive of the characteristics most frequently associated with the categories.

Furthermore, according to the manipulation check results, the classical model participants appeared to have developed the concept of prototype or exemplar brands on their own and used them for their sorting tasks. This finding indicates that marketing researchers need to be knowledgeable about different effects varying models of categorization can have on a sorting task result and use caution in choosing an appropriate participant direction when they design marketing research incorporating sorting tasks.

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In addition, the findings from Phase 4 also provide significant implications for marketers related to the use of comparative advertising. Considering that the prototype and exemplar models seemed to be more effective in making consumers link a brand to a brand category, comparative advertising which juxtaposes a target brand with its competitions in an advertisement may sometimes provide richer content for consumers to process the target brand's information in relation to the category of brands it belongs to than trying to portray characteristics of only the target brand in a descriptive manner. Such strategies could especially work well for introducing a new brand to the market. On the other hand, if a marketer intends to promote the uniqueness of their brand, emphasizing only the target brand's unique characteristics without comparing it to those of other competitors may work better since comparative advertising could inadvertently make consumers notice their similarities rather than differences.

Furthermore, the findings from this study suggest that marketers need to pay attention to other brands that may naturally come in the consumer's mind when choosing an advertising message for their target brand. This is because when exposed to descriptors that are very common to a group of brands, consumers appear to have a natural ability to come up with a prototype brand or a few exemplar brands to which the target brand could be compared.

Additional Findings

In addition to answering the three research questions, this study had some additional findings including the development of a brand association scale and the brand category membership structure, of which managerial implications warrant further discussion.

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Brand association scale. The brand association scale developed in Phase 3 allowed the researcher to examine which attributes or benefits the target population identified as being favorable or unfavorable as well as which apparel brands were more or less associated with these attributes or benefits. Therefore, the brand association scale may be used by brand mangers to investigate the favorability of association items that are thought to be descriptive characteristics of their brand. The attributes and benefits that are found to be favorable should be those to which brand managers may want to associate their brands with accordingly, whereas those found to be unfavorable are those which brand managers may want to disassociate their brand. Brand managers could constantly monitor their own and competitor brands' association ratings (i.e., how strongly consumers perceive an association item to be descriptive of the brands) and the associations' favorability ratings (i.e., how favorable or unfavorable it is for a brand to be associated with the attribute or benefit) in order to find the optimal combination of brand associations they need to maintain or develop for their brands.

Brand groupings. Based upon the brand sorting task results in Phase 2 of the research, four categories of apparel brands were revealed as major brand groupings constituting the apparel market in the minds of the college consumers. According to the labels and descriptors most commonly associated with the brands in each category, the four categories were labeled as Sporty/Outdoor, Casual/Moderately Priced, Trendy/Affordable, and Pricey/Upscale. Thus, these labels indicate the themes that are most commonly thought of by college consumers when they think of an apparel market, and brands that are grouped together in each category can be considered as competitors. The combination of the content analysis of the qualitative brand category labels used by

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consumers and the MDS graphical analysis of the consumer's perceptual map of the brand category membership can provide brand marketers with a meaningful insight into the direct and indirect competitions existing in the apparel market as identified by its target consumers and the nature of the competition. Based on findings from such analyses, brand managers could take steps to differentiate their brand from direct competitors.

<div align="center">Limitations and Recommendations for Future Research</div>

This study has several limitations which should be taken into consideration when the findings are examined. First, a convenience sample was used to conduct the study, restricting the generalizability of the results. The sample consisted of only female college consumers from Auburn University. Therefore, the findings may not be applied to other consumer segments. It is recommended that future research examine the brand awareness, brand association, and brand categorization issues addressed in this study with other consumer segments, which may include men, older/younger age segments, and college students from various colleges/universities.

Second, this study yielded a low response rate (8%) on the number of respondents who participated in Phases 3 and 4. A low response rate potentially may have caused some bias in the data since the sample might not have been representative of the population. It can be suggested that a larger sample may yield different results in both the favorability of brand associations and during the categorization tasks.

The third limitation of this study is that it focused on brands within the apparel industry. It is suggested that future studies may examine the issues with brands in different product categories other than just the apparel industry (i.e., food, hotel,

electronics, automobiles), so that the findings can be generalized to other product categories.

Fourth, this study has a sample size limitation in terms of the number of brands included in the Phase 3 survey. Phase 3 used only 15 apparel brands. Due to the limitation of the sample size, only non-parametric statistics (Kendall's tau and Spearsman's rho coefficients) were used to examine the research question to improve the power of the analysis. If more brands could be tested and assessed for their brand awareness as well as brand association favorability, there would have been more of a basis on which to test the relationship between brand favorability and brand awareness.

It may also be suggested that when testing respondents' brand recognition, the researcher could include fictitious brands in the pre-selected brand list. This will provide an insight to those respondents who are dishonest in their responses and it will also help to reduce social desirability in the data by eliminating responses from those who said they recognized the fictitious brands.

As previously suggested, further research is needed to investigate the characteristics and marketing activities of the brands that have different levels of recall and recognition along with the impact these varying levels of recall and recognition have on the strength of the brand in the market as well as the strength of the brand knowledge. The examination of the marketing practices and associations of such brands could provide insight into the strategies that work best to enhance the overall brand awareness performance for a brand.

In addition, more research is desired on the relationship between brand awareness and brand favorability. A prevalent belief among brand managers has been that the brand

that is recalled by the most consumers is the market leader of the product category. However, the present study found no significant relationship between brand awareness and brand association favorability, questioning the validity of the belief equating brand recall performance with market leadership directly. Therefore, research is needed to compare characteristics of brands with high awareness and favorable brand image and those with high awareness but unfavorable brand image in order to understand the dynamics between brand awareness and brand image favorability that affect a brand's market performance. It can also be suggested to future researchers that they investigate the favorability of associations by changing the occasion in which the respondents are asked to rate the favorability of associations. This could be examined through the use of specific instructions. For example, respondents could be instructed to rate associations favorability levels based given the occasion of going on a hiking trip, formal nigh or for everyday use and wear. The change in occasion is predicted to have an influence on the favorability of associations because associations found more favorable in one particular may not be favorable in another.

Finally, findings from the present study indicate the differential effects the three models of categorization have on consumers' categorization outcome. Therefore, when a sorting task is employed in research, it is strongly recommended that researchers need to be aware of such differences and carefully choose a categorization model that fits their purpose best. The findings also suggest that consumers tend to naturally come up with one or more category exemplars to help their categorization tasks even in a situation with no such exemplars provided by the researcher. Therefore, understanding the meaning of

such exemplar brands naturally arising in the consumer's mind would be another topic

that future researchers could examine.

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APPENDICES

APPENDIX A

QUESTIONNAIRES

Section 1: Brand Recall

Directions: For the following questions in this survey, please answer to the best of your knowledge.

Please here below, write down all clothing brands that come to your mind that are marketed to college-aged consumers like you.

Please un-staple the questionnaire packet and continue on the next page.

↓

Section 2: Brand Recognition

Now, we would like to know if you can recognize some selected clothing brands provided here below. Please do not look back to the previous page. For each of the brands listed below, please put a check in the box beside the brand IF YOU HAVE SEEN OR HEARD OF THE BRAND BEFORE.

☐ Abercrombie & Fitch	☐ Burberry	☐ Dolce & Gabbana
☐ A.B.S. by Allen Schwartz	☐ C & C California	☐ Dolce Vita
☐ Adidas	☐ Cache	☐ Donna Karen
☐ AG Jeans	☐ Calvin Klein	☐ Dooney & Burke
☐ American Apparel	☐ Candie's	☐ DVF
☐ American Eagle	☐ Catwalk	☐ Ecko
☐ A.N.A	☐ Chaco	☐ Eileen Fisher
☐ Ann Taylor	☐ Chanel	☐ Elle Moss
☐ Ann Taylor Loft	☐ Charlotte Russe	☐ Elvis
☐ Arden B	☐ Cherish	☐ Entro
☐ Arizona Jeans Co.	☐ Chole	☐ Esprit
☐ As U Wish	☐ Citizens of Humanity	☐ Express
☐ B. Darlin	☐ Coach	☐ Faded Glory
☐ Baby Phat	☐ Coco & Chase	☐ Forever 21
☐ Banana Republic	☐ Coffee Shop	☐ Free People
☐ BCBG	☐ Cole Hann	☐ French Connection
☐ Beaubios	☐ Columbia	☐ Frenchi
☐ Bebe	☐ Converse	☐ French Kiss
☐ Bella Matto	☐ Costa Del Mar	☐ Frenzii
☐ Betsey Johnson	☐ Daniel Cremieux	☐ Gap
☐ Billabong	☐ Delia's	☐ George
☐ Bottega Veneta	☐ DKNY	☐ Glam
☐ BP.	☐ Diesel	☐ Gucci
☐ Brooks Brothers	☐ Dior	☐ Guess

Please continue to the next page.

(Continued) For each of the brands listed below, please put a check in the box beside the brand IF YOU HAVE SEEN OR HEARD OF THE BRAND BEFORE.

☐ H & M	☐ Liz Claiborne	☐ Nicole Miller
☐ Hanes	☐ L.T.B. Jeans	☐ Nike
☐ Harold's	☐ Lola	☐ Nine West
☐ Helmet Lang	☐ Long Champ	☐ No Boundaries
☐ Hollister Co.	☐ Louis Vuitton	☐ Nolita
☐ Hot Kiss	☐ Love Tease	☐ Northface
☐ Isaac Mizahi	☐ Lucky	☐ O Casuals
☐ ING	☐ Lush	☐ Old Navy
☐ James Peaise	☐ Lux	☐ Ocean Pacific
☐ J. Crew	☐ Magazine	☐ Pacific Sunwear
☐ Joe's Jeans	☐ Marc Jacobs	☐ Paige Denim
☐ Jordache	☐ Max Studio	☐ Pepper
☐ Juicy Couture	☐ Metro 7	☐ Polo Ralph Lauren
☐ Karlie	☐ Michael Kors	☐ Prada
☐ Kavu	☐ Michael Stars	☐ Primp
☐ Kay Unger	☐ Milly	☐ Proenza Schoule
☐ Kenneth Cole	☐ Miss Me	☐ Project E Vintage
☐ Kenzie	☐ Miyake	☐ Puma
☐ L.A.M.B	☐ Mossimo	☐ Quiksilver
☐ Lacoste	☐ Mudd	☐ Rachel Pally
☐ Lani	☐ My Michelle	☐ Ralph Lauren
☐ Laundry	☐ Nanette Lepore	☐ Random points
☐ Lee	☐ Nautica	☐ Reebok
☐ Levi's	☐ Necessary Objects	☐ Reef
☐ Life is Good	☐ New Balance	☐ Roca Wear
☐ Limited	☐ New York & Company	☐ Rocket Dog

Please continue to the next page.

(Continued) For each of the brands listed below, please put a check in the box beside the brand IF YOU HAVE SEEN OR HEARD OF THE BRAND BEFORE.

☐ Roxy

☐ Russell Athletic

☐ Scott

☐ Sean John

☐ Seven for all mankind

☐ Sofee

☐ Soulmates

☐ Steve Madden

☐ St. John's Bay:

☐ Sugar Lips

☐ Susie Collection

☐ The Original, Inc.

☐ Tilt

☐ Tocca

☐ Tommy Bahama

☐ Tommy Hilfiger

☐ True Religion

☐ Truly Burch

☐ Tuffle

☐ Tulle

☐ Under Armor

☐ UnionBay

☐ United Colors of Benetton

☐ Vans

☐ Velvet

☐ Velvet Torch

☐ Vera Wang

☐ Versace

☐ Victoria's Secret

☐ Vineyard Vines

☐ Volcom

☐ White House Black Market

☐ William Rast

☐ With love YAG

☐ Wrangler

☐ Xhilaration

☐ XOXO

☐ Y Apparel

☐ Yellow Box

☐ Zara

☐ Zinc

☐ 1921

Please continue to the next page.

Section 3: Demographic Information

Directions: Please complete the following demographic questions. Choose the answer that most accurately describes you.

1. Please indicate your gender. (Check one of the following).

_____ Female

_____ Male

2. How old are you? _____ years old

3. With which race do you best identify? (Check one of the following).

_____ African American

_____ Asian, Pacific-Islander

_____ Caucasian, Non-Hispanic

_____ Hispanic

_____ Native American

_____ Other (Please specify: _____)

4. What is your class status within the university? (Check one of the following).

_____ Freshman

_____ Sophomore

_____ Junior

_____ Senior

_____ Graduate student

5. Which of the following colleges/schools does your major fall in? (Check one of the following).

_____ College of Agriculture

_____ College of Architecture, Design, and Construction

_____ College of Business

_____ College of Education

_____ College of Engineering

_____ School of Forestry and Wildlife Sciences

_____ College of Human Sciences

_____ Honors College

_____ College of Liberal Arts

_____ School of Nursing

_____ School of Pharmacy

_____ School of Sciences and Mathematics

_____ School of Veterinary Medicine

6. Please indicate your major within your school/college, if any. _____.

When you are finished with the questionnaire, please walk questionnaire to the front of the room, detach the information sheet and place both in their assigned box labeled by the researcher. Thank you for completing the questionnaire and participating in this study.

Directions: In the following section, please sort the clothing brands listed below into three categories whatever using criteria you deem appropriate. We have provided a box for you to place clothing brands that you do not know. Each brand should only be classifed into only one category.

Abercrombie and Fitch	DNKY	J Crew	New Balance	Victoria's Secret
American Eagle	Express	Juicy Couture	Northface	Zara
BCBG	Forever 21	Lacoste	Pacific Sunwear	
Charlotte Russe	Free People	Levi's	Polo Ralph Lauren	
Citizens of Humanity	Gap	Limited	Reef	
Columbia	H&M	Old Navy	Seven for all mankind	
Delia's	Hollister Co.	Ralph Lauren	True Religion	

Category 1

[ ]

Category 2

[ ]

Category 3

[ ]

Brands I don't know.

[ ]

STOP! Please do not move to the next page. Please wait for further instructions from the researcher before completing the next section.

Section 2: Category Labeling and Descriptions

Directions: In the previous section, you were asked to sort clothing brands into 3 categories. In this section, please complete the following 3 questions to the best of your ability.

1. Please label each of the three categories you created in the previous section, using words or phases that you think best describe the categories.

Label for Category 1

[   ]

Label for Category 2

[   ]

Label for Category 3

[   ]

2. Next, besides the words/phases used for the labels above, do you think there may be other words/phases that further explain characteristics of the brands in each category? If so, please write them in the boxes below.

Characteristics of Category 1

[   ]

Characteristics of Category 2

[   ]

Characteristics of Category 3

[   ]

Please continue on the next page.

Section 3: Demographic Information
Directions: Please complete the following demographic questions. Choose the answer that most accurately describes you.

1. Please indicate your gender. (Check one of the following).
_____ Female
_____ Male

2. How old are you? _____ years old

3. With which race do you best identify? (Check one of the following).
_____ African American
_____ Asian, Pacific-Islander
_____ Caucasian, Non-Hispanic
_____ Hispanic
_____ Native American
_____ Other (Please specify: _____)

4. What is your class status within the university? (Check one of the following).
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate student

5. Which of the following colleges/schools does your major fall in? (Check one of the following).
_____ College of Agriculture
_____ College of Architecture, Design, and Construction
_____ College of Business
_____ College of Education
_____ College of Engineering
_____ School of Forestry and Wildlife Sciences
_____ College of Human Sciences
_____ Honors College
_____ College of Liberal Arts
_____ School of Nursing
_____ School of Pharmacy
_____ School of Sciences and Mathematics
_____ School of Veterinary Medicine

6. Please indicate your major within your school/college, if any. _____.

When you are finished with the questionnaire, please walk questionnaire to the front of the room, detach the information sheet and place both in their assigned box labeled by the researcher. Thank you for completing the questionnaire and participating in this study.

PHASE 3 QUESTIONNAIRE

Section1: Favorability of Brand Associations

Directions: Provided below is a list of characteristics consumers may associate with different clothing brands. Please indicate **how favorable or unfavorable you believe it is for a brand to possess each of these characteristics using a scale from "Very Unfavorable" to "Very Favorable".**

Remember to only select one answer per statement.

	Very Unfavorable	Unfavorable	Neither Unfavorable nor Favorable	Favorable	Very Favorable
A brand is outdoorsy.	☐	☐	☐	☐	☐
A brand is sporty.	☐	☐	☐	☐	☐
A brand is trendy.	☐	☐	☐	☐	☐
A brand is fashionable.	☐	☐	☐	☐	☐
A brand is popular.	☐	☐	☐	☐	☐
A brand is stylish.	☐	☐	☐	☐	☐
A brand is expensive.	☐	☐	☐	☐	☐
A brand is luxurious.	☐	☐	☐	☐	☐
A brand is upscale.	☐	☐	☐	☐	☐
A brand is affordable.	☐	☐	☐	☐	☐
A brand is cheap.	☐	☐	☐	☐	☐
A brand is inexpensive.	☐	☐	☐	☐	☐
A brand is reasonably priced.	☐	☐	☐	☐	☐
A brand is durable.	☐	☐	☐	☐	☐
A brand is well-made.	☐	☐	☐	☐	☐

Next

A brand makes reliable clothes.	☐	☐	☐	☐	☐
A brand is youthful.	☐	☐	☐	☐	☐
A brand is sophisticated.	☐	☐	☐	☐	☐
A brand is preppie.	☐	☐	☐	☐	☐
A brand is casual.	☐	☐	☐	☐	☐
A brand is comfortable.	☐	☐	☐	☐	☐
A brand is common.	☐	☐	☐	☐	☐
A brand is simple.	☐	☐	☐	☐	☐
A brand is classic.	☐	☐	☐	☐	☐
A brand is traditional.	☐	☐	☐	☐	☐
A brand is available online.	☐	☐	☐	☐	☐
A brand is found in the mall.	☐	☐	☐	☐	☐
A brand is dressy.	☐	☐	☐	☐	☐
A brand is different from other brands.	☐	☐	☐	☐	☐
A brand carries a variety of assortment.	☐	☐	☐	☐	☐
A brand has a specific image.	☐	☐	☐	☐	☐
A brand is unique.	☐	☐	☐	☐	☐
A brand is nice.	☐	☐	☐	☐	☐

Next

Section2: Brand Associations (All surveys were identical, only the brand name changed)

Directions: Now, we would like to know your thoughts about some of the clothing brands currently available in the market. Please indicate **how strongly you agree or disagree that the brands possess each of the characteristics presented below using a scale from "Strongly Disagree" to "Strongly Agree".**

1. BRAND: THE GAP

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Gap is outdoorsy.	☐	☐	☐	☐	☐
Gap is sporty.	☐	☐	☐	☐	☐
Gap is trendy.	☐	☐	☐	☐	☐
Gap is fashionable.	☐	☐	☐	☐	☐
Gap is popular.	☐	☐	☐	☐	☐
Gap is stylish.	☐	☐	☐	☐	☐
Gap is expensive.	☐	☐	☐	☐	☐
Gap is luxurious.	☐	☐	☐	☐	☐
Gap is upscale.	☐	☐	☐	☐	☐
Gap is affordable.	☐	☐	☐	☐	☐
Gap is cheap.	☐	☐	☐	☐	☐
Gap is inexpensive.	☐	☐	☐	☐	☐
Gap is reasonably priced.	☐	☐	☐	☐	☐

Next

Gap is durable.	☐	☐	☐	☐	☐
Gap is well-made.	☐	☐	☐	☐	☐
Gap makes reliable clothes.	☐	☐	☐	☐	☐
Gap is youthful.	☐	☐	☐	☐	☐
Gap is sophisticated.	☐	☐	☐	☐	☐
Gap is preppie.	☐	☐	☐	☐	☐
Gap is casual.	☐	☐	☐	☐	☐
Gap is comfortable.	☐	☐	☐	☐	☐
Gap is common.	☐	☐	☐	☐	☐
Gap is simple.	☐	☐	☐	☐	☐
Gap is classic.	☐	☐	☐	☐	☐
Gap is traditional.	☐	☐	☐	☐	☐
Gap is available online.	☐	☐	☐	☐	☐
Gap is found in the mall.	☐	☐	☐	☐	☐
Gap is dressy.	☐	☐	☐	☐	☐
Gap is different from other brands.	☐	☐	☐	☐	☐
Gap carries a variety of assortment.	☐	☐	☐	☐	☐
Gap has a specific image.	☐	☐	☐	☐	☐
Gap is unique.	☐	☐	☐	☐	☐
Gap is nice.	☐	☐	☐	☐	☐

Next

Section 3: Demographic Information

Directions: Please complete the following demographic questions. Choose the answer that most accurately describes you.

1. Please indicate your gender. (Check one of the following).
_____ Female
_____ Male

2. How old are you? _____ years old

3. With which race do you best identify? (Check one of the following).
_____ African American
_____ Asian, Pacific-Islander
_____ Caucasian, Non-Hispanic
_____ Hispanic
_____ Native American
_____ Other (Please specify: _____)

4. What is your class status within the university? (Check one of the following).
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate student

5. Which of the following colleges/schools does your major fall in? (Check one of the following).
_____ College of Agriculture
_____ College of Architecture, Design, and Construction
_____ College of Business
_____ College of Education
_____ College of Engineering
_____ School of Forestry and Wildlife Sciences
_____ College of Human Sciences
_____ Honors College
_____ College of Liberal Arts
_____ School of Nursing
_____ School of Pharmacy
_____ School of Sciences and Mathematics
_____ School of Veterinary Medicine

6. Please indicate your major within your school/college, if any. _____.

PROTOTYPE CONDITION

Section 1: Brand Sorting

Directions: Suppose there are only three categories of clothing brands in the market. The first category is represented by AMERICAN EAGLE, the second category is represented by BCBG, and the last category is represented by FOREVER 21. Based on the characteristics of these representative brands, please imagine what kinds of brands would fit in each of the categories. Please evaluate each brand listed here below by thinking about which of the three categories it fits the best and choose the best-fitting category for each brand.

Remember to choose only ONE category for each brand.

	Category 1: AMERICAN EAGLE	Category 2: BCBG	Category 3: FOREVER 21
Hollister, Co.	☐	☐	☐
Levi's	☐	☐	☐
Charlotte Russe	☐	☐	☐
Ralph Lauren	☐	☐	☐
Pacific Sunwear	☐	☐	☐
Delia's	☐	☐	☐
Limited	☐	☐	☐
NorthFace	☐	☐	☐
New Balance	☐	☐	☐
DKNY	☐	☐	☐
Reef	☐	☐	☐
Juicy Couture	☐	☐	☐
Express	☐	☐	☐
Zara	☐	☐	☐

	Category 1: **AMERICAN EAGLE**	Category 2: **BCBG**	Category 3: **FOREVER 21**
Citizens of Humanity	☐	☐	☐
H & M	☐	☐	☐
Gap	☐	☐	☐
Seven for all Mankind	☐	☐	☐
Columbia	☐	☐	☐
Abercrombie and Fitch	☐	☐	☐
True Religion	☐	☐	☐
Old Navy	☐	☐	☐
Lacoste	☐	☐	☐

Next

Section 2: Categorization Process

Directions: Please answer the following questions to the best of your ability. Remember to choose only ONE answer for each question.

	Never	Rarely	Sometimes	Very Often	Always
While deciding the category for a given brand, how often did you compare the brand to the example brand that represented each category?	☐	☐	☐	☐	☐
While deciding the category for a given brand, how often did you imagine specific characteristics of the category and compare the brand's characteristics to the category characteristics?	☐	☐	☐	☐	☐
While deciding the category for a given brand, how often did you compare the brand to the other brands that you already classified into the categories?	☐	☐	☐	☐	☐

Next

Section 3: Demographic Information

Directions: Please complete the following demographic questions. Choose the answer that most accurately describes you.

1. Please indicate your gender. (Check one of the following).
_____ Female
_____ Male

2. How old are you? _____ years old

3. With which race do you best identify? (Check one of the following).
_____ African American
_____ Asian, Pacific-Islander
_____ Caucasian, Non-Hispanic
_____ Hispanic
_____ Native American
_____ Other (Please specify: _____)

4. What is your class status within the university? (Check one of the following).
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate student

5. Which of the following colleges/schools does your major fall in? (Check one of the following).
_____ College of Agriculture
_____ College of Architecture, Design, and Construction
_____ College of Business
_____ College of Education
_____ College of Engineering
_____ School of Forestry and Wildlife Sciences
_____ College of Human Sciences
_____ Honors College
_____ College of Liberal Arts
_____ School of Nursing
_____ School of Pharmacy
_____ School of Sciences and Mathematics
_____ School of Veterinary Medicine

6. Please indicate your major within your school/college, if any. _____.

EXEMPLAR CONDITION

Section 1: Brand Sorting

Directions: Suppose there are only three categories of clothing brands in the market. The first category is represented by ABERCROMBIE & FITCH and GAP, the second category is represented by CHARLOTTE RUSSE and H&M, and the last category is represented by JUICY COUTURE and RALPH LAUREN. Based on the characteristics of these representative brands, please imagine what kinds of brands would fit in each of the categories. Please evaluate each brand listed here below by thinking about which of the three categories it fits the best and choose the best-fitting category for each brand.

Remember to choose only ONE category for each brand.

	Category 1: ABERCROMBIE&FITCH, GAP	Category 2: CHARLOTTE RUSSE, H&M	Category 3: JUICY COUTURE,RALPH LAUREN
Levi's	☐	☐	☐
Citizens of Humanity	☐	☐	☐
True Religion	☐	☐	☐
BCBG	☐	☐	☐
Limited	☐	☐	☐
Express	☐	☐	☐
Delia's	☐	☐	☐
NorthFace	☐	☐	☐
Columbia	☐	☐	☐
Old Navy	☐	☐	☐
New Balance	☐	☐	☐
Hollister, Co.	☐	☐	☐
Reef	☐	☐	☐
American Eagle	☐	☐	☐

	Category 1: AMERICAN EAGLE	Category 2: BCBG	Category 3: FOREVER 21
Pacific Sunwear	☐	☐	☐
DKNY	☐	☐	☐
Zara	☐	☐	☐
Seven for all Mankind	☐	☐	☐
Lacoste	☐	☐	☐
Forever 21	☐	☐	☐

Next

Section 2: Categorization Process

Directions: Please answer the following questions to the best of your ability. Remember to choose only ONE answer for each question.

	Never	Rarely	Sometimes	Very Often	Always
While deciding the category for a given brand, how often did you compare the brand to a brand you imagined may have represented each category?	☐	☐	☐	☐	☐
While deciding the category for a given brand, how often did you compare the brand to each category's example brands provided in the instructions?	☐	☐	☐	☐	☐
While deciding the category for a given brand, how often did you imagine specific characteristics of the category and compare the brand's characteristics to the category characteristics?	☐	☐	☐	☐	☐

Next

Section 3: Demographic Information

Directions: Please complete the following demographic questions. Choose the answer that most accurately describes you.

1. Please indicate your gender. (Check one of the following).
_____ Female
_____ Male

2. How old are you? _____ years old

3. With which race do you best identify? (Check one of the following).
_____ African American
_____ Asian, Pacific-Islander
_____ Caucasian, Non-Hispanic
_____ Hispanic
_____ Native American
_____ Other (Please specify: _____)

4. What is your class status within the university? (Check one of the following).
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate student

5. Which of the following colleges/schools does your major fall in? (Check one of the following).
_____ College of Agriculture
_____ College of Architecture, Design, and Construction
_____ College of Business
_____ College of Education
_____ College of Engineering
_____ School of Forestry and Wildlife Sciences
_____ College of Human Sciences
_____ Honors College
_____ College of Liberal Arts
_____ School of Nursing
_____ School of Pharmacy
_____ School of Sciences and Mathematics
_____ School of Veterinary Medicine

6. Please indicate your major within your school/college, if any. _____.

CLASSICAL CONDITION

Section 1: Brand Sorting

Directions: Suppose there are only three categories of clothing brands in the market. The first category is represented by CASUAL/MODERATELY PRICED, the second category is represented by TRENDY/AFFORDABLE, and the last category is represented by PRICEY/UPSCALE. Based on these characteristics, please imagine what kinds of brands would fit in each of the categories. Please evaluate each brand listed here below by thinking about which of the three categories it fits the best and choose the best-fitting category for each brand.

Remember to choose only ONE category for each brand.

	Category 1: CASUAL/MODERATELY PRICED	Category 2: TRENDY/AFFORDABLE	Category 3: PRICEY/UPSCALE
American Eagle	☐	☐	☐
Reef	☐	☐	☐
Seven for all Mankind	☐	☐	☐
NorthFace	☐	☐	☐
Columbia	☐	☐	☐
Hollister, Co.	☐	☐	☐
True Religion	☐	☐	☐
Old Navy	☐	☐	☐
New Balance	☐	☐	☐
Charlotte Russe	☐	☐	☐
Ralph Lauren	☐	☐	☐
Limited	☐	☐	☐
Forever 21	☐	☐	☐
Abercrombie and Fitch	☐	☐	☐

	Category 1: AMERICAN EAGLE	Category 2: BCBG	Category 3: FOREVER 21
H&M	☐	☐	☐
Citizens of Humanity	☐	☐	☐
Juicy Couture	☐	☐	☐
Levi's	☐	☐	☐
Gap	☐	☐	☐
Pacific Sunwear	☐	☐	☐
BCBG	☐	☐	☐
Lacoste	☐	☐	☐
Express	☐	☐	☐
Zara	☐	☐	☐
DKNY	☐	☐	☐
Delia's	☐	☐	☐

Next

Section 2: Categorization Process

Directions: Please answer the following questions to the best of your ability. Remember to choose only ONE answer for each question.

	Never	Rarely	Sometimes	Very Often	Always
While deciding the category for a given brand, how often did you compare the brand to a brand you imagined may have represented each category?	☐	☐	☐	☐	☐
While deciding the category for a given brand, how often did you compare the brand to the other brands that you already classified into the categories?	☐	☐	☐	☐	☐
While deciding the category for a given brand, how often did you imagine and compare the brand's characteristics to each category's characteristics provided in the directions?	☐	☐	☐	☐	☐

Next

Section 3: Demographic Information

Directions: Please complete the following demographic questions. Choose the answer that most accurately describes you.

1. Please indicate your gender. (Check one of the following).
_____ Female
_____ Male

2. How old are you? _____ years old

3. With which race do you best identify? (Check one of the following).
_____ African American
_____ Asian, Pacific-Islander
_____ Caucasian, Non-Hispanic
_____ Hispanic
_____ Native American
_____ Other (Please specify: _____)

4. What is your class status within the university? (Check one of the following).
_____ Freshman
_____ Sophomore
_____ Junior
_____ Senior
_____ Graduate student

5. Which of the following colleges/schools does your major fall in? (Check one of the following).
_____ College of Agriculture
_____ College of Architecture, Design, and Construction
_____ College of Business
_____ College of Education
_____ College of Engineering
_____ School of Forestry and Wildlife Sciences
_____ College of Human Sciences
_____ Honors College
_____ College of Liberal Arts
_____ School of Nursing
_____ School of Pharmacy
_____ School of Sciences and Mathematics
_____ School of Veterinary Medicine

6. Please indicate your major within your school/college, if any. _____.

APPENDIX B

PHASE 1 DESCRIPTIVES/FREQUENCIES

Table B.1. Brand Recall Frequencies

Clothing Brands Recalled	*f*	Clothing Brands Recalled	*f*
Gap	37	Levi	2
American Eagle	30	Mountain Hardware	2
Forever 21	29	Rock & Republic	2
Old Navy	28	Rue 21	2
Express	22	Zara	2
Abercrombie and Fitch	22	Antonio Melani	1
Seven for all mankind	21	Arden B	1
North Face	19	Arnolds	1
Polo	16	Big Star	1
Victoria's Secret	16	Birkenstocks	1
Hollister	15	Calvin Klein	1
Charlotte Russe	14	Costa Del Mar	1
BCBG	13	Ed Hardy	1
Citizens of Humanity	13	Eddie Bauer	1
Limited	13	Elle	1
Banana Republic	12	Esprit	1
Rainbow	12	Frye	1
Aeropostale	10	G & G	1
Bebe	10	Gucci	1
J Crew	10	Guess	1
Lucky Brand	*9*	*Hot Topic*	*1*
H&M	*8*	*Hurley*	*1*
Lacoste	8	Isaac Mizahi	1
Juicy Couture	7	Joe's Jeans	1
Wet Seal	7	Karlie	1
Free People	6	LEI	1
Nike	6	Life is Good	1
Ann Taylor Loft	5	Madgy London	1
Chaco	5	Marmot	1
Ralph Lauren	5	Max and Cleo	1
Clarks	4	Max Azria	1
Columbia	4	Merrells	1
Delia's	4	Michael Stars	1
New Balance	4	Niki	1
Sperry	4	Paper Doll	1
True Religion	4	Quiksliver	1
Anthropologie	3	Rampage	1
Coach	3	Rave	1
Lily Pulitzer	3	Roxy	1
Maurices	3	RVCA	1
New York & Company	3	Silver Jeans	1
Nine West	3	Sofee	1
Pacific Sunwear	3	Steve Madden	1
Patagonia	3	To the Max	1
Reef	3	Under Armor	1
Teva	3	United Colors of Benetton	1
Tommy Hilfiger	3	Unyx	1
Adidas	2	Vans	1
Ann Taylor	2	Versace	1
Billabong	2	Vineyard Vines	1
Buckle	2	Volcom	1
Chanel	2		
DNKY	2		
Jessica Simpson	2		

Total Brands Recalled: 105

Table B.2. Brand Recognition Frequencies

Clothing Brand	f	Clothing Brand	f
Abercrombie & Fitch	57	Costa Del Mar	45
A.B.S. by Allen Schwartz	19	Daniel Cremieux	11
Adidas	57	Delia's	54
AG Jeans	9	DNKY	57
American Apparel	17	Diesel	55
American Eagle	57	Dior	56
A.N.A	1	Dolce & Gabbana	55
Ann Taylor	56	Dolce Vita	13
Ann Taylor Loft	55	Donna Karen	40
Arden B	42	Dooney & Burke	50
Arizona Jeans Co.	52	DVF	1
As U Wish	1	Ecko	47
B. Darlin	3	Eileen Fisher	10
Baby Phat	49	Elle Moss	13
Banana Republic	57	Elvis	10
BCBG	53	Esprit	56
Bebe	57	Express	57
Bella Matto	2	Faded Glory	50
Betsey Johnson	30	Forever 21	56
Billabong	53	Free People	29
Bottega Veneta	8	French Connection	30
BP.	9	Frenchi	8
Brooks Brothers	49	French Kiss	19
Burberry	55	Gap	57
C & C California	11	George	14
Cache	53	Glam	5
Calvin Klein	57	Gucci	57
Candie's	54	Guess	57
Catwalk	5	H&M	43
Chaco	36	Hanes	54
Chanel	56	Harold's	25
Charlotte Russe	53	Helmet Lang	6
Cherish	6	Hollister Co.	57
Chole	17	Hot Kiss	38
Citizens of Humanity	30	Isaac Mizahi	50
Coach	56	ING	20
Coco & Chase	5	James Peaise	2
Coffee Shop	7	J. Crew	56
Cole Hann	25	Joe's Jeans	9
Columbia	47	Jordache	48

(Continued)

Table B.2 (Continued)

Clothing Brand	f	Clothing Brand	f
Juicy Couture	51	Northface	57
Karlie	11	O Casuals	0
Kavu	35	Old Navy	56
Kay Unger	9	Ocean Pacific	33
Kenneth Cole	55	Pacific Sunwear	51
Kenzie	20	Paige Denim	12
L.A.M.B	21	Pepper	8
Lacoste	55	Polo Ralph Lauren	56
Lani	2	Prada	55
Laundry	31	Primp	1
Lee	56	Proenza Schoule	5
Levi's	57	Project E Vintage	5
Life is Good	27	Puma	55
Limited	55	Quiksliver	52
Liz Claiborne	56	Rachel Pally	0
L.T.B. Jeans	9	Ralph Lauren	57
Lola	26	Random Points	1
Long Champ	7	Reebok	56
Louis Vuitton	54	Reef	51
Love Tease	2	Roca Wear	41
Lucky	57	Rocket Dog	41
Lush	12	Roxy	56
Lux	10	Russell Athletic	41
Magazine	7	Scott	8
Marc Jacobs	46	Sean John	43
Max Studio	37	Seven for all mankind	39
Metro 7	15	Soffe	52
Michael Kors	32	Soulmates	10
Michael Stars	14	Steve Madden	53
Milly	8	St. John's Bay	38
Miss Me	13	Sugar Lips	1
Miyake	1	Susie Collection	4
Mossimo	48	The Original, Inc.	5
Mudd	57	Tilt	1
My Michelle	32	Tocca	10
Nanette Lepore	8	Tommy Bahama	38
Nautica	55	Tommy Hilfiger	57
Necessary Objects	16	True Religion	43
New Balance	56	Truly Burch	2
New York & Company	54	Tuffle	2
Nicole Miller	27	Tulle	14
Nike	57	Under Armor	51
Nine West	56	UnionBay	48
No Boundaries	53	United Colors of Benetton	28
Nolita	3	Vans	49

(Continued)

110

Table B.2 (Continued)

Clothing Brand	f
Velvet	7
Velvet Torch	2
Vera Wang	51
Versace	55
Victoria's Secret	57
Vineyard Vines	32
Volcom	33
White House Black Market	41
William Rast	4
With love YAG	2
Wrangler	55
Xhilaration	47
XOXO	57
Y apparel	13
Yellow Box	27
Zara	22
Zinc	10
1921	8

APPENDIX C

PHASE 2 DATA

Table C.1. Brand Pair Data Matrix

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
01	65																													
02	56	65																												
03	4	1	65																											
04	23	27	6	65																										
05	2	2	34	2	65																									
06	17	15	6	5	3	65																								
07	25	31	5	35	0	9	65																							
08	14	12	36	9	19	14	15	65																						
09	33	35	12	33	5	17	24	16	65																					
10	22	29	8	47	2	7	43	12	26	65																				
11	3	3	36	7	30	4	4	26	6	7	65																			
12	47	15	5	27	4	18	22	12	42	22	4	65																		
13	12	13	13	29	6	6	25	8	13	33	9	12	65																	
14	52	57	0	28	1	18	27	12	34	26	2	44	13	65																
15	31	27	22	13	12	26	12	25	31	12	13	31	15	28	65															
16	5	4	46	6	35	5	7	30	8	6	35	2	13	2	17	65														
17	9	4	45	5	33	9	6	32	12	7	30	9	10	4	24	44	65													

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01- Abercrombie and Fitch; 02-American Eagle; 03- BCBG; 04- Charlotte Russe; 05-Citizens of Humanity;06-Columbia; 07-Delia's; 08-DKNY; 09-Express; 10-Forever 21; 11-Free People; 12-Gap; 13-H&M; 14-Hollister; Co.; 15-J Crew; 16-Juciy Couture; 17-Lacoste; 18-Levi's; 19-The Limited; 20-Old Navy; 21-Ralph Lauren; 22-New Balance; 23-North Face; 24-Pacific Sunwear; 25-Polo Ralph Lauren; 26-Reef; 27-Seven for all mankind; 28-True Religion; 29-Victoria's Secret; 30-Zara.

(Continued)

Table C.1 (Continued)

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
18	34	39	11	23	7	18	29	22	25	25	11	36	18	34	28	11	12	65												
19	37	36	13	28	5	20	21	18	49	24	7	43	13	36	38	7	12	30	65											
20	41	48	0	37	1	9	33	8	32	38	1	42	23	44	23	3	2	33	32	65										
21	10	8	44	9	30	13	8	34	17	10	28	10	8	6	34	39	45	14	20	7	65									
22	21	23	5	6	1	43	11	10	16	7	3	26	5	20	18	4	7	24	19	17	9	65								
23	16	16	8	4	7	45	4	9	16	5	7	19	5	18	22	9	11	12	17	11	14	40	65							
24	29	35	3	27	2	19	32	10	20	24	2	27	12	30	13	2	3	24	22	30	6	22	16	65						
25	14	11	31	6	17	18	8	27	17	5	18	13	8	11	37	30	35	17	20	9	41	12	15	8	65					
26	17	20	2	17	2	36	12	7	12	15	2	17	11	20	9	2	5	17	12	14	5	33	35	29	8	65				
27	2	1	40	2	33	6	2	29	6	4	31	4	7	1	15	38	37	8	5	1	33	3	9	3	24	3	65			
28	4	2	44	3	33	4	4	29	6	4	32	3	9	2	19	42	38	10	8	1	35	1	7	1	26	0	39	65		
29	25	23	18	20	10	19	18	20	37	15	16	33	14	24	26	15	18	22	34	23	18	20	22	15	20	12	14	14	65	
30	3	4	7	9	5	6	8	5	9	9	7	6	12	3	7	7	10	3	7	6	7	4	6	2	5	3	5	5	10	65

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.

Brand[a]. 01- Abercrombie and Fitch; 02-American Eagle; 03- BCBG; 04- Charlotte Russe; 05-Citizens of Humanity;06-Columbia; 07-Delia's; 08-DKNY; 09-Express; 10-Forever 21; 11-Free People; 12-Gap; 13-H&M; 14-Hollister; Co.; 15-J Crew; 16-Juciy Couture; 17-Lacoste; 18-Levi's; 19-The Limited; 20-Old Navy; 21-Ralph Lauren; 22-New Balance; 23-North Face; 24-Pacific Sunwear; 25-Polo Ralph Lauren; 26-Reef; 27-Seven for all mankind; 28-True Religion; 29-Victoria's Secret; 30-Zara.

Table C.2. Brand Dimension Scores

Brand	Dimension 1	Dimension 2
Abercrombie and Fitch	-.55	-.07
American Eagle	-.6	.03
BCBG	.74	-.01
Charlotte Russe	-.42	.58
Citizens of Humanity	.88	.02
Columbia	-.18	-.74
Delia's	-.56	.53
DKNY	.4	-.2
Express	-.24	.26
Forever 21	-.36	.64
Free People	.71	.4
Gap	-.46	.01
H&M	-.05	.78
Hollister, Co.	-.65	.
J Crew	.06	-.28
Juicy Couture	.74	.15
Lacoste	.62	.1
Levi's	-.3	-.19
Limited	-.24	.08
Old Navy	-.64	.23
Ralph Lauren	.54	-.1
New Balance	-.34	-.7
Northface	-.1	-.78
Pacific Sunwear	-.78	-.22
Polo Ralph Lauren	.41	-.48
Reef	-.56	-.64
Seven for all Mankind	.82	-.26
True Religion	.74	-.29
Victoria's Secret	.04	.24
Zara	.31	.92

APPENDIX D

EMAIL SOLICITATION

PHASE 3 & 4

Email for Respondent Solicitation

Dear AU Student:

     You are invited to participate in a study that investigates college consumers' apparel brand knowledge and perceived brand category structures. You were selected as a possible participant in this study because of your status as college-aged consumer, which is of interest to this study. Your email address was obtained from Auburn University GroupWise search tool. The data you provide may offer the apparel industry a valuable insight into college consumers' brand knowledge and their perceived brand category structures. Findings from this study may be used to inform the apparel industry of ways to improve their marketing strategies that are aimed at college-aged consumers.

This survey asks only for general information. Your name will never be used in the collection of the data or reporting of the results. All responses will remain confidential. Your participation is voluntary and you may decline to answer any questions you choose.

Completion of the questionnaire should take no more than 15 minutes. If you are interested in participating in this study, please click on the URL link below to begin the SURVEY.

<u>SURVEY LINK HERE</u>

Your help in completing and returning this survey is most appreciated.

If you have any questions, please do not hesitate to e-mail Leah Dew at dewleah@auburn.edu or Wi-Suk Kwon at kwonwis@auburn.edu in the Department of Consumer Affairs at Auburn University.

Thank you very much.

Leah K. Dew

Graduate Student
Department of Consumer Affairs
College of Human Sciences
Auburn University
308 Spidle Hall
Auburn, AL 36849

APPENDIX E

PHASE 3 BRAND ASSOCATION FAVORABILITY

DESCRIPTIVES/FREQUENCIES

Table E.1. Association Favorability Descriptive Statistics

Brand Association Items	*M*	*SD*
[Brand] is outdoorsy.	.41	.99
[Brand] is sporty.	.58	.92
[Brand] is trendy.	1.18	.78
[Brand] is fashionable.	1.43	.67
[Brand] is popular.	1.01	.85
[Brand] is stylish.	1.40	.70
[Brand] is expensive.	-.32	1.20
[Brand] is luxurious.	.49	.96
[Brand] is upscale.	.48	.97
[Brand] is affordable.	1.55	.66
[Brand] is inexpensive.	.93	.99
[Brand] is reasonably priced.	1.43	.68
[Brand] is durable.	1.58	.63
[Brand] is well made.	1.65	.61
[Brand] has reliable clothing.	1.57	.67
[Brand] is youthful.	.81	.87
[Brand] is sophisticated.	1.15	.70
[Brand] is preppie.	.43	1.00
[Brand] is casual.	.91	.67
[Brand] is comfortable.	1.33	.63
[Brand] is simple.	.39	.76
[Brand] is classic.	1.04	.68
[Brand] is traditional.	.50	.79
[Brand] is available online.	.86	.85
[Brand] is found in a mall.	.93	.82
[Brand] is dressy.	.93	.70
[Brand] is different from other brands.	1.13	.75
[Brand] has a verity of assortment.	1.28	.70
[Brand] has a specific image.	.63	.92
[Brand] is unique.	1.23	.77
[Brand] is nice.	1.25	.63

APPENDIX F

PHASE 4 DATA AND CHI-SQUARE STATISTICS

Table F.1. Data Matrix of Brand Pairs, All Three Models Combined

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01																										
02	173																									
03	33	13																								
04	17	32	34																							
05	39	33	130	44																						
06	124	118	50	30	56																					
07	36	56	24	148	39	31																				
08	59	44	119	53	85	69	46																			
09	95	83	75	49	48	71	54	100																		
10	28	48	23	165	37	26	169	37	52																	
11	172	175	16	27	32	116	53	51	94	43																
12	31	37	55	153	64	38	121	64	71	130	35															
13	176	174	19	29	35	114	48	47	90	40	167	35														
14	19	6	163	21	122	52	13	116	67	13	6	33	9													
15	56	39	137	20	108	79	9	97	65	11	40	26	45	146												
16	119	137	16	60	34	100	70	42	59	72	126	47	123	19	38											
17	96	90	73	52	55	82	62	96	142	60	101	67	87	64	63	70										
18	131	138	21	47	37	114	59	45	72	54	132	45	124	20	47	127	75									
19	126	111	64	21	64	158	16	68	79	15	113	30	109	69	105	87	85	112								

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

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(Continued)

Table F.1. (Continued)

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
20	119	139	9	74	26	83	95	32	55	96	129	60	123	9	32	123	69	113	73							
21	119	136	23	75	47	92	88	35	63	89	119	81	125	14	34	118	69	110	78	121						
22	50	31	138	21	98	74	15	112	78	13	38	33	36	150	147	32	77	47	93	25	27					
23	133	131	27	45	47	114	55	46	75	56	132	57	123	21	43	116	81	122	104	102	123	45				
24	36	23	137	39	153	54	29	97	58	35	23	50	27	142	123	30	62	34	64	21	31	117	38			
25	33	25	132	52	153	53	41	88	56	47	27	59	30	134	114	26	66	32	59	24	41	108	41	150		
26	48	40	72	106	71	41	97	72	67	102	34	115	42	53	44	56	65	46	37	53	71	48	68	69	78	

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

Table F.2. Prototype Model Brand Pair Matrix

Brand[a]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01																										
02	72																									
03	2	0																								
04	1	1	7																							
05	14	14	48	11																						
06	57	57	12	3	21																					
07	5	5	1	59	8	6																				
08	14	12	50	15	36	19	14																			
09	22	21	39	14	24	18	12	43																		
10	0	0	0	66	9	4	66	12	14																	
11	65	66	1	7	13	52	12	14	24	7																
12	6	6	23	47	22	3	42	23	27	44	8															
13	70	70	2	4	13	54	7	12	25	2	63	9														
14	2	0	68	11	48	12	6	48	34	6	0	21	2													
15	26	26	46	7	39	33	3	33	26	1	24	13	26	9												
16	55	55	3	15	18	47	14	14	16	16	51	18	52	42	23											
17	26	25	33	15	26	23	19	40	53	16	30	21	22	3	22	15										
18	57	59	5	8	15	53	13	14	18	8	53	9	55	30	28	21	15									
19	58	60	12	3	21	65	4	18	18	2	54	4	56	4	25	49	20	59								

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

(Continued)

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
20	47	49	1	23	11	39	28	14	16	24	47	20	45	11	38	50	23	47	41							
21	50	51	5	17	18	43	22	14	19	18	45	20	52	2	20	38	23	43	43	48						
22	18	16	54	10	39	24	5	43	35	4	16	20	16	5	25	46	19	17	27	14	15					
23	52	53	8	10	19	46	15	10	21	11	48	14	52	49	53	12	35	49	45	38	51	15				
24	13	11	51	9	54	19	9	40	29	10	11	16	14	5	22	46	23	10	20	10	13	42	13			
25	6	5	51	21	52	14	15	39	30	17	7	21	14	50	40	15	28	6	14	5	14	42	11	48		
26	9	8	26	35	21	10	29	24	27	33	6	38	8	52	41	10	17	8	7	16	16	21	14	23	33	

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

Table F.3. Exemplar Model Brand Pair Matrix

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01																										
02	71																									
03	5	4																								
04	0	2	16																							
05	10	10	44	26																						
06	36	38	10	15	14																					
07	15	17	19	53	23	12																				
08	10	12	40	24	31	25	21																			
09	34	35	16	20	11	25	24	24																		
10	15	14	16	55	21	10	60	16	24																	
11	73	71	5	0	10	36	15	10	34	15																
12	0	2	16	73	26	15	53	24	20	55	0															
13	68	68	4	5	11	37	17	12	33	16	68	5														
14	0	0	52	0	36	21	3	39	19	2	0	0	0													
15	8	8	46	5	36	21	4	34	20	7	8	5	8	60												
16	47	46	9	16	12	35	24	12	26	25	47	16	48	10	11											
17	35	36	16	22	13	26	28	27	48	28	35	22	34	16	14	32										
18	47	46	11	10	14	37	16	12	31	20	47	10	44	14	18	42	36									
19	32	33	16	9	21	50	8	19	26	5	32	9	30	32	33	25	26	40								

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

Table F.3 (Continued)

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
20	55	54	4	15	8	30	25	11	29	30	55	15	52	3	10	50	31	40	26							
21	46	44	10	26	13	29	29	10	26	35	46	26	45	1	6	44	27	35	25	46						
22	0	0	52	0	36	21	3	39	19	2	0	0	0	73	60	10	16	14	32	3	1					
23	47	47	9	15	14	38	19	12	25	25	47	15	47	9	10	45	30	40	34	44	44	9				
24	5	4	50	19	58	15	14	33	15	18	5	19	6	47	44	10	16	15	21	6	8	47	12			
25	9	10	43	21	53	15	20	30	13	21	9	21	11	41	38	13	18	17	17	12	12	41	13	56		
26	13	14	23	47	26	13	47	24	19	48	13	47	15	9	9	24	26	19	13	23	34	9	27	22	22	

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

Table F.4 Classical Model Brand Pair Matrix

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
01																										
02	30																									
03	26	9																								
04	16	29	11																							
05	15	9	38	7																						
06	31	23	28	12	21																					
07	16	34	4	36	8	13																				
08	35	20	29	14	18	25	13																			
09	39	27	20	15	13	28	16	33																		
10	13	34	7	44	7	12	43	9	14																	
11	34	38	10	20	9	28	26	27	36	21																
12	25	29	16	33	16	20	26	17	24	31	27															
13	38	36	13	20	11	23	24	23	32	22	36	21														
14	17	6	43	10	38	19	4	29	14	5	6	12	7													
15	22	5	45	8	33	25	2	30	19	3	8	8	11	44												
16	17	36	4	29	4	18	32	16	17	31	28	13	23	6	5											
17	35	29	24	15	16	33	15	29	41	16	36	24	31	18	21	17										
18	27	33	5	29	8	24	30	19	23	26	32	26	25	2	4	36	19									
19	36	18	36	9	22	43	4	31	35	8	27	17	23	26	34	12	36	13								

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

(Continued)

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Table F.4. (Continued)

Brand[a]	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
20	15	36	4	36	7	14	42	7	10	42	27	25	26	4	2	35	15	26	6							
21	21	41	8	32	16	20	37	11	18	36	28	35	28	8	3	28	23	32	10	37						
22	32	15	32	11	23	29	7	30	24	7	22	13	20	28	34	10	26	16	34	8	11					
23	34	31	10	20	14	30	21	24	29	20	37	28	24	7	11	25	28	33	25	20	28	21				
24	18	8	36	11	41	20	6	24	14	7	7	15	7	45	39	5	16	9	23	5	10	28	13			
25	18	10	38	10	48	24	6	19	13	9	11	17	11	41	35	3	20	9	28	7	15	25	17	46		
26	26	18	23	24	24	18	21	24	21	21	15	30	18	21	20	17	22	19	17	14	21	18	27	24	23	

Note: Numbers in the matrix indicate the number of respondents who grouped the two brands in a same category.
Brand[a]. 01-Abercrombie&Fitch, 02-AmericanEagle, 03-BCBG, 04-CharlottleRusse, 05-CitizenofHumanity, 06-Columbia, 07-Delia's, 08-DKNY, 09-Express, 10-Forever21, 11-Gap, 12-H&M, 13-HollisterCo., 14-JuicyCouture, 15-Lacoste, 16-Levi's, 17-Limited, 18-New Balance, 19-Northface, 20-OldNavy, 21-PacificSunwear, 22-RalphLauren, 23-Reef, 24-SevenforallMankind, 25-TrueReligion, 26-Zara

Table F.5. Chi-Square Descriptive Statistics

Brand Pair Name	Chi-Square	df	p
Abercrombie & Fitch/American Eagle*	65.52	2	.000
Abercrombie & Fitch/BCBG*	49.9	2	.000
Abercrombie & Fitch Charlotte Russe*	39.68	2	.000
Abercrombie & Fitch/Citizens of Humanity	3.11	2	.212
Abercrombie & Fitch /Columbia*	13.49	2	.001
Abercrombie & Fitch /Delia's*	10.44	2	.005
Abercrombie & Fitch /DKNY*	39.8	2	.000
Abercrombie & Fitch /Express*	18.4	2	.000
Abercrombie & Fitch /Forever21*	18.41	2	.000
Abercrombie & Fitch /Gap*	42.3	2	.000
Abercrombie & Fitch /H&M*	51.22	2	.000
Abercrombie & Fitch /Hollister Co.*	27.61	2	.000
Abercrombie & Fitch /Juicy Couture*	38.96	2	.000
Abercrombie & Fitch /Lacoste*	15.41	2	.000
Abercrombie & Fitch /Levi's	28.92	2	.000
Abercrombie & Fitch /Limited	8.36	2	.015
Abercrombie & Fitch /New Balance*	13.1	2	.001
Abercrombie & Fitch /Northface*	18.53	2	.000
Abercrombie & Fitch /Old Navy*	34.26	2	.000
Abercrombie & Fitch /Pacific Sunwear*	14.69	2	.001
Abercrombie & Fitch /Ralph Lauren*	53.35	2	.000
Abercrombie & Fitch /Reef	1.95	2	.377
Abercrombie & Fitch /Seven for all mankind*	13.06	2	.001
Abercrombie & Fitch/ True Religion*	13.85	2	.001
Abercrombie & Fitch /Zara*	21.34	2	.000
American Eagle/BCBG*	13.32	2	.001
American Eagle/Charlotte Russe*	72.67	2	.000
American Eagle/Citizens of Humanity	0.762	2	.683
American Eagle/Columbia*	19.2	2	.000
American Eagle/Delia's*	44.98	2	.000
American Eagle/DKNY	8.13	2	.017
American Eagle/Express	7.07	2	.029
American Eagle/Forever21*	63.44	2	.000
American Eagle/Gap*	27.42	2	.000
American Eagle/H&M*	56.54	2	.000
American Eagle/Hollister Co.*	32.85	2	.000
American Eagle/Juicy Couture*	15.67	2	.000
American Eagle/Lacoste*	19.63	2	.000
American Eagle/Juicy Couture*	15.67	2	.000

(Continued)

Table F.5. (Continued)

Brand Pair Name	Chi-Square	df	p
American Eagle/Lacoste*	19.63	2	.000
American Eagle/Levi's	2.95	2	.229
American Eagle/Limited	4.82	2	.090
American Eagle/New Balance	8.66	2	.013
American Eagle/Northface*	36.45	2	.000
American Eagle/Old Navy	2.23	2	.328
American Eagle/Pacific Sunwear	1.92	2	.384
American Eagle/Ralph Lauren*	20.65	2	.000
American Eagle/Reef	4.67	2	.097
American Eagle/Seven for all mankind	3.79	2	.150
American Eagle/True Religion	3.58	2	.167
American Eagle/Zara	8.48	2	.014
BCBG/Charlotte Russe	4.45	2	.108
BCBG/Citizens of Humanity	0.488	2	.784
BCBG/Columbia*	25.15	2	.000
BCBG/Delia's*	23.46	2	.000
BCBG/DKNY	4.61	2	.100
BCBG/Express*	15.17	2	.001
BCBG/Forever21*	17.78	2	.000
BCBG/Gap*	11.55	2	.003
BCBG/H&M	1.6	2	.450
BCBG/Hollister Co.*	16.96	2	.000
BCBG/Juicy Couture*	11.06	2	.004
BCBG/Lacoste	4.23	2	.120
BCBG/Levi's	3.59	2	.166
BCBG/Limited	9.42	2	.009
BCBG/New Balance	2.99	2	.224
BCBG/Northface*	36.41	2	.000
BCBG/Old Navy	2.7	2	.259
BCBG/Pacific Sunwear	2.32	2	.314
BCBG/Ralph Lauren	5.47	2	.065
BCBG/Reef	1.25	2	.536
BCBG/Seven for all mankind	0.83	2	.660
BCBG/True Religion	1.65	2	.438
BCBG/Zara	0.942	2	.624
Charlotte Russe/Citizens of Humanity*	13.62	2	.001
Charlotte Russe/Columbia	10.38	2	.006
Charlotte Russe/Delia's	5.06	2	.080

Table F.5. (Continued)

Brand Pair Name	Chi-Square	df	p
Charlotte Russe/DKNY	3.17	2	.205
Charlotte Russe/Express	1.62	2	.444
Charlotte Russe/Forever21	5.59	2	.061
Charlotte Russe/Gap*	35	2	.000
Charlotte Russe/H&M*	39.28	2	.000
Charlotte Russe/Hollister Co.*	27.61	2	.000
Charlotte Russe/Juicy Couture*	13.14	2	.001
Charlotte Russe/Lacoste	1.78	2	.410
Charlotte Russe/Levi's*	16.84	2	.000
Charlotte Russe/Limited	1.9	2	.387
Charlotte Russe/New Balance*	33.72	2	.000
Charlotte Russe/Northface	5.18	2	.075
Charlotte Russe/Old Navy*	25.42	2	.000
Charlotte Russe/Pacific Sunwear*	14.58	2	.001
Charlotte Russe/Ralph Lauren*	13.99	2	.001
Charlotte Russe/Reef	8.48	2	.014
Charlotte Russe/Seven for all mankind	4.59	2	.101
Charlotte Russe/True Religion	2.82	2	.244
Charlotte Russe/Zara	7.75	2	.021
Citizens of Humanity/Columbia	4.79	2	.091
Citizens of Humanity/Delia's*	11.65	2	.003
Citizens of Humanity/DKNY	4.2	2	.122
Citizens of Humanity/Express	6.22	2	.045
Citizens of Humanity/Forever21	8.81	2	.012
Citizens of Humanity/Gap	0.418	2	.811
Citizens of Humanity/H&M	1.09	2	.580
Citizens of Humanity/Hollister Co.	0.367	2	.832
Citizens of Humanity/Juicy Couture	4.9	2	.086
Citizens of Humanity/Lacoste	0.745	2	.689
Citizens of Humanity/Levi's	7.14	2	.028
Citizens of Humanity/Limited	5.64	2	.059
Citizens of Humanity/New Balance	1.02	2	.600
Citizens of Humanity/Northface	1.7	2	.428
Citizens of Humanity/Old Navy	0.534	2	.766
Citizens of Humanity/Pacific Sunwear	1.88	2	.391
Citizens of Humanity/Ralph Lauren	2.32	2	.313
Citizens of Humanity/Reef	0.945	2	.623
Citizens of Humanity/Seven for all mankind	1.48	2	.477

Table F.5. (Continued)

Brand Pair Name	Chi-Square	df	p
Citizens of Humanity/True Religion	2.93	2	.232
Citizens of Humanity/Zara	2.48	2	.290
Columbia/Delia's	5.34	2	.069
Columbia/DKNY	4.44	2	.109
Columbia/Express	8.25	2	.016
Columbia/Forever21	6.97	2	.031
Columbia/Gap	8.84	2	.012
Columbia/H&M*	20.24	2	.000
Columbia/Hollister Co.*	15.74	2	.000
Columbia/Juicy Couture	5.39	2	.067
Columbia/Lacoste	4.6	2	.100
Columbia/Levi's*	13.76	2	.001
Columbia/Limited	9.94	2	.007
Columbia/New Balance*	13.16	2	.001
Columbia/Northface	8.18	2	.017
Columbia/Old Navy*	11.03	2	.004
Columbia/Pacific Sunwear	8.55	2	.014
Columbia/Ralph Lauren	6.99	2	.030
Columbia/Reef	2.02	2	.365
Columbia/Seven for all mankind	3.26	2	.196
Columbia/True Religion	10.22	2	.006
Columbia/Zara	6.58	2	.037
Delia's/DKNY	3.33	2	.190
Delia's/Express	3.75	2	.153
Delia's/Forever21	5.09	2	.078
Delia's/Gap*	15.55	2	.000
Delia's/H&M*	10.56	2	.005
Delia's/Hollister Co.*	18.48	2	.000
Delia's/Juicy Couture*	1.03	2	.597
Delia's/Lacoste	0.349	2	.840
Delia's/Levi's*	19.09	2	.000
Delia's/Limited	3.54	2	.171
Delia's/New Balance*	21.11	2	.000
Delia's/Northface	1.67	2	.434
Delia's/Old Navy*	22.3	2	.000
Delia's/Pacific Sunwear*	15.87	2	.000
Delia's/Ralph Lauren	3.07	2	.215
Delia's/Reef	4.24	2	.120

Table F.5. (Continued)

Brand Pair Name	Chi-Square	df	p
Delia's/Seven for all mankind	2.45	2	.293
Delia's/True Religion	5.88	2	.053
Delia's/Zara*	13.36	2	.001
DKNY/Express*	11.5	2	.003
DKNYForever21	1.16	2	.560
DKNY/Gap*	20.87	2	.000
DKNY/H&M	0.192	2	.908
DKNY/Hollister Co.*	12.81	2	.002
DKNY/Juicy Couture	3.39	2	.184
DKNY/Lacoste	0.688	2	.709
DKNY/Levi's	2.64	2	.267
DKNY/Limited	4.63	2	.099
DKNY/New Balance	5.65	2	.059
DKNY/Northface*	15.05	2	.001
DKNY/Old Navy	1.18	2	.553
DKNY/Pacific Sunwear	0.912	2	.634
DKNY/Ralph Lauren	0.602	2	.740
DKNY/Reef*	16.85	2	.000
DKNY/Seven for all mankind	2.3	2	.317
DKNY/True Religion	5.43	2	.066
DKNY/Zara	1.39	2	.498
Express/Forever21	3.85	2	.146
Express/Gap*	11.53	2	.003
Express/H&M	2.97	2	.227
Express/Hollister Co.	6.12	2	.047
Express/Juicy Couture	9.31	2	.010
Express/Lacoste	1.06	2	.589
Express/Levi's	3.52	2	.172
Express/Limited	0.671	2	.715
Express/New Balance	6.04	2	.049
Express/Northface*	18.22	2	.000
Express/Old Navy	9.92	2	.007
Express/Pacific Sunwear	1.71	2	.425
Express/Ralph Lauren	7.43	2	.024
Express/Reef	6.82	2	.033
Express/Seven for all mankind	6.98	2	.030

(Continued)

Table F.5. (Continued)

Brand Pair Name	Chi-Square	df	p
Express/True Religion*	10.54	2	.005
Express/Zara	2.28	2	.319
Forever21/Gap*	14.05	2	.001
Forever21/H&M	7.46	2	.024
Forever21/Hollister Co.*	26.11	2	.000
Forever21/Juicy Couture	2.49	2	.288
Forever21/Lacoste	4.92	2	.086
Forever21/Levi's*	14.49	2	.001
Forever21/Limited	5.08	2	.079
Forever21/New Balance	19.46	2	.000
Forever21/Northface	5.93	2	.051
Forever21/Old Navy*	22.37	2	.000
Forever21/Pacific Sunwear*	19.8	2	.000
Forever21/Ralph Lauren	4.91	2	.086
Forever21/Reef	9.04	2	.011
Forever21/Seven for all mankind	4.65	2	.098
Forever21/True Religion	3.21	2	.201
Forever21/Zara	12.52	2	.002
Gap/H&M*	52.68	2	.000
Gap/Hollister Co.*	21.71	2	.000
Gap/Juicy Couture*	15.67	2	.000
Gap/Lacoste*	12.47	2	.002
Gap/Levi's	6.26	2	.044
Gap/Limited	6.11	2	.047
Gap/New Balance	3.84	2	.147
Gap/Northface*	15.01	2	.001
Gap/Old Navy*	11.5	2	.003
Gap/Pacific Sunwear	3.25	2	.197
Gap/Ralph Lauren*	31.53	2	.000
Gap/Reef	0.016	2	.992
Gap/Seven for all mankind	2.43	2	.297
Gap/True Religion	2.64	2	.267
Gap/Zara	7.53	2	.023
H&M/Hollister Co.*	21.65	2	.000
H&M/Juicy Couture*	23.18	2	.000
H&M/Lacoste	3.9	2	.142
H&M/Levi's	0.132	2	.936
H&M/Limited	2.83	2	.243
H&M/New Balance*	24.76	2	.000

(Continued)

Table F.5. (Continued)

Brand Pair Name	Chi-Square	df	p
H&M/Northface*	15.36	2	.000
H&M/Old Navy	8.22	2	.016
H&M/Pacific Sunwear*	15.82	2	.000
H&M/Ralph Lauren*	22.26	2	.000
H&M/Reef*	16.93	2	.000
H&M/Seven for all mankind	0.482	2	.786
H&M/True Religion	0.014	2	.993
H&M/Zara	3.16	2	.206
Hollister Co./Juicy Couture*	12	2	.002
Hollister Co./Lacoste*	12.96	2	.002
Hollister Co./Levi's*	14.26	2	.001
Hollister Co./Limited	8.28	2	.016
Hollister Co./New Balance*	13.26	2	.001
Hollister Co./Northface*	23.58	2	.000
Hollister Co./Old Navy	9.42	2	.009
Hollister Co./Pacific Sunwear	6.63	2	.036
Hollister Co./Ralph Lauren*	27.87	2	.000
Hollister Co./Reef*	12.22	2	.002
Hollister Co./Seven for all mankind	3.77	2	.152
Hollister Co./True Religion	1.75	2	.417
Hollister Co./Zara	7.11	2	.029
Juicy Couture/Lacoste*	12.45	2	.002
Juicy Couture/Levi's	4.18	2	.124
Juicy Couture/Limited	5.94	2	.051
Juicy Couture/New Balance*	11.57	2	.003
Juicy Couture/Northface*	18.33	2	.000
Juicy Couture/Old Navy	1.38	2	.501
Juicy Couture/Pacific Sunwear	7.84	2	.020
Juicy Couture/Ralph Laruen*	46.9	2	.000
Juicy Couture/Reef	1.53	2	.464
Juicy Couture/Seven for all mankind	2.8	2	.246
Juicy Couture/True Religion	4.24	2	.120
Juicy Couture/Zara*	11.26	2	.004
Lacoste/Levi's*	10.5	2	.005
Lacoste/Limited	7.15	2	.028
Lacoste/New Balance*	13.5	2	.001
Lacoste/Northface	2.33	2	.312
Lacoste/Old Navy*	14.04	2	.001
Lacoste/Pacific Sunwear*	24.98	2	.000

Table F.5 (Continued)

Brand Pair Name	Chi-Square	df	p
Limited/Ralph Lauren*	11.91	2	.003
Limited/Reef	4.14	2	.126
Limited/Seven for all mankind	6.31	2	.043
Limited/True Religion	3.12	2	.210
Limited/Zara	4.16	2	.125
New Balance/Northface*	43.1	2	.000
New Balance/Old Navy	4.59	2	.101
New Balance/Pacific Sunwear	1.6	2	.449
New Balance/Ralph Lauren	1.29	2	.524
New Balance/Reef	2.22	2	.330
New Balance/Seven for all mankind	1.38	2	.501
New Balance/True Religion	6.43	2	.040
New Balance/Zara	9.84	2	.007
Northface/Old Navy*	28.79	2	.000
Northface/Pacific Sunwear*	27.73	2	.000
Northface/Ralph Lauren	6.53	2	.038
Northface/Reef	4.86	2	.088
Northface/Seven for all mankind	2.73	2	.255
Northface/True Religion*	15.34	2	.000
Northface/Zara	8.67	2	.013
Old Navy/Pacific Sunwear	2.83	2	.243
Old Navy/Ralph Lauren	7.72	2	.021
Old Navy/Reef	8.72	2	.013
Old Navy/Seven for all mankind	1.35	2	.509
Old Navy/True Religion	3.34	2	.188
Old Navy/Zara	2	2	.368
Pacific Sunwear/Ralph Lauren*	13.85	2	.001
Pacific Sunwear/Reef	5.78	2	.056
Pacific Sunwear/Seven for all mankind	1.53	2	.465
Pacific Sunwear/True Religion	1.88	2	.391
Pacific Sunwear/Zara	10.2	2	.006
Ralph Lauren/Reef*	10.95	2	.004
Ralph Lauren/Seven for all mankind	3.43	2	.180
Ralph Lauren/True Religion	2.98	2	.225
Ralph Lauren/Zara	7.9	2	.019
Seven for all mankind/True Religion	4.18	2	.124
Seven for all mankind/Zara	2.17	2	.337
True Religion/Zara	3.35	2	.188