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The purpose of this study was to explore young Chinese consumers' attitudes towards mass customized apparel products and its applications, including both body scanning and co-design. At approximately 200 million people, the young generation of Chinese, aged 19-28, are a growing spending force. This group of consumers is more into fashion compared other age groups (Kalish, 2005), and, having been exposed to western values, their consumption patterns and values are also changing.

Using a qualitative methodology, in-depth interviews were conducted with twenty-seven young Chinese consumers aged 18 to 25. Interviews lasted from one to two hours, and were audio-taped with participant consent. Interviews were conducted in Mandarin Chinese, and were then transcribed, translated, and interpreted thematically. Three concepts related to customization emerged and were used to structure the interpretation: *Awareness, Perception,* and *Experience*. Several themes surfaced to provide depth information within each conceptual area.

Based on the interpretation, participants were divided into three different profiles according to their fashion leadership and interest level: Fashion leader/high interest in mass customization; non-fashion leader/high interest in mass customization; non-fashion leader/low interest in mass customization. The majority of participants was found to be non-fashion leader/high interest type, and would be interested in mass customization of apparel if given the chance. Results of the study can help marketers better understand young Chinese consumers' perceptions of mass customization in

order to successfully market mass customization in China. Avenues of further research

are discussed in light of study limitations.

APPAREL MASS CUSTOMIZATION: PERCEPTIONS OF YOUNG

CHINESE CONSUMERS

by

Yingjie Ou

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Approved by

_____
Committee Co-chair

_____
Committee Co-chair

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of the

Graduate School at the University of North Carolina at Greensboro.

Committee Co-Chairs _____

_____

Committee Members _____

_____

_____

Date of Acceptance by Committee

_____

Date of Final Oral Examination

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CHAPTER I

INTRODUCTION

Statement of the Problem

The purpose of the study was to explore Chinese consumers' perceptions of apparel mass customization. Mass customization has become more common in many areas of the marketplace, and apparel companies in particular have implemented mass customization as a means of catering to the needs of consumers. Advances in the technology of mass customization, such as body scanning, have led to better fit as well as more diversified fit options (Loker, Ashdown, & Carnrite, 2008). Although U.S. consumers have been exposed to mass customization, and in some cases body scanning, consumers in many other countries have yet to be exposed to such technology.

According to DesMarteau (2000), 50% of U.S. women found that their clothes did not fit correctly, and 50% of merchandise returns bought from catalogs were due to fit problems. Therefore, improving the fit and sizing of clothing has become a vital issue in the apparel industry. Mass customization, and in particular the use of body scanning technology, has been proposed as a solution to the problem. Nevertheless, the question of whether consumers would be willing to use such technology has yet to be explored in full. Moreover, most research on consumer perceptions of mass customization has been conducted with U.S. consumers, leaving a gap in our knowledge of consumers in other countries besides the United States. This thesis proposed to address this gap by focusing on Chinese apparel consumers.

Research Purpose and Objectives

This study specifically examined young (college-aged) Chinese consumers' perceptions of mass customized apparel. Specific objectives guiding the study were to:

1. Investigate young Chinese consumers' knowledge and awareness of apparel mass customization options.

2. Explore young Chinese consumers' perceptions of the value of mass customization, including the use of body scanning technology, for garment fit.

3. Evaluate young Chinese consumers' involvement and level of interest in mass customized apparel.

4. Segment young Chinese consumers based on involvement with and interest in mass customized apparel.

It was anticipated that the objectives would provide a basis for recommendations to apparel marketers and retailers that offer mass customization looking to expand into the Chinese apparel market.

Background

The need for mass customization in apparel has increased as consumers' demands for apparel decreased (Fiore, Lee & Kunz, 2004; Hetzel, 1998; Taplin, 1999; Wilson, 1999). Decreased consumer demand arose from western society's evolution away from a traditional "service economy" to more of an "experience economy" (Pine & Gilmore, 1999), wherein consumers are seeking memorable experiences from the marketplace (Fiore, Lee & Kunz, 2004). Pine and Gilmore (1999) indicated that for

consumers, service and experience were distinct, and those companies that provide

consumers with a memorable experience would be more successful in today's

economy. Likewise, retailers and apparel manufacturers know that by providing better

fitting clothes, they can better meet customers' needs and ultimately provide them

with a more satisfactory purchase experience (Shankar, Smith & Rangaswamy, 2002).

Any company who wants to satisfy consumers and build long-term relationships must

focus on goods and services that offer value (Fiore, Lee & Kunz, 2004).

Customization vs. Mass Customization

Customization generally means having something made in accordance with one's

particular requirements (Pine, 2003). The most common example is when a consumer

had a suit tailor-made to his or her exact size. Mass customization is a relatively new

concept that has seen rapid development in the past decade. Distinct from

customization, mass customization in the apparel industry generally means "a hybrid

of mass production and customization" (Fiore, Lee & Kunz, 2004, p. 836). According

to Pine and Gilmore (1999), mass customization is an outgrowth of the service

economy, in that it offers firms opportunities to emphasize the value consumers get

from being able to tailor a product to suit their needs. For example, some apparel

companies have begun to allow customers to order goods based on the actual

measurements of their bodies, rather than standardized measurements or indications

of fit (Loker, Ashdown & Schoenfelder, 2005). Mass customization could add value to

the shopping experience, as it addresses the requirements of individual apparel

consumers looking to have their unique needs met (Fiore, Lee & Kunz, 2003; Pine,

1996). Textile Clothing Technology Company (TC^2), a research organization that

developed mass customization technology, defines mass customization as "a process

that uses the same production resources to manufacture a variety of similar, yet individually unique products" (Kurt Salmon Associates Inc., 1998, p. 42).

There are many categories of mass customized products available in the marketplace, from personal computers to automobiles. Similarly, customized apparel has its own target consumers. Segmentation of mass customization apparel consumers relies on consumers' psychological traits and motivations for purchasing customized apparel (Fiore, Lee & Kunz, 2003). An increase in online shopping has also helped to increase sales of customized apparel (Fiore, Lee & Kunz, 2003). Not all consumers are willing to spend time and money on creating a customized product. However, once consumers choose to purchase customized products, they are more willing to pay higher prices and wait longer for the product (Tedeschi, 2002).

Research on mass customization has examined whether it could be applied to all categories of products and for all groups of consumers (Franke & Piller, 2003; Silveira, Borenstein & Fogliatto, 2001), and whether all companies should adopt mass customization (Kotler, 1989). Kaplan, Schoder and Haenlein (2007) identified two factors affecting whether consumers are likely to adopt mass customization: the value of the product itself and the experience acquired during the process. Because of the variables involved in offering mass customization, not all apparel companies are able to provide such options. Moreover, there are different kinds of mass customization available, some related to fit, while others to the design of the product.

Body Scanning Technology

In order to offer fit-based mass customized apparel products, sizing data is required. With the help of body scanning technology, this data has become easier to obtain (Loker, Ashdown & Schoenfelder, 2005). Body scanning has become an

advanced and accurate method for collecting mass customized fit data. It uses

scanning equipment to gather three-dimensional measurement data from consumers'

bodies (Istook & Hwang, 2001). The data might not be used to make a garment to fit

one individual; instead, measurements are collected from all types of human bodies in

order to create patterns for mass customized apparel (Loker, Ashdown & Schoenfelder,

2005). For example, TC^2 developed the Body Measurement System (NX-16) which

utilized 16 sensors placed in different locations to collect more than 200,000 data

points from all over the human body (www.tc2.com). This data can be aggregated to

provide companies with a baseline from which to offer mass customized fit options.

Figure 1 - 3D body scanner.
(Source:http://images.google.com/imgres?imgurl=http://www.fibre2fashion.com/
news/image)
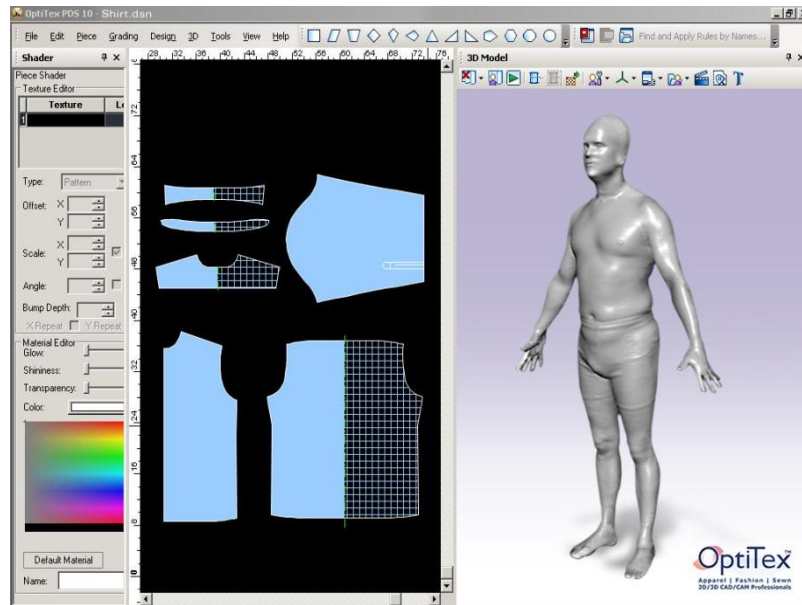
Figure 2 – 3D body image.
(Source: http://fashiontech.wordpress.com/category/virtual-fashion-marketing/)

Figure 3 – Volunteer in UK being scanned.
(Source: http://news.bbc.co.uk/2/hi/business/1500641.stm)

TC^2 also spearheaded a project called Size USA, where it conducted

anthropometric research on sizing data collected in the United States with the help of

the 3D measurement system (TC^2, 2003). Based on the findings of Size USA, nine

female body shapes were identified, four of which were dominant: rectangle shape (46.12%), spoon shape (20.92%), inverted triangle (13.83%) and hourglass (8%). Data from this study showed the evolution in body shapes, and particularly the fact that the hourglass was no longer the most dominant body shape in the US (Keiser & Garner, 2008, p. 352). The data were made available to apparel companies and institutes to make better fitting clothes for a large population. Since Size USA, other countries, such as Korea and the United Kingdom, have conducted similar data-gathering projects.

Many apparel manufacturers have adopted such technology to provide consumers with better fitting clothes and a more engaging shopping experience. One example is Intellifit, utilized by Levi's (http://it-fits.info/). With the use of such equipment, which can quickly acquire individual body measurement information, sales associates are able to determine which pair of jeans best fit each customer.

Similarly, Brooks Brothers began offering in-store customization services by collecting customer body measurements on site, either by a body scanner or hand measuring, so customers could have their made-to-measure dress shirts, suits, and sport coats within three weeks. The company uses Gerber's AccuMark Made-to-Measure (MTM) system to place orders and match customers' requirements (David, 2007).

Co-design

Co-design is another option for mass-customization. With the help of computer technology online or in-store professional assistance, the customer "creates an individualized product design from a company's style, fabric, color, surface design, and size alternatives" (Fiore, Lee & Kunz, 2004, p. 838). Co-design involves a degree

of creativity that helps provide that level of "experience" some consumers are looking for. For example, Vans shoes provided customers the chance to design their own shoes on their website. Customers can combine any colors or patterns for the different parts of the shoes, such as the upper and the sole.

According to Fiore, Lee and Kunz (2004), consumers engage in co-design to "fulfill the desire for experience" while at the same time obtaining a unique product (Fiore, Lee & Kunz, 2004, p. 845). Hence, their willingness to engage in co-design depends largely on two desires: to create a unique product and to have an exciting experience (Fiore, Lee & Kunz, 2004). With the growing number of apparel companies offering mass customization on their websites, such as Converse, Land's End, and Nike, all of which offer various patterns, fabric and color selections, online shopping is now an important channel option for consumers interested in mass customization.

Because consumer shopping online happens in a virtual retail setting, increasing purchase intention and satisfaction with the process are important goals. Generally, assurance of the fit of a garment in the virtual environment is what digital consumers care most about. Online-customized apparel providers often use a "virtual model," a digital tool that allows the consumer to view customized clothes according to his/her body measurements and to assist consumers in a virtual try-on of a garment (Loker, Ashdown, & Carnrite, 2008). They also offer a variety of fabric and pattern selections to engage consumers in the co-design experience.

Moreover, object interactivity, which lets customers manipulate an object virtually, for example on a website, can be used to assist the consumer when purchasing in the virtual environment by offering mental imagery, which influences

purchase intention more directly than attitude (Schlosser, 2003). Richardson (1969) defines mental imagery as "quasi-sensory and quasi-perceptual experiences of which we are self-consciously aware" and may "have different consequences from their sensory or perceptual counterparts" (Richardson, 1969, pp. 2-3). Imagine you are looking for a cell phone online, so you found a demonstration and pictures of the cell phone, and you even used the cell phone to take a picture, viewed it and operated other functions by pressing a button on the website. The experience of use of the cell phone on the website is quasi-sensory and quasi-perceptual, and leads to mental imagery, but you might have different feelings after using the cell phone in reality due to the genuine sensory and perceptual experience. These are the effects of mental imagery.

Figure 4 – The president and founder of My Virtual Model, Louise Guay, shows how the website works to create one's own virtual model.
(Source: http://news.cnet.com/2300-1026_3-6221411-5.html)

It should be noted that co-design is perceived to be somewhat of a financial and social risk. It is a social risk because the product is unique and has yet to be adopted by others; a financial risk because it might be difficult to return (Fiore, Lee & Kunz, 2004). Consequently, it is important for those companies that offer co-design to find ways to reduce consumers' perceived risk. This is even more important when companies are seeking to offer co-design in countries where consumers have accepted internet apparel shopping more slowly, such as in China.

China's Apparel Market

China has become a profitable apparel market due to its large population and rapid economic growth. According to Datamonitor (2008), total revenues in China's apparel retail market reached $67.7 billion in 2007, and forecasts indicate that the market could reach a value of $95.9 billion by the end of 2012. The annual growth rate of the apparel retail market from 2003-2007 was 8.3% (see Figure 5). Overall, the apparel retail market in China has been characterized as fragmented (Datamonitor, 2008). Although large apparel retailers made for most of the market share, there is still growth capacity for smaller retailers (Datamonitor, 2008). Menswear comprises 58.1% of China's total apparel retail market (Datamonitor, 2008). Men's clothing sales reached $53.49 billion in China in 2007, compared to sales of women's clothing in the U.S. of $128.9 billion. However the growth potential for the US apparel market is limited as average growth of sales in men's clothing in the United States is predicted to be less than 1% and only 7% for women's clothing until 2013 (Mintel, 2009).
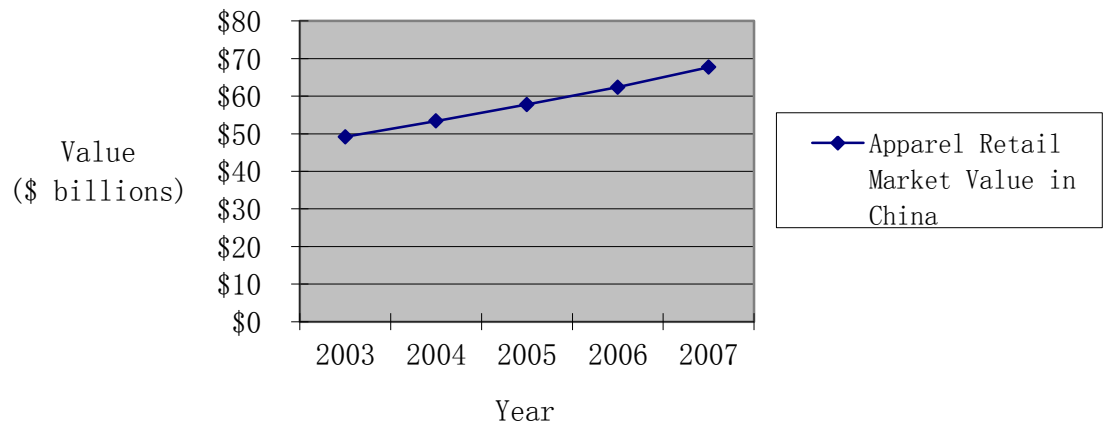
Figure 5: Apparel Retail Market Value in China (billion $).
(Source: Datamonitor, 2008)

China is considered a collectivist society, wherein conformity is an important
value and people adhere to the expectations established by the group (Hofstede, 1980;
Kluckhohn & Strodtbeck, 1961). The Chinese "emphasize living in harmony with
nature, respecting proper order, interdependence self view, modesty, and long-term
orientation" (Li, Jiang, An, Shen & Jin, 2009, p. 100). Conformist consumption
patterns, such as group shopping and similar purchasing behavior among members,
can be seen (Schutte & Ciarlante, 1998). Past research has found that Chinese
consumers are more thrifty and frugal, and have higher savings rates than consumers
in western cultures (Garner, 2005). However, at the same time, Chinese consumers
exhibit conspicuous consumption behaviors in pursuit of making good impressions on
others in order to acquire prestige and status (Wang & Lin, 2008).

Yet some research indicates that consumption patterns among Chinese
consumers are becoming more similar to Western countries, as consumerism in China
continues to grow (Hiu, Siu, Wang & Chang, 2001). Mass customization serves needs
that are individualistic rather than conformist, pointing to the possibility that Chinese

consumers will become increasingly interested in mass customization.

Young Chinese Consumers

Among the various segments of Chinese consumers, young adults have been found to focus more on fashion (Kalish, 2005) and are more likely to spend money on fashion products (Stanat, 2006). Young adults are a large subgroup in China; those between the ages of 19 and 28 number approximately 200 million (Stanat, 2006), which is comparable to the entire US population. This group has already been driving consumer spending in China, as many young people do not remember life before the economic boom of the late 20th century (Movius, 2009).

Even though young consumers are a large market segment, their lifestyles and purchasing behaviors have only begun to be studied (Yi, 2006). St-Maurice and Wu (2006) discovered that young Chinese consumers like modern products and global brands more than local brands. For instance, they prefer Nike and Coke, even though they are, on the whole, patriotic in their beliefs (Lau, 2003).

Consumption patterns among these young consumers suggest the influence of western values, such as materialism and hedonism (Li, Jiang, An, Shen & Jin, 2009). Movius (2009) found out that this young generation is beginning to use credit cards, spending approximately 20% more than they earn. As of 2008, there were 115 million credit cards in use in China, an increase from 56 million in 2007 and 13 million in 2005 (Movius, 2009).

Credit card use in China
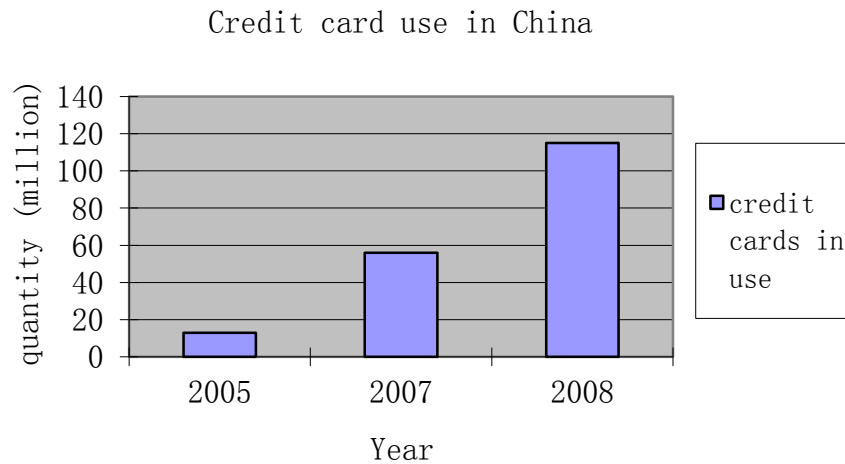
Figure 6: Credit Card Usage in China (million).
(Source: Movius, 2009)

People under 30 exhibit a savings rate of effectively zero, in contrast to the high

savings rate of the older generations, thus indicating a change in the values and

savings patterns among Chinese consumers (Movius, 2009). Consequently,

opportunities for both local and multinational firms competing for the young Chinese

consumer appear endless.

The Digital Chinese Consumer

As Chinese consumers are exposed to more high technology, and have increased

their use of the Internet, online shopping is becoming more accepted as a channel

option. Young consumers are currently the most frequent online shoppers in China

(Mummalaneni & Meng, 2009). Although online shopping is less prevalent in China

than the US, the growth rate of online shopping is high (China Internet Network

Information Center - CNNIC, 2007). Based on a CNNIC (2007) report, the number of

Internet users has reached 162 million; however, the penetration rate is low. However,

the report pointed out that the rate of internet use was much higher in urban areas and

among the young population, especially students, with the highest rate of use found

among college students, at 97.5 percent. The overall online shopping rate among

Chinese Internet users is much lower than among U.S. users, at 25.5 percent,

compared to 71 percent. Surprisingly, even among the Chinese student population, the

shopping rate is only 8.9 percent.
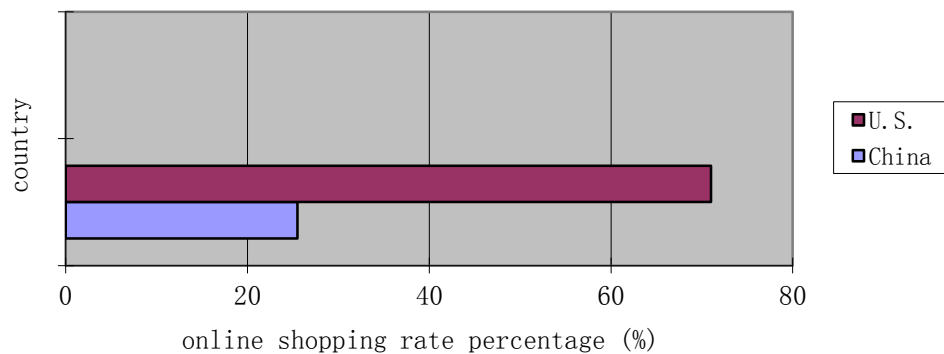
Figure 7: Comparison of Online Shopping Rates in the US and China (%).
(Source: CNNIC, 2007)

According to a study conducted with urban Chinese consumers (which equates to

about 45% of the country's population), three generations of digital users have been

defined, including: Little Emperors, aged 14 to 25; Reform Beneficiaries, aged 26 to

35; and Frugal Middle-agers, aged 36 to 50 (Meyer, Michael & Nettesheim, 2009).

This study focuses on those in the Little Emperors age group, since they also

comprise the college student demographic. Because college students are the group

most likely to use technology to make purchases, including apparel, their perspective

on mass customized apparel is the most appropriate given the purpose of this study.

Conceptual Framework

Beyond age, there are other factors affecting whether or not a consumer will

utilize mass customization. Those factors include such characteristics as whether or

not he/she is a fashion leader, and the consumer's degree of interest and involvement in clothing as a product category.

Innovation and Fashion Leadership

When a new product or service is first introduced into the market, it takes time for most consumers to become familiar with it and ultimately to adopt it. For an innovation "perceived to be new" by consumers, to spread, or diffuse, it usually is used by a small group of people, who try the new product or service. Later it might be adopted by the mass population, hence the term "diffusion of innovation" (Solomon, 2006, p. 586). The first few consumers who try the product or service are known as *early adopters* and *innovators* (Solomon, 2006, p. 586). In the fashion industry, those who are willing to try innovations are referred to as *fashion leaders*.

A fashion leader is someone who "plays a key role in the diffusion of new fashions" (Goldsmith, Freiden & Kilsheimer, 1993, p. 402). It is important for apparel companies to be aware of fashion leaders and to target them with an innovation, because fashion leaders have an impact on the rest of the consumer population. Fashion leaders are aware of the newest styles and are more likely to purchase these items when first introduced into the market (King, 1965).

Previous research on innovation and leadership shows that fashion leaders get excitement from buying new fashion items, as they consider acquiring new styles as a way to experience excitement (Goldsmith, Freiden & Kilsheimer, 1993). Fashion leaders are likely to be younger consumers who do not conform to social norms and who seek change (Goldsmith, Heitmeyer & Freiden, 1991; Kaiser, 1990; Polegato & Wall, 1980; Schrank & Gilmore, 1973). Fashion leaders are also known to have higher clothing involvement levels than other consumer groups (Goldsmith,

Heitmeyer & Freiden, 1991).

Clothing Involvement

Involvement indicates the degree to which the consumer considers an object "a central part of their life" (O'Cass, 2004, p. 870). If consumers believe certain products can satisfy higher psychological needs, then they become more involved with the product, as the high level of involvement between the consumer and the object could lead to better quality of life experiences (O'Cass, 2000). Several perspectives on involvement exist in the literature. Kapferer and Laurent (1985) suggest that there are four types of involvement: product involvement, purchase decision involvement, advertising involvement and consumption involvement. Together they comprise consumer involvement.

Dimensions of involvement as factors of the consumer involvement construct point to various types of involvement (Bloch, 1981; Mittal, 1989). Involvement level relies on each individual's level of motivation (Kapferer & Laurent, 1985). Some posit that purchase decision, advertising and consumption involvement are the result of product involvement (Mittal & Lee, 1989; Slama & Tashchian, 1987). Owing to the different degrees of value consumers place on their purchases and of importance placed on product category, involvement levels differ (Assael, 2004).

O'Cass (2004) developed a fashion involvement measure based on a general product involvement measure he developed previously. O'Cass (2000) found that younger consumers are more involved than older consumers in fashion, and females manifest higher levels of involvement in fashion than males. Materialism is also linked to fashion involvement and purchase decision (O'Cass, 2004). Finally, higher involvement levels typically result in purchases of a product.

A component of fashion involvement, clothing interest reflects "the attitude and beliefs about clothing, the knowledge of and attention paid to clothing, the concern and curiosity a person has about his/her own clothing and that of others" (Gurel, 1974, p. 12). Someone with a high level of clothing interest and high level of fashion involvement pays attention to the latest styles. According to Gurel (1974), interest in clothing is multidimensional as it relates to concern with personal appearance, experimenting with appearance, use of clothing as enhancement of security, use of clothing as enhancement of individuality, and heightened awareness of clothes. Fiore, Lee, and Kunz (2004) used the clothing interest scale created by Gurel and Gurel (1979) to study consumers' attitudes towards mass customization. The scale covered both "product and experience aspects of clothing interest" (Fiore, Lee & Kunz, 2004, p. 841), revealing the likelihood a consumer might choose mass customization. The more interested the consumer, the more likely they may be to engage in the process of mass customization.

Mass customization is a process that requires high interest and involvement. This study explored involvement level and fashion leadership as concepts important to understanding consumer perceptions of the value of apparel mass customization. Specifically, these concepts guided an exploration of the perceptions of Chinese consumers, a group whose point of view has yet to be fully examined.

Significance of the Study

Existing research on customization primarily relies on a U.S. consumer sample. Little research has focused on its relevance across cultures, and particularly to Chinese consumers. China is an enormous consumer market with great potential for

growth. Consumers born after 1980 are the primary consumption force in China, thus, more attention should be paid to these young consumers, and particularly to what they expect from their apparel purchases. This study addressed a gap in knowledge by providing insight into what young Chinese consumers think about mass customized apparel.

Considering the rapid growth in the demand for customized apparel, more research in this area is needed. This study contributes to the overall understanding of consumers' perceptions of mass customization, and specifically those of Chinese consumers. Ultimately, this study offers insight into an under-examined consumer group, and has implications for marketers and retailers looking to target young Chinese apparel consumers.

Definition of Key Terms

This section defines the key terms used throughout the study.

Body Scanning	Body scanning provides a full three-dimensional view of a human body, and can be rotated and measured (Loker, Ashdown & Carnrite, 2008). These three-dimensional images can be viewed on a computer or the Internet (Loker, Ashdown & Carnrite, 2008).
Clothing Interest	Knowledge of and attention paid to clothing, the concern and curiosity a person has about his/her own clothing and that of others (Gurel, 1974, p.

12).

Clothing Involvement	The degree to which the consumer considers clothing as "a central part of their life" (O'Cass, 2004).
Co-Design	Consumers, with the help of computer technology, engage in the design process, designing an individualized product, which is then manufactured for him/her (Fiore, 2008).
Data Measurement Gathering	Involves the collection of data related to human body measurements (Istook & Hwang, 2001).
Digital Consumers	The group of consumers that completes the entire shopping process online: search for products online, collect product information online, and purchase merchandise online (Fiore, 2008).
Fashion Leadership	A trait characteristic of someone who "plays a key role in the diffusion of new fashions" (Goldsmith, Freiden & Kilsheimer, 1993, p. 402).
Involvement Level	The extent to which a consumer is involved in the decision-making process before the purchase (O'Cass, 2004).
Mass Customization	A combination of "the mass production of individually customized goods and services" (Pine, 1993, p. 48) or "a hybrid of mass

	production and customization" (Fiore, Lee & Kunz, 2003). There are two variations in mass customization: co-design and measurement data gathering (Fiore, 2008).
SizeUSA	An anthropometric research project conducted to gather sizing data in the US by utilizing a 3D measurement system (TC^2, 2003).
Virtual Model	A digital tool exhibiting customized clothes to the consumer according to his/her body measurements when he/she shops online (Loker, Ashdown & Carnrite, 2008).

Summary

This chapter discussed the purpose of the study and provided relevant background information. Objectives of the research, significance of the study, and key terms were provided. The next chapter presents a review of literature pertinent to the study.

CHAPTER II

LITERATURE REVIEW

Statement of Purpose

This chapter presents a review of literature pertinent to the topic. First, research on the apparel market in China, and specifically the young Chinese consumer, are presented. Next, an overview of research on mass customization and its current applications, body scanning and co-design, are provided. Last, research in the areas of clothing involvement and fashion leadership are examined for their relevance to the purpose of this study.

China's Apparel Market

According to the World FactBook, in 2006 China's Gross Domestic Product reached 10.21 trillion yuan, or more than US$2.53 trillion, making it the fourth largest economy in the world. China has maintained an average annual GDP growth of 9% for over twenty years (World FactBook, 2006). Further, Chinese consumers' purchasing power amounted to 7.8 trillion US dollars in 2006, ranking it second in the world after the United States (World FactBook, 2006).

Because of China's population and its growing economic power, more companies have sought to enter the market. Datamonitor (2008) indicated revenues of $67.7 billion in China's apparel retail market in 2007, and forecasted continuous growth through 2012, reaching $95.9 billion. The annual growth rate of apparel retail from 2003-2007 was approximately 8.3%, but growth was expected to slow to 7.2%

from 2007-2012 (Datamonitor, 2008). Despite the predicted decline, total revenues are still very high.

Competition has become fierce and the market is considered to be "moderately fragmented" (Datamonitor, 2008). Nevertheless, large apparel retailers, both domestic and international, made for the biggest percentage of market share, including Youngor Group, ROMON Group Co., Ltd., Giordano International Limited, BAOXINIAO Group, Weiqiao Textile Company Limited, DKNY, Armani, Calvin Klein, Inc. and LVMH. Comprising 32% of the total Asia-Pacific apparel market value, Chinese consumers' purchasing power is clearly strong, and especially among young Chinese consumers, who are more likely to spend money than older consumers (Arora, 2005).

Apparel Consumers

According to the consumer behavior literature, there are two types of cultures: individualist and collectivist. Individualist cultures tend to encourage independence and a focus on the unique, while collectivist cultures promote group membership and behavior that reflects that of the collective, or group (Hofstede, 1991; Triandis, 1990, 1995). Compared to a focus on individualism in western societies, conformity is an essential characteristic among consumers in most Asian countries, due to the influence of collectivism (Hofstede, 1980; Triandis, 1995). People are more likely to conform in a collectivist society, and therefore conformist consumption patterns have often been found in research in Asian countries (Schutte & Ciarlante, 1998).

Although China has been described as a collectivistic society, wherein there are close relationships, and tradition, respect, and conformity are emphasized, its society has begun to exhibit individualist and materialist characteristics. It is assumed by many that these changes are the result of major economic changes and modernization.

Some researchers are finding a growing tendency among Chinese consumers to become westernized and exhibit more westernized consumption patterns, following increases in widespread consumerism throughout China (Hiu, Siu, Wang & Chang, 2001; Song & Fiore, 2008). Moreover, recent studies indicate that young urban Chinese consumers hold individualistic values and traditional collectivistic values at the same time, however, they rate individualistic values higher (Feather, 1986; Lau, 1992; Weber, 2001; Xiao & Kim, 2009) than traditional beliefs (Hofstede, 1980; Triandis, 1995). These findings point to the possibility that customized apparel, which emphasizes individualist preferences over conformity, might appeal to these particular Chinese consumers.

Young Chinese adult consumers (aged 19 to 28), an emerging subgroup, are comprised of about 200 million people (Stanat, 2006). With strong purchasing power, this group cares more about fashion and brands than any other age group in China (Kalish, 2005). Stanat (2006) found that expenditures on fashion products by this group are higher than older generations, and that purchases of more expensive items are usually made with the help of parents.

According to Movius (2009), the consumption behaviors of young adult Chinese consumers are quite different from older generations, the latter of which also exhibit higher saving rates. In contrast with the older generations, young consumers did not experience the hardships of pre-open market China, leading Movius (2009) to point out that this group does not save their money, and that they even spend more than they earn. A rapid increase in credit card usage in China, as discussed in Chapter I, illustrates major changes in consumption patterns as well as shifting values and lifestyles (Movius, 2009). Young adult consumers in China also exhibit higher levels

of involvement in apparel, positive attitudes towards premium brands and a greater willingness to spend money on branded merchandise (O'Cass & Choy, 2008). Hedonic shopping motivations have been found with regard to young consumers, however, utilitarian shopping motivations are still considered important within the overall market in China (Xiao & Kim, 2009).

The revolution in China's economy has led to changes in cultural, social and economic values among Chinese people, especially the younger generations, and these changes are clearly being reflected in their consumption patterns (Xiao & Kim, 2009). Yet these changes have not been fully explored, and particularly as they relate to the increasing presence of online shopping in the Chinese marketplace.

Consumers' Use of the Internet

Young Chinese consumers are familiar with using the internet for the purpose of electronic commerce and frequently engage in online shopping through digital devices and services (Brashear, Kashyap, Musante & Donthu, 2009; Meyer, Michael & Nettesheim, 2009; Richards & Shen, 2006). Increased use of the Internet among young Chinese consumers combined with their huge purchasing potential has resulted in online shopping, including apparel shopping, becoming a more frequent channel option (Lu & Rucker, 2005).

Although the penetration of western culture and globalization into China is obvious, differences between East and West still exist. Distinct cultures, value systems, and customs lead to differences in consumer behavior between western and Chinese consumers (Chan & Lin, 1992; Hiu, Siu, Wang & Chang, 2001; Song & Fiore, 2008), particularly when it comes to attitudes (Tan & Farley, 1987), perceived values (Overby, Gardial & Woodruff, 2004), and decision making strategies (Hiu,

Siu, Wang & Chang, 2001). Mass customization is a relatively new technology and Chinese apparel consumers have not yet been fully exposed to it. Therefore, the extent of their knowledge of mass customization and perceptions of its value are not yet known. Considering the changing consumption patterns and purchase potential among the younger generation, apparel companies seeking to gain substantial market share would benefit from an understanding of the level of appeal that mass customization has among young digital Chinese consumers.

Mass Customized Apparel and the Consumer

Mass customization is a bit of an oxymoron, in that it is "the mass production of individually customized goods and services" (Pine, 1993, p. 48). According to Pine (1993), five stages of customization exist on a continuum, where products range from purely mass produced to completely mass customized (see Figure 8). According to Pine (1993), the continuum begins with providing customization of standardized products or services. The second stage involves customized service on a small scale, such as the self-service ticket kiosk (Pine,1993, p. 10). The third stage is to "move production to the customer to provide point-of-delivery customization" (Pine, 1993, p.10). When a consumer orders something, a manufacturer can produce it according to the consumer's requests on site, such as a customized ice cream. The fourth stage is to "provide quick response," that decreases the waiting time for a product to be made to order (Pine, 1993, p.12). The final stage is to fully mass customize a product or service, by "modularizing components to customize end products and services" (Pine, 1993, p.12). For instance, when purchasing a laptop computer, the consumer could choose the devices and systems they want, place the order, and all the components

they choose will be put together and delivered within a matter of days.
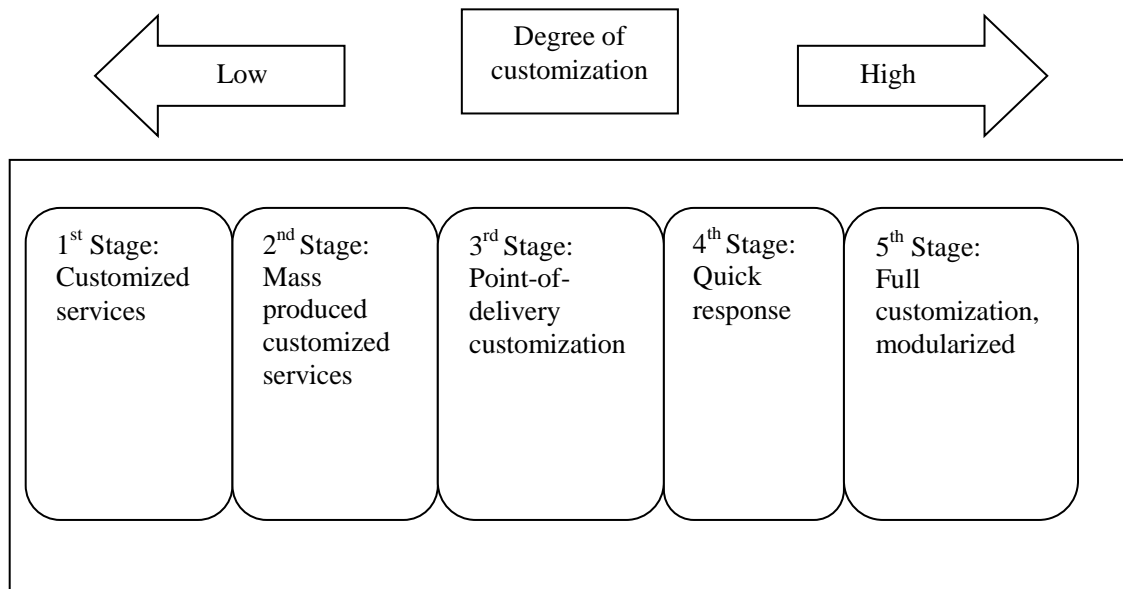
Figure 8- Five Stages of Mass Customization.
(Source: Pine, 1993)

Mass customization options are restricted by a firm's capabilities (Pine, 1993; Piller, 2003; Piller & Muller, 2004). According to Loker (2007), mass customization is a business strategy focused on using technologies, consumer involvement, and production and distribution to "provide the right product to a customer at the right time" (Loker, 2007, p. 59). Piller and Muller (2004) state that mass customization provides product differentiation and builds relationships, in that, as they point out, "the information collected during the process of individualization serves to build up a lasting individual relationship with each customer" (p. 583).

Based on focus groups conducted with 70 female consumers, Anderson-Connell, Ulrich and Brannon (2002) created a consumer-driven model for the mass customization of apparel, including four "outlets" of mass customization: clothes

clone, totally custom, co-design, and design options with standard sizes. Similar to
Pine's (1993) stages, their model began with simple production and ended with the
more complex (Anderson-Connell, Ulrich & Brannon, 2002; Ulrich,
Anderson-Connell & Wu, 2003).

The objective of mass customization is to provide a product being customized at
an optimized cost with the utilization of advanced technology (Anderson-Connell,
Ulrich & Brannon, 2002). Computer manufacturer Dell, for instance, offers
consumers choices regarding possible modules (Dellaert & Dabholkar, 2009).
Likewise, Andersen Windows produces customized windows (Zipkin, 2001). Choy
and Loker (2004) posit that clothing is an excellent option for mass customization
applications due to two factors: (1) its "close connection to customers' personal
preference" and (2) the "applicable emerging technologies" in the apparel industry (p.
86).

As described in Chapter I, there are two essential variations in mass
customization. One is co-design and the other is data measurement gathering (Fiore,
2008). According to Gilmore and Pine (1997), co-design means different things under
different circumstances, "Collaborative customization" points to a process of
co-design, "where a business and customer work together to identify and satisfy the
customer's needs through a system that allows easy articulation of exact wants"
(Ulrich, Anderson-Connell & Wu, 2003, p. 401). Co-design is a process that requires
high levels of involvement and with the help of a computer and technology,
consumers are able to develop an individualized product, which is then manufactured
for him/her (Fiore, 2008). Data measurement gathering refers to human body
measurement data collected through a tool like a body scanner (Istook & Hwang,

2001). Since neither co-design nor data measurement gathering are frequently seen in China, this study examines consumer perceptions of their value and potential applications.

From the US consumers' point of view, the benefits of mass customization must be made obvious in terms of style, fit and comfort, and functionality in order for their interest to become intention (Piller & Muller, 2004). Mass customization in apparel often emphasizes personalized sizing, thereby enhancing the options available (Loker, 2007). For example, when logging onto the custom page of the Land's End website (www.landsend.com/custom), a customer could create a customized dress shirt based on fabric selection, features and fit. To determine a customized fit, the website provides a list of all body measurements, and an illustration of the various parts of the body, such as chest, stomach, and arm type as well as body proportion.

In contrast, standardized sizing systems rely on one of three methods: (1) measurements based on one "ideal" customer, (2) adjustments of additional sizes based on grade rules, and (3) evaluation of comparisons on garment measurements with body measurements in two linear dimensions (Keiser & Garner, 2003; Loker, Ashdown & Schoenfelder, 2005). These prevailing methods no longer meet the fit needs of today's consumers because of the differences in body measurements among various kinds of body types, thereby making it almost impossible to use one standard sizing system for everyone (Loker, Ashdown & Schoenfelder, 2005). Mass customization has therefore become a better choice for today's mass populations, because it offers an opportunity for the size and fit of a garment to be improved at a reasonable cost.

For manufacturers, an advantage of offering mass customized apparel products is

a smaller inventory (Loker, 2007). On the other hand, mass customization has its disadvantages for manufacturers, one of which is the high cost (Fiore, 2008). It can be costly to acquire the technology necessary to offer customization, which can translate into a higher priced product. Consumers might be reluctant to invest in mass customized apparel if the cost is significantly higher than mass produced apparel. Another disadvantage stems from the small quantities that must be produced in a customized setting (Loker, 2007). It is likely that the benefits of apparel mass customization would increase once retailers and manufacturers are able to offer a wider selection of merchandise, and reduce the cost of customization for both the consumer and manufacturer.

Kamali and Loker (2002) studied mass customization levels based on a typology developed by Duray (1997), and classified the levels for the purpose of apparel production: (1) "custom patterns"; (2) "design through component choice of size, style, and fabric"; (3) "production planning through forecasting based on point-of-sale data"; (4) "small lots and repeat orders at the assembly stage"; (5) "automatic replenishment using point-of-sale data"; and (6) "adjustments that customers can make after the purchase" (Kamali & Loker, 2002). They found that even with offering the consumer a broader range of choices, "point-of-sale data" can still serve to predict future sales and help manufacturers decide the quantity to produce and how to deliver the product (Kamali & Loker, 2002).

With more companies offering mass customization options for consumers, the use of advanced technology, such as body scanning, has increased (Loker, Ashdown & Carnrite, 2008). As described earlier, body scanning provides a three-dimensional view of a human body that can be rotated and viewed on a computer (Loker, Ashdown

& Carnrite, 2008). This is different from an image in a mirror, or a photograph, both of which are two-dimensional. Sizing is more individualized in apparel mass customization because fit can be improved for each person based on his or her own body measurements and tailored to his or her preference for a tight or loose fit (Loker, 2007).

Body scanners collect roughly 300,000 data points (as xyz coordinates), and do so in approximately twelve seconds (Loker, Ashdown & Schoenfelder, 2005). All the data points are then connected and a surface applied, forming a three-dimensional model (Loker, 2007). From Fiore's (2008) perspective, body scanning is not only a service but also an experience. The key to succeeding with body scanning is to include some standardization in order to reduce the cost while maintaining consistency in quality for mass customization (Duray, Ward, Milligan & Berry, 2000). However, the question of whether consumers are interested in having their bodies scanned arises.

Loker, Ashdown and Schoenfelder (2005) examined consumer perceptions of body scanning technology and found three key issues: (a) level of comfort with the process of body scanning, (b) willingness to pay for a body scan, and if so, how much and how often, and (c) level of interest in shopping in a virtual environment. According to their study, a high percentage of consumers would be willing to use body scanning. Most were comfortable with having their bodies scanned and viewing their 3D images on a computer, and most were willing to pay for the expense of body scanning (Loker, Ashdown & Carnrite, 2008). Although their results were promising for the US market, a similar examination of consumers' perspectives in other countries, including China, has yet to be conducted.

Some apparel companies have already adopted body scanning technology. For instance, Brooks Brothers produces custom fit suits and shirts for men according to the measurements acquired by a body scanner (Loker, Ashdown & Schoenfelder, 2005). Levi's used a body-scanning system (Intellifit) in some shopping malls to optimize their sizing selections. The system determined the best fit and size based on the customer's body measurements (Chun, 2007). David's Bridal and Lane Bryant have also installed such equipment to better enhance their sizing systems (Chun, 2007).

Researchers have developed a variety of approaches to the analysis of the relationship between the fit of clothes and the human body using body scanning technology. Both Ashdown, Loker, Schoenfelder and Lyman-Clarke (2004) and Fralix (2001) offer such analyses. Findings can be used to create customized clothes based on body scanning data, virtual draping on the body, and to develop a sizing system that improves the current system (Loker, Ashdown & Schoenfelder, 2005). However, no studies have been done specifically to examine Chinese body types for developing mass customization in the apparel industry.

Products resulting from body scanning technology have not always met with success. Levi's Original Spin Program and Custom Foot's customized footwear program (Malone, 1999) were both failures of body scanning, pointing to the problems related to body scanning that remain to be solved. According to Malone (1999), in both cases, no profit was gained due to the costs exceeding revenues. Others revealed that customers of Levi's Original Spin program found that it took much longer to place an order in a store, due to the paperwork and measurements involved, compared to online orders (Rangaswamy & Balakrishnan, 2002).

In most cases, body scanning can benefit consumers not only because it can provide a better fitting garment, but also because it offers a unique experience (Fiore, Lee & Kunz, 2003). The data collected by a body scanner can be used to provide a variety of services, whether in-store or online, such as virtual try-on (the most common application), custom fit and even size prediction (Loker, Ashdown & Carnrite, 2008). With the widespread use of the internet to purchase apparel, retail websites have begun to serve a more functional role as a convenient shopping channel for consumers (Loker, Ashdown & Carnrite, 2008). Online apparel retailers, like H&M, Nike, and Converse, are all providing tools like virtual try-on or virtual fit as a website feature (Loker, Ashdown & Carnrite, 2008). For example, when browsing the website of H&M, one can find a showroom and a virtual model, when the consumer clicks on an item to purchase, it allows him or her to try it on the virtual body, so that the consumer can predict how outfits will look prior to purchase. A personal profile is then developed and outfits saved for future purchases.

Co-design offers personalized clothing based on a consumer's preferences, often with the help of a design professional (Anderson et al., 1997). Collaborative customization, proposed by Gilmore and Pine (1997), is a process where consumers and manufacturers collaborate to address the former's needs. Fiore, Lee and Kunz (2003) discovered that consumers' willingness to use co-design depends on the uniqueness of a product and the excitement of the experience. According to a study by Wu (1998), U.S. college students surveyed showed interest in co-design, as well as comfort with the process of using computer-aided design and satisfaction with the product.

There are currently some examples of co-design in the apparel industry. Typically, co-design takes place in-store, where consumers use computer technology to customize a product with help/support from a design professional (Ulrich, Anderson-Connell & Wu, 2003). For instance, Levi's Original Spin Program offered customized jeans to consumers by using kiosks and taking manual measurements in the stores, but it took time to place an order (Rangaswamy &Balakrishnan, 2002). In contrast, athletic and casual footwear manufacturers like Converse, Vans and Adidas are all offering more convenient online co-design options, providing consumers a variety of options. Kamali and Loker (2002) found that the higher the level of customization, the higher the intention to purchase the product. They also found that people are more likely to co-design if varied options are available.

Customized clothing can better meet consumers' needs by providing a higher degree of fit satisfaction. Nevertheless, at the same time, the process requires more effort on the part of the consumer and some financial risk (Loker, Ashdown & Schoenfelder, 2005). In the past, it was primarily the wealthy who could afford to purchase customized goods (Anderson-Connell, Ulrich & Brannon, 2002). But with the advent of mass customization, more people can access more customized goods. Traditionally, the quality of customized clothes varied because different tailors made clothes differently, leading to inconsistencies in fit and quality (Ives & Piccoli, 2003). In contrast, today's mass customization is much more user- and maker- friendly, as manufacturers control the entire manufacturing process and level of quality resulting from customization.

A study by Kurt Salmon Associates (1996) found that many consumers are willing to pay more for customized clothing and to wait for up to three weeks for

something customized. On the other hand, Anderson, Brannon, Ulrich and Marshall (1997) examined level of knowledge and interest in mass customization among female consumers, and the results indicated they held both positive and negative perceptions. For example, consumers who were interested in co-design may not do so because they are unwilling to use computer-aided design (CAD). Most believed that learning to use it would be too complicated.

One of the few studies of mass customization conducted with consumers outside of the U.S. was by Al-Mousa (2005). This study of Saudi Arabian female consumers' satisfaction with ready-to-wear and custom-made apparel indicates a significant difference in satisfaction levels with ready-to-wear and custom-made apparel. Ready-to-wear apparel rated lower than custom-made among those surveyed. The study found that these Saudi Arabian consumers were interested in co-design in order to increase satisfaction (Al-Mousa, 2005). Similar studies with consumers in other countries are needed in order to understand the degree to which mass customization would have a global appeal. Studies are needed that take into account the extent to which consumers in different cultures would be willing to expend the time, effort and expense of mass customization.

Mass Customization and Clothing Involvement

Mass customization requires that consumers spend more time in the apparel decision-making process (Solomon, 2006, p. 305). Consisting of five stages, the decision-making process begins when the consumer recognizes a need. Typically, they then move to the next stage, information search, looking for product information to help them decide how to meet that need. Information search efforts can be intensive,

depending on the product and the consumer's expectations. For instance, a consumer would spend more time searching for relevant information when buying a more expensive item, like a suit, than a T-shirt. If they were looking for something that involved customization, then they would compare the product with alternative products, and possibly even a mass produced one, for the purposes of evaluation. The next stage is evaluating the alternatives, wherein they decide between choices available. If, for example, the consumer is purchasing a T-shirt at Land's End, there are still several choices to make based on size range, specific size, neck style, sleeve length, fabric and style, color and monogramming. Once product choice has been made, then the consumer moves to the outcome phase. This includes two stages: post-purchase use and evaluation. For Land's End, the mass customization options they provide, while increasing the number of choices the consumer must consider, have resulted in an increase in customer loyalty (Piccoli, Bass & Ives, 2003).

With mass customization, generally the consumer's ultimate goal is a better fitting garment or a unique looking apparel item. In most cases, this requires a higher degree of effort on their part and greater involvement as compared to non-customized goods. Fashion involvement has been studied for the past several decades (Browne & Kaldenberg, 1997; Fairhurst, Good & Gentry, 1989; Flynn & Goldsmith, 1993; O'Cass, 2000 & 2004; O'Cass & Choy, 2008; Tigert et al., 1976). Fairhurst, Good and Gentry (1989) suggest that the purchase of most apparel items requires a high level of involvement due to the myriad of choices and sizes. This is even more the case with mass customization. Typically, to purchase a mass customized garment, the consumer is involved in the entire process, from design to fabric selection and specific sizing. Therefore, level of involvement relates to a consumer's perceptions of the

value-added provided by customization.

Involvement pertains to how "consumers become involved with products" (O'Cass, 2000, p. 546). Ko and Park (2002) considered consumer involvement to be "the level of anxiety felt about, and the importance to the consumer of certain products and services" (p. 53). Because an individual's purchase decisions are in accordance with his/her values, self-concept, and goals, involvement illustrates the relationship between consumers and products/services (Celsi & Olson, 1988; Engel & Blackwell, 1982; Zaichkowsky, 1985). Clothing is more than just functional, as it is a symbol of desired lifestyle and status (O'Cass, 2000). Based on a review of past studies, O'Cass (2000) found that younger consumers were more involved in clothing than older consumers, and females manifested higher levels of involvement in fashion clothing. Product importance and product relevance, both important to involvement, are constructs that O'Cass suggested should be highlighted in marketing high involvement products.

According to O'Cass (2000), there are four types of involvement: product involvement, purchase decision involvement, advertising involvement, and consumption involvement. The four types of involvement constitute interactions between consumers and objects from purchasing to consumption (O'Cass, 2000). Involvement is regarded as being "at the heart" of the "person-object relationship" (O'Cass, 2000) and can be used to predict purchase behavior, in that the higher the involvement level, the higher the purchase intention (Evrard & Aurier, 1996; Martin, 1998). Moreover, involvement level is not influenced by temporary situational surroundings, but by continuous and enduring changes that occur through interactions with objects and the environment (Bloch, 1981; Bloch & Richins, 1983; Fairhurst,

Good & Gentry, 1989).

According to Sproles and King (1973), fashion involvement is affected by at least five factors: (1) fashion innovativeness and time of purchase; (2) fashion interpersonal communications; (3) fashion interest; (4) fashion knowledgeability; and (5) fashion awareness and reactions to changing fashion trends. As O'Cass (2000) points out, "how involved consumers become in their clothes" reveals "the dynamics of consumer behavior and the nature and role of the product category of fashion clothing in society" (O'Cass, 2000, p. 547).

Consumers by necessity must be highly involved in the process of customization, and particularly in the pre- and post-purchase stages (Fiore, Lee & Kunz, 2003). In the present study, purchase decision involvement and consumption involvement are discussed as important elements in the process and experience of mass customization, as both are seen to be relevant to apparel mass customization. Purchase decision involvement is considered important in that highly involved consumers make different judgments and have higher purchase intention than low involvement consumers (Bowen & Chaffee, 1974; Mittal & Lee, 1989). Consumption involvement refers to the extent to which consumers are involved in the post-purchase and evaluation stages (O'Cass, 2000).

As one of the five factors important to fashion involvement defined by Sproles and King (1973), clothing interest points to the degree to which a consumer is interested in the product category. According to Gurel (1974), clothing interest is a multifaceted element, made up of the following factors: concern with personal appearance, experimenting with appearance, use of clothing as enhancement of security, use of clothing as enhancement of individuality, and heightened awareness of

clothes. Since clothing interest encompasses experimentation, individuality, knowledge and curiosity (Gurel, 1974), it is likely to play an important role in consumer's perceptions and use of mass customization (Eagly & Chaiken, 1993).

In this study, the concept of clothing interest, or interest in the purchase and consumption of apparel, was explored for its relevance to young Chinese consumers' perceptions of mass customization. It was thought that the more interest the consumer had in clothing, and thus, the more involved they were with the product category, the more receptive they might be to the process and outcomes of mass customization.

Fashion Involvement and Fashion Leadership

A study with young adult consumers in China revealed that level of involvement had implications for their willingness to pay more for a certain brand (O'Cass & Choy, 2008). The more involved they were with fashion, the more likely they were to buy higher priced products. Consumers who are highly involved with fashion are also often considered leaders. According to Goldsmith, Freiden and Kilsheimer (1993), fashion leadership plays "a key role in the diffusion of new fashions" (p. 402). Solomon and Rabolt (2004) state that diffusion in fashion takes place first in the most innovative social groups before diffusing into other social groups. As a result, four types of fashion consumers were identified: fashion innovators, fashion opinion leaders, innovative communicators and fashion followers (Hirschman & Adcock, 1987). Fashion innovators are the first group of consumers to adopt a new fashion (Park, 2004). Opinion leaders are people interested in a specific field (Weimann, 1994) and affect the opinions of others in that field (Hellevik & Bjorklund, 1991). Hellevik and Bjorklund (1991) point out that opinion leaders in one field may not be leaders in

other fields. Innovative communicators have both the characteristics of fashion innovators and opinion leaders (Workman & Studak, 2006). Beaudoin, Moore and Goldsmith (2000) regard both fashion innovators and fashion opinion leaders as fashion leaders. Fashion leaders are interested in fashion and can influence others in matters of fashion.

Innovators and early adopters are the very few early consumers who try a product after it is introduced into the market (Solomon, 2006). As fashion leaders, they are very important to marketers because they have high sales potential and, more importantly, they serve as the "change agents" able to help spread a trend through the whole fashion cycle (Summers, 1970). Based on a study of French fashion opinion leaders, Vernette (2004) pointed out that opinion leaders should be targeted by fashion media as they respond more positively to media advertising, and have higher involvement with fashion products. Workman and Studak (2006) explained the differences among the four groups in terms of need for uniqueness, variety, optimum stimulation level, sensation seeking, individuality, and susceptibility to boredom. Innovators possess the highest need for uniqueness and individuality whereas opinion leaders need optimum stimulation level. Fashion innovators and opinion leaders are the first to adopt the latest fashions during the fashion cycle. According to Goldsmith, Heitmeyer and Freiden (1991), compared with fashion followers, fashion leaders are also more likely to go shopping, because shopping is an experience which they enjoy.

Although fashion innovators and fashion opinion leaders are different from each other, they have in common that they both serve as change agents, with their biggest impact happening during the introduction and early acceptance stages of the fashion cycle (Kaiser, 1997). Summers (1970) categorized the identity of fashion opinion

leaders based on three characteristics: demographic, social and attitudinal, and topic-oriented. He divided the variables into five sets, including involvement in clothing. The study identified fashion opinion leaders as younger, more educated, with higher incomes and occupational status, as well as higher participation in organizational and social activities as compared to other groups. He also found that fashion involvement was the strongest variable in opinion leadership because this group was more interested in clothing as compared to non-leaders. As a fashion leader, an individual does not only adopt the latest fashion, but also transmits the fashion to other groups of people during participation in social activities. Hence, fashion leaders have a strong impact on other consumers with regard to fashion (King, 1965). Fashion leaders purchase new fashion items to meet their expressive and symbolic needs (Kaiser, 1990; McCracken, 1986; O'Shaughnessy, 1987), revealing "an intrinsic dimension of excitement" (King & Summers, 1967, p. 56).

Some research on fashion leadership has been conducted on non-U.S. consumers. For example, comparing women in the US and UK, Goldsmith, Freiden and Kilsheimer (1993) found that fashion leaders get more excitement from adopting new fashions than non-leaders. Chowdhary and Dickey (1988) conducted a study on Indian college women, and found that fashion opinion leaders are exposed to more sources of fashion information (e.g. fashion magazines) and with more frequency. Findings were consistent with those of studies done in western countries, with one exception: parents and family members had more influence than in western countries. Another study used the Fashion Opinion Leadership scale to categorize South Korean female consumers into the following four groups: tradition oriented/culture conscious, economic-oriented/price conscious, convenience-oriented/time conscious and

appearance-oriented/fashion conscious (Hlavaty, Harp & Horridge, 1997). The implications of fashion leadership have yet to be fully explored among Asian consumers, who, like the Indian consumers of Chowdhary and Dickey's study (1988), may be more influenced by the opinions of others as a result of the Confucian values operating within collectivist societies.

Clearly western cultures have been sufficiently studied to identify characteristics of fashion leaders, and some Asian cultures also have been researched. However, fashion leadership among consumers in China still needs to be studied, and especially in light of its emerging market status. The extent to which fashion leaders in China are similar to or different from fashion leaders in other cultures is not known. In this study, fashion leadership is seen as important to understanding the value of apparel mass customization from the perspective of young Chinese consumers.

Summary

In this chapter, an analysis of the apparel market in China was provided and characteristics of young Chinese consumers were described. Research on mass customization was discussed, and specifically that of body scanning and co-design. Research on fashion leadership and involvement was also discussed and the relevancy of these concepts was explored for the purpose of this study. The next chapter will describe the methodology used in the study.

CHAPTER III

METHODOLOGY

In this chapter, the research design is explained. Procedures used in the study, including sample selection, data collection techniques, and analyses are discussed.

Research Purpose

The purpose of the study is to examine young Chinese consumers' perceptions of mass customized apparel. The potential for using mass customization and its acceptance among young Chinese is explored relative to the concepts of fashion leadership and clothing involvement.

Objectives

In order to better understand young Chinese consumers' perceptions of mass customized apparel, the following research objectives guide the study:

1. To investigate young Chinese consumers' knowledge and awareness of apparel mass customization options.

2. To explore young Chinese consumers' perceptions of the value of mass customization, including the use of body scanning technology, for garment fit.

3. To evaluate young Chinese consumers' involvement and level of interest in mass customized apparel.

4. To segment young Chinese consumers based on involvement with and interest in mass customized apparel.

Research Design

A qualitative study was conducted, since limited research has been done on Chinese consumers' perceptions of apparel mass customization, and none has investigated the concept relative to fashion leadership or involvement. This study provides insight into the topic and helps develop an in-depth understanding of perceptions and attitudes among young Chinese consumers. Findings ultimately have useful implications for manufacturers and retailers in the apparel industry.

The primary method of data collection was in-depth interviews, used to delve into the topic as deeply as possible. Rubin and Rubin (1995) suggest that in-depth interviews can provide information not only about current behaviors, but also past behaviors, as well as emotions and thoughts. Patton (2002) argues that interviews are the best way to uncover participants' thoughts as well as behaviors because not everything can be observed directly, and especially feelings and intentions (Patton, 2002).

A semi-structured interview schedule was used (see Appendix A). Open-ended questions can encourage participants to express themselves in their own words (Patton, 2002). Questions covered general apparel shopping behaviors of the participants, such as how often he or she shopped for apparel, what features he or she cared about most when shopping for apparel, and where he or she shopped for apparel. Questions about participants' knowledge of customization techniques, as well as experiences with such techniques were also asked.

Data collection was conducted in North Carolina during the summer/fall of 2010. An appointment was scheduled with each participant for a specific time and date in order to complete the interview. Each interview lasted between 1-2 hours, and was

audiotaped with the consent of participants (see Appendix B). As an incentive for participation, each interviewee had a chance to win a $20 gift card for a major retailer in a drawing that occurred once all interviews were complete.

Sample Selection

Participants for the study were students from China studying in the U.S. A total of 27 participants were interviewed. Ages ranged from 18 to 25, because this age group, like Generation Y consumers in the United States, is aware of and able to use technology. Participants who shopped for apparel online, in stores, or both, were included in the study. Interviews were conducted in Mandarin Chinese.

Data Analysis

Upon completion of data collection, the interviews were transcribed and translated for interpretation. Unlike quantitative research, wherein the data statistically support or reject the research hypotheses, in qualitative data analysis, it is up to the researcher to explain and interpret the meaning of the data collected. Thematic analysis is often used to reveal key aspects of participant responses and to connect experiences across participants (Spiggle, 1994). Typically, this involves some degree of categorization of the data so that the issues are interpreted as part of the broader meanings and patterns present across the data.

Four steps were followed in the process of thematic interpretation (Rubin & Rubin, 1995): coding, comparison, explanation and significance. The data were divided into categories based on content. Then, comparisons among and across different categories were made. Explanation occurred once the data was categorized

and compared. Finally, significance of the data for the broader issues outlined in the literature review was investigated.

Summary

This chapter presented the research design which was employed in this study. The interview method was discussed as the primary data collection technique used for the research. A description of the sample was also included. The next chapter will present an interpretation of the data.

CHAPTER IV

INTERPRETATION

The purpose of the study is to explore young Chinese consumers' perceptions of apparel mass customization. In light of previous studies, the purpose and objectives of this study focus on apparel mass customization options currently available to consumers. An in-depth analysis of interview data presented in this chapter reveals Chinese consumers' perceptions of and experiences with mass customized apparel products. This chapter includes two sections: (a) a description of participant demographics, and (b) an interpretation of the interview data.

Participant Demographics

A total of 27 participants were interviewed. All of the participants were Chinese students attending college in the United States. Ages ranged from 18-25, with a total of 8 males and 19 females. Each participant has been in the US less than two years, and some have travelled to China and back during this time. Table 1 illustrates participants' demographic information and their customization experiences. All names have been changed for the purpose of confidentiality.

Table 1. Participant demographics and customization experiences.

Name	Age	Gender	Customization Experiences
Natalie	21	Female	Cheongsam (Chinese traditional dress).
Allison	19	Female	Formal dresses and laptop.
Nathan	20	Male	IPod from Apple website.
Tom	20	Male	Birthday cake, suit.
Yun	19	Female	Laptop, curtains, dress.
Jenny	20	Female	Engraving.
Candice	20	Female	None.
Lisa	23	Female	Cheongsam (Chinese traditional dress).
Jackie	24	Female	None.
Grace	18	Female	Customized necklace, cheongsam, and suit.
Sean	20	Male	Cotton wadded pants (Chinese traditional pants), leather jacket.
Amy	22	Female	Necklace, laptop, and T-shirts with customized logos.
Rachel	23	Female	Handicrafts (e.g. a pair of mini statues), T-shirts.
Yuanyuan	25	Female	Laptop, an engraved Zippo lighter, suit.
Ziqun	23	Male	Casual pants.
Xi	23	Male	None.
Stephanie	24	Female	None.
Cindy	22	Female	Clothes.
John	19	Male	Suit, laptop.
Terry	20	Male	None.
Sarah	20	Female	Formal dress.
David	21	Male	Soccer jerseys and matching couples T-shirts.
Wendy	23	Female	Birthday cakes.
Heather	21	Female	Inkstone with engraving.
Daisy	23	Female	Shoes (Nike ID studio in Beijing), accessories, Levi's jeans from Japan.
Britney	18	Female	Laptop, cartoon seal, tangzhuang (Chinese traditional suit).
Clarine	21	Female	School uniform.

Thematic Interpretation

After the interviews were transcribed, three concepts related to customization

emerged and are used to structure the interpretation: *Awareness, Perception,* and

Experience. Within each conceptual area, several themes help to provide depth. For

example, within the discussion of participants' *Awareness of Mass Customization*,

types and levels of customization and apparel specific customization are discussed.

Experience with mass customization includes the themes of *Positive vs. Negative,*

Hedonic vs. Utilitarian, as well as *Factors Influencing Decision Making*. Combined,

the themes provide an in-depth interpretation of the participants' thoughts on mass

customization. Factors influencing purchases of apparel and customized products are

important in understanding participants' overall responses regarding apparel mass

customization, therefore they are discussed in detail within each theme.

Awareness of Mass Customization

Awareness of mass customization varied among the participants. Many were not

aware of customization at all and asked for an explanation. Some, like Jenny,

associated customization with something expensive and exclusive, like high end

couture:

> Actually I have always wanted to customize a pair of shoes, maybe after
> starting working, for myself, and my family. Now, isn't shoe customization
> what Salvatore Ferragamo is known for? I want to have these (shoes)
> customized for them. (It should be) them first, then me. (Jenny)

Since mass customization required explanation, it followed that mass

customization was an unfamiliar topic to the participants. Even a participant like

Daisy, who has personally used both co-design and body scanning for customization,

was not aware of mass customization and what it offers. Although few people had heard of body scanning, some had heard of co-design. Lisa, for example, mentioned Converse at the beginning of the interview:

> Mass customization?... Oh, like Converse, you can choose the color of the shoes and something like that? (Lisa)

Co-design, like Converse offers, is a process of collaborating to personalize a product with help from a design professional or computer technology. Of the participants who had heard of co-design, only a few of them had used such an option. Likewise, participants were much more familiar with customization via traditional hand measurements than with a body scanner. Most had never heard of body scanning. However, though most participants in the study were unfamiliar with both co-design and body scanning, most showed an interest in both after being given an explanation.

Most participants had to think about whether they had purchased anything customized. Once they did, they realized that they had, but to varying degrees, depending on the type of customization. Most interviews thus began with increasing participants' awareness of mass customization.

Types and Degrees of Customization

Along with a general lack of awareness about mass customization, participants also lacked awareness of the wide variety of customized products available, ranging from common engravings or monograms on a shirt or an accessary, to personalizing a pair of shoes, to a laptop or even furniture based on individual preference. For instance, during a trip, Heather customized an inkstone, a stone that holds ink for writing Chinese calligraphy:

I saw people selling inkstones during the trip, so I bought one and went to ask them to put some engraving on it, like "someone had visited somewhere", and the dates. When I went back, I gave it to someone as a gift. (Heather)

Many participants did not initially think of their purchases as customized. For example, Xi said he never considered that getting a shirt embroidered or having a name printed on a jersey was customization. Similarly, a school uniform was considered to be customized to some of Terry's classmates but not to him:

The manufacturer came to school to take measurements, mainly of plus-sized and tall students, not everyone. They listed a size chart, providing your approximate body measurements [for the rest of the students], and you just chose a size fitting you, such as small, or medium, or large, based on your measurements. (Terry)

In this case, customization was done based on hand measurements rather than a body scanner, but customized nonetheless.

Some participants were aware of customization, but associated it primarily with group purchase behavior. For instance, as Rachel explains,

Do you mean customization only myself or in groups? Because I have bought something customized in groups, like people from the same online forum can choose to customize something on a certain theme, including T-shirts…. For group customizations, I have purchased customized themed t-shirts. For example, people in a fan club or an online forum of a sport star or a singer would customize T-shirts, bracelets, necklaces or some accessories altogether. Most of the time they [the customized products] were okay since the quantities were not that large, the prices could be a little higher comparably. Normally, anniversaries of a fan club, or birthdays of the sport star or the singer, there would be some event, and since people were from all over the country, it was more likely that this [customizing something for the whole group] would be a better way to celebrate. (Rachel)

<u>Apparel-Specific Customization</u>

Although some talked about customized t-shirts, most participants regarded customized apparel as limited to special occasion items, like a formal dress or a suit. For example, Yuanyuan had a suit customized during the summer while back at home in China:

> I actually went to customize a suit this past summer. I might wear [it] to a job interview or a presentation. (Yuanyuan)

John also purchased a customized suit, and, like Yuanyuan, thinks that suits and wedding dresses are things people typically get customized.

Similarly, traditional dress was something participants often cited as having customized before. Britney purchased a customized Tangzhuang, the traditional Chinese suit, when she was young, about 11 or 12 years old. As she explains, "I had it customized because it was fun to do such a thing for Chinese New Year." Natalie, who has customized a cheongsam (a traditional dress style), wore it while studying abroad, particularly for special events as an exchange student. One of Wendy's relatives living in the United States has purchased customized cheongsams at a place specializing in apparel customization in Shanghai when she goes back to China. As a student, Wendy herself does not see a current need to customize, but acknowledged that she may customize something traditional or formal, like a cheongsam, in the future.

Nearly all participants, regardless of what they might have had customized in the past, shared the view that special occasions prompted the most need for customized apparel. As Candice explains,

> Well, I don't think I have the need for it (customized apparel product). … I didn't come across any occasion that I needed that. (Candice)

Participants thought of these purchases as expensive and based on wants, not needs. According to Candice, female consumers who customize or have the need to customize apparel products are mostly "wealthy and prestigious." David had a similar conception of the type of consumers who prefer customized clothing:

> … they could be the rich people. The rich people would love to customize [apparel] for sure; they are willing to pay more and to obtain something better. (David)

Likewise, Jenny does not see a need for customized apparel given what is already available.

> First of all, for people at my age, normally you can just buy something off-the-rack, so there is no need to customize, probably no demand for this [customization] currently. I have not reached such a high-ranking yet, I don't think I have the need [for customization]. (Jenny)

Although most thought of customized apparel products as an expensive alternative to off-the-rack garments, others, like Sean and Yuanyuan, had a different point of view:

> [Customization] is fairly cheap, if comparing to the off-the-rack merchandise, probably more than 50% cheaper, [or even] two thirds of the retail price. (Sean)

Once aware of mass customized apparel, participants thought it was innovative and saw the value of it in terms of uniqueness. As Candice explains, "It is innovative, and you can create something different from others." Stephanie also explained her motive for mass customization,

> If I want to customize some clothes, I might be demanding to the tailor. Since I am not a professional, I expect him to be professional, so he can create the garment most suitable for me according to my charisma, personality and body, unlike not being able to tell the difference from something off the rack, that's not good. (Stephanie)

Overall, once participants were made aware of the range of mass customized options, most thought that customization of apparel has a promising future in China. Most participants were interested in mass customization, especially females. However, their level of awareness about mass customization options was very low. While a few had heard of or used mass customization technology for apparel products, most had not heard of either body scanning or co-design. For example, Heather responded,

> No, I have never heard of it [body scanning]. Is it something you use when passing the security in the airport? (Heather)

In contrast, Daisy had a pair of jeans mass customized in Japan, and described her experience with buying the pair of mass customized Levi's jeans using a body scanner as one of the "most satisfying experiences" she had with purchasing apparel.

Perceptions of Mass Customization

In order to find out what young Chinese consumers think of mass customization, and especially apparel mass customization, participants were asked what they thought about it as a purchase option, and whether they thought they might be interested in it. Risk, convenience and uniqueness were the three main themes that surfaced the most often in their perceptions of mass customization as a purchase option. Most participants were willing to try body scanning if given the opportunity and they did not have to pay for it. They also thought they would be comfortable doing body scanning in the store.

Risk

As with any purchase process, risk can be reduced but not necessarily prevented. Risk is inherent to mass customization for a variety of reasons, including the technology applied, questions of merchandise quality, access and distribution, and options for customer service. According to participants, the biggest concerns about purchasing something mass customized included: safety and trust, being able to return the product, and accuracy and consistency of product quality.

Because participants perceive mass customization or customization as a type of activity that carries higher risk levels, trust is crucial. Because mass customization is typically offered via the internet, concerns of online safety surfaced as important. Among the participants, some thought it was safer to shop online in the United States. For example, participants like John and Jenny regard online shopping in the United States to be more secure, while others believed online shopping security and confidentiality in China was more trustworthy. One of the participants, Clarine, explained the difference:

> To be honest, now I think it seems to be relatively safer to do online purchases in China, because there is a confirmation of merchandise arrival when I shop online in China, then when the merchandise arrives, I will confirm it on the website before the seller can acquire the payment I made. Here, there is only a one-time payment [right after you place an order]. (Clarine)

The return policy might also impact customers' purchases, both online and in-store, customized or not, and plays an essential role in the customers' perceptions of risk. That is, it was important to the participants that the customized product could be returned after the purchase has been made, pointing to a direct relationship between money invested in a customized product and expectations of customer

satisfaction. Participants were concerned that if the product being customized did not

meet their expectations, they would be stuck with it. Participants wanted to know that

the customized item was eligible for return or exchange, just like non-customized

merchandise. The return policy meant a lot to some participants, especially during

online purchases when the actual product was not seen. As Yuanyuan explained,

> I feel one big difference is that, when doing online shopping in the U.S., if
> there is something wrong with the merchandise, its return policy is better
> comparatively, it [the return policy] is really being implemented; it is
> relatively easier and faster to do returns. If you need to make a return for
> online shopping in China, probably you have to negotiate with the seller, and
> the process might be longer, not as convenient as here [the US]. (Yuanyuan)

Sarah felt the same way about services such as the return policy,

> I have bought clothes from Taobao [store] and shipped it to Hong Kong. The
> quality was really bad, and it wasn't convenient for you to return or exchange
> either. You can return, but you have to pay for the shipping when returning,
> since you have already paid a lot for shipping, you don't want to pay anymore,
> otherwise that's more expensive, so forget about it. (Sarah)

Most participants have had experiences with online shopping, and their

satisfaction levels ranged from good to bad. A common reason for dissatisfaction was

that the product purchased looked different than it did online. However, participants

varied in their response to negative purchase experiences. Some indicated that they

would not purchase online again due to distrust of actual product quality, while others

have not let the experience stop them. Amy was one who continued shopping online,

pointing out, "Once you learn a lesson, you will be more confident with online

shopping the next time."

The majority of participants saw the return policies in the United States as better

than those in China. Customized products, though, may or may not be accepted for returns or exchanges depending on the company. Participants point to a dilemma faced by manufacturers and retailers in that, on the one hand, they want consumers to be completely satisfied, but on the other hand, accepting returns of customized products increases costs and reduces profit margins. As Daisy points out, she knew this when she customized a pair of Nike shoes: "You cannot return the shoes once you place the order, they told you before you made a final purchase in the store."

Accuracy and consistency of mass customized products was also a concern, and it was relatively more of a concern when dealing with mass customization on the internet. Amy expressed her willingness to try body scanning because "the accuracy level is high" and "the fit is better." However, participants expressed different opinions about the accuracy of machine based mass customization. Some believed it was more accurate to take body measurements via a body scanner, and were interested in trying out such technology. For instance, participants like Sean and Grace both indicated a high interest in the technology to "improve the fit of apparel products."

Since a body scanner can measure a person in as little as 12 seconds, some participants were excited about its efficiency, and almost all of them said they were willing to try scanning if given the opportunity. A few of the participants shared some hesitation, though were willing to try. For instance, Sarah was skeptical about whether "body scanning has a relationship with cancer", and Yuanyuan had a concern about whether "the machine would affect privacy."

At the same time, other participants preferred hand measurements over body scanning. Although they were willing to try the new technology, they emphasized the communication between the customer and the tailor when conducting hand

measurements, as compared to a machine doing it. As Tom explains, "I prefer the old fashioned tailor made suits, because we (me and the tailor) can communicate throughout the entire process."

Other participants, like Stephanie, did not see the need for body scanning, because they can usually find clothes that fit without a lot of effort, "You have so many choices, so many varieties in the market, it is not necessary [to customize clothes]." David felt similarly, "It is not necessary, I can find something to fit me in the store easily." For this reason, some participants believed that mass customization was more helpful for plus sized consumers, in that it offers better fit and more options for that particular group of consumers. As Clarine describes:

> People who are relatively older, or people relatively bigger and fatter that I know, will customize... I always have a thought that is customization is for plus sized people, they need customization because they probably couldn't find clothes that fit them [in the market]. (Clarine)

The perception that mass customization is best used to provide apparel products for non-standard sized consumers makes for a challenge in China, given that the proportion of plus sized consumers in the population is relatively small compared to western societies.

Convenience

Convenience was another theme that emerged when participants were asked to share their perceptions of mass customization. Compared with traditional customization, the concept of mass customization was rather new to most participants. That is, though many were familiar with more traditional means of customizing apparel (i.e., the tailor), they cited the fact that such customized apparel can only be

completed in person. Mass customization, on the other hand, can be executed on or off line.

Online applications of mass customization could make the options more accessible and even faster for participants, as they can communicate choices by just clicking the mouse. To participants who shop online, it is convenient because it saves time, since shopping can be finished within minutes. At the same time, however, some were hesitant to make any decision merely based on what they could see on a computer screen due to information inequality. For example, colors can vary based on monitor settings and sizes can be difficult to judge. As Jenny complained, the fact that you cannot see or touch the actual garment is also a problem.

> The quality that you see in the picture and that you feel in person are very different, normally retailers might add something to deceive consumers, like making the pictures look better, then consumers will be really disappointed upon receiving them, because they are completely different. (Jenny)

It is for this reason that others do not shop online, saying that they prefer to feel the fabric or try the garment before purchase. Obviously, these issues present challenges in terms of participants' perceptions of mass customization via the internet. However, such issues exist in online apparel shopping as a whole, regardless of whether or not the product is mass customized.

Another concern among participants was the lack of available customer service provided by retailers and manufacturers online, especially during the information search, evaluation, and outcome stages of the decision making process. For example, if a customer needs to know more information regarding a mass customized product, such as color match or fit, before placing the order online, she may need expert advice

to help make the best decision quickly. Participants expected timely response, such as an online chat service with a customer representative, or immediate response to phone calls and emails. Online customer service is critical to the sale of mass customized apparel, and participants think it has to be fast and accurate. One benefit of online customer service functions is that they are often able to assist more than one customer at a time, whereas participants described having to wait longer to receive in store services, because "There might not be enough staff offering help with the customers in the store" (Jackie). As Daisy explains, she experienced this at the Nike ID store in Beijing.

> Once it has reached the limit, they won't let more customers coming into the store, unless there were more openings. One staff instructed only one customer at a time. So, if the store reaches its capacity, you have to wait until [the] other customer finishes. (Daisy)

Not everyone agreed that mass customization was a convenience during the interviews. Although most participants thought it was worth trying something mass customized in the future, some had no interest in mass customization options, whether co-design or body scanning. Of those who would try body scanning, Terry shared: "Because the measurements taken by a body scanner are more precise….I would rather go into a store and have the body measurements taken by a machine, and it's faster too" (Terry). Still others were interested in trying out the technologies, but had reservations nonetheless. During the interviews, some participants stated that they would rather spend time shopping for clothes in stores than spend their time on a computer using web-based co-design. From their perspective, it was a hassle to deal with the entire process, due primarily to a lack of knowledge and experience with

mass customization.

> As a student, I don't have much time for shopping, not to mention to spend time to choose or design my own clothes online. (David)

> I am not really familiar with that, technology wise…. I am the customer, why do I have to deal with the whole process which I don't really know about? (Natalie)

Sarah has a similar point of view,

> I might try, but I am not very interested in it. I think it is troublesome, you have to spend a lot of time to match this and that, and I would rather shop for something already being made. Moreover, you have to buy once you customize, and you have to wait for the product to be customized, it is quite time-consuming. (Sarah)

Uniqueness

Uniqueness, often associated with apparel mass customization, is typically sought after by young people, including the participants in this study. Many of them expressed the desire for something personalized that was different from what others had. Jackie explains,

> I think it (mass customization) should belong to a type of personalization, just like this piece of garment being unique, and it totally suits me. By uniqueness, I mean the aspect of fit, its measurement, there is no way you can buy something like it anywhere else. (Jackie)

On the other hand, for consumers shopping at particular brand name stores, they expressed the concern that there might be others wearing the same outfit. Jenny mentioned:

> Jenny: I do care if I will be wearing the same outfit as other people, [I] really

care. So when I choose clothes, I will choose something other people might not be wearing, yet very special and very pretty most of the time. I am quite afraid that I am gonna wear the same outfit as others since I remember that I had an outfit clash once, and I have never worn that piece of clothes again from then on. It was really embarrassing, I think, if you were wearing the same outfit as others.
Researcher: Would you be willing to choose to co-design some clothes in order to prevent this from happening?
Jenny: Yes, surely I am. (Jenny)

Those participants who had some experience with customization typically did so when they wanted something different, such as a necklace, a pair of pants or a traditional dress like a Cheongsam. In this study, most stated that they were willing to try mass customized products if available because it can fulfill the need for uniqueness. As Natalie points out,

Everyone has his/her own taste… So when I go shopping next time, I will get something like that, not something exactly the same, but similar. I want other people to compliment me, and I want positive feedback. I don't want everyone dressed up the same. (Natalie)

Participants perceived the greatest benefit of mass customization as an opportunity to get something "unique" and "special." Lisa described this feature to be most appealing, because "you can have something specially made for you." Yuanyuan indicated that this is important because,

It [mass customization experience] can cater to your own needs, then it can be made as what you expect, thus, it feels like something special and unique. (Yuanyuan)

Experiences Related to Mass Customization

As shown in Table 1, most of the participants had experience with some form of customization, whether or not they realized it before the interviews. Feedback related

to their experiences ranged from negative to positive. Some enjoyed the customization experience while others did not. Some regarded mass customization shopping as an enhancement of fun, whereas others shopped primarily for needs. Most participants indicated that they would utilize body scanning technology to personalize an apparel product for formal occasions in the future, such as a suit, while they would choose co-design to create casual clothing, like a t-shirt. Last, various factors, including price, location, and media all surfaced in participants' decision making with regard to mass customization.

<u>Positive vs. Negative Experiences</u>

Not all participants had pleasant past customization experiences. Some had difficulty recalling their particular experiences in the interview. In such cases, it was often due to the dissatisfaction with the customized product that ultimately resulted in the product not being used. Tom, who purchased a customized suit a few years ago, and Ziqun, who purchased a pair of customized pants, were both dissatisfied with the end result. As Ziqun explained:

> Being too tall, it is hard to find a pair of pants [that are] the right size in China, so I went to customize a pair of casual pants, but they looked terrible on me. I have never worn them…. I don't remember (the price), not at all…. Not quite satisfied….And I have never worn those pants.... (Ziqun)

Similarly, Tom could not remember if he even wore his suit,

> To be honest with you, the measurements might be wrong. The suit did not perfectly fit, and the blazer was somehow baggy, so I didn't wear it often, [I] might have once worn them at my graduation ceremony. (Tom)

Amy talked about a similar experience her friend had that was not very positive:

> My friend customized two dresses (for the exchange program in the United States). The only dissatisfaction was the process being way too slow, because she planned to take them with her to the States; however they were not finished until after she left. … They would be just hanging (in her closet) upon finished since both of us are here only for half a year, and we will be gone before Chinese New Year comes next year, [but] she might have a chance to wear them in China. (Amy)

Clearly, the amount of time a consumer has to wait for the product to be customized can affect satisfaction.

Daisy, in contrast, was positive about her past mass customization experiences, especially when she purchased jeans:

> The Levi's store was magnificent, and they picked up a pair of jeans for me based on the results from the body scanner. It was fast… And the jeans were really flattering. I would love to go back and do this again if I have a chance…. By far, this was the most satisfying shopping experience for me. (Daisy)

Outcomes, whether positive or negative, seem to have an influence on participants' expectations of future mass customization experiences, whether using body scanning, co-design, or both.

Hedonic vs. Utilitarian Motivations

The 27 participants varied in their motivations for apparel shopping ranging from hedonic to utilitarian. For example, some participants viewed shopping as a process that makes them feel happy. This is the case for Allison and Jenny, who really enjoy shopping for apparel.

> [It is] something I like, and shopping for clothes can make me happy. I enjoy the purchases, arrangements of the clothes after purchases and wearing them out, it's a kind of pleasure. (Allison)

Shopping is blissful; I think it is quite enjoyable to buy clothes so I won't think of anything. I will buy clothes when [I'm] upset sometimes, but not too many (clothes), at least I might buy some. That's it. Well, when some people are not happy, they might eat and drink a lot, or shop a lot. …. I feel more released, quite relieved, after all you spent some money, and got what you like, which was worth it. (Jenny)

Participants who enjoy shopping seemed to get excited during the apparel shopping experience. In contrast, other participants did not care much about apparel shopping. In their opinion, shopping for apparel is nothing but a way to fulfill a need, and they only shop for apparel products when necessary. These participants are utilitarian shoppers, and many, like Jackie, were price sensitive.

Firstly, price is a constant variable. If I have budget in my mind as $15, I won't spend more than that. No matter how great a deal it is or how pretty it is, I won't purchase it. (Jackie)

From Ziqun's point of view:

My personality would not be revealed by the way I dressed, thus I don't care about this [fashion], or spend time on this aspect [fashion]. (Ziqun)

According to the responses, about one third of the participants are hedonic shoppers, or those participants who enjoy shopping, these participants were also the ones who were more likely to say they would try mass customization options, such as body scanning and co-design.

Factors Affecting Decision-Making

Participants' responses revealed that price can be a deterrent to mass customization due to the fact that most perceived it as being more expensive than regular apparel. Yun explains, "Mass customization is provided for those consumers

who can afford the price and the service." Some participants even proposed that the

price for mass customized products should be high; otherwise it will not be an

attractive option. Heather pointed out that "setting a high price can attract high end

consumers," but at the same time, she also proposed that "a relatively low price or

some free gift may be a good way of promotion or introduction in the market."

Most participants thought mass customization will be more successful in big

cities in China, due to the higher populations and greater acceptance of innovation.

From Jenny's perspective:

> It depends on the city in China. The expenditure levels among the cities are
> different, so the values on expenditure are different too. Some people think it
> [mass customization] is worth it, some people don't. Therefore, you have to
> locate in certain cities. It won't work if [it's] being introduced in smaller and
> less developed places. However, cities like Shanghai, Beijing, which are more
> fashionable relatively, I think it can be promoted due to fast development and
> [a] growing population [that cares] about fashion. (Jenny)

That is, the higher the acceptance of innovation, the more likely people are willing to

try something new. It follows that mass customization would be more attractive to

those who are more interested in fashion innovation.

Media had an impact on some participants' decision making related to mass

customized apparel products. Those participants who were affected by media were

also those most interested in fashion/apparel shopping.

> The magazine and the TV shows (the media), for instance, the mix and match,
> the style, contrasting colors they (models and celebrities) wear. Sometimes I
> learn from them if they look good. I just want to make myself feel comfortable
> and happy when dressed up in a certain piece of clothes. My style is
> influenced by the media. (Allison)

> First, fashion trend (influenced me). After reading fashion magazines, I will

find out what's trendy now, and if I see classmates in school are wearing that, I am sure that it's the trend. (Natalie)

Since those participants who indicated an interest in fashion were also those who enjoyed shopping, mass customization options might be best marketed to this consumer group. This, in turn, may lead to more people using mass customization. As Wendy points out: "If [it] can attract those fashion leaders, later more people will be attracted to [it] because of the leaders' impact."

Summary

This chapter provided an interpretation of participants' responses organized around three concepts used to understand their awareness, perceptions and experiences with mass customization. The next chapter discusses findings based on the interpretation and relative to the purpose and objectives of the study.

CHAPTER V

DISCUSSION AND IMPLICATIONS

This chapter includes the following sections: (a) research purpose and objectives; (b) a discussion of findings based on the interpretation, and (c) limitations and suggestions for future research.

Research Purpose and Objectives

This study examined young (college-aged) Chinese consumers' perceptions of mass customized apparel. Specific objectives guiding the study were:

1. To investigate young Chinese consumers' knowledge and awareness of apparel mass customization options.

2. To explore young Chinese consumers' perceptions of the value of mass customization, including the use of body scanning technology, for garment fit.

3. To evaluate young Chinese consumers' involvement with and level of interest in mass customized apparel.

4. To segment young Chinese consumers based on involvement with and interest in mass customized apparel.

Discussion of Findings

Among the 27 participants, only one had purchased a mass customized apparel product in the past. Although most participants had heard of traditional customization,

and many had used such services before, they were not aware of mass customized apparel, or the options afforded by it. Nearly all of the participants had never heard of body scanning, and roughly 80% of them did not know about co-design prior to the interviews. Therefore, apparel mass customization is clearly not a topic these young Chinese consumers are familiar with.

Although most participants have customized something in the past, it was found that some of them needed repeated reminders before they could recall their customization experiences. It seems that they were not aware of the wide variety of options within customization, as most considered customized apparel to be limited to special occasion items, like a traditional dress or suit, which are seldom worn. Moreover, they explained that the most common reason why they had not purchased customized apparel products was that they did not think they needed them. For example, Jackie was one participant who pointed out that she did not customize clothes because she did not need to customize anything formal, and she did not see a need to customize anything casual either.

Once exposed to the concept of mass customization, the female participants indicated a higher level of interest in pursuing mass customization than the males. For example, Terry did not have an explicit attitude towards apparel mass customization, as he stated, "I may try either of [the] mass customization options if available, but [I am] not quite sure, I am not quite interested in them." Nathan claimed that mass customization would not matter to him because he had "no interest in apparel or fashion" or did not "care about what to wear." In contrast, most female participants expressed an interest and indicated that they would be more willing to utilize mass customization for formal apparel products. As Natalie explained,

> Of course the wedding dress or formal dress. [A] wedding is something really important to a woman; the dress you wear on that day has to be gorgeous because you are the bride, so I think it is really important. But jeans are something you wear everyday, and they don't cost that much either….It is not necessary to have a pair of jeans made to order. (Natalie)

All participants thought that mass customization in apparel sounded innovative and unique. According to the interpretation, risk, convenience and uniqueness were the three factors influencing these young consumers' perceptions of mass customization. Apparel mass customization has inherent unavoidable risk because of accuracy and consistency issues. Before ordering a mass customized garment, it is important to make sure the product will meet the consumer's expectations, and if the product does not meet their satisfaction, ensure that it may be returned. Based on the responses from the participants, the return policy in China needs to be improved. As Sarah complained during her interview,

> I have bought clothes from Taobao [store] and shipped it to Hong Kong. The quality was really bad, and it wasn't convenient for you to return or exchange either. You can return, but you have to pay for the shipping when returning, since you have already paid a lot for shipping, you don't want to pay anymore, otherwise that's more expensive, so forget about it. (Sarah)

Mass customization can be executed on or off line, which is an advantage when compared to traditional customization, which is typically off line. Consumers can choose to get a body scan or engage in co-design with the help of a professional and/or a computer in the store, or they can mass customize products online. Participants acknowledged that online customization is easily accessible and fast, however it may mean waiting for a product. In order to make mass customization appealing to consumers, they thought that service concerns must be resolved in a

timely manner.

Not all participants thought that mass customization was convenient, and especially those who had no interest in mass customization. Some participants thought it would be too time consuming to deal with co-design online since they had no prior knowledge or experience with mass customization. Hence, there is a considerable need for mass customization providers to increase young Chinese consumers' interest in the potential of apparel mass customization and to encourage them to use such technology.

One benefit of mass customization is that a consumer can get something different from others, even though the manufacturing process is the same. Historically, interest in uniqueness and individuality was rarely evident in China, which was primarily a collectivist culture. According to Schutte and Ciarlante (1998), in most Asian countries, conformity can be found in all aspects of behavior, including conformist consumption patterns. Collectivism is a key value among Asian societies, where close relationships, respect, tradition, and conformity exist. But because of westernization in recent years, Chinese consumers are beginning to exhibit more western consumption patterns, including less conformity (Hiu, Siu, Wang, & Chang, 2001; Song & Fiore, 2008). Moreover, studies have revealed that young Chinese consumers represent both traditional collectivistic and individualistic values and rate the latter of the two higher (Feather, 1986; Lau, 1992; Weber, 2001; Xiao & Kim, 2009). This was reflected by those participants who expressed a positive attitude toward mass customization; for example, Amy was excited to learn about mass customization and its application to apparel because she wanted garments that were "different, unique and personalized." Given this shift, it is not hard to understand why the participants in

the study were interested in mass customization and expressed a willingness to use mass customization options for apparel in the future. Even those participants who shop at brand name or apparel specialty stores did not want to wear the exact same outfit as others.

Participants who had customized products in the past had a variety of experiences ranging from positive to negative. Some participants complained about the results. For instance, Tom did not like the customized suit he bought because it did not fit him well, and Amy's friend who customized a traditional dress could not get the product in time. Due to the difference in skills among tailors, traditional customization is not always as consistent and accurate as mass customization. Only one participant, Daisy, had experience with mass customized apparel, and she found it to be quite satisfying.

Motivations for apparel shopping varied from utilitarian to hedonic among the participants. For example, fashion leaders like Allison enjoy shopping and are considered to be hedonic shoppers. On the other hand, for fashion followers who shop based on needs, the motivation is rather different from fashion leaders. Based on the interpretation of data, price, location and media are important elements in consumer decision making about apparel mass customization. As suggested by this study, an appropriate price range could motivate potential Chinese consumers to try using mass customization technology. Introduction of mass customization would best be carried out in urban China, especially big cities where people are more accepting of innovations and willing to try new ideas. Last, media has an influence over fashion leaders, so utilizing a variety of sources in the media could promote mass customization more widely in the Chinese apparel consumer market.

Attributes of Apparel Mass Customization

The objective of mass customization is to provide a customized product at optimal cost through the utilization of advanced technology (Anderson-Connell, Ulrich & Brannon, 2002). Apparel is a good application of mass customization for two reasons: (1) consumers can choose based on their preferences and personal tastes; and (2) innovative technologies, including body scanning and co-design, are available.

Piller and Muller (2004) indicated that for U.S. consumers, mass customization is a way to choose personal style, fit and comfort, as well as functionality. While participants in this study agreed, very few claimed that they had trouble finding clothes that fit them. Because of different body types and sizing systems, the perceived need for mass customized apparel was not high among participants. However, it is not easy to find a garment that perfectly fits, like a pair of jeans or a dress shirt. Most participants did not see the need for mass customization in casual wear because they can find something to wear from the available selection in the market, even though the fit may not be ideal. Participants feel that the current selection is already wide enough for them; as a result, it is more likely that these young Chinese consumers will utilize mass customization for formal wear. Therefore, apparel manufacturers and retailers should focus on the benefits of mass customization for formal wear when being first introduced into this market. Once Chinese consumers become familiar with mass customization, the concept could be made more prevalent in casualwear and the benefits of a perfect fit would be more obvious.

Manufacturers do not need a lot of inventory if offering mass customized apparel products. This is in contrast to the small quantities often produced in a customized setting, which can be challenging for manufacturers (Loker, 2007). Mass customized merchandise also offers a higher level of consistency in merchandise quality compared to traditional customization. Some of the participants were not happy with the outcomes of customized apparel purchases due to incorrect measurements or poor fit. When introducing mass customization, marketers could suggest that such defects could be prevented as mass customized apparel products are more accurate.

Participants who thought favorably of mass customization would prefer to do so in store because they feel it would be easier to get help from a professional. This is the case with both body scanning and co-design. John, for example, considered the communication that happens in the store with a professional to be essential, and seeks "the face-to-face communication." Jackie said she would go to the store and place a mass customized order instead of online, as did other participants, including Wendy, Grace and Stephanie. Stephanie pointed to the lack of trust that Chinese consumers have in terms of internet shopping. She explained that Chinese consumers trust official websites more than third party websites as a result of past negative experiences, such as online fraud, and information inequality. Moreover, as Amy points out, "Sometimes, there is a difference between the online image and actual product." Retailers looking to promote online mass customization options must overcome these challenges to appeal to young Chinese consumers.

Higher cost is another drawback of apparel mass customization (Fiore, 2008). According to participants, they would be more likely to mass customize apparel products if the service, such as body scanning and co-design, were offered for free.

Thus, marketers and retailers could advertise free services at first to get consumers interested. Once satisfied with the outcome, they may be more likely to consider paying for it. Participants also have different opinions as to how long they would be willing to wait for their mass customized apparel product. Times ranged from a few days to several months, but most would not wait for more than a week or two. Therefore, reducing the time spent between ordering and delivery is a key issue that retailers should address before offering mass customization services to customers in China.

Involvement and Level of Interest in Mass Customized Apparel

Participants in the study represented both high and low levels of involvement and interest in apparel. Those who were strongly interested in and curious about mass customization options showed a higher level of involvement in apparel in general. At the same time, those who were not interested in mass customization exhibited a low level of involvement with fashion or clothing.

One primary difference in terms of clothing involvement level emerged when comparing responses of female and male participants. Most of the female participants were interested in mass customization as a way to have a garment that is unique and based on their preferences. Male participants who were interested were interested only if it was something they needed. This is consistent with O'Cass (2000), who found that female consumers are more involved in fashion compared to male consumers, and female consumers are more likely to make purchases because of higher involvement.

Customization requires more time in the decision-making process (Solomon, 2006, p. 305). A high level of involvement with mass customized apparel means more

time and money spent on acquiring apparel products, and a more complicated apparel decision making process. Participants who had a higher level of involvement were more interested in the mass customization process, and saw the benefits of selecting their own fabrics, colors, and style.

Those participants who did not have a strong interest in mass customization also did not like to spend a lot of time and effort on shopping for apparel products. These participants also did not see the need for mass customized apparel, such as Nathan, who claimed that he had no interest in mass customization as he did not care much about clothing in general.

Participant Profiles

Based on the data, the participants can be divided into three different groups according to fashion leadership and clothing interest levels: Fashion leader/high clothing interest in mass customization; non-fashion leader/high clothing interest in mass customization; non-fashion leader /low clothing interest in mass customization. The profiles categorize participant types in terms of their level of clothing interest and fashion leadership (see Table 2).

Table 2. Participants' profiles by fashion leadership and clothing mass customization interest.

Name	Gender	Fashion Leadership	Interest Level
Natalie	Female	yes	high
Allison	Female	yes	high
Nathan	Male	no	low
Tom	Male	yes	high
Yun	Female	no	high
Jenny	Female	yes	high
Candice	Female	no	low
Lisa	Female	no	low
Jackie	Female	no	high
Grace	Female	yes	high
Sean	Male	yes	high
Amy	Female	yes	high
Rachel	Female	no	high
Yuanyuan	Female	no	high
Ziqun	Male	no	low
Xi	Male	no	low
Stephanie	Female	no	high
Cindy	Female	yes	high
John	Male	no	low
Terry	Male	no	low
Sarah	Female	no	high
David	Male	no	low
Wendy	Female	no	high
Heather	Female	no	high
Daisy	Female	yes	high
Britney	Female	no	high
Clarine	Female	no	high

Fashion Leader/High Interest

Fashion leaders with a high interest in mass customization are the consumers that manufacturers and retailers should focus on when introducing mass customized apparel into the market. It is known that fashion leaders are more likely to adopt the latest fashion during the fashion cycle and they are the most influential consumers among the entire consumer population (Kaiser, 1997). Participants who fit in this category included: Natalie, Allison, Tom, Jenny, Grace, Sean, Amy, Cindy, and Daisy. Most were female participants, and many of them were brand name buyers. For example, Jenny enjoys shopping, and she also uses shopping as therapy.

> I shopped almost every day at home, but did not buy stuff every time I shopped….I shop for certain brands…. (I) don't care about the price. (Jenny)

Five out of the nine have customized apparel products in the past. All expressed a high level of interest in mass customization options, which reflected the likelihood that they would utilize mass customization if available. As fashion leaders, shopping for apparel is an exciting experience for them, and they all shop more frequently and spend more money on fashion products. All of these characteristics make this group the most likely to engage in apparel mass customization.

Non-fashion Leader/High Interest

Though a number of the participants were not fashion leaders, many still had a high interest in mass customization. For this group, brand names were of less value than among fashion leaders and they focused on other features, like comfort, price, and material, rather than particular brands. Being price-sensitive, and interested in mass customization, they were willing to try body scanning or co-design if the

services were free. Participants in this group include: Yun, Jackie, Rachel, Yuanyuan, Stephanie, Sarah, Wendy, Heather, Britney, and Clarine; all of whom are female. While none have purchased any mass customized apparel products, most claim strong interest in trying the innovations, especially co-design, since they want something different from others.

Non-fashion Leader/Low Interest

Nathan, Candice, Lisa, Ziqun, Xi, John, Terry and David were the participants best categorized as non-fashion leaders with low interest in mass customization. These participants did not care about mass customized apparel products, and most of them did not see the need for mass customization. For example, John did not show much interest nor any leadership at all because:

> I am not interested in fashion at all, and …I don't shop normally, I only shop for clothes when I need them. (John)

These participants shop for apparel only when needed, and they normally do not spend much time shopping around. Their involvement levels are comparatively low as they do not focus on uniqueness or brand. Instead their focus is on need. This group is the most challenging for manufacturers and retailers looking to attract consumers with apparel mass customization.
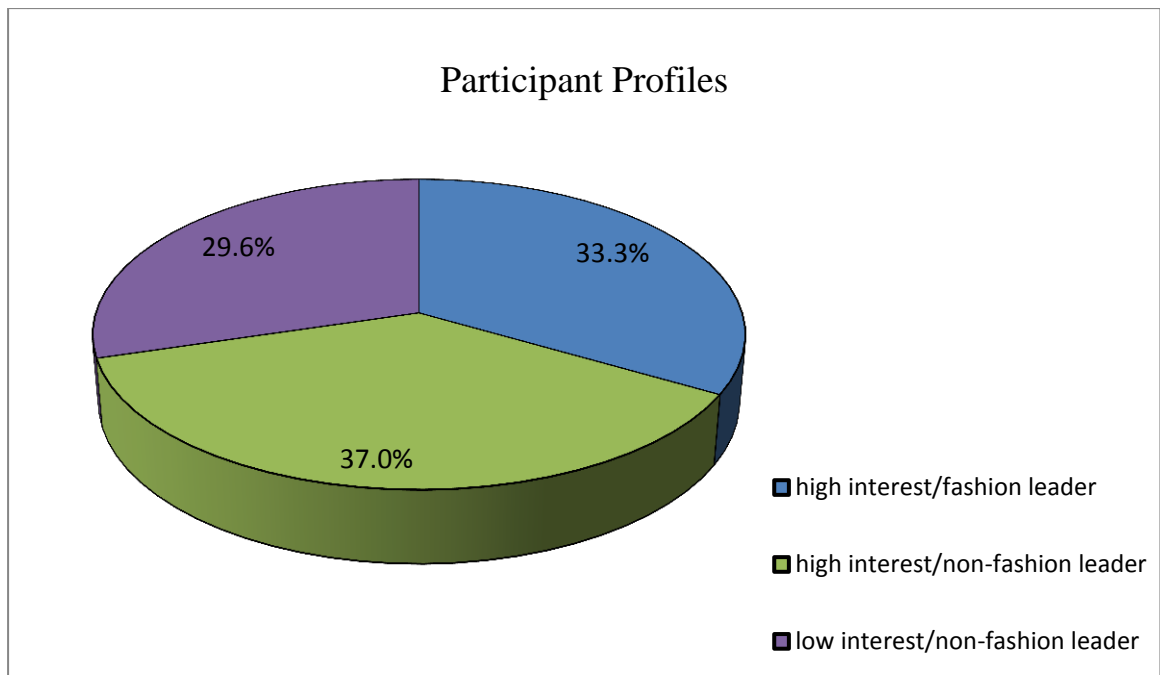
Figure 9 – Participant categories by fashion leadership and clothing interest.

According to Figure 9, 37% of the participants could be categorized as non-fashion leaders with a high level of mass customization interest, 29.6% as non-fashion leaders with a low level of mass customization interest, and 33.3% were fashion leaders with a high interest. As in other studies (Goldsmith, Freiden & Kilsheimer, 1993; King, 1965; Solomon, 2006), fashion leaders in this study were highly involved in apparel and willing to try new innovations. Because fashion leaders have an impact on other groups, if they are satisfied with the outcome of mass customization, they may convince others to try such innovations. Thus they are an essential group of consumers for marketers to address.

Participants who were not fashion leaders but highly interested in mass customized apparel products were inclined to make a mass customized purchase if motivated and if the price of the product was reasonable. Therefore, marketers could attract this group by launching promotions related to mass customization.

For the low interest, non-fashion leaders, lack of interest and low involvement will hinder their receptivity to mass customization opportunities. Comprised of both males and females, this group shops for apparel out of need, so may best respond to associating mass customization with necessary products.

It is interesting that most participants showed a high level of interest in mass customized apparel products. This suggests that manufacturers and retailers could be successful in targeting the young Chinese market. The findings of this study point to some of the key ways that they could go about introducing apparel mass customization to this consumer group.

Limitations and Further Research

This study has several limitations that could be addressed in further research on young Chinese consumers' perceptions of apparel mass customization:

- The sample was limited to participants who are currently studying and living in the United States, so there maybe acculturation among the sample.

- Participants were students, therefore other occupations were not included.

- The majority of the participants had no experience with mass customization, thus their responses regarding mass customization might be limited by their lack of awareness.

- Because most of the participants have little to no exposure to mass customization, their perceptions and thoughts on mass customization were hypothetical. However, once they have experience with apparel mass customization, they may have different opinions.

The study emphasized the consumer perspective. Thus, in the future, research on apparel mass customization from the perspective of manufacturers and retailers is needed to provide a better understanding of apparel mass customization.

One concern participants expressed is the accuracy and consistency of online shopping, whether mass customization was involved or not. Some participants who had online shopping experience were disappointed in the difference between the actual product and what it looked like online. Therefore, future research is needed to explore satisfaction with online shopping outcomes in order to ultimately provide greater consumer satisfaction with apparel mass customization.

Summary

This chapter discussed the findings of the interpretation relative to the purpose and objectives of the study. Fashion leadership, involvement and level of interest as well as attributes of mass customized apparel products were discussed as concepts important to understanding what young Chinese consumers think of apparel mass customization. In light of study limitations, future research areas were presented.

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APPENDIX A

INTERVIEW SCHEDULE

1. Describe your most recent apparel purchase. What, where, why and when?

2. How often do you shop for apparel?

3. Do you shop with other people? If yes, who do you shop with? Friends, or family? What are some examples of recent shopping trips you've taken.

4. Have you ever purchased any customized products? If so, please describe.

5. Have you had any clothes made to order?

   If yes: a. What, how and why did you choose to customize?

          b. Do you recall the price? If yes, do you feel it was reasonable?

          c. Were you satisfied with the purchase? What were you most satisfied with? The quality, the style, or the fit?

          d. What made you decide to buy something customized?

   If no, why not? Can you give a specific reason? Too expensive? Too complicated? Other factors?

6. Do you know anyone who has purchased customized clothing? Were they satisfied with it?

7. Describe the type of clothing that is best customized.

8. Describe the type of consumer who prefers customized clothes.

9. When you purchase something, do you talk about it with other people? Why?

10. Do you find that you and your peers share similar tastes in clothing?

11. Are your clothing choices influenced by others or the media? In what way? What about expectations? Styles?

12. What are looking for when you are shopping for apparel? What factors are important? And what are not?

13. What is the most appealing to you about customized apparel?

14. What is the least appealing to you about customized apparel?

15. If you decided to have your clothes made to order, which category/type of clothes would you choose? Wedding dress/formal dress, or jeans/T shirt? And why?

16. How much more would you be willing to pay for something customized?

17. How much time would you be willing to devote to the process? Including time spent waiting for the product to be customized?

18. Are you familiar with body scanning technology? Have you or would you get a body scan?   Why or why not?

19. Have you ever heard of co-design? What do you think about it?

20. Is either body scanning or co-design, or both options, something that you would be interested in using in order to acquire customized clothes? Why? Why not?

21. What kinds of apparel do you think would best be created using body scanning technology or co-design?

22. Do you think that mass customization would work better in store or on-line? Why?

23. Is there anything we did not talk about that you would like to add?

APPENDIX B

CONSENT FORM

To: Nancy Hodges
Consumer, Apparel, and Ret Stds
213 Stone Building

From: UNCG IRB

Authorized signature on behalf of IRB

Approval Date: 5/14/2010
Expiration Date of Approval: 5/13/2011

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Submission Type: Initial
Expedited Category: 7.Surveys/interviews/focus groups,6.Voice/image research recordings
Study #: 10-0177

Study Title: Apparel Mass Customization: Perceptions of Chinese Consumers

This submission has been approved by the IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

Study Description:

The purpose of this project is to understand Chinese consumers' perceptions about mass customized apparel and the relevant technology used in mass customization.

Investigator's Responsibilities

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

When applicable, enclosed are stamped copies of approved consent documents and other recruitment materials. You must copy the stamped consent forms for use with subjects unless you have approval to do otherwise.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the modification application available at http://www.uncg.edu/orc/irb.htm). Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB using the "Unanticipated Problem/Event" form at the same website.

CC: Melanie Carrico, Consumer, Apparel, And Ret Stds., Yingjie Ou, Chris Farrior, (ORED), Non-IRB Review Contact, (ORC), Non-IRB Review Contact

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ACT AS A HUMAN PARTICIPANT: LONG FORM

Project Title: Apparel Mass Customization: Perceptions of Chinese Consumers
Project Director: Dr. Nancy Nelson Hodges

Participant's Name: _____

What is the study about?
This research project explores young adult Chinese consumers' perceptions of mass customized apparel.   The potential for mass customization use and acceptance will be discussed.

Why are you asking me?
You are being asked to participate because being a young Chinese consumer, your opinions and experiences with customized apparel will help to provide a better understanding of its appeal.

What will you ask me to do if I agree to be in the study?
You will be asked to do an interview regarding your opinions and past experiences with mass customized apparel. The interview will be conducted in mandarin Chinese. On agreement to be interviewed, the interview will last approximately 1 to 2 hours. Later, you will be able to review your interview transcript once it is complete. The review process will take approximately 1 hour.

Is there any audio/video recording?
Yes. A digital audio recorder will be used during the interview for data collection in order to ensure reliability of data and to reveal your responses and thoughts towards mass customization products and relevant technology. Because your voice will be potentially identifiable by anyone who hears the tape, confidentiality for things you say on the tape cannot be guaranteed, although the researcher will try to limit access to the tape as described below.

What are the dangers to me?
The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. As stated above, there is a low risk of a breach of confidentiality. Measures that will be implemented to minimize this risk are described in the confidentiality section below.

If you have any concerns about your rights or how you are being treated please contact Eric Allen in the Office of Research and Compliance at UNCG at (336) 256-1482. Questions and concerns about this project or your benefits or risks associated with being in this study can be answered by Dr. Nancy Nelson Hodges who may be contacted at (336) 256–0291 or njnelson@uncg.edu, or Yingjie Ou at (336) 340-0749 or y_ou@uncg.edu.

Are there any benefits to me for taking part in this research study?
There are no direct benefits to participants of this study.

Are there any benefits to society as a result of me taking part in this research?
Your participation may help to shed light on what young Chinese consumers think about

mass customization of apparel.

Will I get paid for being in the study?   Will it cost me anything?
There is no cost to you for participating in this study. Upon completion, you will be entered into a drawing for a $20 gift card from a major retailer.

How will you keep my information confidential?
Consent forms will be stored in a locked file cabinet in the Principal Investigator's campus office, audio files will be password protected on the student researchers' laptop, and participants will not be identified by name when data are disseminated. All information obtained in this study is strictly confidential unless disclosure is required by law. Consent forms will be kept for three years after the close of the study and destroyed by shredding.   Audio files will be kept password protected on the student researcher's computer for a minimum of five to a maximum of seven years upon completion of the study, after which point the files will be erased. There will be a file linking participants' identities to pseudonyms that will be used in published materials. This file will be kept separate from the data and will be erased no more than seven years after the close of the study.

What if I want to leave the study?
You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state.

What about new information/changes in the study?
If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

Voluntary Consent by Participant:
By signing this consent form you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate, or have the individual specified above as a participant participate, in this study described to you by <u>Yingjie Ou</u>.

Signature: _____ Date: _____