

**Effects of Body Shape on Body Cathexis and Dress Shape Preferences of Female Consumers: A Balancing Perspective**

by

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## Abstract

Apparel design has been proposed as a tool for altering the perceptual body and an individual's level of body cathexis. The purpose of this study was to uncover dress shape preferences of female consumers as a function of body shape and body cathexis. An online survey with 203 college-aged students revealed support for all hypotheses: a) actual body shape had a main effect on body cathexis, with X and V body shapes demonstrating higher body cathexis than A and H body shapes; b) ideal body shape moderated this effect; c) A and H body shapes demonstrated greater comfort and purchase intent for Rectangular and Wedge dress silhouettes than X and V; d) X and V body shapes demonstrated greater comfort and purchase intent for A-line, Bell and Hour-glass dress silhouettes than A and H; e) body cathexis mediated the effect of body shape on comfort with dress shapes.

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## CHAPTER I. INTRODUCTION

Complete satisfaction with an apparel purchase depends on the fulfillment of several aspects of consumers' design preferences. These design preferences may be a direct result of an individual's current figure or body shape, their ideal body shape, and their feelings towards their body (Chattaraman & Rudd, 2006; Feather, Ford, & Herr, 1996; Kwon & Parham, 1994; Yoo, 2003). Kwon and Parham (1994) found that consumers desire to camouflage their bodies as a direct result of negative feelings toward their body. Yoo (2003) found that consumers with body shapes similar to the diamond-shape preferred a loosely fitting jacket silhouette and suggested that these individuals prefer to cover areas of their bodies that do not reflect the ideal proportions. Feather et al.(1996) discovered that female athletes preferred more coverage on their lower bodies, an area in which they indicated dissatisfaction. Body dissatisfaction, and particularly consumers' feelings towards their bodies, has been linked to low self-esteem (Striegel-Moore & Franco, 2002). Clothing has been proposed as a tool for altering the perceptual body, therefore altering the level of body satisfaction that an individual experiences (Fiore & Kimle, 1997).

There was a gap in the literature about the interaction between body shape and garment shape preferences of female consumers. Existing research has mostly addressed the influence of body cathexis on design preferences. The few studies in which body shape is addressed operationalize design preferences with respect to the garment silhouette's proximity to the body, and not the shape that the garment lends to the wearer, which is the focus of the current study. The perceptual body shape may have an important effect on an individual's body cathexis. Body cathexis, a direct subset of body image,

may potentially be influenced by a number of factors including gender and cultural background (Kaiser, 1997). Jourard and Secord's (1955) research suggested that there exists a standard for an ideal body against which women compare themselves. A negative body cathexis may originate due to divergence between the actual body of an individual and this ideal body (Higgins, 1987). Body cathexis also has a significant influence on consumers' comfort level with clothing and hence their garment selection (Labat & DeLong, 1990). Another study suggested that the more negative an individual's feelings toward her body, the more likely she is to cover the body (Kwon & Parham, 1994).

Several body shape scales exist, creating many options when attempting to uncover a female's shape or desired shape. The actual and ideal body shape may be categorized in different ways via the use of landmarks (Bookstein, 1991; Dryden & Mardia, 1998). Landmarks are designated points along the two-dimensional (2-D) silhouette that serve as common areas linking the different body shapes (Bookstein, 1991). Through the use of a process called shape recognition, grouping of shapes by using existing classification segments, in combination with the aforementioned landmarks, body shape classification may be achieved (Costa & Cesar, 2001).

Several studies (August, 1981; Connell, Ulrich, Brannon, Alexander & Presley, 2006; Douty, 1968; Simmons, Istook & Devarajan, 2002) have utilized landmarks to discover the variability of the human body, specifically the female body. These studies have suggested that differences at landmarks such as the waist, hip, bust, and shoulders create different body shapes. For example, author Bonnie August (1981) suggests greater

deviation at a women's shoulder landmark than at the hip landmark creates a shape comparable to the alphabetical letter V, thus giving this shape the indicator V.

It has been proposed that clothing may provide individuals with a better method of altering the perceptual body in efforts to obtain the ideal body (August, 1981). Through the use of several garment silhouettes and the incorporation of various combinations of design elements, women may achieve an alternate perceptual body shape (Fiore & Kimle, 1997). However, the question that arises in this context is: whether or not consumers' dress shape preferences reflect perceptual balancing techniques for different body types? No previous studies have examined consumer preferences in relation to the perceptual balancing approach to achieve the ideal body shape.

#### Statement of Problem

Several past studies have shown varying body shapes exist amongst the vast female population (August, 1981; Connell et al., 2006; Douty, 1968; Simmons, Istook, & Devarajan, 2002). The relationship between these varying body shapes and clothing tend to shape consumers' overall buying decisions (Eckman, Damhorst, Kadolph, 1991). As a result, consumers may use various styles to intentionally hide body areas perceived as undesirable (Yoo, 2003). The apparel industry has recently taken notice of consumers', particularly women's, use of clothing as a mechanism to obtain a desired shape. Several retailers such as MyShape.com and Nordstrom.com have taken initiatives to provide their customers with guidelines for obtaining ideal bodies through online suggestions of different clothing styles and silhouettes for different body shapes.

With increasing competition and the full emergence of a consumer-driven market, catering to the needs of consumers has become an essential step in creating and

maintaining profit for firms in the apparel industry. A review of online shopping and fashion consulting sources revealed that online retailers are beginning to incorporate several interactive categorization methods to help consumers easily find the garment they are looking for (see Table 1). Four well-known retailers were found to have some form of dress categorization that was either dress-oriented or body-oriented. The dress-oriented category denotes that the items are categorized by characteristics of the actual dress. The body-oriented category signifies that the items are categorized by the garments ability to accentuate the particular body type to which it is assigned. Nordstrom's online dress shop provides consumers with a total of five body shape categories: straight, pear, apple, hourglass, and full bust. The visual stimuli used included fashion illustrations, which were partnered with short descriptions of the shape. MyShape.com provides online users with seven body shape categories: M, Y, S, H, A, P, and E. The visual stimuli included with these shapes were in the form of abstract line representations paired with shape overview and a list of recommendations.

Though these scales represent good initiatives in the right direction, the industry needs more concrete information about consumers' garment shape preferences in order to more accurately provide consumers with a relevant offering based on body shape. The problem presented by this industry initiative is the lack of empirical research documenting the relationship between body shape and female consumers' garment shape preferences. This lack of research-based evidence leaves designers within the industry without a scientific basis for designing garments befitting consumers with different figure types. By providing this actionable information, this study informs both future research and industry practice by creating a greater foundation of knowledge when designing for

particular body shapes, consequently providing apparel researchers, merchandisers and designers a means of giving consumers a more desirable product.

Table 1  
*Comparison of Industry Developed Body and Dress Shape Figures*

Name	Advantages	Disadvantages	Nature of Stimuli	Shapes	Dress Silhouettes
Nordstrom	Women that identify with the chosen body shape are given a selection of dresses to accentuate/de-accentuate different areas to make the body appear to be more balanced between the waist and hips (hourglass).	Consumers are expected to identify with a certain shape rather than including a tool similar to MyShape's measurement entry tool.	Fashion illustrations with short descriptions of shape included	Straight, Pear, Apple, Hourglass, Full Bust	*Body-oriented; not dress oriented
My Shape	Shape classification is assigned via measurement entry rather than the consumer choosing. Deep classification			Shape M, Shape Y, Shape S, Shape H, Shape A, Shape P, and Shape E	*Body-oriented; not dress oriented
Neiman Marcus	None perceived.			*Dress oriented; not body-oriented	Sleeved or Sleeveless
Bergdorf Goodman	None perceived.	Lack of variety in dress silhouettes	None	*Dress oriented; body-oriented	Sleeved, Strapless, or Sleeveless

## Purpose

The purpose of this research was to uncover the relationship between body shape and dress shape preference in a sample of college students by utilizing a conceptual framework combining Branson and Sweeney's (1991) comfort model and Sproule's (1979) fashion adoption process. The combination of these two models was utilized as a mechanism to acquire the respondent's level of comfort with and purchase intent for dress shapes. Within this study, body shape and garment shape preferences were assessed among young consumers, not overlooking potential influences of ideal body shape and body cathexis. Young consumers are said to be more fashion conscious, and therefore provided this study with more relevant and useful information, in contrast to other age groups (Chowdhary, 1989; Forsythe, Butler, & Kim, 1991).

In order to address the research problem discussed previously, this research aimed to empirically examine the following hypotheses:

*Hypothesis 1:* (Self-Identified) Actual body shape will have a main effect on body cathexis. Specifically, X and V body shapes will demonstrate higher body cathexis than A and H body shapes.

*Hypothesis 2:* (Self-Identified) Ideal body shape will moderate the effect of actual body shape on body cathexis.

*Hypothesis 3:* Body shape will interact with dress shape to affect the overall purchase intent for dresses among female consumers.

*a:* Female consumers with body shapes categorized as A and H will demonstrate greater purchase intent for rectangular and wedge silhouettes in dresses than female consumers with X and V.

*b:* Female consumers with body shapes categorized as X and V will demonstrate a greater purchase intent for A-line, bell, and hourglass silhouettes in dresses than female consumers with A and H body shapes.

*Hypothesis 4:* Body shape will interact with dress shape to affect the level of comfort with dresses for female consumers.

*a:* Female consumers with body shapes categorized as A and H will demonstrate a higher level of comfort with rectangular and wedge silhouettes in dresses than female consumers with X and V.

*b:* Female consumers with body shapes categorized as X and V will demonstrate a higher level of comfort with A-line, bell, and hourglass silhouettes in dresses than female consumers with A and H body shapes.

*Hypothesis 5:* Body cathexis will mediate the relationship between actual body shape and level of comfort with dress shape.

#### Significance of the Study

Since body image is an important issue for female consumers, this research will prove extremely useful to both academic scholarship on this topic and industry practice. By addressing the current gap in research regarding consumers' dress shape preferences, this study will enable designers within industry to provide consumers with more accurate tools for obtaining the desired perceptual body via clothing. The results of this research will build knowledge of design preferences of female consumers as related to their current body shapes. Existing research has been able to link individual's body cathexis and body size with design preferences, but few researchers have delved into body shape's influence on garment shape preferences. The study will also extend Branson and

Sweeney's (1991) and Sproles' (1979) models, since it specifies new applications and relationships between variables arising from these models.

The results of this study will provide designers with the information needed to more accurately provide the consumers with the garments they desire. This study will build upon the existing knowledge regarding consumer design preferences, providing dress designers with more information with respect to the collegiate age target market. As a result of this, the apparel industry may benefit by reducing the percentage of product returns, as the consumer is more likely to be satisfied with her purchase.

#### Definition of Terms

Actual Body Shape: the current shape and/or silhouette of the body.

Body Cathexis: one's degree of satisfaction with his/her body (Kaiser, 1997).

Body Mass Index (BMI): "a number calculated from a person's weight and height.

Formula:  $\text{weight (lb)} / [\text{height (in)}]^2 \times 703$ " (Centers for Disease Control and Prevention, 2011).

Clothing Comfort: "a state of satisfaction indicating physiological, social-psychological and physical balance among a person, his/her clothing, and his/her environment" (Branson & Sweeney, 1991, pg. 99).

Dress Shape: the outermost shape and silhouette of a dress and the perceptual shape it lends the wearer.

Ideal Body Shape: the desired shape and/or silhouette of the body.

Landmarks: designated points along the body shape that serve as commonalities between varying body shapes.

Ought body shape: the body shape an individual feels he/she ought to possess.

WTH Ratio: waist-to-hip ratio; the variation between the waist measurement and the hip measurement.

## CHAPTER II. BACKGROUND LITERATURE AND CONCEPTUAL FRAMEWORK

This chapter will first provide an overview of the constructs addressed within this study. It will also explain how the constructs are operationalized into the conceptual framework based on Branson and Sweeney's (1991) clothing comfort model and Sproles' (1979) fashion adoption process. Hypothesis development constitutes the final section of this chapter, where the relationships between the key constructs are examined, and ensuing hypotheses are proposed.

### Body Cathexis

Body cathexis is a concept that is closely related to body image, but more specifically addresses the degree of satisfaction one has with his/her body (Kaiser, 1997). This construct is described as multidimensional and complex (Kaiser, 1997). As satisfaction with one's body can be influenced by many different factors, such as cultural ideals and gender, body cathexis can vary from body area to body area (Kaiser, 1997). Jourard and Secord (1955) found body part size to be a predictor of body cathexis in men, as males desired to possess larger body parts. They proposed that females evaluate their present body by comparing it with the concept of an ideal body that is shared by most women. The results of Jourard and Secord's (1955) study regarding female body cathexis suggested that a positive body cathexis is associated with possessing a relatively small body frame, with exception to the bust area. Within their study, Jourard and Secord (1955) also explored whether or not a shared ideal for body shape or size exists. The researchers uncovered a small variability in ideal sizes, indicating the existence of a standard ideal body frame (Jourard & Secord, 1955).

Hwang (1996) defined body cathexis as a factor that aids in the formation of clothing behavior and attitude towards clothing. Many consumers perceive an innate problem with their body when their clothing fails to accentuate the body in a desired way. However, quite often, these consumers neglect to realize that clothing needs to be designed for the body and not vice versa. These consumers also frequently rely on outside influences when shaping their ideal body. Bodies of female fashion models are considered to represent the perfect figure, and women that fall short of those standards are left with negative thoughts about their own bodies (Labat & DeLong, 1990). In addition, individuals often have a perceived divergence in their ideal physical self and the actual self (Kaiser, 1997). This divergence between the actual body shape/size and ideal body shape/size means that the consumer has a desire to have a shape other than the one she possesses. Notions of an ideal physical self are formed from elements of society and standards of beauty to which the person has been exposed, and these often dictate the way they view themselves. The socially accepted standard of an ideal body has been found to create body image disturbances and contribute to negative body cathexis among women (Cusumano & Thompson, 1997).

Actual weight, although important, may not play a major role in women's feeling about their bodies (Kwon & Parham, 1994). The results of Kwon and Parham's (1994) study regarding body perception and clothing practices indicated that women's perception of their weight rather than numerical weight had a heavier bearing on their clothing practices. Their perception of personal physicality dictated whether garments were to be used as camouflaging tools or to individualize oneself (Kwon & Parham, 1994). A study conducted by Singh (1994) to determine the role of waist to hip (WTH)

ratio in perceived female attractiveness concluded both male and female respondents ranked attractiveness on the basis of WTH ratio measurements as opposed to apparent body weight. This eludes to the fact that actual proportion is a higher standard of attractiveness than weight. Therefore, the results of this study suggest that a woman may workout to achieve an ideal weight but may still be dissatisfied with her body. However, the results of Singh's study have been contradicted by studies conducted by Tovee, Reinhardt, Emery, and Cornelissen(1998), Tovee, Hancock, Mahmoodi, Singleton, and Cernalissen(2002)and Tovee, Mason, and Cohen-Tovee (2003), who argue that Body Mass Index (BMI) serves as a better predictor of body attractiveness than WTH. Another study conducted by Harrison (2003) regarding mass media ideals and ideal body proportions, concluded that women's desire for a smaller figure, specifically smaller waist and hips, increased on exposure to television images of the ideal body. These results elude to the suggestion that mass media's ideal body proportions are the source of lower body cathexis amongst women; while also supporting both Singh's and Tovee's suggestions that BMI and WTH ratio are integral to women's satisfaction with their body. Jourard and Secord (1955) found that none of the women in their study's sample possessed the measurements they (women) viewed to be ideal. Most women hold themselves to a standard that may be unobtainable when body shape and size are taken into account.

### Body Shape

Previous research has concluded that body shape can have a significant influence on one's body cathexis and design preferences (Chattaraman & Rudd, 2006; Feather et al., 1996; Yoo, 2003). Most research concerning body shape has focused on relating

body shape to psychological aspects of the consumer, as opposed to the physiological aspects (Connell et al, 2006) or perceptual aspects. As a consequence, little is known about the role of body shape in influencing general consumer practices guided by perceptual analysis. Although a psychological aspect, namely body cathexis, is addressed in the current study, the focus of the relationships tested was on the perceptual aspects of the interaction between the body shape and apparel shape.

Studies conducted in the 1990s analyzed body shapes by appointing common points called landmarks along the 2-D silhouettes of the body (Bookstein, 1991; Dryden & Mardia, 1998). Landmarks aid shape analysis by presenting examiners with a basis to compare body shapes by viewing them in an atomistic fashion. Atomistic refers to a method dividing the body shape into portions or landmarks, which then can be compared. Although the actual body is a three-dimensional (3-D) structure, 2-D silhouettes often convey adequate information and allow the original object to be recognized (Costa & Cesar, 2001). With a common base for shape inspection and analysis, a theory may be applied. Mossiman's (1988) theory suggests that two individuals of dissimilar sizes may be categorized as possessing the same body shape. This shape-based categorization tries to identify variations amongst multiple groups within the same overall division (Costa & Cesar, 2001).

The challenge within female body shape classification is the vast range of variability among female body shapes. This creates difficulty when attempting to synthesize numerous body shapes into a few categories (Connell et al., 2006). Costa and Cesar (2001) identified two aspects of attempting to classify shapes, the first distinguishes whether input shape belongs to some specific predetermined group. This

process is called shape recognition. For example, a shape may resemble a triangle, therefore it would be classified as a triangle. The second aspect is distinguishing the shape category in a group of shapes that belong to a cluster of previously unclassified shapes. This process is called clustering. For example, a group of shapes may not resemble any preexisting figure, but within the collection, commonalities may exist amongst shapes. Through these commonalities, shapes may be divided and grouped on the basis of similarity in shape. Both methods involve shape comparison, which is typically done by matching particular locations (landmarks) on the shape. The following sections review various female body shape classification systems.

### *The Body Shape Assessment Scale*

The Body Shape Assessment Scale (BSAS©) developed by Connellet al. (2006) contains nine variants assessing frontal body shapes. This scale came about as a result of the assessment of body scans derived from a sample of 42 women between the ages of 20 and 55, in combination with the review and revision of existing body scales. The results of this analysis yielded four prominent frontal body shapes (see Figure 1) discussed below. The BSAS© uses digitally illustrated female body silhouettes to represent each of the four body shapes based on the following landmark locations to differentiate whole body shapes: shoulder point to shoulder point, the frontal waistline, and the widest point between the waist and crotch line, as seen from the front (Connell et al., 2006).

Hourglass: Shoulder and hip width are balanced with clearly defined to very small waist in relation to shoulder and hip width.

Pear: Hip and thigh width visually greater than shoulder width.

Rectangle: Shoulder and hip width are balanced with little to no waist definition.

Inverted Triangle: Shoulder width is visually greater than fullest width at hip.

The BSAS© encompasses a 5-step scale for each of the four included body shapes, which makes the BSAS© an ordinal scale. Each step is given a numerical representation, one being the first, smallest and thinnest version of the particular body shape being referenced. For example, variation three of the hourglass body shape would be the third thinnest hourglass body shape, respectively labeled H-3.

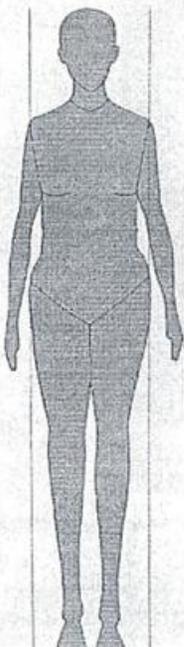
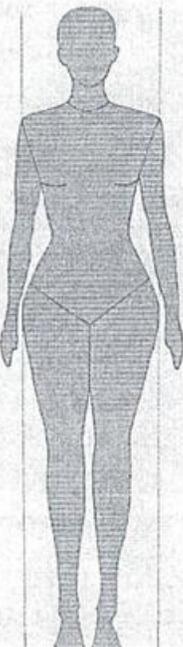
LABEL	R (RECTANGULAR)	H (HOURLASS)	P (PEAR)	I (INVERTED TRIANGLE)
DESCRIPTION	SHOULDER AND HIP WIDTH ARE BALANCED WITH LITTLE TO NO WAIST DEFINITION	SHOULDER AND HIP WIDTH ARE BALANCED WITH CLEARLY DEFINED TO VERY SMALL WAIST IN RELATION TO SHOULDER AND HIP WIDTH.	HIP AND/OR THIGH WIDTH IS VISUALLY GREATER THAN SHOULDER WIDTH.	SHOULDER WIDTH IS VISUALLY GREATER THAN FULLEST WIDTH AT HIP OR THIGHS
STIMULI				

Figure 1. Body Shape Assessment Scale (BSAS©) (Connell et al., 2006).

*Bonnie August's Body I.D. Scale*

Bonnie August's Body I.D. (1981) scale contains eleven proportion designators categorized into 3 different groups; front view width, side view width, and front view

length. These proportions are represented by alphabetic letters, which visually align with the selected landmarks amongst the varying shapes of the body forms. August's decision to utilize the alphabet in contrast to shape names was influenced by the notion that certain shape classifications may seem derogatory to women. These alphabetic representations are A, X, H, V, W, Y, T, b, d, i, and r (see Figure 2). The design of this scale allows for frontal categories to be combined with side view categories. The present study will only concentrate on the front view width category of this scale (A, X, H, and V), as the other elements of the scale are not applicable. The Body I.D. process provided by August (1981) advises women to outline their bodies on a larger paper, then utilize the "squint trick." In this method, a viewer must squint to derive the dominant areas of the body silhouette. Once the dominant areas are located, the observer may then assess the dominant areas by comparing them to the Body I.D. stimuli (see Figure 2).

August's (1981) scale is a nominal scale, as it does not contain a ranking. The stimulus used in Bonnie August's Body I.D. scale (1981) contains body silhouettes with the appropriate alphabetic representation aligning with the landmark points of the body shape. The landmarks used in the formation of this scale include shoulder points, natural waistline, and widest hip point (Fiore & Kimle, 1997). This scale also uses the shape recognition classification as a basis for grouping unidentified shapes.

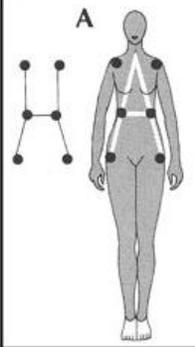
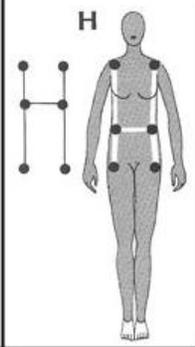
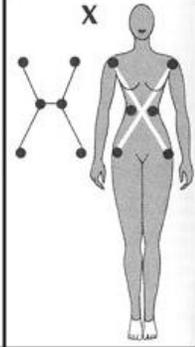
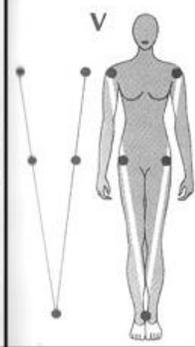
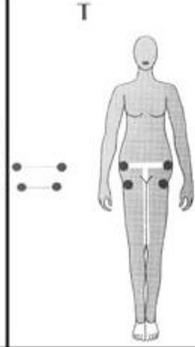
LABEL	A	H	X	V	T
DESCRIPTION	WIDER HIPS WITH NARROW WAIST AND SHOULDERS	SHOULDERS, WAIST, AND HIPS SIMILAR IN WIDTH	SHOULDERS AND HIPS ARE THE SAME WIDTH WITH NARROW WAIST	WIDER SHOULDERS WITH NARROW HIPS, WAIST MAY BE SAME WIDTH AS HIPS	NARROWER ACROSS THE TOP OF THE THIGHS THAN THE HIPS
STIMULI					

Figure 2. Bonnie August Body I.D. Scale (August, 1981).

*Douty's Body Build Scale*

Douty's Body Build scale (Douty, 1968) proposes 5 alternatives in body build. This scale is an ordinal scale as the body builds are ranked from smallest to largest, with variations occurring in the waist, hips, thighs, arms, legs, bust, midriff, and abdomen (see Figure 3). These points serve as the landmarks within this body build scale. The stimulus used in Douty's Body Build Scale includes frontal illustrations of female silhouettes, which gradually increase in size (width, not length) as the numerical representation increases on the scale.

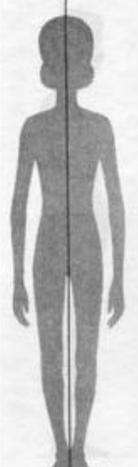
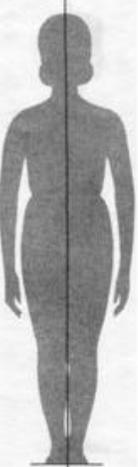
LABEL	1	2	3	4	5
STIMULI					

Figure 3. Douty body build scale (Douty, 1968).

*Female Figure Identification Technique (FFIT) for Apparel*

The Female Figure Identification Technique (FFIT) scale (Simmons, 2002) was derived via a method similar to that of the BSAS, the difference being the FFIT method utilized circumferential measures as opposed to silhouette. Prior to utilizing a Textile and Clothing Technology Corporation [TC]<sup>2</sup> NX-12 3-D body scanner, researchers reviewed the existing information regarding female body shape to find commonalities amongst the data. Next, common body shapes were acquired from the existing information and synthesized into five shapes: Triangle, which is defined by hips that exceed the shoulder in width; inverted triangle, which is defined by shoulders that exceed the hips in width; rectangle, which is described by a lack of deviation between shoulder, waist, and hip widths; hourglass, which is characterized by equally wide shoulder and hip widths that created a defined waistline; and oval, which is defined by a narrow top and bottom torso, with a wide or full abdomen (Simmons, 2002)

Once these five shapes were derived, they were assessed using the body scan data of a sample of 222 women above the age of 18, in combination with mathematical criteria that identified each body shape. The landmarks used in this assessment were bust, waist, stomach, and abdomen circumferences. The results were that more body shape categories were needed as many subjects failed to be categorized. To alleviate this problem, four new categories were developed; these groups were labeled spoon, diamond, bottom hourglass, and top hourglass, as they resembled the shapes of the object after which they were named. Diverging away from the previously mentioned scales, some body shapes within the FFIT scale utilize different combinations of landmarks (Simmons, 2002) (see Figure 4):

*Hourglass:* appear to be proportional in bust and hip with a clearly defined waist.

This shape uses the bust, waist and hip as landmarks.

*Bottom Hourglass:* a function of the above mentioned hourglass shape, this shape has a wider hip than bust, BUT maintains a clearly defined waist as the bust-to-waist and hip-to-waist ratios are still sufficient enough to create the waist. This shape also uses the bust, waist and hip as landmarks.

*Top Hourglass:* also a function of the hourglass shape, this shape has a larger bust circumference in comparison to the hip, BUT maintains a clearly defined waist. This shape also uses the bust, waist and hip as landmarks.

*Spoon:* the waist tapers from the bust creating a defined waistline, but the high hip and hip spread outward create a greater hip-to-waist ratio. This shape uses the bust, waist, hips, and high hips as landmarks.

*Rectangle:* the bust and hip measurements are nearly equal with low bust-to-waist and waist-to-hip ratios failing to create a clearly defined waistline. This shape uses the bust, waist, and hips as landmarks.

*Diamond:* this shape has large abdomen, waist and stomach values, which may exceed or equal the value of the bust and hip measurements. This shape uses the bust, waist, hips, and abdomen as landmarks.

*Oval:* the averaged measures from the stomach, waist, and abdomen are lower than the bust, but higher or equal to the hip. This shape uses the bust, waist, hip, stomach, and abdomen as landmarks.

*Triangle:* hips that are wider than the bust and a small hip-to-waist ratio characterize this shape; bust-to-waist ratio is not considered, therefore this shape differs from the bottom hourglass. This shape uses bust, waist, and hips as landmarks.

*Inverted Triangle:* larger bust when compared to the hips, with a small bust-to-waist ratio; hip-to-waist ratio is not considered, therefore this shape differs from the top hourglass. This shape uses the bust, waist, and hips as landmarks.

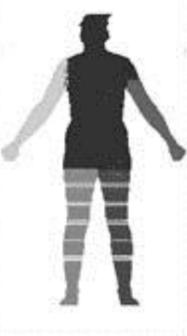
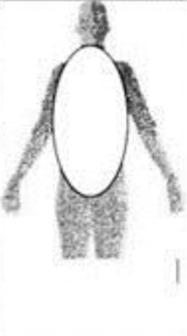
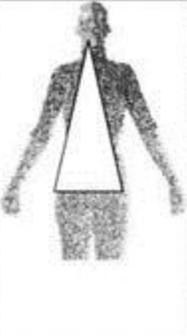
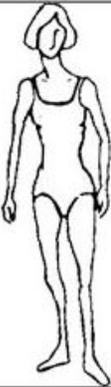
LABEL	HOURGLASS	BOTTOM HOURGLASS	TOP HOURGLASS	SPOON	RECTANGLE
DESCRIPTION	APPEARS TO BE PROPORTIONAL IN BUST AND HIP WITH A CLEARLY DEFINED WAIST	WIDER HIP THAN BUST, BUT MAINTAINS A CLEARLY DEFINED WAIST AS THE BUST-TO-WAIST AND HIP-TO-WAIST RATIOS ARE STILL SUFFICIENT ENOUGH TO CREATE THE WAIST	LARGER BUST CIRCUMFERENCE IN COMPARISON TO THE HIP, BUT MAINTAINS A CLEARLY DEFINED WAIST	WAIST TAPERS FROM THE BUST CREATING A DEFINED WAISTLINE, BUT THE HIGH HIP AND HIP CAST OUTWARD TO THE SIDE	BUST AND HIP WIDTHS ARE NEARLY EQUAL
STIMULI					
LABEL	DIAMOND	OVAL	TRIANGLE	INVERTED TRIANGLE	
DESCRIPTION	LARGE ABDOMEN, WAIST AND STOMACH VALUES, WHICH MAY EXCEED OR EQUAL THE VALUE OF THE BUST AND HIP WIDTHS	AVERAGED MEASURES FROM THE STOMACH, WAIST, AND ABDOMEN ARE LOWER THAN THE BUST	HIPS THAT ARE WIDER THAN THE BUST	LARGER BUST WHEN COMPARED TO THE HIPS, WAIST NOT CONSIDERED.	
STIMULI					

Figure 4. Female Figure Identification Technique (FFIT) Scale (Simmons, 2002).

*Stunkard's Obesity and Thinness Scale*

The Obesity and Thinness scale was developed by Stunkard, Sorenson, and Schulsinger (1983). The scale's visual stimuli encompasses males and females with nine body type variations each, ranging from thin to obese, left to right respectively (see Figure 5). This scale is an ordinal scale, as the stimuli are ranked by thinness/obesity and this order must be maintained for the scale to remain effective. Shape recognition is used as methodology for the utilization of this scale.

LABEL	1	2	3	4	5
STIMULI					
LABEL	6	7	8	9	
STIMULI					

*Figure 5.* Stunkard's Obesity and Thinness Scale (Stunkard et al, 1983, pg. 119)

## Interaction between Dress and Body Shape

Studies to determine the importance of garment aesthetics to the consumer's fashion adoption process have determined that aesthetic qualities transcend utilitarian characteristics during the consumer's point of purchase (Eckman et al., 1990). These aesthetic attributes include the color, pattern, fabrication and styling (Eckman et al., 1990; Fiore & Damhorst, 1992; Yoo, 2003). Styling includes garment shape, which is a key variable in this study. Because styling is an element included in the aesthetic qualities of a garment and garment shape is a consequence of styling, garment shape is an integral factor in the clothing selection processes of consumers. Yoo's (2003) study regarding the design preferences of working females concluded that design components within garments have an impact on the female consumer's evaluation of the garment. Although Yoo's study and the current study share a common variable in garment shape or silhouette, Yoo's operational definition for silhouette differed from the definition used in this study. Yoo's study defined silhouette in terms of how closely the garment (jacket) fits in proximity to the wearer's body, thus how much it exposed the actual shape of the wearer. This study defines silhouette as the shape that the garment (dress) actually has and the shape it lends to the wearer.

It has been proposed that a visually pleasing garment must efficiently follow the contours of the body, stressing the good points of the figure and masking the imperfections (Green, 1978; McJimsey, 1963; Morton, 1964; Ryan & Phillips, 1947). Researchers have proposed that garments provide consumers with a good method of altering the perceived body to obtain an ideal proportion (Fiore and Kimle, 1997; Kwon and Parham, 1990). The results of a study conducted to determine the effects of garment

shape manipulations on perceived body shape attractiveness suggested that clothing items revealing the socially accepted contours of the female figure are considerably more attractive than those that conceal the body (Green, 1978). Items such as close fitting tops, bottoms that define the waistline and flared hem skirts received positive feedback (Green, 1978).

In Western cultures, the perfect form is typically one with balanced hips and shoulders with a narrow waist, described as designator “X” by Bonnie August and hourglass by BSAS© (Connell et al., 2006). Fiore and Kimle (1997) analyzed body shape and proportion utilizing Bonnie August’s Body I.D. designators. These researchers posited that proportion and size can be influenced by shifting emphasis via silhouette manipulation. The silhouette may reach past the natural curves of the body, altering the perceived size of the area.

### *Balancing Techniques*

August (1981) recommends that women attempting to alter the perception of their bodies should choose dress silhouettes that play up the desirable landmark points in their bodies and hide the less desirable areas. Dress silhouettes, such as the following (see Figure 6), may serve as a tool to alter the perceptions of body shape:

A-line: A garment that falls straight from shoulder in diagonals extending to hem. There is no indentation at the waist.

Bell: Indented waist with full, gathered, or pleated skirt adding fullness in hip and falling straight to the floor.

Tubular (Rectangular): Narrow, cylindrical form with little to no indentation for waist or curve of bust or hip; falls from the shoulder to the floor.

Wedge: Greater width in upper body than lower with diagonal and vertical line, essentially creating a V-shape; opposite of the A-line.

Hourglass: Balanced or equal shoulder and hip with obvious waist indentation.

Using these dress shapes in combination with the body shape designators, Fiore and Kimle (1997) suggested balancing techniques to serve as means to obtain the ideal silhouette. Women with the designator A body shape may emphasize their upper torso and/or increase shoulder width to effectively create a balanced silhouette. These women may utilize the wedge and rectangular dress shapes to de-emphasize the hips and lower torso, while simultaneously shifting focus to the shoulders and upper torso. The wedge dress shape highlights the shoulders and upper torso, consequently overtaking emphasis on the hips and lower torso. The rectangular dress shape stresses no particular area of the body, therefore detracting from the prominent hip and lower torso of the A body shape.

Those with the designator V body shape may emphasize the lower body or increase hip width, balancing the shoulder with the lower torso. This focus diversion may be achieved by applying the A-line, hourglass, or bell dress shapes. These dress shapes will visually alter the proportions of the body, transferring focus from the dominant shoulders and upper body to the hips and lower body. The A-line dress shape places emphasis on the hips and lower body and enhances visual weight at the hemline, thus balancing the wider shoulder. The hourglass silhouette places recognition on the waist and hip, diverting attention to the lower torso, thus creating the illusion of a balanced body shape. The bell dress shape places attention on the waist and creates fullness at lower body, making the shoulders of the V body shape less apparent and creating a more balanced look.

Females categorized as designator X body shape may simply accentuate their current waistline, as they already have a balanced frame. These women may gravitate towards silhouettes that emphasize their current waistline; these dress shapes include the hourglass and bell shapes. These two dress shapes accentuate the narrow waistline and emphasize its divergence from the upper and lower torso.

Women with type H body shape may draw attention away from the waist while adding emphasis to the upper and lower torso. As a consequence, these women may avoid wearing dresses with the hourglass and bell shapes that emphasize the waist. Similar to those females with body designator A, women with body shapes categorized as designator H may utilize the rectangular and wedge to achieve perceptually balanced proportions that de-emphasize the waist. The rectangular dress shape places no emphasis on the H waistline. The wedge dress shape highlights the shoulder and upper lower of the body while synchronously distracting from the waist. The aforementioned suggestions are methods to achieve a perceptually balanced appearance through a combined strategy of accentuating desirable attributes and de-emphasizing less desirable attributes of the body (Fiore & Kimle, 1997).

The above discussion reveals similarities in the balancing techniques applied to the A& H body shapes and X & V body shapes. The A and H body shapes were grouped together due to similar suggestions for the use of the rectangular and wedge dress shapes to de-emphasize the waist consequently obtain balanced proportions. The X and V body shapes were clustered due to recommendations leading to the use the A-line, bell, and hourglass dress shapes to create balanced emphasis. Also, as a result of the congruencies in dress shape mechanisms, the A-line, hourglass, and bell dress shapes were grouped

together and the rectangular and wedge dress shapes grouped together; thus creating two groups of body shapes and two groups of dress shapes.



Figure 6. Dress Silhouettes (Fiore & Kimle, 1997, pg 144).

## Conceptual Framework

### *Sproles' Fashion Adoption Process*

The consumer decision process is extremely important when discussing product preference, regardless of the product's genre. Sproles (1979) proposed a fashion adoption process model that incorporated the following three variables: pre-existing conditions, directing influences, and the channel of decision.

*Pre-existing conditions.* Sproles (1979) describes preexisting conditions as variables that exist prior to the start of the fashion adoption process. Three elements are described within this portion of the model, *style of dress*, *current level of acceptance of style*, and *identity of the potential adopter*. *Style of dress* addresses the actual styling, characteristics, and design of the fashion item. *Current level of acceptance of style* describes how well the item is accepted into the adopter's social environment. *Identity of the potential adopter* denotes the characteristics of the actual adopter at hand.

*Directing influences.* The Consumer's Fashion Adoption Process (Sproles, 1979) describes directing influences as conditions and situations that have influence over a consumer's behavior. The three variables that compose this construct include environment, motivations, and communication. Environment is described as the lifestyles, social change, and fashion marketing to which the potential adopter is exposed. Sproles described motivations as the reasons that support a consumer's tastes as far as clothing and clothing adoption are concerned. Communication is explained as the outside factor that directly influences the opinions and processes of the consumer; environment is an indirect influence on the consumers and their processes.

*The channel of decision.* All the elements from the preexisting conditions and directing influences are incorporated into the channel of decision portion of the model.

This channel of decision incorporates several steps:

1. Awareness – exposure to the existing fashion and/or style of dress.
2. Interest – attraction to a particular fashion based on the identity of the potential adaptor.
3. Evaluation – analysis of the possible advantages and disadvantages of adoptions the style of dress.
4. Information search on alternatives (if evaluations are favorable) – the pros and cons of adopting alternate fashion are assessed to find out whether there is a more beneficial style than the one evaluated in the previous step.
5. Rejection or adoption - the evaluated fashion is either adopted or rejected.

The variables found within preexisting conditions and directing influences aid the adopter with grounds to make decisions. This channel of decision makes the ultimate verdict on the selection of a fashion (Sproles, 1979).

#### *Clothing Comfort Model*

Consumer's comfort with clothing items is another factor that heavily influences product preference (Labat & DeLong, 1990). Branson and Sweeney (1991) conceptualize comfort as "a state of satisfaction indicating physiological, social-psychological and physical balance among a person, his/her clothing, and his/her environment" (p. 99). These researchers proposed a model for clothing comfort which includes a triad of person, clothing, and environment attributes, which are split into two dimensions: physical and social psychological dimension triad. Each attribute category

contains characteristics that apply to its subheading (See Figures 7 and 8). The physical dimension variables are those that are measurable, such as core and skin temperatures; most of these variables can be manipulated to observe changes. The physical triad variable may be described by sex, age, weight, height, physical condition, activity and exposed surface area. The social-psychological dimension variables are less apparent; the person attributes found within this category may be depicted as background characteristics that influence the entirety of the individual and their decisions, such as body image and cathexis. Environment attributes are described as intangible incentives that influence the perceptual/physiological response and eventually comfort judgments, such as the cultural norms to which an individual is accustomed.

The third component of Branson and Sweeney's (1991) comfort model is the physiological/perceptual response of the consumer to a given set of attributes from the physical and social-psychological dimension triads. Physiological responses are typically measured and include temperature, sweat rate, heart rate, and oxygen consumption. Perceptual responses encompass the wearer's perceived temperature, thermal comfort, and tactile sensations. Consumer's attitude towards dress shape is included in the perceptual response component of the comfort model, as attitude is the inclination of the psyche to react to circumstances at hand (Jung, 1923).

Once the physiological and perceptual responses of the body and mind are addressed, a processing period labeled as the filtering process occurs. This process includes several factors such as past experiences, and expectations, which influence the consumers' resultant comfort judgment for the garment. Past experiences may be relevant to any one or combination of the attributes found within the physical and social

psychological triad dimensions (Branson & Sweeney, 1991). The filtering process results in the final component of the Clothing Comfort Model, comfort or overall judgment.

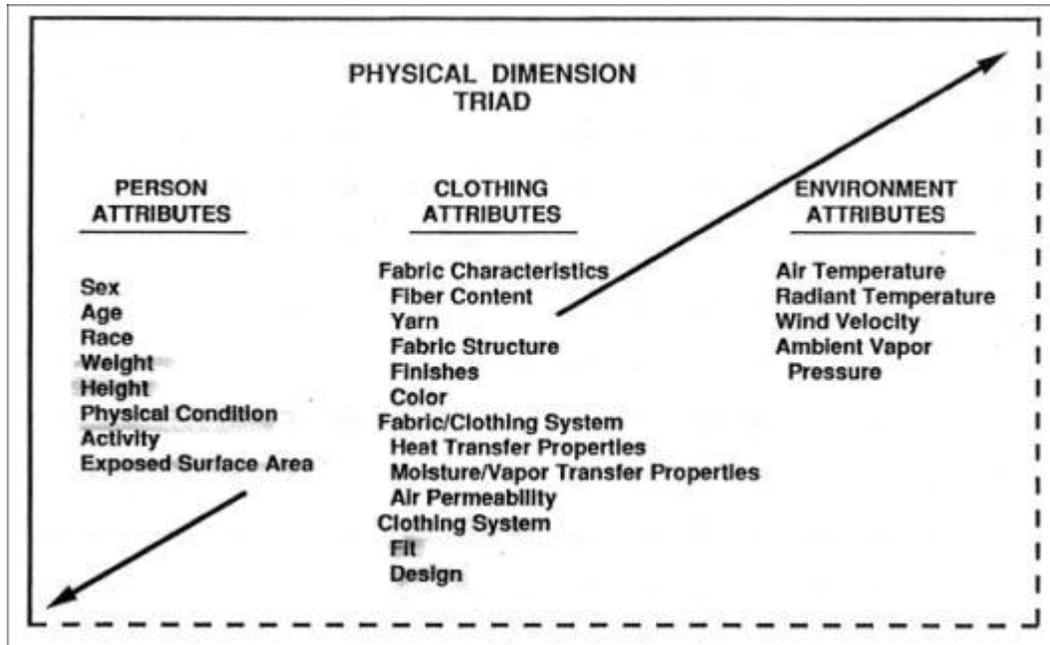


Figure 7. Physical dimension triad of the clothing comfort model (Branson & Sweeney, 1991, p. 102).

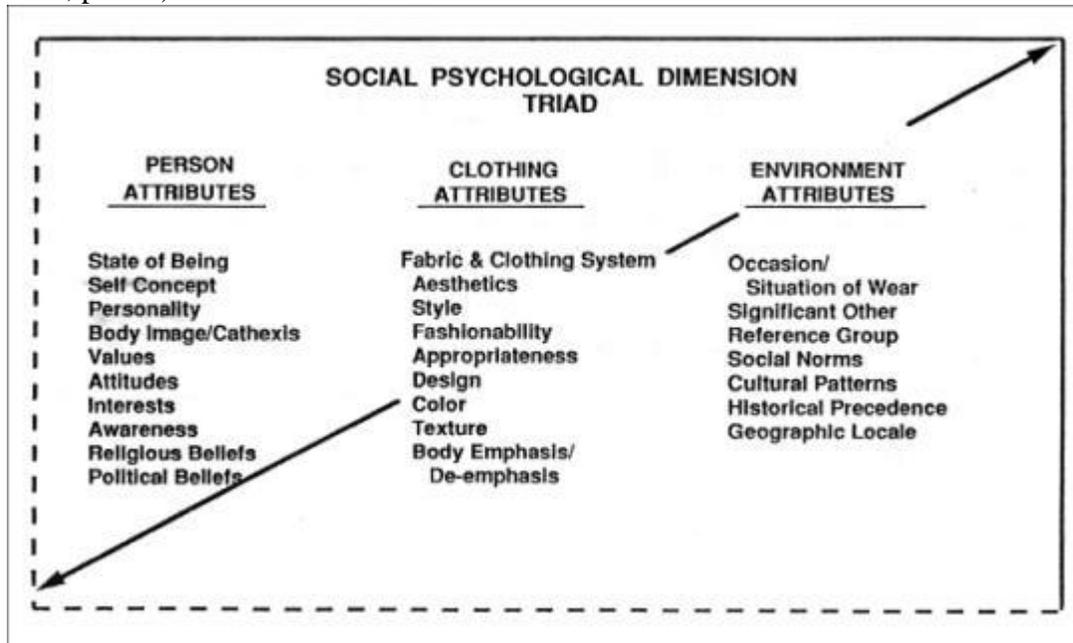


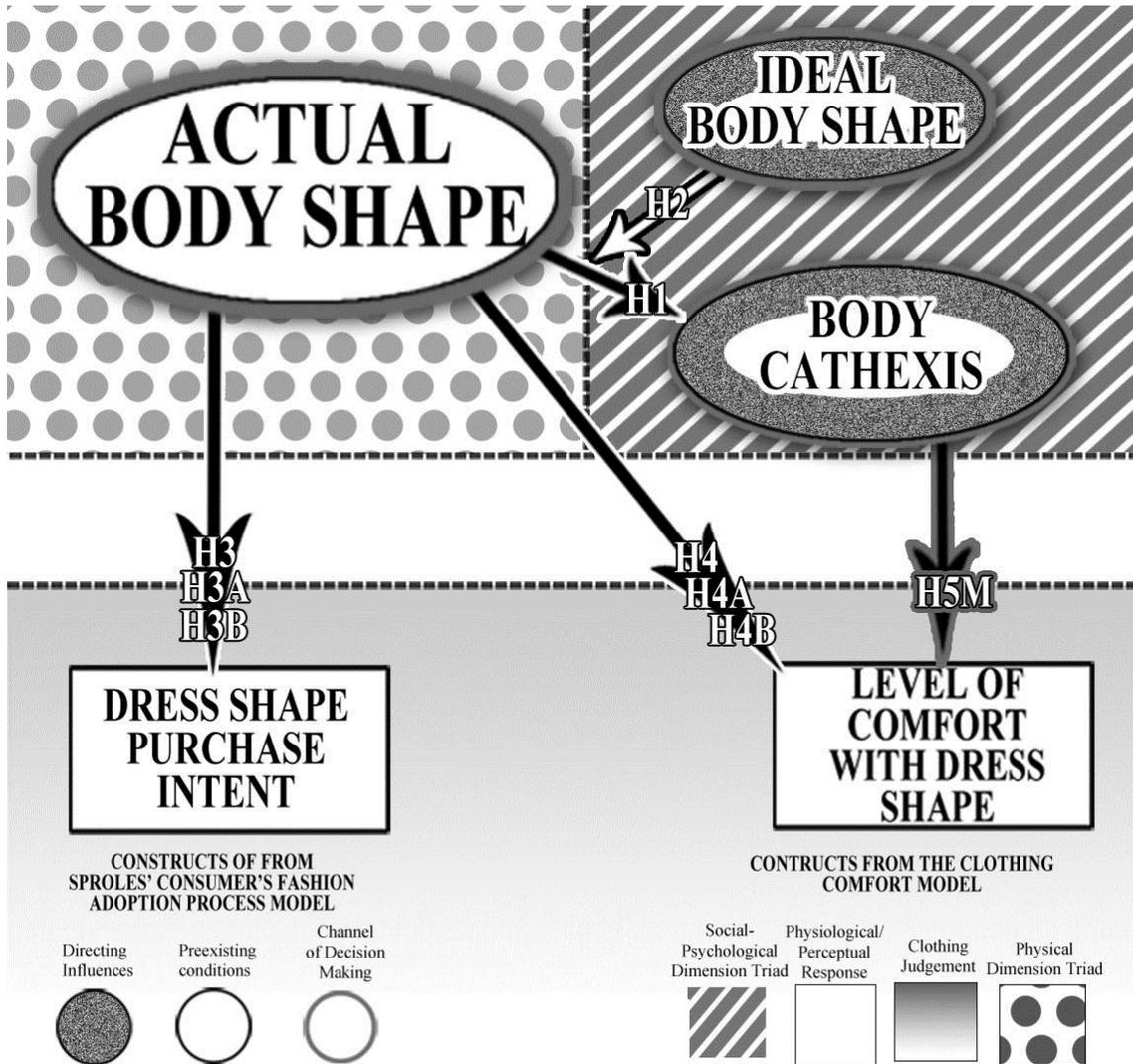
Figure 8. Social-psychological dimension triad of the clothing comfort model (Branson & Sweeney, 1991, p. 102).

### *Proposed Conceptual Model*

As this study assesses both clothing comfort, and fashion adoption, a combination of the aforementioned Clothing Comfort Model (Branson & Sweeney, 1991) and Sproles' Fashion Adoption Model (1979) must be utilized to create the proposed conceptual model (See Figure 9). Within this proposed model, the variables addressed in this study are categorized into one of the three groupings within Sproles' framework (1979), while simultaneously incorporating the variables from the comfort model (Branson & Sweeney, 1991). An adopter's actual body shape is placed into preexisting conditions group of the Fashion Adoption Process (Sproles, 1979), as well as the person attributes found within the physical dimension triad of the Clothing Comfort Model (Branson & Sweeney, 1991). In relation to Sprole's Clothing Comfort Model (1979), ideal body shape is categorized as a motive, therefore a directing influence. This classification comes as a consequence of consumer's use of fashion as a gateway to achieve their ideal body shape (Fiore & Kimle, 1997). Ideal body shape, in combination with the adopter's body cathexis, is, for that reason, to be classified within the person attributes portion of the social psychological section of the comfort model (Branson & Sweeney, 1991), as these variables are embedded in the psyche of an individual (see Figure 9).

The filtering process found within the Clothing Comfort Model (Branson & Sweeney, 1971) is similar to the channel of decision of the Sproles' (1979) model in that both of these processes result in a final decision. For the purposes of this research, the final outcome of fashion adoption or rejection is operationalized by dress shape purchase intent; and the final outcome of comfort determination is operationalized by level of comfort with dress shape. Purchase intent for and level of comfort with dress shapes are

to be classified as preference judgments and form final decision segment of the proposed model (See Figure 9).



\*Variables may be categorized in to multiple constructs.  
 \* Filtering Process not included in visual representation of conceptual model

Figure 9. Conceptual model developed based on Sproles' fashion adoption process (1979) and Branson and Sweeney's (1991) clothing comfort model.

## Hypothesis Development

### *Body Shape and Body Cathexis*

Body image concerns are much more likely to occur among females than males (Striefel-Moore & Franko, 2002). Women constantly feel the pressure to modify their current body shape and weight to coincide with the culturally ideal body (Grogan, 1999). Women have responded to these pressures by enduring painful procedures, such as wearing restrictive corsets, undergoing foot-binding, and, in modern society, withstanding plastic surgeries to uphold these demands set by culture (Grogan, 1999). The bases of these procedures are to change the overall perception of the female body, which indicates dissatisfaction with the body. Inconsistencies between an individual's actual body and their ideal body may result in discomfort with the self (Higgins, 1987), and this discomfort may be indicative of a negative body cathexis.

The self-discrepancy theory describes three selves that are relevant to this study: (1) the actual self, which is an individual's representation of the combined characteristics that he or she (or another) actually believes they possess, (2) the ideal self, which is symbolic of the characteristic an individual desires to possess, and (3) the ought self, which is described as the qualities individual perceive that they should possess. In this study, the actual and ideal body shapes would be examples of the actual and ideal selves respectively. Discrepancy occurs when there is a difference between the actual self and the ideal and/or ought self. A study conducted by Davis (1985) found that 78% of the 91 student sample indicated some discrepancy between their perceived body build and their ideal body build; 87.5% of aforesaid percentage indicated their ideal as being more slim than the actual. In addition, those respondents who perceived discrepancy had a lower

body cathexis score than those respondents who perceived no discrepancy, thus supporting the assumption that actual-ideal body discrepancies create dissatisfaction with the body (Davis, 1985).

Jourard and Secord (1955) suggested that a cultural standard of female body guides body cathexis. Therefore, it is assumed that there exists an ideal body shape against which female body shape attractiveness is rated. Researcher Harrison (2003) found that women exposed to the cultural ideals via television images desired to be thinner and possess smaller waist and hip measurements but at the same time wanted a significantly larger bust. This conclusion by Harrison (2003) is in agreement with results found by Jourard and Secord (1955) who found that higher body cathexis scores were associated with a relatively body small frame but large bust size. These conclusions indicate that it is desirable to possess an upper torso measurement that is significantly larger than the waist measurement. Another study regarding body attractiveness held by Douty and Brannon (1984) found body shapes with smooth, uninterrupted contours and an absence of lumps received higher rankings in regards to figure attractiveness. Asymmetry, in regards to body silhouette, was associated with lower attractiveness ratings. This overall admiration for body symmetry implies that the cultural standard for female body shape is one that is proportional. Body figures with prominent abdomens also received lower ratings, as respondents within the study seemed to disapprove of noticeable stomach regions that interrupt the body's symmetry. An additional study conducted by Singh (1994) found that both male and female respondents ranked figures with low waist to hip ratios, figures with smaller waists than hips, more attractive than those with high waist to hip ratios. Being that the aforementioned studies suggested that

small hip measurements as desirable, the results from Singh's (1994) study indicate that society idealizes a body shape with relatively small hips and an even smaller waistline.

Another researcher, Tovee (2000), contradicted Singh's (1994) findings by suggesting that figure attractiveness was a function of BMI, and not waist to hip ratio. Tovee's (2000) results affirmed his predictions, concluding that high attractiveness ratings were associated with low BMI scores. These results support the notion that the culturally ideal female body is one that has low fat. Another study suggests that apart from low body fat being the cultural ideal, women are also progressively moving towards a more muscularly toned standard for the body (Krane, Waldron, Michalenok & Stiles-ShIPLEY, 2001). Respondents state that ideally they would desire to be toned, rather than extremely muscular or skinny. Results from this study suggest that a body with muscle tone combined with the absence of fat is emerging as an ideal body amongst women. These results, in conjunction with previously mentioned results from other studies, suggest that the ideal body shape is physically fit and absent of fat, therefore implying that the V or the athletic ideal is also desirable among both younger and older women. Collectively all these studies suggest that western culture idealizes a body that is moderately thin, physically fit, and yet proportional. The X body shape aligns with women's desire for a small waist with symmetrical proportions. The V body shape satisfies women's want for muscle tone, as this body shape is associated with physical fitness. Given the combination of the aforementioned literature, the following is hypothesized:

*Hypothesis 1:* (Self-Identified) Actual body shape will have a main effect on body cathexis. Specifically, X and V body shapes will demonstrate higher body cathexis than A and H body shapes.

*Hypothesis 2:* (Self-Identified) Ideal body shape will moderate the effect of actual body shape on body cathexis.

### *Body Shape and Dress Shape Preferences*

The perception of the body can be altered by the use of clothing (Featheret al., 1996). Researcher Yoo (2003), while conducting a study concerning the design preferences of working females, concluded that jacket silhouette preferences were dependent on figure type. These results indicated that although the majority of respondents preferred fitted or semi-fitted garments, women who tended to classify themselves as diamond shaped preferred a loosely-fitted silhouette (Yoo, 2003). Yoo's (2003) study also indicated that silhouette wasn't the only design element influenced by figure. Collar style and neckline drop also interact with figure type in influencing design preferences. Yoo concluded that when obtaining consumers' design preferences, the relationship between the garment and body form must be addressed.

In addition to altering the perception of the body, clothing may also serve as a tool for improving the wearer's body perception (Featheret al., 1996). In a study conducted by Feather, et al. (1996) regarding the fit of female collegiate basketball players, it was shown that the larger an athlete's body, the more likely it was that the individual would prefer baggy shorts, implying a definite relationship between the body and design preference. Along similar lines, Chattaraman and Rudd (2006) found that body size has a positive association with body coverage through clothing. The study specifically found

that increase in body size correlates with increased preferences for longer top lengths, less fitted top silhouettes, longer skirt lengths, less fitted skirts and pant silhouettes, and higher skirt and pant waists. These results suggest that the size of a female's body predicts her preferences for clothing silhouettes.

As discussed in the earlier section, Fiore and Kimle (1997) have compiled a list of balancing techniques for women of varying shapes attempting to obtain a balanced perceptual figure. Fiore and Kimle also propose that basic dress silhouettes that may be used as a mechanism to achieve balanced proportions. Women with body shapes similar to the figures designated A and H may achieve perceptual balance by wearing wedge and rectangular dress shapes. These dress shapes balance the wider lower torso of the A body shape and de-emphasize the lack of waist definition in the H body shape. Women with body shapes matching figures designated X and V may appear more balanced by wearing A-line, hourglass, and bell dress shapes. These dress shapes balance the wider shoulders of the V shape and accentuate the small waist of the X shape. Based on the above discussion, the following hypotheses are proposed:

*Hypothesis 3:* Body shape will interact with dress shape to affect the overall purchase intent for dresses among female consumers.

*a:* Female consumers with body shapes categorized as A and H will demonstrate greater purchase intent for rectangular and wedge silhouettes in dresses than female consumers with X and V.

*b:* Female consumers with body shapes categorized as X and V will demonstrate a greater purchase intent for A-line, bell, and hourglass silhouettes in dresses than female consumers with A and H body shapes.

*Hypothesis 4:* Body shape will interact with dress shape to affect the level of comfort with dresses among female consumers.

*a:* Female consumers with body shapes categorized as A and H will demonstrate a higher level of comfort with Rectangular and Wedge silhouettes in dresses than female consumers with X and V.

*b:* Female consumers with body shapes categorized as X and V will demonstrate a higher level of comfort with A-line, bell, and hourglass silhouettes in dresses than female consumers with A and H body shapes.

#### *Body Cathexis and Dress Shape Preferences*

According to Kaiser (1997), body cathexis plays an important role in an individual's attitude towards clothing and clothing preferences. A higher body cathexis is associated with a higher satisfaction with the fit of garments among female consumers (Labat & Delong, 1990). The failure of clothing to accentuate the body in the desired manner may lead to a negative body cathexis. Dissatisfaction may become a determinant of garment comfort and adoption. Researchers have suggested that clothing may counteract one's dissatisfaction with the body and increase self-esteem (Hwang, 1996; Kaiser, 1997).

Kwon and Parham (1994) found that the higher a woman's satisfaction with her weight, the more likely she would be to purchase clothing for purpose of being different in comparison to others. This implies that the more comfortable a woman is with herself, the more she desires to stand out. Kwon and Parham found that in both perceived states of fat and slender, women purchase clothing with the underlying purpose of camouflaging undesirable parts of their bodies. Not only do consumers desire their

clothing to accentuate elements of the body about which they feel confident about, consumers also want garments to cover any parts they may consider undesirable. Another study revealed similar findings in that consumers showed preferences for styles that complement their figure and hid flaws (Chattaraman & Rudd, 2006). Chattaraman and Rudd (2006) found that individuals with lower body image and satisfaction levels preferred more body coverage and less fitted garment silhouettes. These results coincided with the outcome of Kwon and Parham's research (1994), which concluded that when women felt they were overweight and were less confident in regards to their bodies, clothing's most important function became camouflaging sites that were perceived to be undesirable.

Hwang (1996) found that females dissatisfied with their torso, lower body, and weight desired figure flaw compensation via clothing. This may be a result of overarching pressures for the body to coincide with society's standard female figure, which has been confirmed by several studies (Cohn & Adler, 1992; Douty & Brannon, 1984; Jeroud and Secord, 1955; Singh, 1994). Hwang's results also showed that when a woman possesses a high body cathexis, she prefers clothing that accentuates the waist and hip areas. Women's comfort level with closely fitted garments also rises when her body cathexis is high (Chattaraman & Rudd, 2006; Hwang, 1996; Kwon & Parham, 1994). Hence, when a woman's body meets the social standard of society and/or personal standard, her tendency to wear accentuating garments rises. In contrast, when a woman's body fails to meet these standards, she desires to camouflage her body. This leads to the following hypothesis:

*Hypothesis 5:* Body cathexis mediates the relationship between actual body shape and level of comfort with the A-line, bell, hourglass, wedge, and rectangular dress shapes.

## CHAPTER III. METHODOLOGY

There were several variables utilized in this study. Actual body shape, ideal body shape, and dress shape served as the independent variables. Body cathexis served as a dependent and mediating variable. Purchase intention for and level of comfort with dress shapes served as the dependent variables. The data elicitation for this research took place via survey research in quantitative form. This information was then investigated using quantitative data analysis. The following chapter will outline and discuss the scales used to assess the previously mentioned variables. Once the scales are explained, the data analysis plan is reviewed.

### Pilot Study

A pilot study was conducted to check the face validity of the body shape and dress shape stimuli and also to check the reliability of the purchase intention and comfort scale items when used in combination with digitally developed dress shape stimuli. A convenience sample of respondents was recruited by contacting professors and visiting classes within the College of Human Sciences and offering extra credit in the class, in addition to entry in drawing for a \$50 gift certificate to a local eatery for participating in the study. Students were given a brief verbal introduction about the study and its intentions, which was followed-up by an information email containing a link to the questionnaire. Students opting not to participate or not qualifying for participation in the study were given an alternative means to gain extra credit chosen by the instructor.

The pilot study utilized a questionnaire containing existing scales that had already been proven reliable and valid; however, these scales were modified for the purposes of this study and paired with developed stimuli. This pilot study questionnaire administered

was shorter in length when compared to the main study questionnaire and included the following scales (See Appendix A): a) Cash's (2000) Body Area Satisfaction Subscale (BASS) to assess the respondents body cathexis, b) current actual and ideal body shape indication scale using August's (1981) Body I.D. as stimuli, and c) dress shape preference scale which used a synthesis of Kim and Lennon's (2000) purchase intent scale and three clothing comfort items from Beaudoin, Moore, and Goldsmith's (1998) consumer attitude attributes to measure preferences for the five dress shapes (A-line, bell, tubular, wedge, and hourglass) displayed as fashion illustrations on identical croqui figures. The pilot study was used to assess the face validity of certain items via open-ended questions, as well as to derive the reliabilities of scale items using Cronbach's alpha coefficient.

Suggestions for the dress shape stimuli (fashion illustrations) via the open-ended responses were taken into consideration and addressed in revising the stimuli for the main study. Based on the open-ended responses, further exaggerations were made to the dress silhouettes to increase the perceptual differences amongst the five dress shapes. Also, in addition to providing respondents with fashion illustrations of the dresses, the main study included a separate flat drawing of each dress shape in order to increase respondents' comprehension of each dress shape. Photographic stimuli representing each dress shape on actual models were also included in the main study in addition to the digitally illustrated stimuli. These photos were controlled for color across dress shapes but not styling.

## Main Study

### *Sample*

After receiving consent from the Institutional Review Board (IRB Protocol # 10-164), the pilot and main study were conducted. A random sample of female undergraduate students enrolled in classes within in the College of Human Sciences was recruited for these studies. Students were only recruited after the professors authorized recruitment in the classes. First, a brief verbal introduction to the study was administered in the classes. Following this introduction, the link to the online questionnaire was sent to every female student within the classes. Only female students were recruited since this study aimed to discover the body and dress shape preferences of female consumers.

### *Procedure*

The sample of respondents utilized in this study was obtained through a recruitment email containing a link to the online survey. As an incentive to participate, these students were offered the opportunity to be included in a random drawing for a brand new Apple Ipad Touch. Participants' identity was protected by providing the respondents with a link for the questionnaire and then, subsequent to the final item, a separate link for entering the random drawing. This separate link ensured that respondents' questionnaire responses were not tied to any personal information needed for the Ipad drawing.

## *Instrumentation*

### *Body Cathexis Scale*

The instrumentation used in this research included a questionnaire with a combination of scales. Female consumers' degree of body cathexis was measured through the Body Areas Satisfaction Subscale (BASS) developed by Thomas Cash (2000). This scale was used as is, but also included four additional areas (bust, shoulders, waist, and hips) pertaining directly to female body shape (see AppendixB). Using the given items, respondents were instructed to indicate the most appropriate degree of feelings toward the body area via a 5-point Likert-type scale with "1" = "Very Dissatisfied" and "5" = "Very Satisfied". The reliability of this scale was previously established specifically for use with female respondents via Cronbach's alpha and a one month test-retest (Cash, 2000). The resulting values were .73 and .74 respectively. The validity of this scale as a research instrument has been established by its use in multiple previous studies (Arbour & Ginis, 2006; Friedman, Reichmann, Costanzo, & Musante, 2002; Gillen & Lefkowitz, 2006).

### *Body Shape Scale*

Respondents' self-identified actual and ideal body shape were measured utilizing a short questionnaire containing the front width portion of the Bonnie August's Body I.D. scale (1981), A, H, V and X, as visual stimuli for assessing the respondents' self-perceived body shape. The A and H body shape were paired together, as well as the X and V body shapes together, because of similarities among balancing techniques. The scale was chosen since the stimuli provided the viewer with information via the landmarks, which are visually marked on the stimuli. Within this scale, respondents were

given four images derived from the Body I.D. (see AppendixB), which were labeled alphabetically as found in the original scale. The respondents were directed to select the letter that denoted the appropriate body shape that reflected their actual and ideal bodies. The face validity of this scale was addressed using open-ended questions following the body shape items in a pilot study. The open-ended responses showed that pilot study participants found no difficulties with the body shape identification scale and its' stimuli.

### *Dress Shape Preferences*

Respondents' dress shape preference was measured using a combination of previously developed scales and stimuli developed by the author. This scale contained items which measured for purchase intent and comfort level with dress shape. Two previously used scales were used in combination with digitally illustrated and photographic visual stimuli. The illustrated stimuli were manipulated to reflect dress shapes in a single color, utilizing the same model, to ensure internal validity, (see Appendix B). The varying garment shapes were based on Fiore and Kimle's (1997) dress silhouette categories, which include the following silhouettes (shapes): A-line, bell, tubular, wedge, and hourglass. The first was a digitally rendered fashion figure draped in each dress shape, which was paired with the second representation of the dress shape, a corresponding digitally rendered flat drawing of the dress shape. The third portrayal of the dress shape stimuli was an actual photographic representation of each dress shape. Respondents separately viewed five dress shape stimuli, each time indicating their preference for the shape via purchase intent and level of comfort items.

### *Purchase Intention*

Purchase intent was assessed using an adapted version of Kim and Lennon's (2000) purchase intention scale (see Appendix B). For example, an original measure that reads "How likely is it that you will buy the apparel item you viewed today in the next 12 months?" (Kim & Lennon, 2000, p. 315) was modified to read "How likely is it that you will buy the dress you viewed above in the next 12 months?" The items were rated on a 5-point Likert scale anchored by "1" = "Very Unlikely" and "5" = "Very Likely," which respondents used to indicate their level of purchase intent. The internal consistency reliability of Kim and Lennon's (2000) scale has been established as .90 via Cronbach's alpha coefficient testing. The validity of this scale has also previously been established in several studies (Kim & Lennon, 2000; Kim, Kim, & Lennon, 2006; Park, Lennon, & Stoel, 2005; Park & Stoel, 2005).

### *Comfort level*

Respondents' level of comfort was addressed via the "comfort" and "fit" attributes found within Beaudoin et al.(1998) original twelve consumer attitude attributes. A third attribute, "fashionable," was utilized within the questionnaire, but this single item was used strictly as a potential covariate. The "comfort" and "fit" attributes were placed into statements addressing the respondent's comfort level with the relevant stimulus such as "this dress shape will fit my body well" and "this dress shape will be comfortable on my body." The reliability of these attributes has been previously established via the use of Cronbach's alpha coefficient in the original study and is as follows, .93 for domestic apparel and .95 for imported apparel (et al., 1998). The final section of the questionnaire

contained a demographics section (age, race/ethnicity, education level, height, weight and marital status).

### Data Analysis

After all the responses from the data collection were received, the data were analyzed. The independent variables in this study were two levels of actual and ideal body shape (A and H; X and V). The dependent variables in this study were body cathexis, purchase intent for the five dress shapes, and comfort level with the five dress shapes. Prior to conducting analyses to accept or reject the hypotheses, descriptive statistics were calculated to uncover the demographic characteristics of respondents. Reliability analyses were then run to ensure that all scales had adequate reliability. Hypotheses 1 and 2 were tested using one-way and two-way ANOVAs respectively. Hypotheses 3, 3a, 3b, 4, 4a, and 4b were tested using repeated measures ANOVAs. Baron and Kenny's (1986) mediational analysis was used to test Hypothesis 5.

## CHAPTER IV. RESULTS

The main objective of this study was to examine the relationship between body shape and dress shape preferences of female consumers. The data collection process of this research included a pilot study, and then the a main study. The main purpose of the pilot study was to affirm the reliabilities of the measures used and assure the face validities of the stimuli used in conjunction with the scales' items. From the main study data, descriptive information was analyzed to determine frequencies; then the reliabilities of the main study scales were tested. Following this, one-way, two-way, and repeated measures ANOVA analyses were used, when appropriate, to assess the relationships between the dependent and independent variables. The following sections will discuss, in order, results from the pilot study, the descriptive data results from the main study; followed by results from the hypotheses testing, and finally the results from additional analyses.

### Pilot Study

A total of 35 of 55 students completed the pilot study questionnaire yielding a 64% response rate. Of the 35 complete questionnaires, 3 were discarded as a result of insufficient item responses (50% or more of the questionnaire was not completed). The pilot study displayed that the reliability of both the comfort and purchase intention scales were more than .70 (see Table 2).

Table 2

*Pilot Study Dress Preference Subscale Reliabilities*

<b>Scale Reliability – Cronbach's Alpha</b>					
	A-line (1)	Bell (2)	Hourglass (3)	Wedge (4)	Rectangular (5)
Comfort	0.83	0.91	0.90	0.85	0.87
Purchase Intent	0.91	0.97	0.97	1.00	0.99

## Main Study

A total of 240 submitted questionnaires were received. Of these, 203 were valid; the remaining 37 questionnaires were deleted because 50% or more of the questionnaire was incomplete. Qualifying data was entered into the PASW Statistics 18 software for analysis. Frequencies and means were used to derive the demographic characteristics of the respondents. The bulk of the respondents were undergraduate students (97.1%) followed by other technical or professional workers (1.9%) and graduate students (1.0%). The mean age was 21. Since the study took place on a predominantly Caucasian campus, the diversity in terms of ethnicity wasn't very high: 88.6% of respondents identified themselves as Caucasian, 4.8% Non-Hispanic Black, 3.3% Hispanic, 1.4% Pacific Islander, and 1.4% other. The marital status of respondents was as follows: 93.3% were single and never married; 4.3% were married; 1.4% were divorced, and .5% were separated. Other relevant details of the sample are provided in Table 3.

Table 3

### *Sample Characteristics and Frequency Distributions*

<b>Characteristic</b>	<b><i>n</i></b>	<b>%</b>	<b>Mean</b>
<b>Age (N= 198)</b>			
19-21	158	79.8%	
22-24	33	16.7%	
25 and older	7	3.5%	21
<b>Ethnicity (N= 209)</b>			
Non-Hispanic White	186	89.0%	
Non-Hispanic Black	10	4.8%	
Hispanic	7	3.3%	
Asian/Pacific Islander	3	1.4%	
Native American/Alaska Native	0	0.0%	
Other	3	1.4%	

**Marital Status (N= 209)**

Single and Never Married	196	93.8%
Married	9	4.3%
Separated	1	0.5%
Divorced	3	1.4%
Widowed	0	0.0%

**Occupation (N= 208)**

Undergraduate Student	202	97.1%
Graduate Student	2	1.0%
Other Professional or Technical	4	1.9%

**Annual Income (N= 204)**

UNDER \$5,000	41	20.1%
\$5,000 TO \$24,999	24	11.8%
\$25,000 TO \$69,999	18	8.8%
\$70,000 TO 124,999	52	25.5%
\$125,000 AND OVER	69	33.8%

**Amount Spent on Gen. Clothing Monthly (N= 207)**

0-50	62	30.0%
50-100	61	29.5%
100-150	42	20.3%
150-200	22	10.6%
Over 200	20	9.7%

**Amount Spent on Dresses Yearly (N= 209)**

0-300	107	51.2%
300-700	57	27.3%
700 AND OVER	45	21.5%

**General Shopping Frequency (N= 209)**

At least once a week	42	20.1%
Two or three times a month	82	39.2%
Once in a month or two	63	30.1%
Once in three or four months	18	8.6%
Twice a year	1	0.5%
Once a year	3	1.4%
Never	0	0.0%

**Dress Shopping Frequency (N= 208)**

At least once a week	17	8.2%
Two or three times a month	55	26.4%

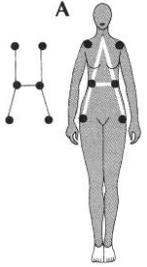
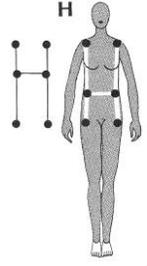
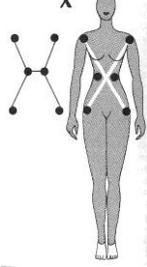
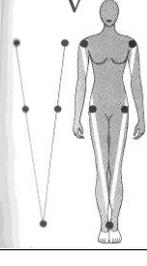
	Once in a month or two	63	30.3%	
	Once in three or four months	51	24.5%	
	Twice a year	14	6.7%	
	Once a year	6	2.9%	
	Never	2	1.0%	
<b>Weight (N= 210)</b>				<b>Mean</b>
	100-125 lbs.	72	34.3%	131.4 lbs
	125-150 lbs.	91	43.3%	
	150 and over lbs.	42	20.0%	
	Answer Withheld	5	2.4%	
<b>Height (N= 210)</b>				
	4' 10" - 5'3"	59	28.1%	
	5' 4" - 5' 8"	125	59.5%	
	5' 9" - 6' 5"	26	12.4%	5'5"

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Additional frequency analyses were run to uncover the most preferred body shapes among respondents. Results declared the X body shape as the most ideal body shape, accounting for 56.5% of all responses, and the V body shape as the second most ideal, accounting for 25.6% of all responses. Additional frequencies were run to determine which actual body shape was most prevalent amongst respondents. The outcome of these frequencies acknowledged the X body shape as the most prevalent body shape, accounting for 38.8% of the responses. See Table 4 for additional percentages and details relating to actual and ideal body shape.

Table 4

*Actual/Ideal Body Shape Frequencies*

Body Shape	Actual Body Shape		Ideal Body Shape		
	<i>n</i>	%	<i>n</i>	%	
A		54	25.8%	13	6.3%
H		42	20.1%	24	11.6%
X		81	38.8%	117	56.5%
V		32	15.3%	53	25.6%

*Reliability Analysis*

Composite variables were created for each subscale by averaging items attributed to each scale. Using Cronbach's alpha coefficient, the reliabilities of these composite variables were calculated for all scales. Three sets of analyses were run to derive the

reliabilities of each dress shape subscale; one set for the digitally illustrated stimuli, one set for the photographic stimuli, and one set for the two combined. All scales and subscales had adequate reliabilities with Cronbach's alpha coefficient over .70, (see Table 5). As a consequence of each set of dress shape stimuli being reliable, the researchers chose to utilize a combination of both photographic and digitally illustrated stimuli for hypothesis testing since it had greater external validity due to stimulus sampling.

Table 5

*Main Study Scale Reliabilities*

Dress Shape Preferences Reliability (CAD)						
	A-line (1)	Bell (2)	Hourglass (3)	Wedge (4)	Rectangular (5)	# of Items
Comfort	0.87	0.91	0.91	0.75	0.8	2
Purchase Intent	0.92	0.97	0.98	0.99	0.98	2
Dress Shape Preferences Reliability (Photo)						
	A-line (1)	Bell (2)	Hourglass (3)	Wedge (4)	Rectangular (5)	# of Items
Comfort	0.89	0.89	0.92	0.9	0.93	2
Purchase Intent	0.97	0.95	0.98	0.99	0.98	2
Dress Shape Preferences Reliability (Combined)						
	A-line (1)	Bell (2)	Hourglass (3)	Wedge (4)	Rectangular (5)	# of Items
Comfort	0.78	0.72	0.86	0.84	0.8	2
Purchase Intent	0.77	0.76	0.86	0.90	0.82	2
Body Cathexis Scale Reliability						
Cronbach's Alpha Coefficient					# of Items	
0.88					11	

\*Reliabilities of single item scales (actual/ideal body shape and size indication) were not assessed.

### *Hypotheses Testing*

*Body shape and body cathexis.* In Hypothesis 1, it was anticipated that a female's self-perceived actual body shape would have a significant influence on her body cathexis. Hypothesis 1 was supported, as a result of a one-way ANOVA analysis. Data analysis shows that respondents' self-perceived actual body shape, which included two levels of body shape: X and V, and A and H, has a significant effect on body cathexis [ $F(207, 1) = 6.77, \eta^2 = .032, p = .01$ ]. There is a significant relationship between an individual's actual body shape and level of body cathexis. The latter portion of Hypothesis 1 was also supported. This support came as a consequence of a significant mean difference ( $MD = .335, p = .01$ ) between those respondents with body shapes X and V ( $M = 4.98; SE = .09$ ) and than those with body shapes A and H ( $M = 4.65; SE = .1$ ). Those respondents with X and V body shapes reported higher body cathexis scores than those respondents with A and H (see Table 6).

Hypothesis 2 addressed the role of ideal body shape in the relationship between actual body and body cathexis. This hypothesis states that ideal body shape will moderate the effect actual body shape has on body cathexis. This hypothesis was tested utilizing a two-way ANOVA analysis. Hypothesis 2 gained support via this two-way ANOVA, the interaction between actual and ideal body shape had a significant effect on body cathexis [ $F(192, 8) = 3.97, p = .00, \eta^2 = .14$ ]. Further, the main effects of actual body shape [ $F(192, 3) = 1.9, p = .13, \eta^2 = .03$ ] and ideal body shape [ $F(192, 3) = .64, p = .59, \eta^2 = .01$ ] on body cathexis were non-significant. This means that ideal body shape completely moderates the relationship between actual body shape and body cathexis and accounts for 14.2% of the variance found. Therefore, Hypothesis 2 is supported.

Table 6

*Mean Scores for Body Cathexis: X&V versus A&H*

Measure	Body Shape				Mean Difference	Sig.
	A & H		X & V			
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>		
Body Cathexis	4.645	.1	4.98	..09	.335	.01

*Body shape and dress shape preferences.* Hypothesis 3 predicted that there would be a significant interaction effect between actual body shape and dress shapes to influence purchase intentions of female consumers. Hypothesis 3 was tested with a repeated measures ANOVA conducted with two levels of body shape (A & H; X & V) and two levels of dress shape (A-line, hourglass, & bell; rectangular & wedge) as fixed factors and purchase intent as the dependent variable. Results revealed that there was a significant interaction effect between actual body shape and dress shape on purchase intentions ( $Wilks \lambda = .98$ ,  $F(207, 1) = 4.08$ ,  $p = .05$ ,  $\eta^2 = .02$ ). Therefore this portion of Hypothesis 3 was supported. Specifically, Hypothesis (3a) predicted that females with body shapes A and H will have a higher purchase intention for the rectangular and wedge dress shape than females with X and V body shapes. The same data output from the previous repeated measures ANOVA revealed that respondents with A and H body shape displayed higher purchase intent for the Rectangular and Wedge dress shapes than respondents with X and V body shapes ( $M_{A\&H} = 3.18$ ;  $M_{X\&V} = 2.9$ ;  $SE_{A\&H} = .12$ ,  $SE_{X\&V} = .11$ ) thus supporting Hypothesis 3a (see Table 7). Hypothesis 3b predicted that females with X and V body shapes will demonstrate higher purchase intent for A-line, bell, and hourglass dress shapes than females with A and H body shapes. This hypothesis was also

supported ( $M_{X\&V} = 4.18$  to  $M_{A\&H} = 4.08$ ;  $SE_{X\&V} = .09$ ,  $SE_{A\&H} = .10$ ). Detailed results of this significant interaction effect are displayed in Figure 10 and Table 7.

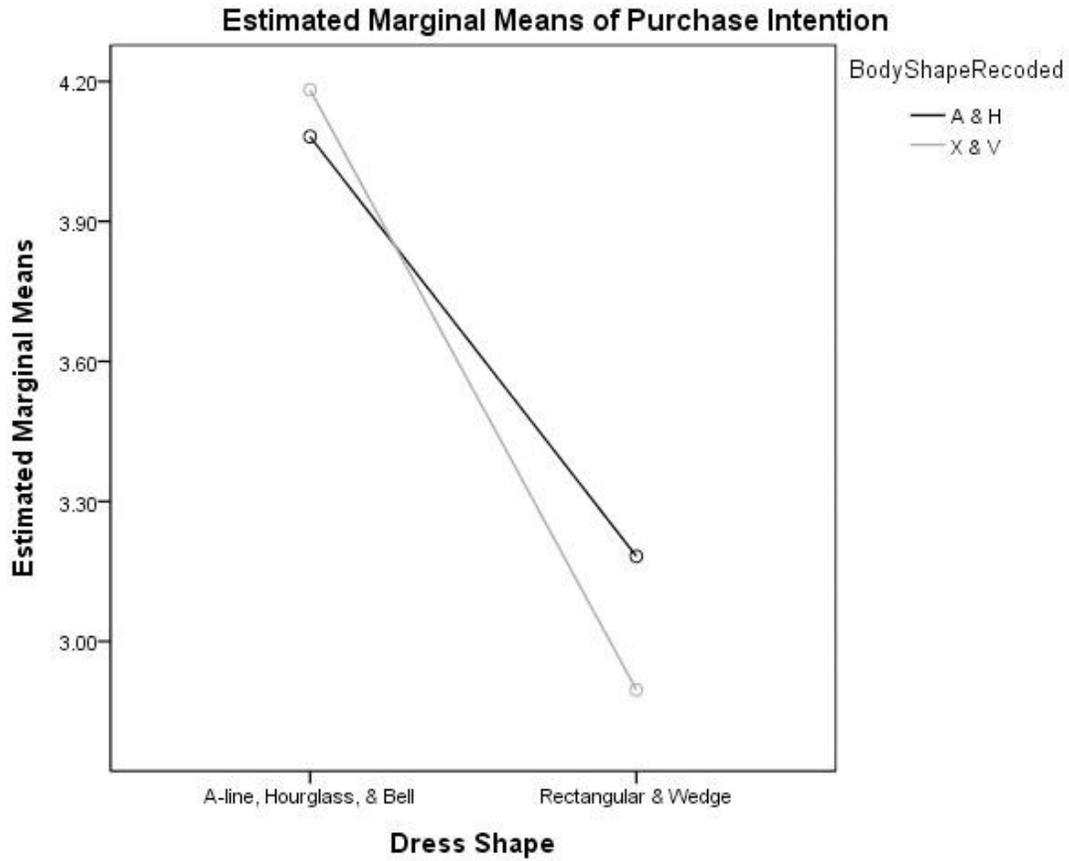


Figure 10. Interaction effect of body shape and dress shape on purchase intention

Table 7

*Interaction Effect of Body Shape and Dress Shape on Purchase Intention*

Body Shape	Purchase Intent				Mean Difference	Sig.
	A-line, Hourglass, and Bell		Rectangular and Wedge			
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>		
A & H	4.08	.10	3.18	.12	.9	.00
X & V	4.18	.09	2.9	.11	1.28	.00

The repeated measures ANOVA tests also revealed that actual body shape had a main effect on the purchase intent of dress shapes (*Wilkes  $\Lambda$*  = .61, *F*(207, 1) = 130.35, *p* = .00,  $\eta^2$  = .39). In general, women of all body shapes preferred the A-line, hourglass, and bell dress shapes ( $M_{AH}$  = 4.08,  $M_{XV}$  = 4.18), more than the wedge and rectangular dress shapes ( $M_{AH}$  = 3.18,  $M_{XV}$  = 2.90).

*Actual body shape effect on consumer's comfort level.* It was anticipated in hypothesis 4 that actual body shape would have an interaction effect with dress shape to influence consumer's level of comfort with each dress shape. This prediction was tested by conducting a repeated measures ANOVA analysis utilizing the two levels of body shapes and the two levels of dress shape as Independent Variables (IVs), and comfort as the Dependent Variable (DV). Results from this analysis indicate that there is a significant interaction effect between actual body shape and dress shape (*Wilks  $\Lambda$*  = .98, *F*(207, 1) = 4.918, *p* = .03,  $\eta^2$  = .023). Particularly, in Hypothesis 4a it was predicted that females with body shapes A and H will find greater comfort with the rectangular and wedge dress shapes than females with X and V dress shapes. Hypothesis 4a was supported with the following results:  $M_{A\&H}$  = 4.103 to  $M_{X\&V}$  = 3.860;  $SE_{A\&H}$  = .129,  $SE_{X\&V}$  = .119 .

Respondents identifying with body shapes A and H found greater comfort with the rectangular and wedge dress shapes than body shapes X and V. Hypothesis 4b also predicted that female consumers with X and V body shapes will demonstrate greater purchase intent for A-line, bell, and hourglass dresses than female consumers with A and H body shapes. Hypothesis 4b was supported by the following results:  $M_{X\&V}$  = 5.020 to  $M_{A\&H}$  = 4.876,;  $SE_{X\&V}$  = .09,  $SE_{A\&H}$  = .1. This difference displays the higher preference for A-line, hourglass, and bell dress shapes among body shapes X and V. See Figure 11 and

Table 8 for a summary of these results.

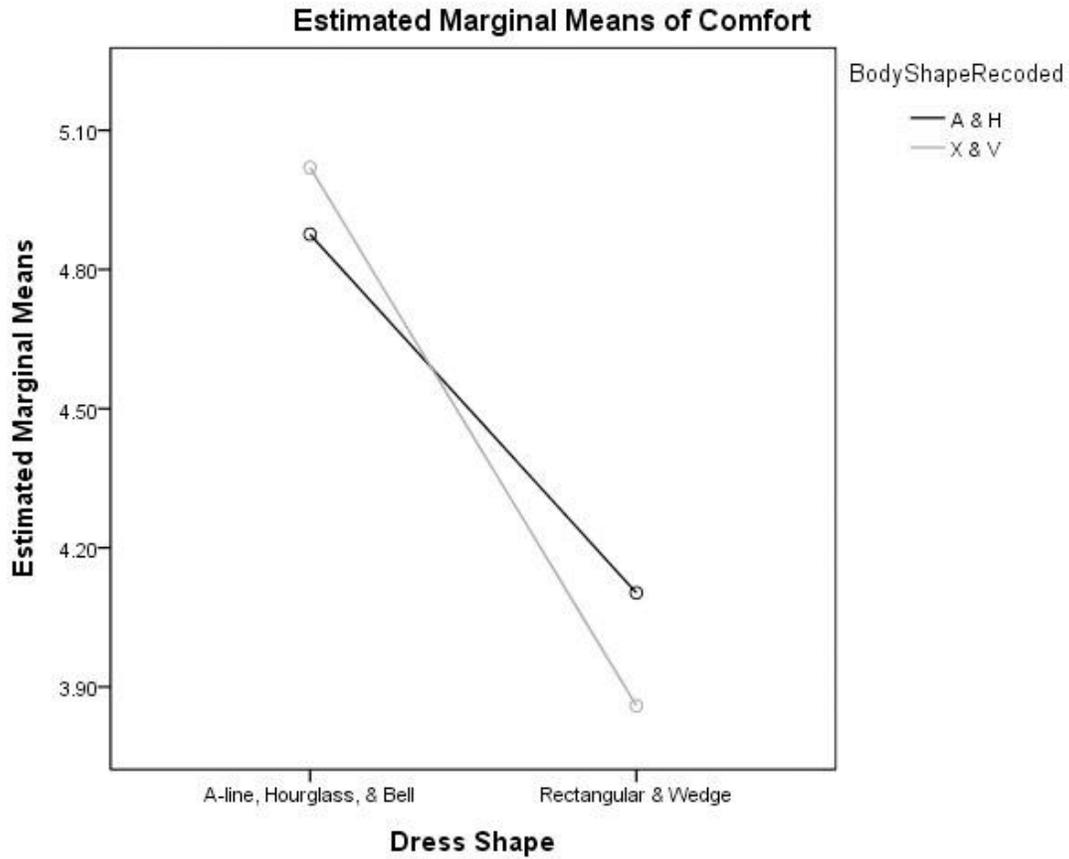


Figure 11. Interaction effect of body shape and dress shape on consumer's level of comfort.

Table 8

*Interaction Effect of Body Shape and Dress Shape on Consumer's Level of Comfort*

Body Shape	Comfort Level				Mean Difference	Sig.
	A-line, Hourglass, and Bell		Rectangular and Wedge			
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>		
A & H	4.88	.95	4.10	.09	.78	.00
X & V	5.02	.13	3.86	.18	1.2	.00

*Body cathexis' role in actual body shapes relation to level of comfort.* A repeated measures ANOVA was used to assess body cathexis' role in the relationship between

actual body shapes and level of comfort. Hypothesis 5 addresses the aforementioned role of body cathexis by stating that body cathexis will mediate the relationship between actual body shape and level of comfort. In testing this mediational effect, three conditions need to be met: 1) actual body shape (IV) needs to have a significant effect on body cathexis (mediator); 2) actual body shape (IV) needs to have a significant effect on comfort level with dress shapes (DV); and 3) when body cathexis (mediator) is introduced in the above model as IV, the effect of actual body shape (IV) on level of comfort should become non-significant. Conditions 1 and 2 were met with Hypothesis 1 and Hypothesis 4 gaining support in the previous analyses. To test condition 3, a repeated measures ANOVA was run holding body cathexis as a constant covariate, body shape and dress shape as fixed factors, and level of comfort as dependent variable. Results stated that the influence of body cathexis is significant ( $Wilkes \Lambda = .96, F(206, 1) = 7.76, p = .01$ ), reducing the main effect of actual body shape to non-significance ( $Wilkes \Lambda = 1.00, F(206, 1) = .38, p = .54$ ), passing condition Hypothesis 3. Therefore, Hypothesis 5 was supported by the results of the repeated measures ANOVA analysis. All five hypotheses were supported by the quantitative testing via PASW software.

## CHAPTER V. DISCUSSION AND CONCLUSIONS

The goal of this study was to gain further insight into female consumers' dress shape preferences, while investigating whether actual body shape has a bearing on these decisions. It was also the goal of this research to investigate the role of body cathexis in dress preference decisions of consumers. This chapter will first discuss the results pertaining actual and ideal body shapes' bearing on body cathexis. This discussion will be followed by a summary of the results found regarding female consumers' purchase intention for and level of comfort with dress shape. A discussion about the results pertaining to the influence body cathexis on consumers' level of comfort with dress shape will be discussed in the final part of this chapter.

### Actual Body Shape, Ideal Body Shape and Body Cathexis

The first hypothesis predicted that actual body shape would have a main effect on body cathexis, specifically assuming that respondents with the X and V body shapes would have higher body cathexis scores than those with A and H body shapes. Both posits from this hypothesis were supported. Hypothesis 2 predicted that the main effect of actual body shape on body cathexis would be moderated by ideal body shape. This hypothesis stated that a female consumer's self-identified ideal body shape would moderate the effect of actual body shape on body cathexis. This hypothesis was supported. The interaction effect between actual body shape and ideal body shape overshadowed the main effect of actual body shape on body cathexis, therefore confirming that ideal body shape moderates the relationship. The results of hypotheses 1 and 2 will be discussed together.

According to Grogan (1999), women constantly experience pressures to modify their bodies, or their body shapes, to coincide with societal ideals for the female body. Researchers Jourard and Secord (1955) suggested that a common ideal body standard exists. Women may have lower body cathexis scores if their current bodies do not align with this ideal standard, thereby implying a relationship between actual body shape, ideal body shape and body cathexis. Previous studies have affirmed that within Western society, there is an ideal standard of body shape devoid of fat while idealizing physically fit bodies with relatively small waist, moderately small hips and large, yet proportional, bust area (Douty & Brannon, 1984; Harrison, 2003; Jourard & Secord, 1955; Krane et al., 2001). This cultural standard denotes that the X and V body shapes are ideal and that A and H body shapes are less desirable, which consequently results in lower body cathexis score for women with this body type.

The body shape frequency results of the current study show that a majority, 56.5%, of the respondents in the sample identified the X body shape as their ideal body shape, followed by the V shape which accounted for 25.6% of the sample's responses. Of those that felt the X body shape was the ideal shape, only 38.8% of these respondents felt they possessed this body shape. Of the 25.6% of females that felt the V body shape was the ideal shape to possess, only 15.3% of these consumers felt they aligned with this shape. This means that, in regards to the X body shape, a minimum of 17.3% of females in this sample are experiencing discrepancy between their actual and ideal bodies. In regards to the V body shape, a minimum of 10.3% of these respondents have discrepancy. The combination of Hypothesis 1 and Hypothesis 2 testing supports the idealization of the X and V body shape. The discrepancy between the actual and ideal

self, according to Higgins (1987), can cause frustration and agitation, which will manifest into feelings toward one's own body or body cathexis. This suggests that a minimum of 27.6% of the respondents who fell short of possessing the ideal body shape may indicate lower body cathexis scores as a result of discrepancy.

Another study conducted by researcher Davis (1985) found that 71 out of 91 students indicated some discrepancy between their actual body and their ideal body. Those students that felt this discrepancy scored lower on body cathexis assessments than those who experienced no discrepancy. The results of the current study paralleled the aforementioned results of Davis' study, further supporting the notion that actual and ideal body shape both have a direct effect on the body cathexis, via actual/ ideal discrepancy; this study further adds that the more discrepancy between actual and ideal, the greater the effect on body cathexis. This study is also the first to propose and demonstrate lower body cathexis among A and H body types and higher body cathexis among the X and V body types since these are endorsed by culture. As mentioned earlier, 82.1% of the respondents chose V and X body shapes as their ideal. Jourard and Secord (1955) concluded that there was little difference among the ideals of women in their sample. The results of this study would suggest that the X and V body shapes are the ideal standard among college-aged women, as only 17.9% of respondents indicated having an ideal body shape outside of the X and V body shapes.

#### Actual Body Shapes Effect on Consumer Preferences

To assess the impact of body shape on consumer behavior, this study also demonstrates that current body shape interacts with dress shape to affect consumers' apparel preferences. The first portion of Hypothesis 3 and 4 predicted that actual body

shape and dress shape would interact to influence the decision regarding consumer's purchase intention and level of comfort with a dress shape. These hypotheses were supported. The second portion of these hypotheses actually predicted the dress shapes for which respondents would have higher purchase intention and level of comfort.

Hypothesis 3a and Hypothesis 4a posited that female consumers with body shapes A and H would have higher purchase intentions for and comfort with the rectangular and wedge dress shapes than those consumers with X and V body shapes. Hypothesis 3b and Hypothesis 4b predicted that body shapes X and V would have higher purchase intent for and comfort with the A-line, hourglass, and bell dress shapes than the A and H dress shapes. All of these secondary hypotheses found support in this study.

Several studies have determined that women utilize clothing as a method of masking, altering, or enhancing the view of the body. Yoo (2003) uncovered that women of varying body shapes may have particular preferences for clothing when attempting to mask or alter the perception of her body shape. This suggests that no one garment will help women of varying frames to achieve the same goal, which is to mask, alter, or enhance the perception of her actual body shape. Therefore, as affirmed in the results of Hypothesis 3 and Hypothesis 4 testing, the body and dress shape must interact to give these women the results they prefer. Fiore and Kimle (1997) indicated that there were balancing techniques through apparel for women who were unsatisfied with their proportions. Their suggestions were for women attempting to accomplish or accentuate balanced proportions through perceptually creating the X body shape. These methods included utilizing clothing as a shaping mechanism to achieve the ideal body shape. As previously mentioned, a majority of the respondents in the current study identified the X

body shape as their ideal body shape, although only a percentage of that majority felt they had this body shape. This means that these consumers may be attempting to create the illusion of having their ideal body shape, the X body shape, and those possessing it may be looking to accentuate the shape through the use of clothing. Fiore and Kimle's (1997) suggestions for achieving a balanced body were used as a basis for developing hypotheses 3a, 3b, 4a, and 4b. These suggestions alleviated top heavy body shapes by suggesting the use of silhouettes with wider hems and exaggerated hiplines, such as the A-line, hourglass and bell dress shapes, to balance the upper torso. Fiore and Kimle (1997) also recommended the use of dress shapes with built-up shoulder lines and little to no waist definition, such as the wedge and rectangular dress shapes, to offset body shapes with wider lower torsos. The findings within the current study suggest that perceptual balancing techniques are an integral part of consumers' decision making processes with respect to dresses. Therefore apparel decisions are made to aid women in achieving their ideal perceptual body shape.

#### Body Cathexis and Consumer's Level of Comfort

The notion that actual body shape has a direct effect on both body cathexis and consumer dress shape preferences received support in Hypotheses 1-4. Hypothesis 5 addresses whether body cathexis mediates the relationship between body shape and level of comfort with dress shapes. The mediating effect of body cathexis caused the main effect of actual body shape on consumers' level of comfort to become non-significant. As a result, body cathexis explains the significant relationship between actual body shape and consumer's level of comfort with various dress shapes. These results re-affirm and support the finding of previous studies that assessed body cathexis and consumer comfort

(Chattaraman & Rudd, 2006; Hwang, 1996; Kwon & Parham, 1994). This suggests that the effect of body shape on dress shape comfort of women is explained by body cathexis or their satisfaction with their body.

As previously stated, X and V body shapes had stronger preferences for the A-line, hourglass, and bell dress shapes than the A and H body shapes; and the A and H body shapes had a greater preference for the rectangular and wedge dress shapes than the X and V body shape. However, all body shapes indicated a higher level of overall comfort with the A-line, hourglass and bell dress shapes than with the rectangular and wedge dress shapes. This finding is congruent with the findings of an earlier study conducted by Green (1978). The results of Green's (1978) study predicted that the rectangular and wedge dress shapes would produce unfavorable results. The findings in her study concluded that silhouettes with little or no waist definition were found to be undesirable. These findings may be a direct result of the sample's efforts to create a perceptual body shape that aligns with their chosen ideal body shape. Previous research has concluded that the current ideal of Western society idealizes a small waistline. Therefore, dress shapes with little or no waist definition are consequently not desirable. Also, as previously stated, a majority of the current study's sample indicated the X body shape as their ideal body shape. Therefore, a majority of the sample may have responded in efforts to accent or obtain a perceptually thin waist. The fashion and trends of the time may have also influenced the results of both the current study and Green's (1978) study. The rectangular and wedge dress shapes were not the popular fashions during the time that the research was conducted in both studies

## CHAPTER VI. IMPLICATIONS AND LIMITATIONS

The implications of this research will be discussed in the following sections. Following the conceptual and practical implications of this research, suggestions for further research will be reviewed. Lastly, the limitations of the study will be explained.

### Conceptual Implications

The concept of this research is important because it's the first study to utilize the discrepancy between actual and ideal body shape as a motivator of dress preferences. Previous studies have established that consumers use clothing as a means to appear thinner and alter the visual perception of themselves, but none have actually empirically tested how women alleviate actual/ideal body shape discrepancies via clothing, particularly dress shapes. The results of this research show that perceptual balancing in efforts to achieve the ideal body shape is a factor motivating consumer purchase behavior. The body shape balancing techniques outlined by Fiore and Kimle (1997) served as a basis for the predictions of the motives of respondents in this study. Though there is no viable proof to assess respondents' exposure to these balancing techniques, it can be suggested that respondents innately adopted dress shapes that balanced their current body shapes to minimize or eliminate the discrepancy between their actual and ideal body shapes. This conclusion also alludes to the notion that to achieve perceptual balance is an ultimate goal for apparel consumers.

This research addressed actual and ideal body shape from the individual's own perspective; perhaps if the study assessed actual/ideal body shape from the perspective of others, additional insights may have emerged. This study also assessed the patterns among college-aged consumers' current actual and ideal body shape. These findings

displayed the commonalities among the ideal body shapes of consumers that share the demographics of this sample. These commonalities seemingly had mutual impacts on preferences; body shapes had higher levels of comfort and purchase intents for dress shapes that visually balance the bodies and help achieve ideal proportions. Although this study provides critical research-based evidence on the topic, more research needs to be conducted with regard to body shape's impact on consumer preferences outside of dress shape.

The conceptual model used in this research combined Sproles' (1979) Fashion Adoption Process with Branson and Sweeney's (1991) Clothing Comfort Model. The successful use of this conceptual model or preference model suggests that comfort and the fashion adoption process are related and potentially dependent on one another. Researchers focusing on the adoption on clothing by consumers may want to utilize this preference model further, as the potential of this model reaches far beyond dress shape and is applicable to any facet of clothing. Though the two scales regarding comfort and purchase intent were analyzed separately, the trends among each were similar. Body shapes within the same grouping displayed the same tendencies as far as comfort and purchase intent were concerned. This means that if a consumer displayed higher purchase intent for a particular grouping of dress shapes, then she also displayed a similar level of comfort with that grouping. This observation from the findings of this study suggests that comfort and purchase intent are somewhat linked, adding validation to the conceptual model. To further validate this model and support the linkage between comfort and fashion adoption, future research should be conducted utilizing this preference model.

## Practical Implications

There are many practical implications for this research, especially in regards to the fashion industry. This research shows that there are definite trends for ideal body shape and dress shape preferences among young college-aged consumers. Apparel firms designing for the demographic segments found in this study may use its results as a guide to design and cater to their target market. It is extremely important for designers to know their customer. Though the designer may have creative power as far as the styling details of garments, specifically dresses, are concerned, this study provides strong indication that consumers have pre-determined physical and emotional factors that have an important bearing on their final purchase intent for apparel such as dresses. Firms within the industry must be exposed to these pre-determined factors, prior to designing for their market or unfavorable financial consequences can result. The differences amongst actual and ideal body shape were suggested to have a significant effect on the emotions of consumers, specially their body cathexis. The results concerning actual and ideal body shape provide the industry with the information it needs to begin addressing consumers' emotional needs and wants. These results aid apparel firms targeting collegiate age females by providing valuable information in regards to the most prevalent self-perceived actual and ideal body shape amongst this demographic. Using this information, these apparel companies may more accurately produce dress shapes that aid their consumers by providing them a means to obtain the body shape they hold ideal. Also for those companies designing for a market outside of the demographics of this study, this research provides a research framework for them to uncover the actual and ideal body shape patterns and preferences of consumers within their market.

This research may also be beneficial to the average female consumer because the results display that many women have a body shape that is alternative to the body shape they hold ideal. This study also shows average women that a majority of females utilize clothing as a means to obtain their ideal body shape and improve their body cathexis. This means it is normal to gravitate towards particular dress shapes because these dresses provide a more positive emotional response in regard to the current body. Therefore, women exposed to the results of this study may feel more confident in their dress preferences, as well as purchases.

#### Suggestions for Future Research

This research should serve as groundwork for future studies planning to uncover consumers' actual and ideal bodies' effect on purchase decisions. It is clear from the results of this study that actual body shape does affect consumers' preference for the two sets of dress shapes, but other studies may want to de-segregate the dress shapes, to uncover the consumers' preferences across each of the five dress shapes. This can be accomplished by using a larger sample than the one used in the current study. Also in addition to quantitative research, it would also be beneficial to conduct qualitative research via focus groups to reveal how consumers' perceive the interaction between apparel and their bodies. These focus groups could also address the perceived availability of certain shapes and fits in the market, which may be revealed in consumers' open-ended responses. It would also be beneficial for respondents to be asked about their reason for choosing their ideal body shape. This information may explain if the motivations of female consumers are strictly internal or guided by outside elements. Future researchers should also go beyond dress shape, to explore body shape's effect on

styling details, such as value added techniques and seam placements. In addition to breaking garments down into detailed components, separate body cathexis scores could be assessed for various parts of the body. This information would give industry even more insight into the needs and wants of consumers. It would also be beneficial to gain knowledge in regards to the differences in preferences and body shape ideals across varying cultures and nationalities. Being that this study utilized a smaller sample of college students in the southeastern region of the United States, these differences could not be addressed. Lastly, future research should assess respondents' actual body shape via a professional body scanning tool and/or expert evaluators, in addition to self-identified body shape. These results could potentially reveal flaws in respondents' perception of their own bodies uncovering deeper actual/ideal body shape discrepancies. Ma (2003) assessed the differences between respondents' self reported body and the analyses of experts and found that 50% of her samples' selections differed from the experts selection. This suggests that at least half of her sample may have indicated the wrong body shape and size. The use of experts and body scanning tools would add more validity to the actual body shape variable measures of this study and similar studies.

#### Limitations of the Study

Although this study revealed useful results, there were limitations to the research, the first one being the size of the sample. Though this study was held on a college campus of more than 24,000 students, approximately 46.3% of this population being female, this study utilized only slightly over 200 respondents (Auburn University, 2011). This was mainly due to time and extra credit permission constraints. As previously mentioned, actual body shape was left to the discretion of respondent, as it was a self-

identified body shape. These respondents may have a flawed perception of their own actual body shape which would consequently skew the results of this study. With less time constraints and the help of body scanning technology and/or a team of body shape experts, a potentially more accurate depiction of actual body shape could be determined. Also, a majority of the respondents were undergraduate students. That being stated, a more diverse sample, age-wise, may have created alternative results. Another limitation in regards to the sample used was ethnicity. A total of 89% of respondents in this study's sample identified themselves as Non-Hispanic Caucasian. This overwhelming percentage seems to be a complete representation of the majority to minority percentage of the campus; approximately 12% of Auburn University's campus is said to be of minority status (Auburn University, 2011). A less homogeneous sample, ethnicity-wise, may have resulted in varied results. Finally, the current study addressed body shape and dress shape by creating groupings determined by similarities among balancing suggestions. This resulted in two separate groups for body shapes and two separate groups for dress shapes. The limited number of responses also made it necessary for these shapes to be grouped to derive more robust results. Although valuable information was derived by using the grouped body shapes and dress shapes, alternative results may have emerged if the body and dress shapes were not grouped. Though the grouped body shapes possess similarities in regards to balancing techniques, there are still distinct differences between them, suggesting that there should be different preferences among the women who possess these body shapes. The dress shapes not being represented individually within the analysis of data prevented the creation of individualized findings for each dress shape, which may provide implications for the industry. The accessibility

of fit may also have played a factor in the preferences of respondents. The responses could have potentially been swayed by the fashions available to consumers in today's market.

## REFERENCES

- Auburn University (2011). Enrollment by age, gender, and level. Retrieved from <https://oira.auburn.edu/factbook/enrollment/stuchar/ebaglf.aspx>.
- August, B. (1981). *The complete Bonnie August dress thin system: 642+ ways to correct figure flaws with clothes*. New York: Rawson, Wade Publishers, Inc.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–82.
- Beaudoin, P., Moore, M. A., & Goldsmith, R. E. (1998). Young fashion leaders' and followers' attitudes toward American and imported apparel. *Journal of Product and Brand Management*, *7*(3), 193-207.
- Branson, D. H. & Sweeney, M. (1991). Conceptualization and measurement of clothing comfort: Toward a metatheory. In S. B. Kaiser & M. L. Damhorst (Eds.) *Critical linkages in textile and clothing subject matter: Theory, method, and practice* (pp. 94-105). Monument, CO: International Textiles and Apparel Association
- Bookstein, L. R. (1991). *Morphometric tools for landmark data geometry and biology*. New York, NY: Cambridge University Press.
- Cash, T. F. (2000). *Multidimensional body-self relations questionnaire (MBSRQ)*. Norfolk, VA: Author.
- Chattaraman, V. & Rudd, N. A. (2006). Preferences for aesthetic attributes in clothing as a function of body image, body cathexis and body size. *Clothing and Textile Research Journal*, *24*, 46-61.

- Centers for Disease Control and Prevention (2011). Body Mass Index. Retrieved from [http://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/index.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html).
- Chowdhary, U. (1989). Fashion information seeking by younger and older consumers. *Clothing and Textiles Research Journal*, 8, 49-55.
- Cohn, L. D., Adler, N. E., Irwin, C. E., Jr., Millstein, S. G., Kegeles, S. M. & Stone, G. (1987). Body-figure preferences in male and female adolescents. *Journal of Abnormal Psychology*, 96, 276-79.
- Cohn, L. D. & Adler, N. E. (1992). Female and male perceptions of ideal body shapes: Distorted views among Caucasian college students. *Psychology of women quarterly* 16(1), 69-79.
- Connell, L. J., Ulrich, P., Brannon, E. L., Alexander, M. & Presley, A. B. (2006). Body shape assessment scale: Instrument development for analyzing female figures. *Clothing and Textile Research Journal*, 24(2), 80-95.
- Costa, F. D. L., & Cesar, R. M. (2001). *Shape analysis and classification theory and practice*. New York, NY: CRC Press.
- Cusumano, D. L. & Thompson, J. K. (1997). Body image and body shape ideals in magazines: Exposure, awareness, and internalization. *Sex Roles*, 37(9/10), 701-21.
- Davis, L. L. (1985). Perceived somatotypes, body cathexis, and attitudes toward clothing among college females. *Perceptual and Motor Skills* 61, 1199-205.
- Douty, H. I. (1968). "Visual somatometry" in health related research. *Journal of the Alabama Academy of Science*, 39, 21-34.
- Douty, H. I. & Brannon, E. L. (1984). Figure attractiveness: Male and female

- preferences for female figures. *Home Economics Research Journal* 13(2), 122-137.
- Dryden, I. L., & Mardia, K. V. (1998). *Statistical shape analysis*. West Sussex, England. John Wiley and Sons.
- Eckman, M., Damhorst, M. L., & Kadolph, S. J. (1990). Toward a model of the instore purchase decision process: Consumer use of criteria for evaluating women's apparel. *Clothing and Textiles Research Journal* 8(2), 13-22.
- Feather, B. L., & Ford, S. & Herr, D. G. (1996). Female collegiate basketball players' perceptions about their bodies, garment fit and uniform design preferences. *Clothing and Textiles Research Journal*, 14(1), 22-29.
- Fiore, A. M. & Kimle, P. A. (1997). *Understanding Aesthetics for the Merchandising and Design Professional*. New York; Fairchild Publications.
- Forsythe, S., Butler, S., and Kim, M. S. (1991). Fashion adoption: Theory and pragmatics. *Clothing and Textiles Research Journal*, 9, 8 -15.
- Green, L. L. (1978). Perception of figure attractiveness as it is affected by garment treatment. Unpublished masters' thesis, Auburn University.
- Grogan, S. (1999). *Body image: Understanding body dissatisfaction in men, women and children*. London: Routledge.
- Harrison, K. (2003). Television viewers' ideal body proportions: The case of the curvaceously thin woman. *Sex Roles*, 48, 255–264.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review* 94(3), 319-40.
- Hwang, J. (1996). Relationships between body cathexis, clothing benefits sought and

- clothing behavior: Effects of importance of meeting ideal body image and clothing attitudes. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA.
- Jourard, S. M. & Secord, P. F. (1953). The appraisal of body cathexis: Body cathexis and the self. *Journal of Consulting Psychology, 17*(3), 343-347.
- Jourard, S. M. & Secord, P. F. (1955). Body cathexis and personality. *British Journal of Psychology, 46*, 130-138.
- Jung, C. (1926). *Psychological types* (H. G. Baynes, Trans.). London: Routledge & Regan Paul.
- Kaiser, S. K. (1997). *The social psychology of clothing: Symbolic appearance in context ed. 2* (pp. 108-109). New York: Fairchild Publications.
- Kim, M. and Lennon, S. J. (2000), Television Shopping for Apparel in the United States: Effects of Perceived Amount of Information on Perceived Risks and Purchase Intentions. *Family and Consumer Sciences Research Journal, 28*, 301–31.
- Kim, M., Kim, J., & Lennon, S. J. (2006). Online service attributes available on apparel retail web sites: an E-S-QUAL approach. *Managing Service Quality, 16*(1), 51 – 77.
- Krane, V., Waldron, J., Michalenok, J., & Stiles-Shipley, J. (2001). Body image concerns in female exercisers and athletes: A feminist cultural studies perspective. *Women in Sport and Physical Activity Journal, 10*, 17–54.
- Kwon, Y. & Parham, E. (1994). Effect of state of fatness perception on weight conscious women's clothing practices. *Clothing and Textiles Research Journal, 12*(4), 16-21.

- Labat, K. L., & DeLong, M. R. (1990). Body cathexis and satisfaction with fit of apparel. *Clothing and Textile Research Journal*, 8(2), 43-48.
- Li, M. (2003). *Exploring apparel fit for women: body shape and build in relation to fit problems, body cathexis, and clothing benefit sought*. Unpublished Master's Thesis. Auburn University, Auburn, A.L.
- McJimsey, H. T. (1963). *Art in clothing selection*. New York: Harper & Row.
- Morton, G. M. (1964). *The arts of costume and personal appearance*. New York: John Wiley & Sons, Inc.
- Mossiman, J. E. (1988). Size and shape analysis. In S. Kotz & N. L. Johnson (Eds.), *Encyclopedia of Statistical Sciences*, 8, (497-507). New York: John Wiley and Sons.
- Park, J., Lennon, S. J., and Stoel, L. (2005). On-line product presentation: effects on mood, perceived risk, and purchase intention. *Psychology & Marketing*, 22(9), 695-719.
- Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail Distribution and Management*, 33, 148-60.
- Ryan, M. G. Phillips, V. (1947). *Clothes For You*. New York: Appleton-Century-Crofts.
- Simmons, K. (2002). Body shape analysis using three-dimensional body scanning technology. Unpublished Doctoral Dissertation. North Carolina State University, Raleigh, NC.
- Simmons, K. P., Istook, C. L., & Devarajan, P. (2002). Female Figure Identification

- Technique (FFIT) for Apparel part 1: Describing female shape. *Journal of Textile and Apparel Management*, 4(1), 1-15.
- Singh, D. (1994). Ideal female body shape: Role of body weight and waist to hip ratio. *International Journal of Eating Disorders*, 16(3), 283-88.
- Sproles, G. B. (1979). Toward a theory of fashion-oriented consumer behavior. In *Fashion: Consumer Behavior Toward Dress* (pp.195-207). Minneapolis, MN: Burgess Publishing Company.
- Striefel-Moore, R. H. and Franko, D. L. (2002). Body image issues among girls and women. In T. F. Cash & T. Pruzinsky (Eds.) *Body Image: A Handbook of Theory, Research, and Clinical Practice* (183-199). New York: The Guilford Press.
- Stunkard, A., Sorensen, T., & Schulsinger, F. (1980). Use of the danish adoption register for the study of obesity and thinness. In S. Kety (Ed.), *The Genetics of Neurological and Psychiatric Disorders* (p. 115-20). New York: Raven Press.
- Tovee, M. J, Reinhardt, S., Emery, J. L., & Cornelissen, P. L. (1998). Optimal BMI and maximal sexual attractiveness. *The Lancet*, 352, 548.
- Tovee, M. J., Hancock, P. J. B., Mahmoodi, S., Singleton, B. R., & Cornelissen, P.L. (2002). Human female attractiveness: Waveform analysis of body shape. *Proceeding of the Royal Society of London B*, 269, 2205-2213.
- Tovee, M. J., Mason, S. M., & Cohen-Tovee, E. M. (2003). Measurement of body size and shape perception in eating-disordered and control observers using body-shape software. *British Journal of Physiology*, 94, 501-516.
- Yoo, S. (2003). Design elements and consumer characteristics relating to design

preferences of working females. *Clothing and Textile Research Journal*, 21, 49-62.

APPENDIX A

Pilot Study Questionnaire

Consumer Body Satisfaction

Directions: Using the scale below indicate your level of satisfaction with each of the body areas below.

**Please indicate your level of satisfaction with the follow body areas:**

	Very Dissatisfied	Dissatisfied	Neither Dissatisfied Nor Satisfied	Satisfied	Very Satisfied
1. Face (facial features, complexion)	•	•	•	•	•
2. Hair (color, thickness, texture)	•	•	•	•	•
3. Lower torso (buttocks, hips, thighs, legs)	•	•	•	•	•
4. Mid torso (waist, stomach)	•	•	•	•	•
5. Upper torso (chest, shoulders, arms)	•	•	•	•	•
6. Muscle tone	•	•	•	•	•
7. Overall Appearance	•	•	•	•	•
8. Bust	•	•	•	•	•
9. Hip	•	•	•	•	•
10. Waist	•	•	•	•	•
11. Shoulders	•	•	•	•	•

Questionnaire Clarity

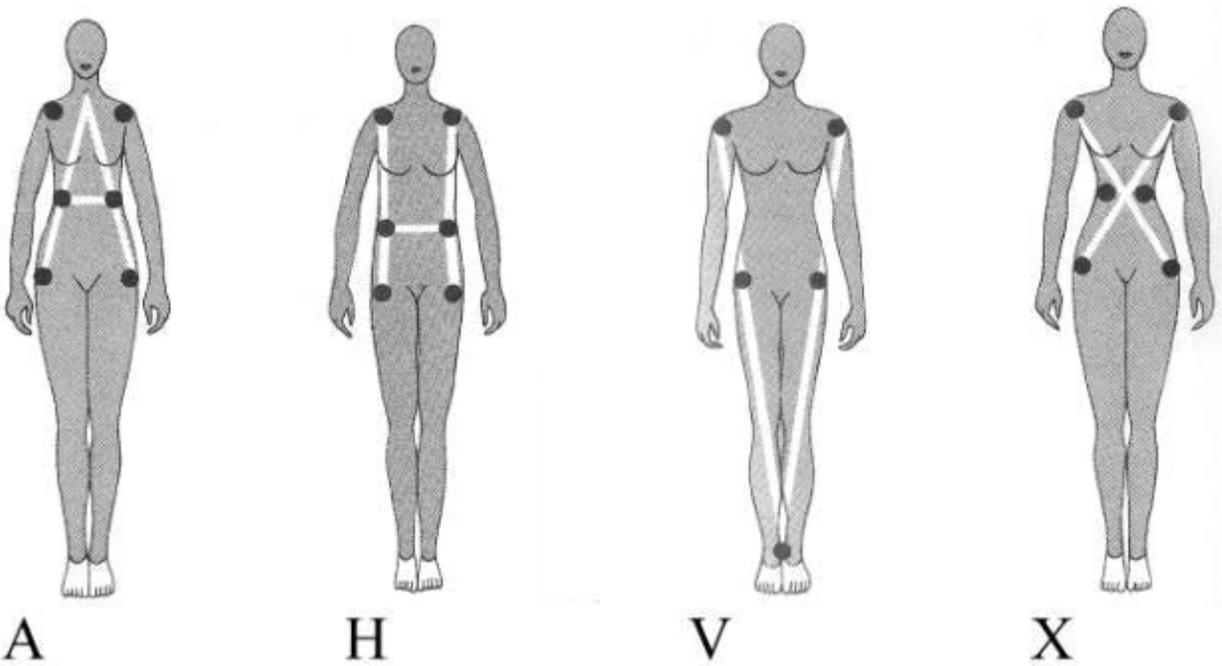
	YES	NO
Were the directions in the previous section clear?	•	•
Was the format of the previous section clear and easy to navigate?	•	•
Did you clearly understand everything asked of you?	•	•

**Part I – Comments/Suggestions**

Please take the time to write any comments and/or suggestions on the previous questions in the following box. Your comments will be used to improve this questionnaire.

**Leave Suggestions/Comments Below.**

**Body Shape Identification**



Directions: Use the visual scale above and identify which of the images best represents your current body and your ideal body shape.

Please indicate the body shape that best completes the follow statements:

	A	H	V	X
My CURRENT body shape is	•	•	•	•
My IDEAL body shape is	•	•	•	•

**Part II - Comments/Suggestions**

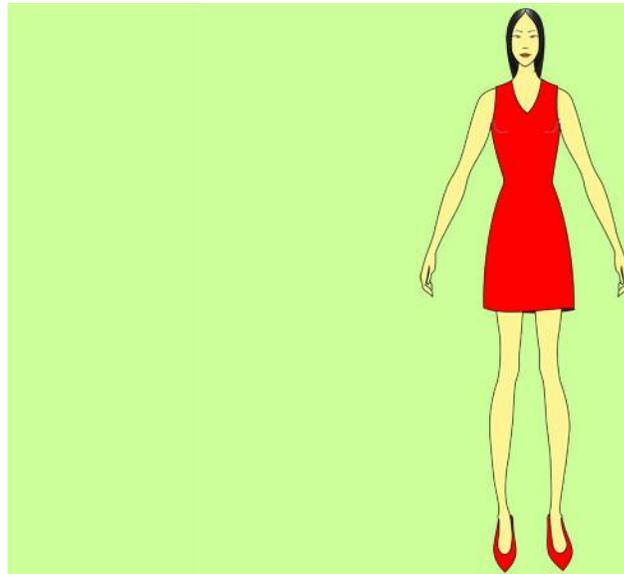
Please take the time to write any comments and/or suggestions on the previous questions in the following box. Your comments will be used to improve this questionnaire.

Please leave your critiques below.

### Dress Shape Preferences

Different consumers have different preferences for apparel design details, such as shape and silhouette. Using the visual stimuli provided, indicate the likelihood as relevant to the adjacent statement or question.

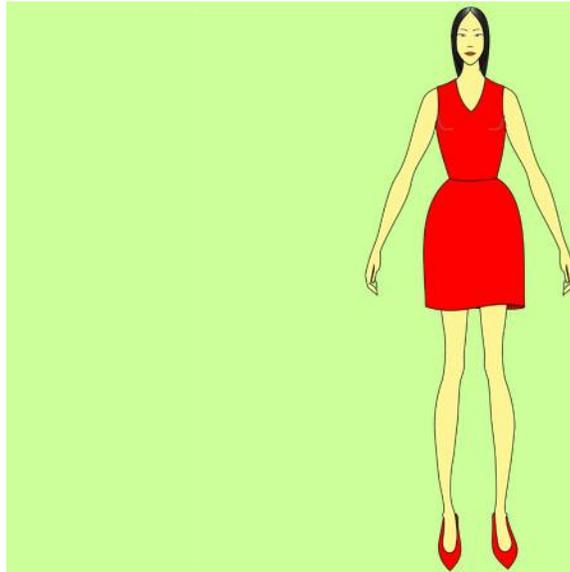
FOCUS ON DRESS SHAPE, NOT THE COLOR AND/OR STYLING DETAIL OF EACH DRESS.



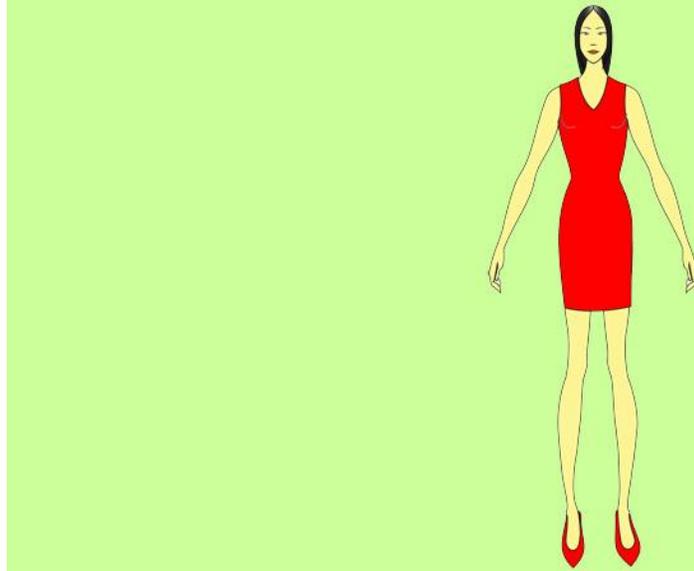
	Very Unlikely	Somewhat Unlikely	Neither Unlikely or Likely	Somewhat Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•

How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?

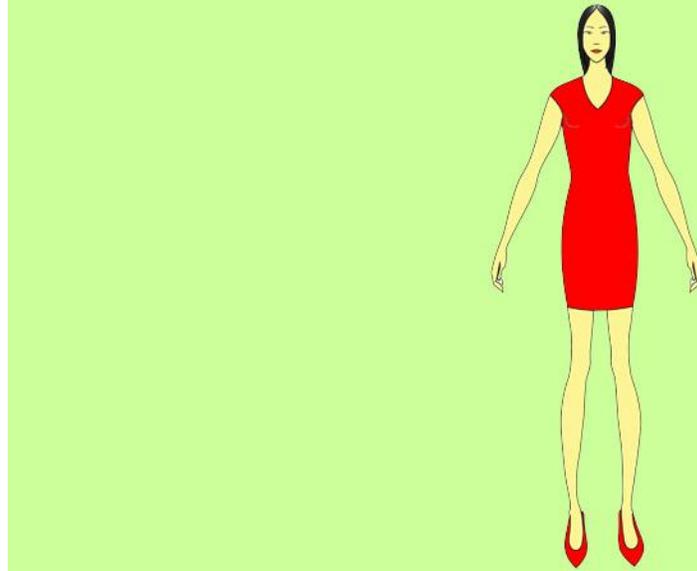
• • • • •



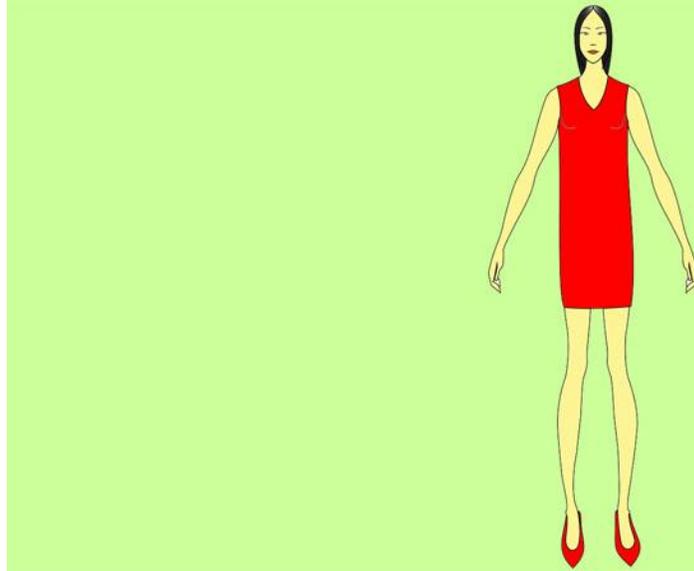
	Very Unlikely	Somewhat Unlikely	Neither Unlikely or Likely	Somewhat Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•	•	•	•	•



	Very Unlikely	Somewhat Unlikely	Neither Unlikely or Likely	Somewhat Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•	•	•	•	•



	Very Unlikely	Somewhat Unlikely	Neither Unlikely or Likely	Somewhat Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•	•	•	•	•



	Very Unlikely	Somewhat Unlikely	Neither Unlikely or Likely	Somewhat Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•	•	•	•	•

**Part III - Comments/Suggestions**

Please take the time to write any comments and/or suggestions on the previous questions in the following box. Your comments will be used to improve this questionnaire.

**Please write any comment/suggestions that you may have below.**



## APPENDIX B

### Main Study Questionnaire

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

#### INFORMATION LETTER

for a Research Study entitled

“Consumer’s Body Shape and Dress Shape Preferences”

**You are invited to participate in a research study** to examine consumers’ responses to product designs as part of my thesis. The study is being conducted by Phillip Sidberry, graduate student, under the direction of Dr. Chattaraman, Assistant Professor at Auburn University Department of Consumer Affairs. You were selected as a possible participant because you are an Auburn female student, 19 years of age or older, enrolled in a selected Human Sciences course.

**What will be involved if you participate?** Your participation is completely voluntary. If you decide to participate in this research study, you will be asked to complete a questionnaire. Your total time commitment will be approximately 15 minutes.

**Are there any risks or discomforts?** We assure that the participation in this study would put you in no physical or psychological risks other than the minimal inconvenience of completing the questionnaire. Personal information collected through this questionnaire will be kept confidential and used only for the purpose of this study. No identifiers will be used to link your responses to your identity.

**Are there any benefits to yourself or others?** The general population may benefit from this study as product designers and marketers may produce and sell products that better fit the preferences of their target market.

**Will you receive compensation for participating?** To thank you for your time you will be offered one extra credit for the class from which you are recruited from. The value of this extra credit will be left to the discretion of the class instructor. After your questionnaire is sent, you will be advised to click a link, which will take to a separate webpage. This webpage will ask that you to enter your email address for extra credit purposes.

In addition to this extra credit opportunity, you will be entered in a drawing for a brand new Apple Ipad touch. The winner of the Apple Ipad Touch will be

notified via an email from researcher, stating when and where she may claim her prize.

**If you change your mind about participating**, you can withdraw at any time during the study by closing your browser window. Once you've submitted anonymous data, it cannot be withdrawn since it will be unidentifiable. Your decision about whether or not to participate or to stop participating will not jeopardize your future relations with Auburn University or the Department of Consumer Affairs.

**Any data obtained in connection with this study will remain anonymous.** We will protect your privacy and the data you provide by not collecting IP or email addresses from research participants. Information collected through your participation may be published in a professional journal, and/or presented at a professional meeting. If so, none of your identifiable information will be included

**If you have questions about this study**, please contact Phillip Sidberry at 251-406-0643, [sidbepa@auburn.edu](mailto:sidbepa@auburn.edu) or Dr. Chattaraman at [vzc0001@auburn.edu](mailto:vzc0001@auburn.edu). 334-844-4084.

**If you have questions about your rights as a research participant**, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334) 844-5966 or e-mail at [hsubjec@auburn.edu](mailto:hsubjec@auburn.edu) or [IRBChair@auburn.edu](mailto:IRBChair@auburn.edu).

HAVING READ THE INFORMATION ABOVE, YOU MUST DECIDE IF YOU WANT TO PARTICIPATE IN THIS RESEARCH PROJECT. IF YOU DECIDE TO PARTICIPATE, PLEASE CLICK ON THE LINK BELOW.

YOU MAY PRINT A COPY OF THIS LETTER TO KEEP.

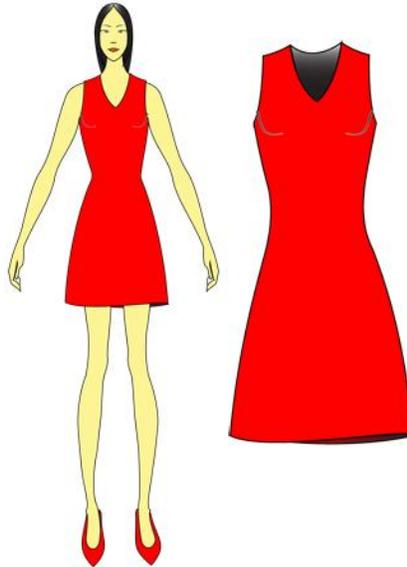
*Phillip Sidberry*, Investigator                      05/ 25/ 2010

*Dr. Veena Chattaraman*, Co-Investigator      05/25/2010

*The Auburn University Institutional Review Board has approved this document for use from June 24, 2010 to June 23, 2011. Protocol #10-164 EX 1006.*

Different consumers have different preferences for apparel design details, such as shape and silhouette. Please indicate your preference for the dress shape below on the following statements.

FOCUS ON DRESS SHAPE, NOT COLOR AND/OR STYLING DETAILS.

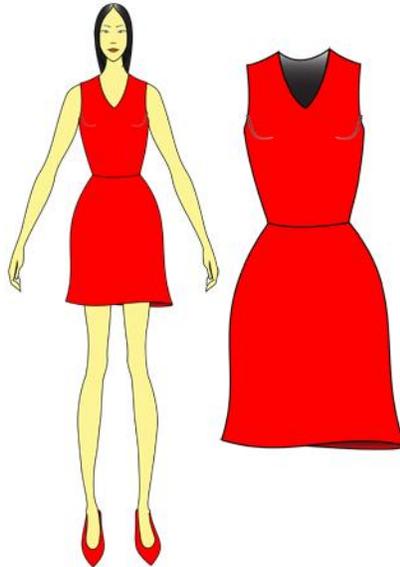


	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•	•	•
How likely is it that you will buy the dress you viewed	•	•	•	•	•	•	•

above in the next 12 months?  
 How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?

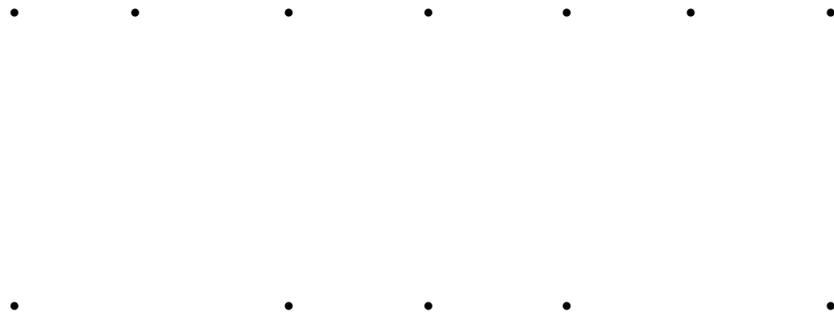
• • • • •

Please indicate your preference for the dress shape below on the following statements.



	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress	•	•	•	•	•	•	•

shape is fashionable.  
 How likely is it that you will buy the dress you viewed above in the next 12 months?  
 How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?



Please indicate your preference for the dress shape below on the following statements.



	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on	•	•	•	•	•	•	•

my body.

This dress shape is attractive on my body.

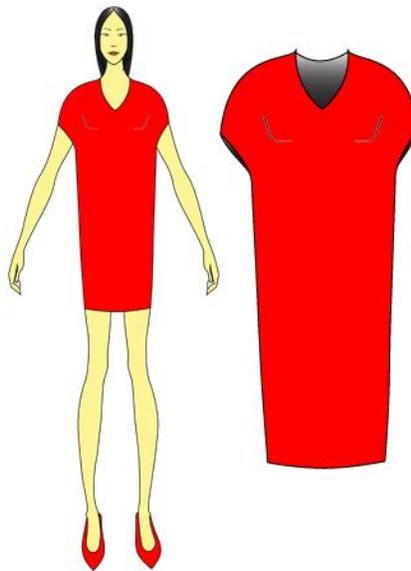
This dress shape is fashionable.

How likely is it that you will buy the dress you viewed above in the next 12 months?

How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?

•	•	•	•	•	•	•
•	•	•	•	•	•	•
•	•	•	•	•	•	•
•		•	•	•		•

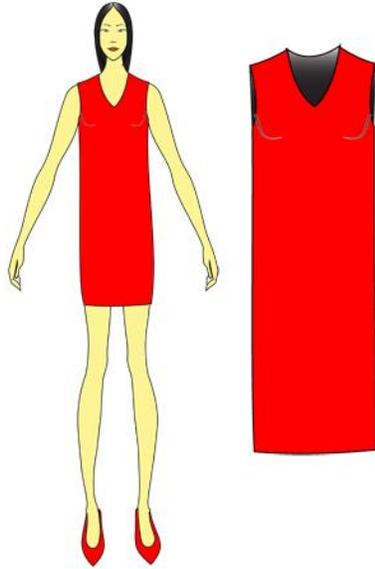
Please indicate your preference for the dress shape below on the following statements.



Very Unlikely	Unlikely	Somewhat	Undecided	Somewhat Likely	Likely	Very Likely
---------------	----------	----------	-----------	-----------------	--------	-------------

	y						Unlikely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•		•	•	•		•

Please indicate your preference for the dress shape below on the following statements.



	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the	•		•	•	•		•

upcoming  
year?

Please indicate your preference for the dress shape below on the following statements.

FOCUS ON DRESS SHAPE, NOT COLOR, MODEL'S FACE AND/OR STYLING  
DETAILS.



	Very Unlikel y	Unlikel y	Somewha t Unlikely	Undeci ded	Somewh at Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•	•	•
How likely is it that you will buy the dress you viewed	•	•	•	•	•	•	•

above in the next 12 months?  
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?

• • • • •

Please indicate your preference for the dress shape below on the following statements.

FOCUS ON DRESS SHAPE, NOT COLOR, MODEL'S FACE AND/OR STYLING DETAILS.



	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•

This dress shape is fashionable. How likely is it that you will buy the dress you viewed above in the next 12 months? How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?

<input type="radio"/>						
<input type="radio"/>						
<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>

Please indicate your preference for the dress shape below on the following statements.

FOCUS ON DRESS SHAPE, NOT COLOR, MODEL'S FACE, AND/OR STYLING DETAILS.



	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	<input type="radio"/>						

This dress shape will be comfortable on my body.

This dress shape is attractive on my body.

This dress shape is fashionable.

How likely is it that you will buy the dress you viewed above in the next 12 months?

How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?

<input type="radio"/>						
<input type="radio"/>						
<input type="radio"/>						
<input type="radio"/>						
<input type="radio"/>						

Please indicate your preference for the dress shape below on the following statements.

**FOCUS ON DRESS SHAPE, NOT COLOR, MODEL'S FACE, AND/OR STYLING DETAILS.**



	Very Unlikel y	Unlikel y	Somewha t Unlikely	Undeci ded	Somewh at Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•		•	•	•		•

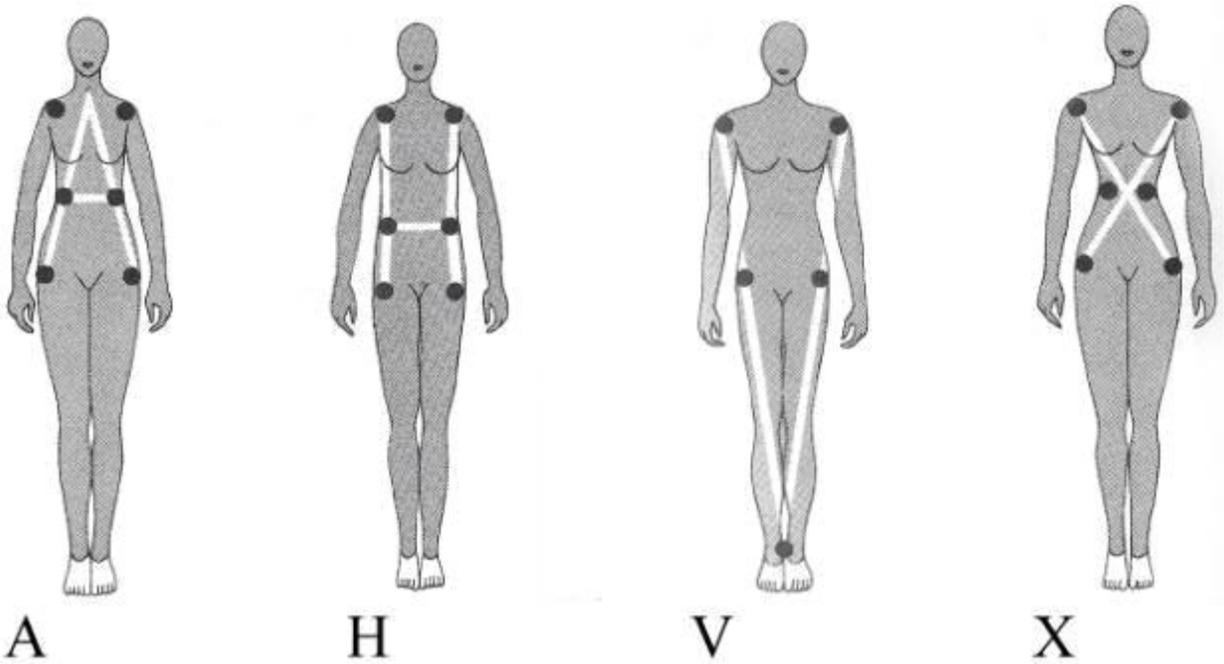
Please indicate your preference for the dress shape below on the following statements.

FOCUS ON DRESS SHAPE, NOT COLOR, MODEL'S FACE, AND/OR STYLING DETAILS.



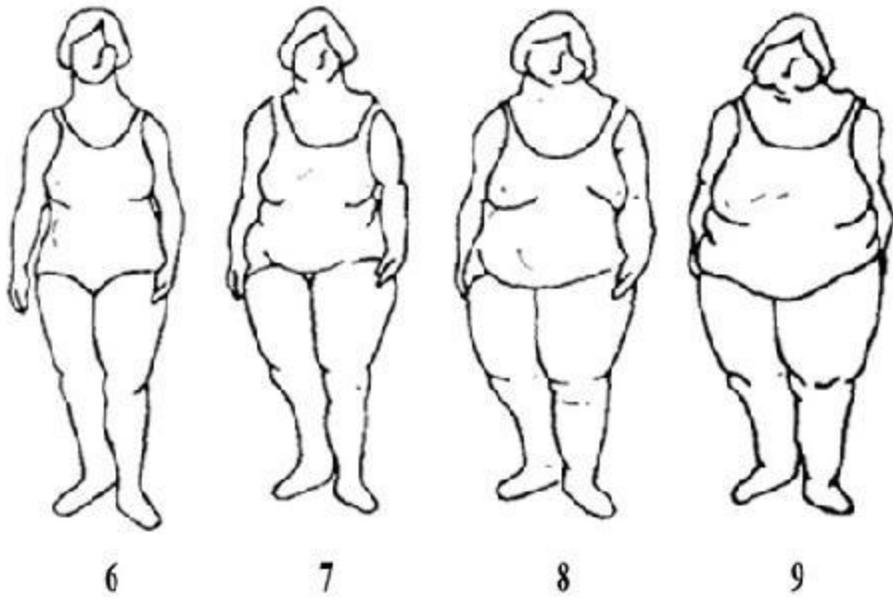
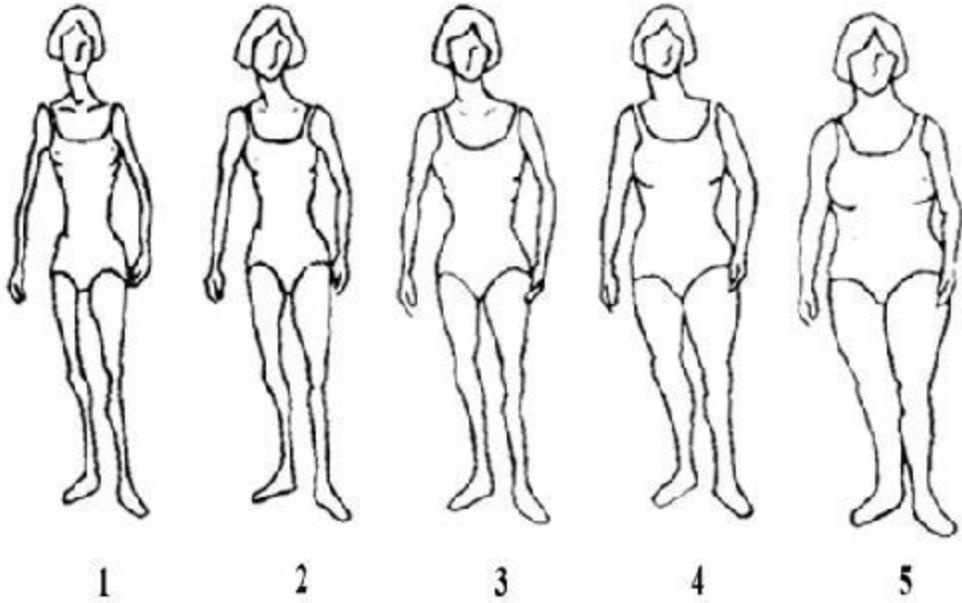
	Very Unlikely	Unlikely	Somewhat Unlikely	Undecided	Somewhat Likely	Likely	Very Likely
This dress shape will fit my body well.	•	•	•	•	•	•	•
This dress shape will be comfortable on my body.	•	•	•	•	•	•	•
This dress shape is attractive on my body.	•	•	•	•	•	•	•
This dress shape is fashionable.	•	•	•	•	•	•	•
How likely is it that you will buy the dress you viewed above in the next 12 months?	•	•	•	•	•	•	•
How likely is it that you will shop for this dress shape when you buy apparel in the upcoming year?	•		•	•	•		•

Use the visual scale below and identify which of the images best represents **your** current and ideal BODY SHAPE.



	A	H	V	X
Current Body Shape	•	•	•	•
Ideal Body Shape	•	•	•	•

Use the visual scale below and identify which of the images best represents **your** current and ideal body SIZE.



	1	2	3	4	5	6	7	8	9
Current Body Size	•	•	•	•	•	•	•	•	•
Ideal Body Size	•	•	•	•	•	•	•	•	•

Please indicate your level of satisfaction with the following body areas on YOUR body:

	Very Dissatisfi ed	Dissatisfi ed	Somewha t Dissatisfi ed	Neither Dissatisfi ed Nor Satisfied	Somewha t Satisfied	Satisfi ed	Very Satisfie d
A. Face (facial features, complexio n)	•	•	•	•	•	•	•
B. Hair (color, thickness, texture)	•	•	•	•	•	•	•
C. Lower torso (buttocks, hips, thighs, legs)	•	•	•	•	•	•	•
D. Mid torso (waist, stomach)	•	•	•	•	•	•	•
E. Upper torso (chest, shoulders, arms)	•	•	•	•	•	•	•
F. Muscle tone	•	•	•	•	•	•	•
G. Overall Appearanc e	•	•	•	•	•	•	•
H. Bust	•	•	•	•	•	•	•
I. Hip	•	•	•	•	•	•	•
J. Waist	•	•	•	•	•	•	•
K. Shoulders	•	•	•	•	•	•	•

**Directions: Please answer the following demographic questions.**

AGE:

ETHNICITY:

- NON-HISPANIC WHITE
- NON-HISPANIC BLACK
- HISPANIC
- ASIAN/PACIFIC ISLANDER
- AMERICAN INDIAN/ALASKA NATIVE
- OTHER

MARITAL STATUS:

- SINGLE AND NEVER MARRIED
- MARRIED
- SEPARATED
- DIVORCED
- WIDOWED

YOUR HEIGHT:

Feet

Inches

YOUR WEIGHT (IN POUNDS):

HOW OFTEN DO YOU SHOP FOR CLOTHING?

- NEVER
- AT LEAST ONCE A WEEK
- TWO OR THREE TIMES A MONTH
- ONCE IN A MONTH OR TWO

- ONCE IN THREE OR FOUR MONTHS
- TWICE A YEAR
- ONCE A YEAR

BASED ON YOUR PREVIOUS SELECTION, HOW MUCH OF THIS TIME IS SPENT SHOPPING FOR DRESSES?

- NEVER
- AT LEAST ONCE A WEEK
- TWO OR THREE TIMES A MONTH
- ONCE IN A MONTH OR TWO
- ONCE IN THREE OR FOUR MONTHS
- TWICE A YEAR
- ONCE A YEAR

ON A MONTHLY BASIS, HOW MUCH DO YOU SPEND ON CLOTHING?

- \$0-50
- \$50-100
- \$100-150
- \$150-200
- OVER \$200

ON A YEARLY BASIS, HOW MUCH DO YOU SPEND ON DRESSES?

- \$0-100
- \$100-200
- \$200-300
- \$300-400
- \$400-500
- \$500-600
- \$600-700
- \$700-800
- \$800-900
- \$900-1000

IF YOUR PREVIOUS SELECTION IS "OVER \$1000," PLEASE INDICATE A ROUNDED AMOUNT SPENT ON DRESSES:

--

WHICH OF THE FOLLOWING REPRESENTS YOUR OCCUPATION?

- UNDERGRADUATE STUDENT

- GRADUATE STUDENT
- OTHER PROFESSIONAL OR TECHNICAL

IF "OTHER PROFESSIONAL OR TECHNICAL" PLEASE SPECIFY:

WHICH OF THE FOLLOWING REPRESENTS YOUR ANNUAL HOUSEHOLD INCOME?

- UNDER \$5,000
- \$5,000 TO \$9,999
- \$10,000 TO \$14,999
- \$15,000 TO \$19,999
- \$20,000 TO \$24,999
- \$25,000 TO \$29,999
- \$30,000 TO \$39,999
- \$40,000 TO \$49,999
- \$50,000 TO \$59,999
- \$60,000 TO \$69,999
- \$70,000 TO \$79,999
- \$80,000 TO \$89,999
- \$90,000 TO \$99,999
- \$100,000 TO \$124,999
- \$125,000 TO \$149,999
- \$150,000 TO \$199,999
- \$200,000 TO \$249,999
- \$250,000 AND OVER