The purpose of this dissertation was to understand female baby boomers' perceptions of and experiences with apparel shopping using virtual technology in the online context. The three objectives of this study were: (1) to examine age-related needs and expectations of female baby boomers as older apparel consumers, (2) to investigate how these needs and expectations can be addressed in the online context, and specifically through virtual technology, and (3) to explore how virtual technology can enhance the overall online shopping experience for this group of consumers. Most studies on virtual technology in the consumption context examine younger consumers, such as college students. Therefore, this dissertation fills a gap in the academic literature regarding apparel and technology consumption behaviors among older consumers.

A phenomenological approach to qualitative research was used to address the purpose of this study. Data collection methods included interviews, online observation, personal journals, and focus groups. A total of 20 in-depth interviews were conducted with female baby boomers (born between 1955 and 1964) who had purchased apparel online within the prior three months. A total of eight participants' active social media accounts were used for online observation. After the interviews, participants were divided into two groups. One group completed personal journals and the other participated in focus group interviews. Both groups were asked to consider how virtual technology could be used in the online apparel shopping context. Data were analyzed for similarities and differences to identify categories of meaning in and across the data. Three emergent themes were used to structure the interpretation: *Apparel and Aging*, *The Online Experience*, and *Filling the Void Through Virtual Technology*. The theoretical

significance of the interpretation was then considered in relation to literature on the topic and through the lens of social cognitive theory.

Findings indicate that female baby boomers exhibit distinctive apparel and technology consumption behaviors due to not only age-related changes but also to certain cohort characteristics. As older women, participants have experienced various age-related changes (physical, psychological, social changes), which, in turn, have impacted their needs and preferences when shopping for apparel online. These age-related needs and expectations could be addressed in the online context, and specifically with the use of virtual technology. Findings of this study reveal how participants perceive the value of virtual technology for addressing the drawbacks of purchasing apparel online, especially as older consumers and members of the baby boomer cohort. Consequently, this study further highlights the potential for virtual technology to enhance consumers' online shopping experiences as they age.

Baby boomers have been identified as the "new older consumer" due to their cohort characteristics, such as healthy bodies, familiarity with technology, focus on hedonic value, and rebellion against convention. As a group, they are more likely to use technology for shopping than previous generations of older consumers due to their experiences with the emergence of technological innovations, such as the personal computer and the Internet. As this dissertation found, female baby boomers are active online shoppers. Because virtual technology has the potential to address some of their biggest issues with online apparel shopping, including unpredictable fit and inconsistent sizing, they are willing and eager to use this new technology. This dissertation suggests that implementing virtual technology is a worthy investment, and one with great potential for making online apparel shopping more convenient, accessible, and fun for this important segment of consumers.

VIRTUAL TECHNOLOGY AND ONLINE APPAREL SHOPPING: PERCEPTIONS AND

BEHAVIORS OF FEMALE BABY BOOMERS

by

Youngji Lee

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Submitted to
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Doctor of Philosophy

Greensboro

2023

Approved by

_____
Dr. Nancy Hodges
Committee Chair

DEDICATION

To my husband and best friend, Jason, and my lovely daughter, Kayla

APPROVAL PAGE

This dissertation written by Youngji Lee has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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I feel very lucky to have my friends who have supported me throughout this long adventure. My colleagues made me never feel alone. They always encouraged me throughout the chaos and stress brought on during these last few years. Words cannot express my gratitude to my friends. Last but not least, I would like to thank my family for their endless love and support. To my parents, you always told me, "I'm always proud of my daughter." Thank you for trusting me with whatever decision I made in my life thus far. You are the ones that I respect the most. Also, to my husband and daughter, I could not have done this without you. This dissertation is dedicated to both of you. From now on, I will always be your biggest supporter as you did for me. Thank you.

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CHAPTER I: INTRODUCTION

Technology, such as the Internet and smartphones, has impacted how consumers purchase and shop for apparel. According to Statista (2022a), in 2021, American consumers made approximately 35% of all apparel expenditures online. To enhance consumers' experiences with online apparel shopping, technologies have emerged, including image interactivity technology and virtual technology (Lee, Kim, & Fiore, 2010; Yu & Damhorst, 2015). For example, virtual try-on technology, which refers to "creating a virtual model and trying clothing on it," enables consumers to create avatars of their own size and acquire information about a garment before they purchase it online, which can have a positive impact on purchase intentions (Kim & Forsythe, 2007, p. 503). Ultimately, this technology helps consumers overcome the primary limitation of online apparel shopping, which is that they cannot try on a garment before purchasing it like they can in a brick-and-mortar store.

Given the potential for the positive impact of virtual technology on online apparel shopping, major online retailers, such as Amazon and eBay, have invested in virtual technology (e.g., virtual dressing room, virtual reality department store) (Dogadkina, 2022; Pando, 2018). This investment indicates a focus on finding innovative ways that such technologies can benefit the overall consumption experience (Gorra, 2022; Jones, 2017; Pando, 2018). Virtual technology innovations could fundamentally change the e-commerce industry, as well as consumers' overall online shopping experiences, and specifically relative to the fashion industry, by allowing them to examine apparel before purchasing it (Jiang, 2017; Jones, 2017; Marr, 2022; Pando, 2018). It is therefore likely that virtual technology will play an important role in online apparel shopping in the near future (Loker, Ashdown, & Carnrite, 2008; Porta, House, Buckley,

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& Blitz, 2008). Consequently, there is a need for research that enhances the understanding of consumers' perceptions of and experiences with virtual technology in the online context.

To date, most studies on virtual technology in the consumption context examine younger consumers, such as college students (e.g., Kim & Forsythe, 2007, 2008; Lee, Xu, & Porterfield, 2021; Shin & Baytar, 2014). This is due to younger consumers' greater tendency to use technology for shopping as compared to older consumers (Sulaiman, Ng, & Mohezar, 2008). However, the number of online shoppers, as well as Internet users, who are over 55 years of age has grown rapidly in the United States (Iyer & Eastman, 2006; McGann, 2004). Baby boomers have contributed to the fast growth of online shoppers in this age group because they are more willing to use technology than the previous generations of older adults due to their broader experiences with it, as well as greater access to it (LeRouge, Slyke, Seale, & Wright, 2014). As a result, baby boomers have been identified as active online shoppers, playing a significant role in the continued growth of online apparel sales in the US (Binkely, 2009; Coleman, Hladikova, & Savelyeva, 2006; eMarketer, 2013; Pando, 2018).

According to the U.S. Bureau of the Census (2014a), nearly one in five Americans will be 65 years or older in 2030. For most of the 20th century, the growth of the population aged 65 and over surpassed that of the total U.S. population (U.S. Bureau of the Census, 2018). As a result, the number of Americans who are over 65 increased more than ten times, growing from 3.1 million in 1900 to 35.0 million in 2000 (U.S. Bureau of the Census, 2018). The rapid population growth of those aged 65 and older is expected to continue at least until 2050, largely due to lower fertility rates and increased lifespan averages (Administration on Aging, 2021; U.S. Bureau of the Census, 2014a, 2018).

In particular, the baby boomer generation, comprised of individuals born between 1946 and 1964, has fueled the aging trend in America once they began turning 65 years of age (U.S. Bureau of the Census, 2018). In 2021, the baby boomer generation constituted approximately 21% of the total U.S. population (Statista, 2022c). Their sheer numbers have contributed to the growth of the older market due to the increasing number of consumers who need products, including apparel, as they age (Howarton & Lee, 2009; U.S. Bureau of the Census, 2018). According to Pearson (2017), baby boomer consumers contribute to "more than 51% of the spending in the United States" (p. 1). As a result, they have been considered an important consumer group, and especially in relation to fashion consumption (Howarton & Lee, 2009; McGee, 2018).

It is possible that baby boomers will become more involved with online apparel shopping as they grow older due to the changes that occur during the aging process. For example, most people experience age-related body changes, including an enlarged waist and a forward tilt of the shoulders, which are significantly related to apparel fit (Ashdown & Na, 2008; Howarton & Lee, 2009). These age-related body changes might create difficulty in finding the right size and therefore a greater need to try on apparel. By using virtual try-on technology, online retailers could reduce some of the risks of online apparel shopping, and ultimately enhance the overall shopping experience for aging consumers like baby boomers. Females in particular tend to have distinct needs for apparel stemming from the changes that occur during the aging process. Given the potential benefit of virtual technology in the context of online apparel shopping, this dissertation aimed to explore experiences with online apparel shopping and perceptions of the potential for virtual technology in this process among female baby boomers.

Background

In this section, background information relevant to the topic of this dissertation is provided. First, the aging population in the United States is explored. Specifically, baby boomers, who play a significant role in the growth of the aging US population, are examined as a cohort. Second, online apparel shopping is discussed, and particularly in relation to baby boomers. Virtual technology is then examined as an innovation that can enhance consumers' online apparel shopping experiences, and especially those of female baby boomers.

The Aging US Population

The older population, defined as individuals aged 65 and over, is rapidly growing in the US (Administration on Aging, 2021; U.S. Bureau of the Census, 2014a). To be specific, the number of people in the older population is anticipated to double, going from 43.1 million in 2012 to 83.7 million in 2050 (U.S. Bureau of the Census, 2014a). In 2040, the older population is expected to comprise 21.7% of the total number of Americans (Administration for Community Living, n.d.). Given this large number, the older population has been a focus of various research studies, policy initiatives, and government programs (U.S. Bureau of the Census, 2018). In a similar vein, researchers in the field of fashion have identified the consumption behaviors of older consumers as in need of further study (Lee, Damhorst, Lee, Kozar, & Martin, 2012; Peter, Shelton, & Thomas, 2011; Rahman & Yu, 2018; Rahulan, Troynikov, Watson, Janta, & Senner, 2015).

Baby Boomer Cohort

Baby boomers, or those individuals born between 1946 and 1964, are the largest population group ever born in the United States (U.S. Bureau of Census, 2014a). As this group has aged, it has contributed to the rapid increase in the country's older population (U.S. Bureau

of Census, 2018). When all baby boomers officially move into the older population, predicted to occur in 2030, those aged 65 and over are anticipated to constitute more than 20% of the total U.S. population, compared with 13% in 2010 (U.S. Bureau of the Census, 2014a). Furthermore, baby boomers will constitute about 88% of the total U.S. older population in 2030 (U.S. Bureau of the Census, 2014b). Consequently, baby boomers will be responsible for a notable change in the overall age structure of the U.S. population.

Each day, about 10,000 American baby boomers turn 65 (McGee, 2018). In addition to increasing their numbers, the high purchasing power and significant disposable income of this cohort make them an attractive consumer segment in the marketplace (Hernandez, Jimenez, & Martin, 2011; Mumel & Prodnik, 2005). Yet, despite the importance of the aging baby boomer cohort, fashion retailers tend to concentrate their efforts on younger consumers (Goldsberry, Shim, & Reich, 1996; Lee et al., 2012). As a result, aging baby boomers often have difficulty finding apparel styles that represent their lifestyles, as well as styles that are considered "age-appropriate" (Coleman et al., 2006; Lee et al., 2012). Like everyone, baby boomers will experience social and physical changes during the aging process, resulting in distinct needs for apparel as compared to younger consumers (Jackson, 1992; Kozar & Damhorst, 2008). For example, they experience shorter stature and stooped posture with age (Campbell & Horne, 2001; Goldsberry et al., 1996). Such changes mean they have different needs and preferences in apparel fit when compared with younger consumers. It is important to note that, as a cohort, baby boomers exhibit different apparel consumption behaviors when compared with previous generations of older consumers (e.g., the Silent Generation), particularly due to the different types of life experiences of each cohort (Lehto, Jang, Achana, & O'Leary, 2008; Twigg, 2013). For instance, baby boomers are more likely to engage in travel and social activities after

retirement than previous generations of older adults because they tend to explore different cultures and seek new adventures stemming from their experiences with political, social, and cultural changes that occurred between the 1960s and 1990s (Lehto et al., 2008; Menchin, 1991).

According to Lehto et al. (2008), the situations surrounding the cultural and social history of individual generations influence consumers' attitudes and preferences. This is why the generational cohort approach has been employed to examine attitudes and behaviors that are based on shared experiences and values (Rahulan et al., 2015; Solomon, 2012). For example, Rahulan et al. (2015) found a difference between baby boomers and Generation Y consumers in purchase behavior for sportswear. Baby boomers tend to need a short time to make a purchase decision due to confidence in their purchase decisions by knowing what they need and want (Rahulan et al., 2015). However, Generation Y consumers are likely to take a much longer time to reach a purchase decision because they are more inquisitive, prompting to them spend more time on information search compared to baby boomers (Rahulan et al., 2015).

An age cohort refers to a group of "people of similar ages who have similar experiences" (Solomon, 2012, p. 522). As illustrated in Figure 1, each age cohort consists of individuals born at a particular time. Cohorts in the US include: (1) The Greatest Generation (or the GI Generation) – those born in 1928 and earlier; (2) The Silent Generation – those born between 1929 and 1945; (3) The Baby Boomer Generation – those born between 1946 and 1964; (4) Generation X – those born between 1965 and 1980; (5) Millennials (or Generation Y) – those born in 1981 and 1996; and (6) Generation Z – those born in 1997 and later (Statista, 2022c; U.S. Bureau of Labor Statistics, 2018, 2022).

Figure 1. Age Cohorts in the US

The Greatest Generation
1928 and earlier

The Silent Generation
1929-1945

The Baby Boomer Generation
1946-1964

Generation X
1965-1980

Millennials
1981-1996

Generation Z
1997 and later

1929   1946   1965   1981   1997
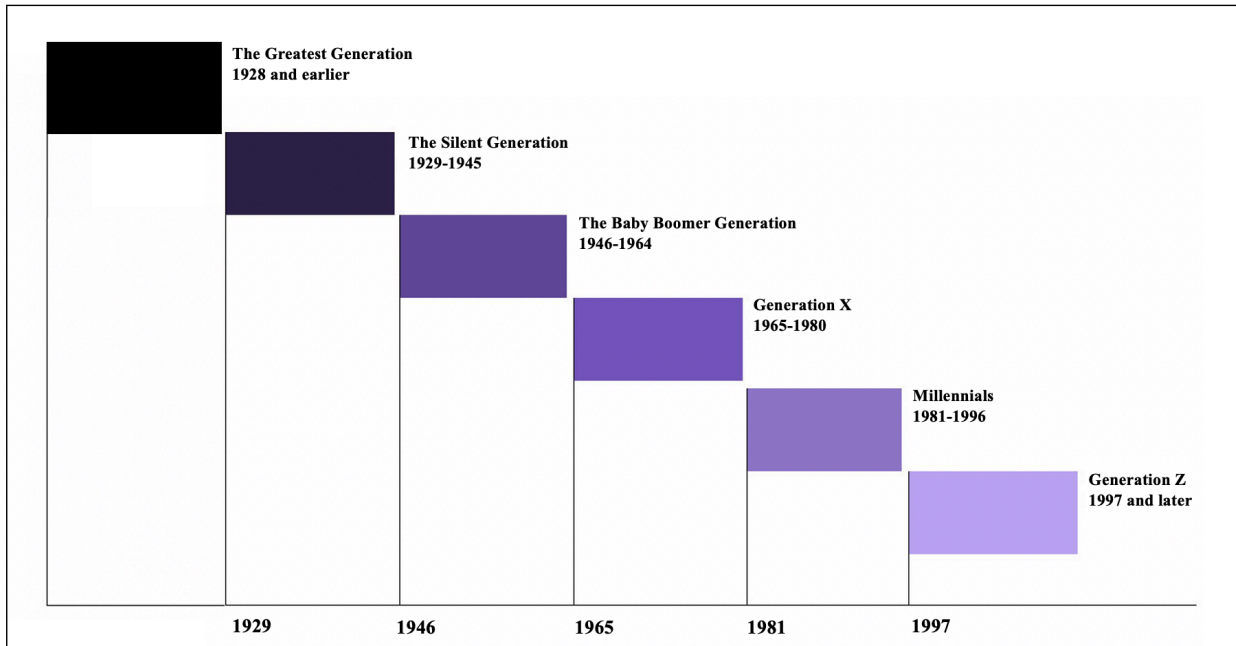
Individuals in the same age cohort share common memories of and experiences with important cultural and historical events, which can influence their "value, attitudes, preferences, expectations, and buying behaviors" (Rahulan et al., 2014, p. 88). As a result, retailers often identify and target a specific age cohort when marketing products (Solomon, 2012). For example, JCPenney is focused on the development of its apparel lines to target baby boomers, known to be the main customers for private-label brands (McGee, 2018). As another example, Ralph Lauren, an apparel brand that appeals to the baby boomer generation as a luxury brand, employed a brand extension strategy to target younger women in the luxury apparel market (Trefis Team, 2014). To be specific, Women's Polo Ralph Lauren focuses on providing products combining classic and preppy looks with a street style to appeal to the Millennial consumer cohort (Ralph Lauren Corporation, n.d.; Trefis Team, 2014).

As mentioned earlier, baby boomers play a major role in today's rapid growth of the older population within the US, indicating that this generation will represent the majority of older consumers in the marketplace for several decades to come. It is therefore likely that older consumers' consumption behaviors will be largely based on the baby boomer cohort's preferences and attitudes (McGee, 2018). Thus, it is important to explore baby boomers as an age cohort in order to accurately understand the differences in their needs and preferences compared with other generational consumer cohorts.

Baby Boomers as Consumers

According to the U.S. Bureau of Labor Statistics (2022), in 2021, baby boomers' expenditures accounted for $2,690 Billion, the second largest amount seen among the six age cohorts. In 2021, baby boomer consumers were responsible for about 30% of the total U.S. expenditures, second to Generation X (33%) due to their sheer numbers (U.S. Bureau of Labor Statistics, 2022). As seen in Figure 2, in 2021, the baby boomer cohort was the biggest consumer group in the United States (U.S. Bureau of Labor Statistics, 2022). U.S. consumers consisted of mostly baby boomers (33%), followed by Generation X (27%), Millennials (26%), the Greatest and Silent Generations (10%), and Generation Z (4%) in 2021. Baby boomers also contributed significantly to total U.S. apparel expenditures by spending nearly $55 Billion on apparel and services, with a mean expenditure of $1,289 per year (U.S. Bureau of Labor Statistics, 2022). In sum, more than one-fifth (23%) of the total U.S. consumer expenditures on apparel and services was made by baby boomers (see Figure 2), thereby cementing the fact that baby boomers are a critical consumer cohort in the fashion marketplace.

Figure 2. U.S. Consumers and Expenditures on Apparel by Generation in 2021
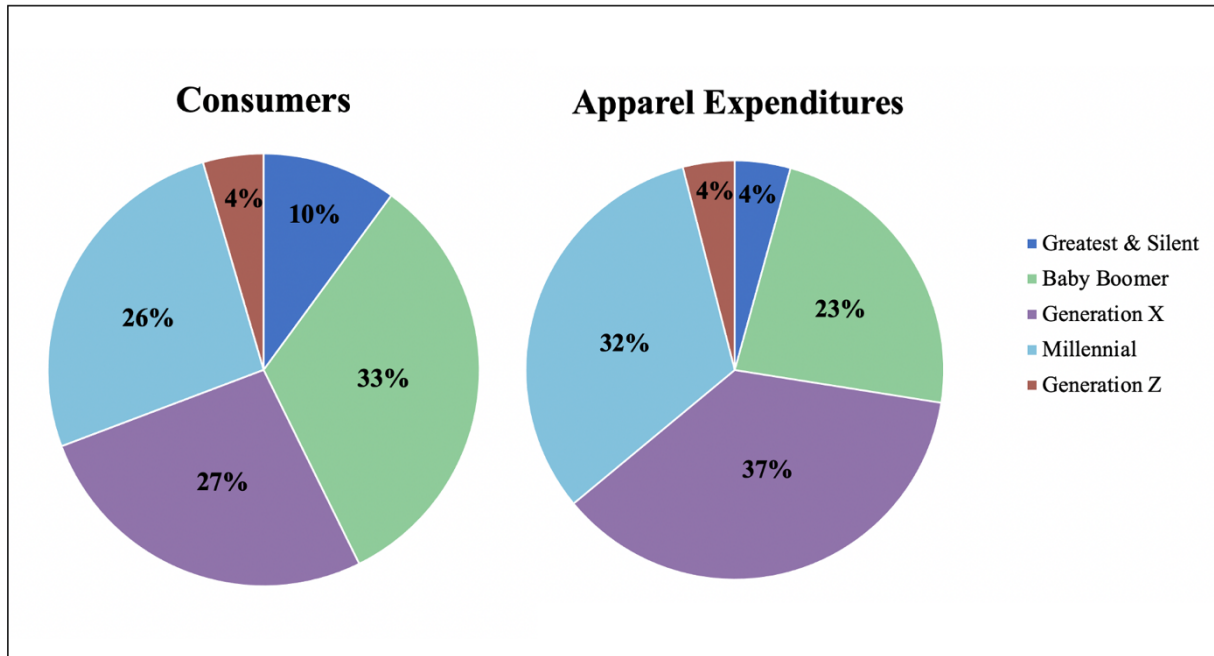
Note. Sourced from U.S. Bureau of Labor Statistics (2022). *Consumer expenditure surveys* [Data file].

Baby boomer consumers tend to have higher purchasing power with greater disposable income compared with previous generations of older consumers, as well as with younger consumers (Howarton & Lee, 2009; McGee, 2018). Moreover, as a group they have tended to retire later than previous generations, which results in higher spending power later in life when compared with generations that came before (McGee, 2018). Baby boomers are also more likely to make more money than younger generations, including Generation X and Millennials (Kiersz, 2018). For instance, Kiersa (2018) found that the Baby Boomer generation earned approximately 25-62% more income than Millennials in all U.S. states.

High incomes, combined with the sheer number of baby boomers have prompted retailers to try to attract the attention of this cohort by changing store formats, product selections, and

service design (McGee, 2018). For example, the number of stores updating layouts (e.g., lower shelf height) and signage (e.g., larger font size) to become physically accessible is increasing (McGee, 2018). One department store company, Boscov's, even launched a hearing aid division in its stores for baby boomer shoppers (McGee, 2018). Consequently, baby boomers are expected to play a critical role in shaping marketplace trends in the coming decade (McGee, 2018).

As a cohort, baby boomer consumers exhibit a tendency to be open to trying new things (Coleman et al., 2006; Staff, 2016), perhaps due to their experiences with dynamic, revolutionary changes that occurred through historical, social, political, and economic events of the 1960s through the 1990s (Lehto et al., 2008; Staff, 2016). For example, baby boomers experienced and actively engaged in social and political transitions, such as the Civil Rights Movement and the Sexual Revolution of the 1960s, the Women's Liberation Movement of the 1970s, and the Yuppie economic period of the 1980s and 1990s (Lehto et al., 2008). It has been suggested that these experiences are the reason why baby boomers are called the "new older consumer," and are more open to new technologies than previous generations (Coleman et al., 2006; Kumar & Lim, 2008; Staff, 2016). As a result, baby boomers are more likely to use technology for shopping as they age compared with previous generations of older consumers. For instance, aging baby boomers frequently shop for apparel online, and ultimately have contributed to the growth of online apparel sales (eMarketer, 2013; Pando, 2018). In the next section, the important role of technology in apparel shopping is discussed to frame the ways that older consumers' apparel shopping behaviors have changed.

Online Apparel Shopping

        Major changes to consumers' shopping behaviors have occurred due to the development

of technology (Loker et al., 2008). With the advent of the Internet, consumers can shop at

anytime from anywhere using their computers, and now mobile devices such as smartphones and

tablets. According to Business Insider (2017), the number of online consumers and their

spending amounts are increasing. Both contribute to the steady growth of online retail sales in

the US. In addition, overall U.S. e-commerce sales are expected to increase from $875 Billion in

2022, to $1.330 Billion in 2025 (Statista, 2022b). Online retailers such as Amazon and Alibaba

have helped contribute to this growth in online sales (Business Insider, 2017; Feger, 2022). For

example, within a single year, from 2016 to 2017, Amazon went from the seventh to the second

largest retailer based on sales (National Retail Federation, n.d.). Consequently, e-commerce was

projected to outperform brick-and-mortar retail and ultimately become the dominant retail

channel in the near future (Business Insider, 2017). Indeed, with the COVID-19 pandemic

beginning in 2020, online sales grew by 43% from 2019 to 2020 alone (U.S. Bureau of the

Census, 2022).

        In the early days of online shopping, there was a negative prospect for fashion

businesses because of the assumption that consumers would insist on trying on clothing prior to

purchase ("Internet Apparel Sales," 1999). In spite of this prediction, online shopping for

apparel has grown steadily and is expected to continue to grow (Statista, 2022a). According to

Statista (2022a), online apparel sales are predicted to reach $300 Billion in 2025. Moreover,

despite the negative early prospects, as illustrated in Figure 3, apparel is now one of the leading

categories of online purchases in the US, and comprises about one-fifth of the total U.S. online

sales (eMarketer, 2021). As a result of the COVID-19 pandemic, apparel was expected to be the fastest growing product category (eMarketer, 2021).

Figure 3. U.S. Online Sales by Product Category in 2020
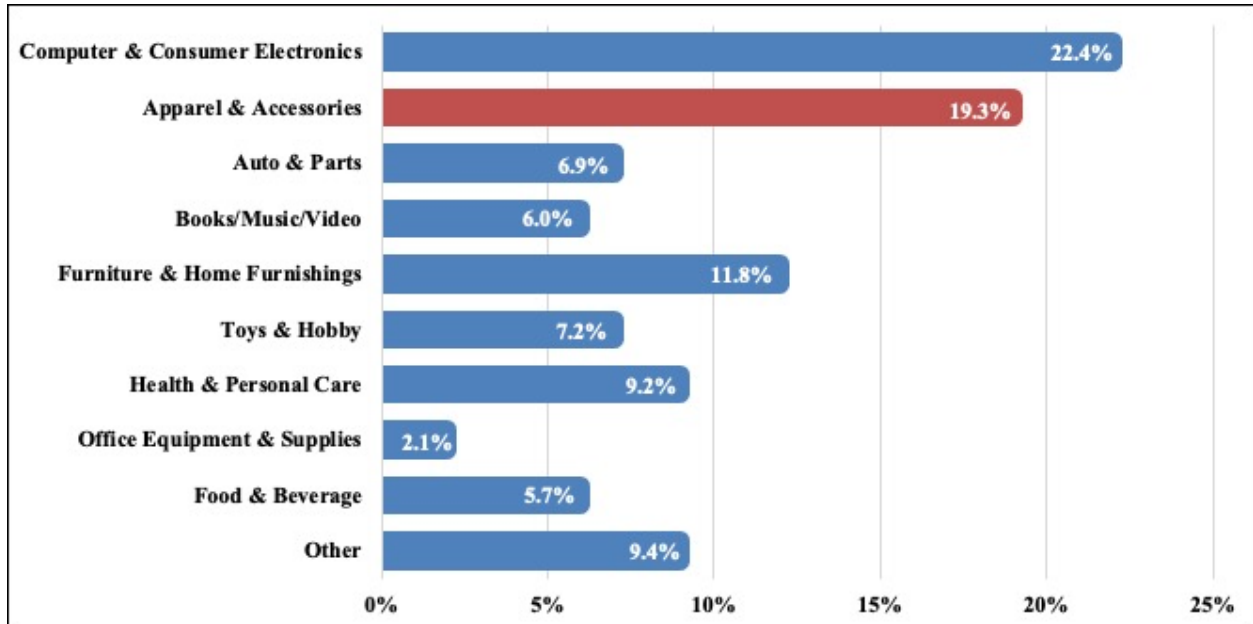
Note. Sourced from eMarketer (2021). "US ecommerce by category 2021."

Alongside retailers like Amazon, consumer groups like the baby boomers have played a significant role in the growth of online apparel sales (Binkely, 2009; eMarketer, 2013; Pando, 2018). Because baby boomers are familiar with using the Internet, the number of individuals in this cohort who engage in online apparel shopping continues to grow (Pando, 2018). Hence, although baby boomers are more likely to engage in online activities for shopping compared to other cohorts (Pando, 2018), most research regarding online apparel shopping behaviors has focused on consumers in younger cohorts. As a result, research is needed that sheds light on baby boomers' online apparel shopping behaviors. It is particularly important to understand how baby boomers perceive virtual technology, which has attracted attention from fashion retailers due to its potential to enhance the online apparel shopping experience. In the following section,

virtual technology is discussed in the online apparel shopping context because it has the potential to allow online fashion retailers to better serve female baby boomer consumers.

Virtual Technology

With the steady growth of online sales, online retailers have invested in tools and technologies in order to meet consumers' online shopping needs, and ultimately to increase profits (Forrester, 2017). In the fashion industry, several brands have attempted to use virtual technology to improve the overall consumer shopping experience (Flanagan, 2014; Jones, 2017; Nazario, 2015). For example, Ralph Lauren launched interactive mirrors in its flagship stores, which enable consumers to tap on the mirror in the fitting room to change the lighting and request different sizes and corresponding items from store employees (Nazario, 2015). Major fashion brands, such as Dior, Topshop, and Balenciaga, provide consumers with the technology to watch fashion shows using virtual reality headsets in the store (Jones, 2017).

One of the biggest online retailers, Amazon, has been instrumental in the development of the "smart mirror," which uses virtual clothing and mirrors to help consumers shop for apparel online. In recent years, Amazon has focused on its fashion business, such as developing its own fashion brands and patenting the smart mirror, resulting in even greater growth of its fashion sales (Yurieff, 2018). As a result, Amazon is expected to become the largest apparel retailer in the US, surpassing even Walmart in the near future (eMarketer, 2018a; Yurieff, 2018). The smart mirror in particular is anticipated to contribute to Amazon's fashion business because it enables consumers to explore how garments might look on their bodies, and ultimately improves their knowledge of apparel prior to purchase (Yurieff, 2018). Consequently, the smart mirror has the potential to enhance the online apparel shopping experience overall (Yurieff, 2018).

Given the potential significance of virtual technology for online apparel shopping, virtual technology has received a great deal of attention from online fashion retailers (Flanagan, 2014; Jones, 2017; Kim & Forsythe, 2007). As a result, several studies anticipate that virtual technology will become a requirement for online apparel shopping in the near future (Flanagan, 2014; Jiang, 2017; Jones, 2017; Loker et al., 2008). That is, virtual technology will likely play an important role in consumers' online apparel shopping decision-making. Female baby boomer consumers are no exception, in that they will likely use such technology in the near future. As mentioned earlier, baby boomers are active online shoppers (Pando, 2018). Furthermore, baby boomers are not just familiar with online shopping, but are eager to explore new technologies (Coleman et al., 2006; LeRouge et al., 2014). Thus, it is important to understand how consumers of this generational cohort will use virtual technology in the online apparel shopping context.

Purpose and Objectives

The purpose of this dissertation was to understand female baby boomers' perceptions of and experiences with apparel shopping using virtual technology in the online context. This study focuses on the younger group of baby boomers, born between 1955-1964, as they tend to have broader experience with technology compared with older baby boomers, born between 1946-1954 (eMarketer, 2018b). To address this purpose, three research objectives were developed: (1) to examine age-related needs and expectations of female baby boomers as older apparel consumers, (2) to investigate how these needs and expectations can be addressed in the online context, and specifically through virtual technology, and (3) to explore how virtual technology can enhance the overall online shopping experience for this group of consumers.

In exploring older women's experiences with online apparel shopping as a Master's thesis topic (Lee, 2014), I found that older women actively engage in online apparel shopping, but

garment fit and lack of selection are primary areas of dissatisfaction. In addition, I found that older female consumers value features of apparel shopping websites (e.g., interactive technologies and various images of apparel on models) because they can get information about apparel products that helps to facilitate their decision-making. However, they also expressed the desire to see models or avatars that represent body types of older women on the websites. Such findings provide preliminary justification for further exploration of the topic through this dissertation. Thus, this dissertation was designed to address these gaps by exploring how fashion retailers can better serve older women, particularly with virtual technology, in ways that positively enhance their experiences with shopping for apparel online.

As discussed earlier in this chapter, virtual technology is expected to play a significant role in consumers' online apparel shopping, as such technology is rapidly advancing (Dogadkina, 2022; Loker et al., 2008; Pando, 2018). Despite the importance of female baby boomer consumers in the fashion marketplace, few researchers have focused on them in the online shopping context. Moreover, to date, there has been little to no academic research that has addressed female baby boomers' use of virtual technology for apparel shopping. Although research exists on virtual technology in the consumption context, studies tend to focus primarily on younger consumers, therefore there is a gap in knowledge that this dissertation aimed to fill.

Methodological Framework

As discussed, the goal of this dissertation was to understand female baby boomers' perceptions of and experiences with online apparel shopping and specifically using virtual technology. To address this goal, a qualitative, and specifically phenomenological methodological framework was used to understand how female baby boomers "make sense of the world and the experiences they have in the world" (Merriam, 1988, p. 6). According to van

Manen (1990), a phenomenological approach to qualitative research enables researchers to interpret subjective meanings of lived experience. Therefore, the phenomenological approach allowed for an understanding of the topic from the participants' perspectives and through their lived experiences.

As will be discussed in more depth in Chapter III, in this dissertation, multiple methods of data collection were employed to address the study's purpose and objectives, including interviews, online observation, personal journals, and focus groups. First, in-depth, online interviews were conducted with younger female baby boomers who have purchased apparel online within the last three months. The interviews were semi-structured and were employed to better understand the age-related changes that impact their apparel and technology consumption behaviors. During the interviews, social media accounts of participants were reviewed and active social media accounts were used for online observation to gain a general understanding of female baby boomers' apparel-related behaviors.

After the interviews, participants were divided into two groups (Group A and Group B) for further data collection. Group A was asked to watch a video on virtual technology created for this study, and then keep a journal regarding their thoughts about the potential for using virtual technology and their online apparel shopping experiences. The journals enabled me to achieve an in-depth understanding of participants' online apparel shopping behaviors and perceptions of using virtual technology. Group B was also asked to watch the virtual technology video followed by a focus group interview. The video helped the participants gain an idea of how virtual technology could work in the context of online apparel shopping. The focus group interviews examined what participants think about the potential for using virtual technology in the online apparel shopping context.

Due to the positive potential impact of virtual technology on online apparel shopping, researchers have emphasized the need for studies of consumers' attitudes toward and willingness to use such emerging technologies (Loker et al., 2008). Thus far, most studies on consumers' online apparel shopping and virtual technology in the consumption context have employed quantitative methods. This focus results in a lack of depth in understanding of the potential for virtual technology use among consumers. For this reason, a qualitative approach was employed in this dissertation, as it allowed for an exploration of female baby boomers' perceptions of using virtual technology as part of the apparel consumption process. It is hoped that the findings from this dissertation offer a new perspective that adds depth to previous studies that have mostly used a quantitative approach. Ultimately, the goal was to offer in-depth insight into what older female consumers think of virtual technology in the online apparel shopping context. Consequently, this dissertation filled several gaps in the literature. These gaps are discussed in more depth in the next section.

Conceptual Scope and Significance

As discussed, the U.S. population aged 65 and over has and will continue to grow in the US. Such growth suggests the significant impact of baby boomers, and specifically their consumption of apparel, because they have the greatest purchasing power among all age cohorts (Howarton & Lee, 2009; Jackson, 1992). As a group, they also have particular apparel needs, such as for age-appropriate styles and well-fitting apparel for their aging bodies (Coleman et al., 2006; Jackson, 1992; Lee et al., 2012). However, research regarding older consumers, and specifically aging baby boomers, is very limited, and particularly so in relation to apparel. Previous research on older consumers has emphasized the lack of research regarding shopping behaviors among older consumers in general (Holmlund et al., 2011; Iyer & Eastman, 2006;

Kwon & Noh, 2010; Lee et al., 2012; Lian & Yen, 2014; Peter et al., 2011; Rocha, Hammond, & Hawkins, 2005). This dissertation was designed to address the research gap regarding female baby boomers as older apparel consumers.

Online retailers often target younger consumers, perhaps because of assumptions regarding their experiences with using computers compared to older consumers (Hernandez et al., 2011). Due to the perception of a lack of technology proficiency among older consumers, there is an assumed negative relationship between being older and shopping online. However, previous studies have found various factors related to consumers' online shopping behaviors beyond age, including gender (Hashim, Ghani, & Said, 2009; Hernandez et al., 2011; Law & Na, 2016; Lian & Yen, 2014), income (Hashim et al., 2009; Hernandez et al., 2011), experience using the Internet (Iyer & Eastman, 2006; Know & Noh, 2010), confidence in ability to use the Internet (Iyer & Eastman, 2006), and job and marital status (Hashim et al., 2009). Such findings indicate that age is not the only influential factor determining consumers' online shopping behaviors. It does not make sense to treat older consumers as non-Internet users, and this gap points to the need for investigation of older consumers' online apparel shopping behavior in depth. Thus, the dissertation addressed this gap in knowledge, and particularly in terms of how older consumers view shopping for apparel online using virtual technology.

Virtual technology has been examined in previous research on online apparel shopping because it is supposed to help enhance consumers' knowledge of apparel products (e.g., Ivanov, Mou, & Tawira, 2022; Kim & Forsythe, 2008; Lee et al., 2021; Shim, Kwon, Chattaraman, & Gilbert, 2012; Shin & Baytar, 2014; Yu & Damhorst, 2015). However, most of this research has focused on consumers' intentions to use virtual technology for online apparel shopping using the Technology Acceptance Model (TAM) (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). That

is, consumers' decisions to accept virtual technology for online apparel shopping are explained based on the *perceived usefulness* and *perceived ease of use* constructs of TAM (Kim & Forsyth, 2007, 2008; Yu & Damhorst, 2015). This results in a limited understanding of how and why consumers may adopt or reject virtual technology for their online apparel shopping by focusing on beliefs about technologies, instead of personal factors such as age and lifestyle. Furthermore, previous research regarding virtual technology in the consumption context has focused on younger consumers. Consequently, there is a need for research on older consumers' perceptions of virtual technology, as well as research that employs theories or frameworks other than TAM.

To address this need, social cognitive theory (Bandura, 1986) was employed as a theoretical framework in this dissertation to gain a deeper understanding of female baby boomers' apparel consumption behaviors and views on virtual technology. As will be discussed in more depth in Chapter II, social cognitive theory is based on reciprocal determinism, or the notion that behavior, personal factors, and environmental influences "all operate interactively as determinants of each other" (Bandura, 1986, p. 23). In other words, human behavior is caused by the interaction among the three factors (Bandura, 1986). Social cognitive theory has been used to examine why individuals adopt or change certain behaviors (Bandura, 1986; Ratten & Ratten, 2007). For this reason, several studies have employed social cognitive theory to examine consumption, such as sustainable consumption behaviors (Phipps et al., 2013; Preko, 2017; Young, Lipowski, & Cline, 2005). In addition, this theory has been utilized in research on consumers' adoption of technological innovations (Compeau, Higgins, & Huff, 1999; Ratten & Ratten, 2007). However, this dissertation was the first use of social cognitive theory to examine online consumer behavior among older consumers. Thus, the results of this dissertation extend the overall application of social cognitive theory.

The aim of this dissertation was to examine female baby boomers as an overlooked apparel consumer demographic. As mentioned earlier, findings of this dissertation fill several gaps within the consumer behavior literature regarding apparel and technology consumption behaviors among older consumers through a qualitative approach. The findings from the study also have practical implications for online fashion retailers who target female baby boomers. Understanding how female baby boomers perceive virtual technology and what influences their use of this technology while shopping for apparel online can help retailers better address the needs of this large and important group of consumers.

Summary

In this chapter, the topic of the dissertation was discussed and the purpose and objectives were presented. Relevant background information on the topic, including the rapid growth of the aging US population and the increasing use of technology for online apparel shopping was provided. Significant developments in aging as well as innovations in technology were explained as rationales for the study. The methodological framework was outlined and the conceptual scope and significance of the study was discussed. The next chapter provides a review of the literature that informed the dissertation.

CHAPTER II: LITERATURE REVIEW

As introduced in Chapter I, the goal of this dissertation was to understand female baby boomers' perceptions of and experiences with apparel shopping using virtual technology in the online context. Three research objectives were used to guide this dissertation: (1) to examine age-related needs and expectations of female baby boomers as older apparel consumers, (2) to investigate how these needs and expectations can be addressed in the online context, and specifically through virtual technology, and (3) to explore how virtual technology can enhance the overall shopping experience for this group of consumers.

In this chapter, an examination of the literature relevant to the topic of this dissertation is presented. To this end, the chapter is divided into four main sections. The first section explains age-related changes, including physical, psychological, and social changes. Second, the literature pertaining to female baby boomers' apparel consumption and online shopping behaviors is explored. In the third section, studies related to virtual technology are discussed, and particularly those that examine virtual technology for use in the consumption context. Studies examining virtual try-on technology are specifically examined in relation to female baby boomers' online apparel shopping. The last section of this chapter includes a discussion of the conceptual framework based on social cognitive theory (Bandura, 1986) that was developed for use in this study.

Age-Related Changes

The aging process occurs during an individual's lifespan. In particular, individuals tend to experience a steady decline in functional capacities in most organ systems as they get older (U.S. National Library of Medicine, 2018a). Although people age at different rates and in different ways, there are normal and expected changes associated with aging, such as muscle

loss, height loss, spinal curving, wrinkled skin, and graying hair (Joung & Miller, 2006; Moschis, 1994; U.S. National Library of Medicine, 2018a). Many of these age-related changes play a significant role in determining consumer behavior in later life (Gregorie, 2003; Moschis, 1994). Specifically, changes associated with aging alter the consumer's needs for apparel and their abilities to perform in retail environments (Gregorie, 2003; Kwon & Noh, 2010; Moschis, 1994). For example, Howarton and Lee (2009) found that older consumers prefer apparel designs that conceal certain parts of their aging bodies. Seo and Fiore (2016) suggested that a fitting room environment that has lower handles, brighter lighting, and slip-resistant flooring helps to compensate for the physical changes that occur as consumers age. In this section, the literature focused on identifying age-related changes is reviewed and these changes are considered in terms of how they potentially affect female baby boomers' consumption behaviors.

According to Gregorie (2003), age-related changes are typically grouped into three categories: (1) physical (or biological), (2) psychological, and (3) social. Through an examination of the three categories of age-related changes, the following sections are designed to frame the effect of aging on consumer behavior, and ultimately to understand how age-related changes relate to female baby boomers' apparel consumption and technology-related behaviors.

Physical Changes

All individuals experience physical changes as they go through the process of aging. According to Moschis (1994), physical changes that occur with aging are derived from "changes in cells and tissues that in turn cause deterioration of the biological system and its subsystems and susceptibility to disease and mortality" (p. 195). As a result, these physical changes involve the decline of functional capacity due to both natural changes and disease during the aging process (Moschis, 1994). Age-related physical changes often have an important relationship

with changes to body shape and particularly among females, which, in turn, impacts apparel

needs and preferences (e.g., sizes and styles) (Campbell & Horne, 2001; Goldsberry et al., 1996;

Moschis, 1994). Physical changes with age vary by individual, however, the following

discussion focuses on general age-related changes that alter physical functions and body shape in

ways that can potentially impact apparel consumption and technology-related behaviors.

Bone and Muscle Changes

People tend to experience posture changes with aging due to decreased bone mass and

muscle loss (U.S. National Library of Medicine, 2018b). Once an individual reaches the age of

30, bones lose calcium and minerals, which makes them become less dense (U.S. National

Library of Medicine, 2018a, 2018b). This loss of bone density results in a change of the spine

that eventually makes the posture more bent (U.S. National Library of Medicine, 2018b).

According to the U.S. National Library of Medicine (2018b), women are more likely to lose

bone mass than men, especially after menopause. Women also experience posture changes,

including stooped shoulders, tilted neck, narrow shoulders, and wider pelvis as they age (U.S.

National Library of Medicine, 2018b). These distinctive body changes have an important

influence on female baby boomers' satisfaction with apparel fit (Howarton & Lee, 2009; Lee et

al., 2012). For example, Howarton and Lee (2009) suggest that female baby boomers have

difficulty finding clothing that fits well with their aging bodies, including the enlarged waist,

hips, and chest areas. Lee et al. (2012) also found that older consumers expressed dissatisfaction

with apparel fit, particularly in terms of shoulders, hip, and waist, due to their aging body

proportions.

Individuals also typically experience a rapid decline in physical strength after the age of

50 (U.S. National Library of Medicine, 2018b). This is due to the process of muscle loss known

as atrophy (U.S. National Library of Medicine, 2018a). Because muscles play a pivotal role in the force and strength of the body, the loss of muscle tissue makes for greater difficulty in body movements (U.S. National Library of Medicine, 2018b). According to Gregorie (2003), such changes can influence the shopping patterns of older consumers. For example, weaker leg muscles can mean a loss of mobility, which can be related to a preference for types of retail stores that require less walking (e.g., small-size stores) among older consumers. Moreover, difficulty with mobility means older consumers can face physical challenges when trying on apparel in a store, such as reaching for the hooks to hang clothing in a fitting room (Seo & Fiore, 2016). Thus, older consumers might consider the convenience of technology (e.g., online shopping and virtual try-on technology) more valuable as they experience reduced mobility with age.

Height and Weight Changes

Individuals normally experience a loss of height with aging, mainly due to a shortened spine (U.S. National Library of Medicine, 2018b). According to the U.S. National Library of Medicine (2018a), people tend to lose about 1 centimeter (one-half inch) on average every decade after the age of 40. Height loss becomes particularly noticeable after age 70 (U.S. National Library of Medicine, 2018a). Overall, a total of 2.5 to 7.5 centimeters (1 to 3 inches) in height is lost due to aging (U.S. National Library of Medicine, 2018b). Howarton and Lee (2009) found that this height loss makes female baby boomers feel that the fit of their apparel is different, even though they may maintain their weight. Lee et al. (2012) suggested that this change results in different needs and preferences with aging, such as shorter pants and sleeve lengths due to height loss.

Along with height loss, changes in body weight often occur during the process of aging. To be specific, most people experience a gradual increase in weight after age 30 (U.S. National Library of Medicine, 2018a). As a result, an older person tends to have about 33% more fat compared to when they were younger (U.S. National Library of Medicine, 2018a). However, individuals also usually experience weight loss later in life. For example, women often gain weight until about the age of 65, and then begin to lose weight (U.S. National Library of Medicine, 2018a). Weight loss is due to a reduction in fat that replaces muscle tissue with age (U.S. National Library of Medicine, 2018a). Weight changes later in life can involve significant changes in body appearance (e.g., changes to face, legs, and arms) (U.S. National Library of Medicine, 2018a). According to Howarton and Lee (2009), female baby boomers tend to look for specific styles (e.g., longer tops, black color) that can hide parts of their aging bodies. Overall, age-related body changes in height and weight have been found to influence female baby boomers' fit and style preferences (Howarton & Lee, 2009; Lee et al., 2012).

Skin and Hair Changes

As people grow older, they typically experience changes in their skin and hair. In fact, changes in the skin and hair, such as wrinkles, sagging skin, and whitening or graying hair, are often the most common and visible signs of aging (U.S. National Library of Medicine, 2018b, 2018c). With aging, skin becomes thinner and more fragile, which causes it to develop wrinkles and look paler and more translucent (U.S. National Library of Medicine, 2018c). Hair color can change to white or gray due to an increasing lack of melanin that determines hair color (U.S. National Library of Medicine, 2018d). As with other physical changes, such notable changes in the skin and hair can impact clothing choices. For example, most people prefer clothing that works best for their skin and hair, but these features typically change due to the aging process

(Howarton & Lee, 2009). In Lee et al.'s study (2012), participants sought to avoid shorter length sleeves and low-cut necklines in order to cover wrinkles on their neck and arms, and ultimately minimize the signs of aging.

Changes to the Senses

Aging can cause a decline in the senses, including vision, hearing, touch, taste, and smell (U.S. National Library of Medicine, 2018e). As people age, their senses become less sharp, which makes it more difficult for them to notice details to the same extent as when they were younger (U.S. National Library of Medicine, 2018e). Often during the aging process, the most recognizable changes are declines in vision and hearing acuity (U.S. National Library of Medicine, 2018e). Because these two senses play significant roles in communication, and especially information that is presented visually and orally, researchers have investigated the effect of age-related changes in vision and hearing on consumer shopping behavior, especially in terms of lighting in store environments as well as packaging and labeling (Gregorie, 2003; Moschis, 1994).

An age-related decline in vision can also influence online apparel shopping behaviors. With age, visual acuity gradually declines, and this decline has an impact on the individual's information processing abilities (Gregorie, 2003; U.S. National Library of Medicine, 2018e). In the context of online apparel shopping, communication occurs through visual information (e.g., text and images for design, color, and sizing information). Thus, vision changes that occur with aging might result in distinctive online shopping needs and behaviors among older consumers as compared to younger consumers. Such needs and behaviors include the use of a larger font size and interactive technologies that enable older consumers to see enlarged or magnified text and images of a product. As a result, older consumers might value advanced technologies (e.g.,

virtual technology) that allow them to have accurate visual information about a product when they shop for apparel online.

Psychological Changes

According to Moschis (1994), psychological changes associated with aging are defined as "continuous growth or change in cognition and personality" (p. 196). Gregorie (2003) posits that psychological changes influence consumer responses in terms of information processing, personality, and emotion. This idea has support in the literature, in that Williams and Drolet (2005) found different responses to emotional advertisements between younger and older consumers and attributed these differences to cognitive and motivational changes that occur with aging. Similarly, Yoon (1997) found age-related differences in consumers' processing strategies: Older consumers prefer schema-based processing, whereas younger consumers rely more on detailed processing strategies. For example, older consumers prefer processing strategies that require less effort due to memory deficiencies that come with aging (Yoon, 1997). As a result, older consumers are more likely to use television as an information source rather than print media, which requires more effort in terms of information processing (Gregorie, 2003).

According to the literature, age-related psychological changes are also associated with changes in consumers' attitudes, motivations, and behaviors (Schroots, 1996). That is, consumers tend to change how they respond and behave as they age, particularly due to cognitive changes derived from age-related declines in memory, problem-solving, and cognition (Moschis, 1994). The decline in cognitive abilities associated with aging can lead to age-related differences in cognitive function and performance (Gregorie, 2003; Yoon, 1997), and ultimately result in distinctive shopping patterns among older consumers compared to younger consumers (Sorce, Perotti, & Widrick, 2005). For example, Sorce et al. (2005) found a difference in online

searching behavior between older and younger consumers. Older consumers tended to search fewer product possibilities than younger consumers when shopping online (Sorce et al., 2005).

Cognitive abilities involve various aspects of the thinking process, including memorizing, organizing, planning, and making decisions (National Institute on Aging, 2017). Due to the aging process, older consumers tend to have more difficulty with accessing and remembering specific words and names (National Institute on Aging, 2017). In addition, they are more likely to experience a slight decrease in their ability to pay attention and learn new things (Moschis, 1994; National Institute on Aging, 2017). A lower cognitive performance can lessen an individual's interest and participation in cognitively demanding activities, such as learning new skills or adopting new innovations (Moschis, 1994; National Institute on Aging, 2017). For example, the effect of age has been examined relative to the adoption of new technologies (Moschis, 1994). Findings suggest that there are in fact several factors that influence the acceptance of new technological innovations among older consumers, such as education, interest and familiarity with other technologies, as well as lifestyle (Moschis, 1994). Such findings indicate that older consumers likely will have different perceptions of virtual technology compared with younger consumers due to age, as well as being of a different generational cohort.

Social Changes

Age-related social changes refer to changes in roles that individuals experience as they age (Gregorie, 2003). More specifically, aging leads people to change their social relationships, or as Moschis (1994) writes, "social status within a society, power relationships within social groups (e.g., family), and various roles people are expected to play at various stages in life" (p. 198). As a result of age-related social changes, consumers tend to redefine their needs and preferences based on their new roles (Moschis, 1994). Thus, age-related social changes can

influence consumption behavior, such as needs for products and services, store selection, and preference for information sources (Gregorie, 2003).

Roles are expressed as behavioral expectations depending on social status within a society (Moschis, 1994). With aging typically comes a reduction in the number of roles and responsibilities (Gregorie, 2003). Moreover, the remaining roles in late adulthood tend to be less intensive (Gregorie, 2003). These changes in roles with age result in an increased time availability later in life, which can affect older consumers' shopping behaviors (e.g., abundant shopping time) (Gregorie, 2003). For instance, Gregorie (2003) found that older consumers are considered to be recreational shoppers who enjoy shopping with hedonic purposes, in contrast to utilitarian purposes. In particular, retirement, which many Americans tend to experience around the age of 65, has been found to greatly impact consumption behavior (Moschis, 1994; Schau, Gilly, & Wolfinbarger, 2009). For example, consumers' apparel expenditures tend to decrease when they retire due to the reduced need for work-related apparel (Jackson, 1992; Lee, Hanna, Mok, & Wang, 1997). Likewise, an increase in available time due to retirement allows older consumers to engage more in social and travel activities, which may shift their particular needs for apparel to include more activewear and less professional attire (Hyllegard, Ogle, & Dunbar, 2006; Lehto et al., 2008; Menchin, 1991). For example, baby boomers have been identified as an important target market for outdoor apparel because they are more likely to engage in outdoor activities than Generation X or Y consumers, especially after their retirement (Hyllegard et al., 2006). Lehto et al. (2008) also found a greater tendency to engage in leisure activities, including traveling, among baby boomers during retirement due to better health and wealth in their old age compared to the Silent Generation. As a result, baby boomers have different needs for apparel for various activities, including outdoor and traveling activities, after retirement (Menchin,

1991). Thus, female baby boomers' transition to roles in later stages of life likely impacts their apparel consumption behaviors.

The rapidly growing number of older consumers in the U.S. indicates an increasing need to understand consumer behavior across age groups. To understand age-related needs and expectations of older apparel consumers, it is essential to examine the age-related changes that potentially affect their apparel consumption behaviors. For instance, age-related physical changes are related to apparel fit. Moreover, physical and psychological changes associated with aging influence how consumers shop for apparel, and specifically how they use technology for apparel shopping. Social changes that happen with aging also influence apparel needs in later life. Consequently, the variety of possible age-related physical, psychological, and social changes must be considered in order to fully understand and contextualize consumption behavior among older consumers, and in the case of this dissertation, females of the baby boomer generation. In the next section, the literature on female baby boomers' apparel consumption and online shopping behaviors will be examined, including discussion of how age and age-related factors contribute to these behaviors.

Age and Consumption Behavior

Aging has often been examined in the consumer behavior and marketing literatures due to the impact it has on consumption behavior, particularly in such areas as information processing (Yoon, 1997), the decision-making process (Han, Hsu, & Lee, 2009), motivations (Williams & Drolet, 2005), attitudes (Bittner & Schipper, 2014), and purchase intention (Zhao & Lee, 2019). Studies have also examined how age plays a role in consumers' apparel consumption behaviors in particular. Such topics as apparel buying patterns (Holmlund, Hagman, & Polsa, 2011), spending patterns on personal apparel (Jackson, 1992), segmentation

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based on professional and social activities (Mumel & Prodnik, 2005), shopping behaviors and fashion opinions (Peters et al., 2011), clothing choice (Rahman & Yu, 2018), preferences for apparel consumption (Rocha et al., 2005; Thomas & Peters, 2009), and apparel fit and style concerns (Howarton & Lee, 2009; Lee et al., 2012), have all been explained through the lens of age.

Age also has been investigated as a factor that influences consumers' online shopping behaviors. Studies regarding older consumers' online shopping behaviors have examined the effect of age on attitudes and intentions to shop online (Hashim et al., 2009; Iyer & Eastman, 2006). For example, Lian and Yen's study (2014) explored drivers (performance expectation, effort expectation, social influence, and facilitating conditions) and barriers (usage, value, risk, tradition, and image) experienced by older consumers when shopping online. Law and Ng (2016) examined four factors (security, innovativeness, usefulness, and ease of purchase) that influence older consumers' decisions to purchase products online. Given the important effect of age on consumer behavior found in the literature, empirical studies that examine consumption and online shopping behaviors will be discussed in the following sections and linked to the topic of female baby boomers' consumption behavior as compared with other consumer groups (e.g., younger women and the previous generation of older women).

Apparel Consumption Behavior

Female baby boomers have attracted attention from retailers because they are considered to represent a generation of wealthy and active consumers (Coleman et al., 2006). However, there has been little research on female baby boomers in the field of fashion. Moreover, few studies examine apparel consumption behavior among aging female baby boomers. One exception is Howarton and Lee (2009), who examined fit preferences among female baby

boomers. The authors found that members of this cohort prefer apparel fit and styles that flatter their aging bodies by hiding figure flaws. Another exception is Rahman and Yu (2018), who investigated female baby boomers' physiological and psychological apparel needs. According to Rahman and Yu (2018), female baby boomers consider age appropriateness as an important factor for apparel consumption, as well as fit, style, comfort, and color. Rahulan et al. (2015) explored baby boomers' activewear consumption behavior. They found a difference in purchase decision behavior of compression sportswear between baby boomer and Generation Y consumers. In addition, baby boomer consumers were more likely to spend less time making a purchase decision than Generation Y consumers (Rahulan et al., 2015). Lastly, Wray and Hodges (2008) studied the important role of cognitive versus chronological age factors in activewear apparel advertisements targeting female baby boomers. In their study, female baby boomers perceived themselves as younger than their chronological age and preferred activewear apparel advertisements that use models who are closer to their cognitive age.

Except for the four studies above, many studies set out to investigate "older women" in general. However, female baby boomers have distinct apparel needs and preferences compared with previous generations of older women because baby boomers have different experiences with social, cultural, and body-related changes (Twigg, 2013). Thus, studies regarding the baby boomer generation are included in this section of the literature review to examine connections between female baby boomers' characteristics and their distinctive needs and preferences for apparel, especially compared with previous generations. At the same time, female baby boomers likely share similar apparel needs and preferences with their predecessors, due to the more general experience of the aging process. Thus, in some ways, literature that examines older women is useful for contextualizing female baby boomers' apparel needs, especially compared

with younger consumers. Importantly, fashion retailers could better serve the female baby boomer cohort by doing so, rather than just paying attention to younger consumers. In this section, factors related to apparel preference, including fit, style, and lifestyle, are examined via the literature.

Fit

As examined earlier in this chapter, age has a major impact on physical changes that individuals experience. These changes impact how clothing fits. According to Howarton and Lee (2010), women typically need larger sizes of apparel due to the average increase of "3-5 inches in the waist, 1-3 inches in the hips and 4-6 inches in the chest, as they age" (p. 220). Such increases reflect typical changes that women experience in their body shape with age, often going from an hourglass figure in their 20s and 30s to an apple figure in their 50s (Kirkova, 2013; Rahman & Yu, 2018). Often body changes that impact size and fit include rounded shoulders, bent posture, sagging underarms/biceps, and lower bust lines (Goldsberry et al., 1996; Rahman & Yu, 2018). Howarton and Lee (2009) explained that female preferences for apparel fit tend to gravitate toward emphasizing or concealing particular parts of their bodies. Even though female baby boomers tend to be healthier than previous generations, they are not immune to experiencing notable body changes with age (Howarton & Lee, 2009; Rahman & Yu, 2018). Therefore, it is important to develop ways to address their needs from a fit standpoint, such as modifying patterns and offering more adequate sizes.

Developing well-fitting clothing is important because, according to the literature, female baby boomers consider apparel fit as one of the most influential attributes when making purchase decisions. For example, all women participants aged 50 to 63 years in Holmlund et al.'s study (2011) indicated that good fit is one of the most important aspects when they buy clothing.

Howarton and Lee (2009) also found that female baby boomers rate apparel fit as most important for their decisions to buy apparel, followed by ease of care and style. In a similar vein, the need and desire for well-fitting clothing was identified as a priority for women aged over 55 (Schofield, Ashdown, Hethorn, LaBat, & Salusso, 2006). However, fashion retailers tend to focus on younger consumers, which makes it difficult for older, and particularly baby boomer consumers to find well-fitting clothing in the current fashion market (Shim & Bickle, 1993). According to Shim and Bickle (1993), the lack of well-fitting clothing makes female baby boomers dissatisfied with the fit of ready-to-wear garments. Again, fashion retailers need to consider female baby boomers' body changes (e.g., waist-to-hip ratio) in order to improve apparel fit and ultimately satisfy female baby boomers' apparel needs.

Style

Body changes that come with age are often associated with certain style preferences. Previous studies indicate that comfort of apparel plays a crucial role in clothing choice among female baby boomers, particularly to compensate for age-related body changes (Howarton & Lee, 2009; Rahman & Yu, 2018; Rahulan et al., 2015). For example, Rahman and Yu (2018) found that female baby boomers dislike form-fitting garments (e.g., tight waistbands) and uncomfortable footwear (e.g., high heels). In Howarton and Lee's study (2009), female baby boomers tend to consider well-fitting apparel as comfortable apparel that has enough ease for movement. They tend to prefer specific styles of apparel that can de-emphasize their body features derived from aging, such as longer tops to hide enlarged hips (Howarton & Lee, 2009). Specifically, female baby boomers try to avoid revealing styles (e.g., sleeveless or strapless styles, off the shoulder styles), and use black and layering techniques in order to hide certain parts of the body (Howarton & Lee, 2009; Rahman & Yu, 2018). Reflecting a preference for

comfortable clothing, Howarton and Lee (2009) found that the most popular types of apparel among female baby boomers are slacks, jeans, and T-shirts, whereas the least preferred styles are skirts, skirt suits, and dresses.

Along with a comfortable style, studies suggest that female baby boomers want fashionable and stylish clothing that makes them look younger (Howarton & Lee, 2009; Rahman & Yu, 2018). This preference aligns with their general interests in appearance and fashion trends as a cohort (Howarton & Lee, 2009; Rahman & Yu, 2018). Although age has been considered a negative aspect in fashion, some research reveals that female consumers maintain a keen interest in appearance and fashion regardless of age (Kozar, 2005; Lee et al., 2012). Furthermore, according to the literature (Holmlund et al., 2011; Lee et al., 2012), fashionable clothing plays an important role in expressing identities among women in later stages of life. Interestingly, female baby boomers do not want to look too young, like their daughters, or too old, like their mothers (Howarton & Lee, 2009; Rahman & Yu, 2018). Thus, female consumers of this cohort prefer age-appropriate styles that make them look youthful and fashionable, but neither too young nor too old (Howarton & Lee, 2009; Rahman & Yu, 2018). Yet, in Howarton and Lee's study (2009), 99% of the female baby boomers who participated perceived a general lack of attention from fashion retailers, which, in turn, makes it hard for them to find appropriate apparel.

Indeed, baby boomers are known as "the most fashion forward generation" (After Fifty Living Inc., 2016, p. 1). Baby boomers experienced dynamic, revolutionary changes in society, politics, and fashion between the 1960s and 1980s (After Fifty Living Inc., 2016; Lehto et al., 2008). For women in particular, there was a significant change in social norms starting in the early 1960s, which impacted fashion (After Fifty Living Inc., 2016). For instance, female baby boomers were important to the emergence of key fashion trends (e.g., the bikini, the mini-skirt,

knee-high boots) that remain part of today's fashion market (After Fifty Living Inc., 2016).

Experiencing these changes has also had a crucial impact on this cohort's tendency to be open to

trying new things, which can be seen in their interests in keeping up with fashion trends, but also

lower brand loyalty when compared with younger generations (Gregoire, 2014; Howarton &

Lee, 2009).

The literature also suggests that baby boomers tend to feel younger than they actually are,

a phenomenon known as cognitive aging (Rahman & Yu, 2018; Wray & Hodges, 2008).

According to Lehto et al. (2008), more than half of female baby boomers perceive themselves as

being younger in both age and outlook than their chronological age. Wray and Hodges (2008)

found that most of the female baby boomer participants in their study viewed themselves to be at

least five to ten years younger than their chronological age. This difference or gap between

chronological and cognitive ages could have importance for their consumption behaviors

(Amatulli, Peluso, Guido, & Yoon, 2018; Wray & Hodges, 2008). For example, Amatulli et al.

(2018) found that the more consumers aged 65 and over feel younger than their chronological

age, the more they prefer contemporary products versus traditional products. Wray and Hodges

(2008) found that female baby boomers have more positive attitudes toward activewear apparel

advertisements when they include models that appear younger than their chronological age.

Consequently, age-appropriate styles designed for previous generations of older women will

likely not align with female baby boomers' preferences.

Lifestyle

The literature shows that consumers evaluate and choose apparel based on their lifestyles,

and that they seek appropriate apparel products that fit their specific roles (Cassill & Drake,

1987). In this regard, lifestyle has been examined as a key factor in consumption behavior

changes that occur with aging (Rocha et al., 2005; Schau et al., 2009; Thomas & Peters, 2009).

For example, Schau et al. (2009) posited the important role of a retirement lifestyle (i.e., changes

in lifestyle due to retirement) in older consumers' identity-related consumption behaviors.

Rocha et al. (2005) indicated that older consumers' fashion and clothing consumption is

determined by lifestyle, along with physical and identity attributes, because lifestyle is an

indicator of their apparel needs. Likewise, Thomas and Peter (2009) found that lifestyle impacts

apparel purchase decisions among women over age 65. All of the women who participated in

Thomas and Peter's study (2009) mentioned that their hobbies (e.g., gardening) and social

activities (e.g., attending church) have an impact on their fashion consumption behaviors.

Howarton and Lee (2009) also found that female baby boomers consider their lifestyles to be one

of the important selection criteria for apparel. They want to wear apparel styles that represent

their lifestyles, which allows them to look neither too old nor too young (Howarton & Lee,

2009).

Lifestyle can be defined by women's "careers, leisure activities, child-rearing issues,

socio-economic and educational levels, and community involvement" (Howarton & Lee, 2009, p.

222). Female baby boomers' employment status also affects their apparel consumption

behaviors. For instance, Rahman and Yu (2018) suggest that female baby boomer employees

tend to select business clothing that they consider appropriate for an office environment. In

Howarton and Lee's study (2009), female baby boomers also indicated a preference for wearing

formal attire at work. Importantly, baby boomers tend to have healthier bodies and a longer life

expectancy compared with previous generations, which has enabled many to postpone their

retirement (Rahman & Yu, 2018; Toossi & Torpey, 2017). As a result, this consumer group

needs more career apparel that is appropriate to aging compared with previous generations. For

work-related activities, it has been found that female baby boomers desire more formal and fashionable clothing to maintain their professional appearance (Rahman & Yu, 2018). According to Rahman and Yu's study (2018), appropriate apparel helps female baby boomers feel more confident about engaging in economic and social activities and therefore appropriate apparel is critical in the enhancement of their workplace self-confidence.

With respect to educational and socio-economic levels, baby boomers are considered the most educated generation in the United States, which results in a great sense of empowerment (Howarton & Lee, 2009; Wray & Hodges, 2008). They are also the generational cohort that experienced the consumption boom of the 1980s and 1990s (Twigg, 2013). Thus, the baby boomer cohort is defined as consumers who know "what they want, compared to previous generations, and are the first generation to have the money to buy it...[They] are interested in quality products that are aesthetically pleasing, personally satisfying, and are conscious of brand and store" (Cassill & Drake, 1987, p. 20). Twigg (2013) found that female baby boomers tend to focus on hedonic values in apparel consumption, which is related to their interests in wearing fashionable and attractive clothing. Moreover, prompted by their continued interest in fashion, they have many opportunities to shop for apparel and the disposable income to buy it because they remain actively engaged in work throughout their adulthood (Twigg, 2013). These characteristics have distinguished baby boomers from the previous generation of older women, such as those of the Silent Generation, and identified them as the "younger" old generation or the "new elderly" when compared with the generations before them (Kim, Jolly, & Kim, 2007; Twigg, 2013).

In terms of leisure activities, baby boomers are more likely to be involved in active leisure activities, particularly during their retirement years, because they experience improved

health as compared to the previous generations of older women (Lehto et al., 2008). Notably, according to Rahman and Yu (2018), female baby boomers tend to spend a significant amount of money on purchasing apparel for vacations, suggesting that the need for activewear apparel has accelerated in the fashion market. Interestingly, many female baby boomers consider apparel shopping to be a leisure activity (Birtwistle & Tsim, 2005), and engage in apparel shopping for various reasons, including stress relief and retail therapy (Rahman & Yu, 2018). Moreover, they have been found to enjoy apparel shopping through exploring the aesthetic aspects of apparel and learning about current fashion trends (Rahman & Yu, 2018). Lee, Hodges, and Min (2019) also found an interest in recent fashion trends and appearance among female baby boomers. In their study, female baby boomers were found to actively use social media (i.e., fashion blogs) to share fashion information as well as tips for how to dress "age appropriate" (Lee et al., 2019).

In sum, female baby boomers are a different kind of older apparel consumer when compared with previous generations of older women. To be specific, female baby boomers have distinctive needs and preferences for apparel (e.g., the types of and how much apparel they need) based on their lifestyles. However, female baby boomers are not necessarily a homogeneous group of consumers and are more likely to have different lifestyles and preferences than other cohorts (Kozar & Damhorst, 2008; Rahman & Yu, 2018). Moreover, they reflect diverse demographics, such as ethnicity, marital status, class, and education levels (Wray & Hodges, 2008). These differences result in distinctive apparel consumption behaviors within and among members of this cohort. Therefore, fashion retailers should consider the diversity of female baby boomers' lifestyles to fully meet their demands. The results of this dissertation help to shed light on their needs and preferences as a distinct and diverse group of consumers.

Online Shopping Behavior

Typically, online retailers target younger consumers due to the perception that older consumers lack experience with using technology (Hernandez et al., 2011; Sulaiman et al., 2008). Older consumers are often seen as resistant to change and are thought to make decisions carefully to reduce risks (Hernandez et al., 2011). As a result, there is a general perception of a negative relationship between age and the adoption of online shopping. However, the number of online shoppers, as well as Internet users over 55 years of age has rapidly increased (Iyer & Eastman, 2006). In particular, baby boomers play a significant role in the growing number of Internet users among the older population (Binkley, 2009; Dolliver, 2018; Rainie, 2012).

Baby boomers as a group are more willing to use technology than previous generations of consumers because they have more experience with technology as well as greater access to it (Dolliver, 2018; eMarketer, 2018b; LeRouge et al., 2014). As a generation, baby boomers experienced the major technological breakthroughs of the 1990s, including the introduction of personal computers and the rising popularity of the Internet for personal use. This experience with technological innovation means that baby boomers respond differently than previous older generations, especially in terms of their attitudes toward technology, use of technology, their readiness to use technology, and familiarity with technology (LeRouge et al., 2014). Indeed, according to LeRouge et al. (2014) and Zickuhr (2011), experience with the unique and significant changes in technological inventions during baby boomers' younger days has led to positive attitudes toward the adoption of new technology in later adulthood.

Female baby boomers are active online shoppers, and are expected to engage more in online shopping as technology advances (Wray & Hodges, 2008). According to Statista (2019), 41% of baby boomers prefer to search for and purchase products online rather than in store,

which is significantly different compared with 28% of previous generations. Furthermore, studies have found that female baby boomers' online shopping behavior is similar to that of younger generations (Beldona, Nusair, & Demicco, 2009; Kumar & Lim, 2008). At the same time, female baby boomers exhibit distinctive online shopping behaviors as compared with younger women. That is, they tend to spend less time searching for products online compared with younger women (Sorce et al., 2005). This may be because female baby boomers tend to need less time in making purchase decisions because they are confident of what they need and what works for them (Holmlund et al., 2011; Peters et al., 2011; Rahulan et al., 2015).

Sorce et al. (2005) found that older consumers are more willing to purchase a product online than younger consumers. In a similar vein, female baby boomers spend more money on online apparel shopping than younger women (Binkley, 2009). According to Binkley (2009), women who are between 54 and 64 years old spend more money on online apparel shopping than women under 45 years old. In addition, the age group between 55 and 64 is the fastest growing group of online apparel buyers (Binkley, 2009). This information suggests that female baby boomers play a significant role in the online fashion market and, in turn, provide an important opportunity for online fashion retailers. Results of this dissertation help to deepen understanding of their online apparel shopping behaviors, which offers practical implications for online fashion retailers targeting this consumer group.

The literature suggests that baby boomers significantly value convenience when they shop for apparel (Miles, 2019; Rahman & Yu, 2018). For example, convenience plays an important role in their shopping motivations and selection of stores (Rahman & Yu, 2018). Given their focus on convenience, online and mobile shopping platforms might offer them better outlets for apparel shopping. However, some of the participants in Rahman and Yu's study

(2018) hesitated to purchase apparel online due to the body changes they have experienced during the aging process, and have difficulty finding the right size without trying something on first. Virtual technology can contribute to reducing the perceived risk inherent to online apparel shopping. For example, virtual try-on technology allows consumers to evaluate fit on 3D avatars that represent their bodies, and eventually get more accurate information on fit when they shop for apparel online (Shim & Lee, 2011; Shin & Baytar, 2013). Moreover, virtual try-on technology can make the process of trying on apparel easier for consumers who face physical challenges due to age-related body changes, and ultimately make apparel shopping more convenient. Because the focus of the dissertation was on the role of virtual technology relative to female baby boomers' apparel consumption behaviors, findings expand the literature on technology and apparel consumption by broadening the understanding of the needs of this consumer group. To further explore the potential of technology, in the next section, studies on virtual technology are discussed, and particularly in relation to the online consumption context.

Virtual Technology and Consumption

Virtual technology is defined as technology that is used to manufacture real or virtual products and services (e.g., a custom design for an avatar that is a graphical representation of an individual consumer) (Kisielnicki, 2008). Virtual technology is distinguishable from traditional technology by employing different tools, such as virtual machines, simulation, and modeling (Kisielnicki, 2008). According to Kisielnicki (2008), virtual technology can be considered as having two primary functions: (1) to produce virtual products and (2) to provide efficient and effective tools to replace traditional technology. The key component of virtual technology is "virtual," which means having something without a physical presence (BusinessDictionary, n.d.). To be specific, "virtual" is a digitally simulated version of real objects or effects through

computing (Rouse, 2017). This simulation exists mostly online and tends to be less exact when compared with something real, yet it is similar enough to invoke the essence of the actual thing (Rouse, 2017). Consequently, virtual technology is technology that serves to make something visible, including "mapping of physical reality with virtual reality for end users to understand the output generated through simulated data" (Rao, 2010, p. 4).

With the rapid advancement of technology, a wide range of virtual technology applications have been developed. Specifically, virtual technology is an inclusive phrase used to describe various types of information systems and communications technologies that support virtual reality environments and augmented reality experiences (Molka-Danielsen, 2018). In recent years, virtual reality (VR) and augmented reality (AR) are two of the most emergent and popular "reality" technologies (Bradshaw, 2017; Chen, 2022), and most virtual technology applications that are currently available in the marketplace can be categorized as one of the two types.

VR enables users to immerse themselves in "a fully artificial digital environment" (Forbes, 2018, p. 1). In VR applications, artificial environments are presented to users through virtual technology in order to allow the users to perceive the environments as real or real to a certain degree (Forbes, 2018). The most prominent example of VR is the Meta Quest VR headset (Bradshaw, 2017; Chen, 2022). Another example of VR is a virtual computer-based world, such as Second Life (Schoonheim, Heyden, & Wiecha, 2014). In the virtual world, users can create their own avatars, participate in activities, and communicate with others (Loker et al., 2008). Users can also purchase virtual apparel for their personal avatars in the virtual world (or game) (Loker et al., 2008). In addition, VR includes virtual stores and showrooms that "replicate the in-store experience by allowing customers to walk past virtual shelves and racks stocked with

virtual products for sale" (Loker et al., 2008, p. 171). In the fashion industry, VR has been

employed to provide runway experiences to consumers by allowing them to have a front row seat

at shows via VR headsets (Jones, 2017). Several fashion brands, including Dior, Tommy

Hilfiger, Balenciaga, Rebecca Minkoff, and Topshop have launched VR catwalk experiences in

stores (A. Jones, 2017; N. Jones, 2014).

Unlike VR, AR does not create an artificial environment, but rather overlays virtual

objects onto existing, real environments (Forbes, 2018). Thus, AR is more commonly associated

with smartphone applications, such as Snapchat and Pokemon Go (Bradshaw, 2017; Chen,

2022). The most prevalent example of AR is virtual try-on, which enables consumers to try on

virtual products (e.g., eyeglasses, makeup). As mentioned in Chapter I, Amazon is currently

working on the development of the smart mirror that helps consumers shop for apparel online by

allowing them to try virtual clothing on their own bodies (Yurieff, 2018).

Virtual try-on technology can be employed as both VR and AR. As VR, consumers can

try virtual clothing on 3D virtual models that reflect their particular body measurements and

shape. However, as mentioned above, virtual try-on technology can also be used to allow

consumers to try virtual clothing on their real bodies instead of 3D avatars. In this case, virtual

clothing is overlaid on consumers' actual bodies through images or other visual information,

which means the application of AR (Forbes, 2018). In this dissertation, virtual try-on technology

is considered VR because in the online apparel shopping context consumers are more likely to be

involved in a virtual computer-based environment (i.e., online shopping websites). Moreover,

the focus of this study was on female baby boomers' perceptions of and experiences with online

apparel shopping using virtual technology specifically to enable them to use 3D avatars that

reflect their own body measurements.

The next section focuses on the literature examining consumers' use of virtual technology and specifically in relation to female baby boomers' online apparel shopping. To this end, the literature is discussed relative to three key themes: (1) virtual technology in the consumption context, (2) virtual technology for online apparel shopping, and (3) virtual try-on technology for female baby boomers. The findings discussed in this section help to identify gaps in the literature regarding virtual technology that this dissertation could address.

Virtual Technology in the Consumption Context

With the rapid advancement of technology, virtual technology provides new business opportunities to retailers (Porta et al., 2008). Such innovations can result in changes in consumption behaviors. To be specific, consumers can shop for products online using virtual technology (e.g., virtual try-on), and can even shop in virtual worlds (e.g., virtual apparel purchase). Furthermore, virtual technology allows consumers to engage in social activities while they are shopping (Porta et al., 2008). Consumers can interact with other consumers as well as retailers in virtual communities. Overall, consumers can gain a better understanding of products and garner social support for their shopping by using virtual technology.

The positive aspects of shopping with virtual technology have an impact on consumers' shopping behaviors (Lee et al., 2010). For example, Lee et al. (2010) found that a 3D virtual model allows consumers to interact with a product through simulation, and ultimately facilitate their purchase decisions when shopping online. To improve consumers' shopping experiences and increase sales, the number of retailers who invest in and employ virtual technology has increased (Dogadkina, 2022; Sumner, 2018). As a result, it is likely that in the near future, the use of virtual technology will become widespread and even essential for online shopping (Loker et al., 2008; Porta et al., 2008). For retailers, an understanding of consumers' attitudes toward

and willingness to use virtual technology is crucial to successfully ensure they adopt the

technology and to eventually develop marketing strategies to increase profits. Consequently,

there have been various studies that examine consumers' attitudes and intentions to use virtual

technology.

Previous studies have examined consumers' attitudes toward virtual technology, such as

3D rotation view, a virtual model, virtual try-on, 3D body scanning, virtual closets, and virtual

fitting rooms (Ivanov et al., 2022; Kim & Forsyth, 2007, 2008; Lee et al., 2021; Loker et al.,

2008; Nantel, 2004; Pantano, Rese, & Baier, 2017; Park & Kim, 2021; Perry, 2016; Rese, Baier,

Geyer-Schulz, & Schreiber, 2017). For example, a study by Kim and Forsythe (2007) revealed

positive attitudes toward 3D rotation views and virtual try-on for online apparel shopping among

consumers. Kim and Forsythe (2007, 2008), Pantano et al. (2018), and Rese et al. (2017) also

found consumer attitudes toward virtual try-on to be positive.

According to several studies, virtual technology has a positive influence on enhancing

consumers' product experiences, and ultimately their purchase decisions (e.g., Beck & Crie,

2018; Oh, Yoon, & Shyu, 2008; Park & Lee, 2021; Yang & Wu, 2009). Given that virtual

technology can influence the consumer's decision to buy a product, research has sought to

understand why consumers either accept or reject virtual technology when shopping (Kim &

Forsythe, 2008; Pantano & Servidio, 2012). Specifically, consumers' adoption of virtual

technology has been examined based on the relationship between attitude and intention to use the

technology via the Technology Acceptance Model (TAM) (Davis, 1989; Davis et al., 1989). In

these studies, external variables that influence consumers' attitudes toward virtual technology,

such as consumers' personal traits, were also included. For example, Ivanov et al. (2022)

explored how individual traits (i.e., disposition to value privacy, body esteem) influence

consumers' decisions to adopt virtual try-on for apparel shopping. Kim and Forsythe (2008) examined the role of gender and technology anxiety/innovativeness in the virtual try-on adoption process for online apparel shopping. Lee et al. (2021) investigated the influence of media characteristics (perceived interactivity and augmentation) on consumers' attitudes and adoption intention towards virtual fitting rooms. Pantano et al. (2017) also included technology characteristics, such as aesthetic quality, interactivity, response time, and quality of information to investigate how these characteristics influence ease of use, enjoyment, and perceived usefulness, and ultimately, attitude toward virtual try-on technology. Perry (2016) employed an extended TAM that includes three additional factors (subjective norm, technology optimism, product aesthetics) to examine consumers' attitudes and intentions to use smart virtual closets. In Shin and Baytar's study (2014), female consumers' concerns with apparel size and fit were examined in relation to their intention to use a virtual try-on model for online apparel shopping. Yu and Damhorst (2015) also considered female consumers' body satisfaction as a variable that impacts their perceived usefulness and enjoyment of the virtual product experience. Overall, these external variables have been found to have a significant impact on consumers' attitudes toward virtual technology. Finally, Kim and Forsythe (2007) found that hedonic and perceived entertainment values motivated consumers to use virtual technology. Findings of these previous studies indicate that consumers' attitudes and intentions to use virtual technology are determined by diverse influential factors relative to not only aspects of the technology, but also personal traits, such as fit concerns and body satisfaction. Hence the focus of this dissertation on the role of female baby boomers' age-related needs and expectations relative to their perceptions of virtual technology in online apparel shopping.

Virtual Technology Applications

Virtual technology has diverse applications for shopping, such as virtual fitting rooms, 3D rotation views, virtual try-on, virtual stores, virtual closets, virtual sales associates, and so on. Beck and Crie (2018) found a positive effect of a virtual fitting room on consumers' patronage and purchase intentions in both online and offline contexts. Using a virtual fitting room in a website or a store, consumers are able to virtually try on clothing in front of a camera and to change virtual clothing in terms of design, color, and size. This experience increases consumers' curiosity about the product, and eventually their intention to buy the product (Beck & Crie, 2018). Perry (2016) examined smart virtual closets, which is a virtual technology application that provides advice on coordination based on users' closets. The author found three factors that significantly influence consumers' intention to adopt smart virtual closets: (1) subjective norm as a social influence, (2) technology optimism as a personality trait, and (3) aesthetics as a product feature.

3D rotation views and virtual try-on can be employed to allow online shoppers to view apparel from different angles and ultimately acquire more information about and experience with the product before purchasing it. The literature indicates a perceived usefulness and enjoyment/enjoyment value of 3D rotation views and virtual try-on for online apparel shopping (Kim & Forsythe, 2007; Yu & Damhorst, 2015). According to Kim and Forsythe (2007), consumers have positive attitudes toward 3D rotation views and virtual try-on, which results in intention to use those virtual technologies for online apparel shopping and further purchases of apparel from the specific website providing the technologies. Yu and Damhorst (2015) also found a positive relationship between the use of 3D rotation views, virtual try-on and online purchase intention. In Yu and Damhorst's study (2015), participants' perceived usefulness of 3D

rotation views and virtual try-on was prompted by the virtual technologies because they improved their online shopping productivity and ability. They also indicated that 3D rotation views and virtual try-on are enjoyable and interesting (Yu & Damhorst, 2015). Moreover, their experiences with those virtual technologies positively influenced their attitudes toward the apparel products and their intentions to purchase the products online (Yu & Damhorst, 2015). In a similar vein, Park and Kim (2021) revealed a positive impact of virtual try-on on consumers' purchase intentions when shopping for apparel online.

Virtual try-on has been the most frequent type of virtual technology examined in previous research on virtual technology in the consumption context. Specific contexts of virtual try-on include shopping for apparel, sunglasses, and furniture. There are several studies that examined consumers' adoption of virtual try-on for shopping based on TAM (e.g., Pantano et al., 2017; Rese et al., 2017). Pantano et al. (2017) suggested a positive influence of virtual try-on on online shopping behavior. That is, the authors posited that consumers are more willing to make online purchase decisions when they can try on virtual sunglasses using a smart mirror. Rese et al. (2017) likewise found that consumers tend to use augmented reality applications that allow them to place virtual furniture in their own home due to the utilitarian (information) and hedonic (enjoyment) value of virtual try-on. Kim and Forsythe (2008) proposed a virtual try-on acceptance model for online apparel shopping. To be specific, the authors extended the e-TAM to develop the virtual try-on acceptance model. The e-TAM is an extended model of TAM focused on the online context (Heijden, 2000). According to Heijden (2000), perceived usefulness and perceived enjoyment are influential factors leading to the revisiting of websites by consumers. To this end, Kim and Forsythe (2008) included the hedonic role of virtual try-on

(i.e., the perceived entertainment value of virtual try-on) in online apparel shopping in the virtual try-on acceptance model.

Virtual technology also has applications to enhance the social features of online apparel shopping (Flanagan, 2014; Shim et al., 2012). For instance, Shim et al. (2012) found that virtual sales associates can help older consumers find products easily and solve problems when shopping for apparel online. The availability of social support through virtual sales associates enables older consumers to shop for apparel online conveniently and effectively (Shim et al., 2012). Shim et al.'s study (2012) is one study that examined older consumers' attitudes toward virtual technology when engaging in online apparel shopping. Most studies regarding consumers' use of virtual technology for online apparel shopping target younger consumers, a point that will be discussed in the next section.

Age

The previous studies regarding virtual technology in the consumption context discussed above have focused on younger consumers, with college students being the most prevalent sample. For example, Merle, Senecal, and St-Onge (2012) examined the influence of virtual try-on on female college students' responses to online apparel stores. Female college students were also recruited for three studies regarding virtual technology in the online apparel shopping context: (1) to explore the role of shopping goals in the effect of virtual technology on purchase intention (Park & Kim, 2021), (2) to examine intention to use the virtual try-on model (Shin & Baytar, 2014), and (3) to investigate the relationship between body satisfaction and intention to use virtual try-on technology (Yu & Damhorst, 2015). In addition, Oh et al. (2008) used a student sample to examine the impact of virtual reality on consumers' product experiences and decision-making for furniture shopping. In Pantano and Servidio's study (2012), undergraduate

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students were employed to explore how the use of virtual reality impacted consumers' store perceptions and satisfaction. Lee et al. (2021) also recruited university students to investigate the relationship between consumers' perceived media characteristics and their adoption intention towards virtual fitting rooms.

Along with college students, Internet users and online shoppers in the age range of 20-30 years have frequently been included in previous research on virtual technology in the consumption context. Participants in Yang and Wu's study (2009) examining the effect of a virtual model on consumers' satisfaction and purchase intentions were Internet users with an average age of 22. Smith, Johnston, and Howard (2011) also selected Internet users between 18 and 30 years old to explore how a virtual model impacts attitudes towards online stores. In Kim and Forsythe's studies (2007, 2008) examining consumers' intentions to use virtual try-on for online apparel shopping, a national sample of US online shoppers ages 19 and older, particularly undergraduate students, were recruited for focus group interviews. Similarly, Perry (2016) investigated the intention to use smart virtual closets by online consumer panels comprised of consumers between 25-31 years of age. Likewise, Ivanov et al.'s study (2022) included Chinese females who were between 18 and 25 to examine how privacy concerns influence adoption intention of virtual try-on in apparel shopping.

Older samples were recruited in two studies examining virtual technology in the consumption context. Loker et al. (2008) explored consumers' perceptions of body scan technology using two different age groups: (1) women aged 35 to 54 years and (2) female graduate students aged 19 to 22 years. Shim et al. (2012) included mature consumers between 50 and 89 years old to examine the influence of a virtual sales associate on their attitudes and patronage intentions toward an apparel retail website. Overall, aside from these two studies,

existing research tends to focus primarily on younger consumers, therefore there is a gap in need of addressing through research on older consumers' use of virtual technology for apparel shopping, and specifically in the online context. Thus, the dissertation explored how female baby boomers, as an older apparel consumer group, perceive virtual technology for online apparel shopping and how virtual technology might impact their overall decision-making process.

Method and Theoretical Framework

Quantitative approaches, such as surveys and experiments, have primarily been employed in previous research on virtual technology in the consumption context, resulting in a lack of research employing qualitative approaches. Qualitative and quantitative approaches are different in terms of how the issues regarding people and society are addressed (Denzin & Lincoln, 2000; Willis, 2007). According to Denzin and Lincoln (2000), qualitative approaches involve a concentration on process and meaning that cannot be captured through numbers, whereas the focus on measurement and analysis of causes and effects are attributes common to quantitative approaches (Denzin & Lincoln, 2000). These different approaches contribute to the production of different kinds of stories about people and society, and ultimately a wide range of knowledge about a phenomenon (Denzin & Lincoln, 2000). As a result, they foster the production of various types of knowledge that enhances the understanding and explanation of the world. In this regard, qualitative research is needed in the area of virtual technology related to consumer behavior to enable researchers to view the topic from angles that are currently unavailable in the literature.

Most research has focused on consumers' adoption of virtual technology for online apparel shopping using TAM, or the Technology Acceptance Model (Davis, 1989; Davis et al.,

1989). To be specific, two variables in TAM, *perceived usefulness* and *perceived ease of use*, have been used to determine how consumers make decisions about whether to adopt or reject virtual technology when they shop for apparel online (Kim & Forsythe, 2007, 2008; Yu & Damhorst, 2015). The results of Kim and Forsythe's studies (2007, 2008) confirmed all relationships in TAM: Relationships between perceived usefulness/ease of use/entertainment value and attitude, and attitude and intention. Yu and Damhorst (2015) also found the usefulness of TAM in studies regarding consumers' adoption of virtual technology in the online apparel shopping context. The authors suggest positive relationships among variables in TAM (perceived usefulness/enjoyment of virtual try-on, attitude toward an apparel product, and online purchase intention). Although this information is useful, TAM tends to simplify consumers' perceptions of virtual technology based on two variables (*perceived usefulness* and *perceived ease of use)*, and to exclusively focus on beliefs about technologies while neglecting other aspects, such as consumer demographic variables and identity. For example, information on consumers' acceptance of virtual technology for their apparel shopping does not address to what extent characteristics such as age or lifestyle influence their decisions to use virtual technology when shopping for apparel online. Therefore, this dissertation employed a qualitative approach to explore how female baby boomers perceive and experience online apparel shopping using virtual technology. As a result, a more in-depth understanding of the phenomenon was achieved. Likewise, by employing a conceptual framework that is different from TAM, results of the dissertation extend the overall understanding of the potential for virtual technology in the online apparel consumption context.

A summary of the literature reviewed relative to virtual technology is shown in Table 1. Specific factors of each study, such as virtual technology application type, context, method, theory, key findings related to virtual technology, and sample are considered.

Table 1. Summary of Studies Examining Virtual Technology in the Consumption Context

Study	VT application type	Context	Method	Theory	Key findings (Related to VT)	Sample (age of the majority)
Beck & Crie (2018)	Virtual fitting room	Online/ offline apparel shopping	Experiment	None	A positive impact on patronage and purchase intention	Two sample groups (mean age: 21 & 33)
Ivanov et al. (2022)	Virtual try-on	Online apparel shopping	Mixed method: Interview and survey	TAM, behaviour calculus	Effect of privacy concerns on adoption intention	Chinese females (18-25)
Kim & Forsythe (2007)	3D rotation views and virtual try-on	Online apparel shopping	Mixed method: Interview and survey	TAM	Relationships between hedonic motivation/ perceived entertainment value and attitude	National sample of US online shoppers (19 and older)
Kim & Forsythe (2008)	Virtual try-on	Online apparel shopping	Mixed method: Interview and survey	e-TAM	Virtual try-on acceptance model; examined gender differences and included technology anxiety and innovativeness	National panel of online shoppers (N/A)
Lee et al. (2021)	Virtual fitting room	Online apparel shopping	Survey	Theory of interactive media effects	Positive relationship between consumers' perceived media characteristics, telepresence, attitudes and adoption intention	Undergraduate students (20-23)
Loker et al. (2008)	3D body scanning, virtual try-on, virtual fit, and VR	The apparel industry and virtual world	Literature review	None	Reactions to applications of 3D body scanning technology	Two sample groups (35-54 & 19-22)

Study	VT application type	Context	Method	Theory	Key findings (Related to VT)	Sample (age of the majority)
Merle et al. (2012)	Virtual try-on	Online apparel shopping	Experiment	Theory of planned behavior	Influence on responses to an apparel website	Female college students (mean age: 21)
Nantel (2004)	Virtual model and VR	Online apparel shopping	Case study	None	Consumers' positive attitude and intention	None
Oh et al. (2008)	VR	Online furniture retailing	Survey	S-O-R paradigm, TAM	Positive impact of VR on consumers' product experiences and decision-making	Student sample (mean age: 23.5)
Pantano et al. (2017)	Virtual try-on	Online apparel shopping	Experiment	TAM	Relationships between technology characteristics and ease of use/usefulness/ enjoyment	Younger consumers (mean age: 24.4)
Pantano & Servidio (2012)	Virtual store (VR in retail stores)	Offline	Survey	None	Positive impact of VR in retailing on consumers' store perception and satisfaction	Italian undergraduate students (under 25)
Park & Kim (2021)	Virtual try-on and 3D virtual store	Online apparel shopping	Experiment	None	The mediating role of cognitive elaboration in the relationship between website technology and purchase intentions	National consumer panel (31-40) and female students (mean age: 20.2)
Perry (2016)	Smart virtual closets	Usage intention	Survey	TAM	Positive relationships between technology optimism/aesthetics and attitude	Online consumer panel (25.1-35)

Study	VT application type	Context	Method	Theory	Key findings (Related to VT)	Sample (age of the majority)
Rese et al. (2017)	Virtual try-on	Usage intention	Experiment	TAM	Positive intention to use AR applications for shopping	Student sample (mean age: 22.1-23.5)
Shim et al. (2012)	Virtual sales associates	Online apparel shopping	Experiment	Social presence theory	Positive relationship between perceived social support and attitude	Mature consumers (mean age: 68.8)
Shin & Baytar (2014)	Virtual try-on	Online apparel shopping	Experiment	S-O-R paradigm	Positive relationship between concerns with apparel fit and size and intentions	Female college students (mean age: 21)
Smith et al. (2011)	Virtual model	Online apparel shopping	Experiment	None	Relationships between self-image and attitude	Internet users (18-30)
Yang & Wu (2009)	Virtual model	Online apparel shopping	Survey	None	Positive impact of utilitarian and hedonic values on purchase intention	Online users (mean age: 22.25)
Yu & Damhorst (2015)	3D rotation views and virtual try-on	Online apparel shopping	Survey	TAM	Relationship between body satisfaction and perceived usefulness/enjoyment	Female college students (mean age: 22.25)

Virtual Technology for Online Apparel Shopping

As seen in Table 1, online is the most common shopping context employed in previous research on virtual technology and apparel consumption. Virtual technology has applications for online apparel shopping, such as virtual reality and virtual try-on, that have been found to positively impact consumers' online apparel shopping experiences (Loker et al., 2008; Nantel, 2004). In addition, Shim et al. (2012) revealed that virtual sales associates (e.g., chat service, online customer support, etc.) can help overcome the lack of interaction between a salesperson and the consumer when shopping for apparel on websites by helping the consumer find a product or solve a problem.

Previous research on virtual technology in the online apparel shopping context has been heavily focused on virtual try-on technology (Beck & Crie, 2018; Ivanov et al., 2022; Kim & Forsythe, 2007, 2008; Merle et al., 2012; Pantano et al., 2017; Park & Kim, 2021; Shin & Baytar, 2014; Yu & Damhorst, 2015). This emphasis is likely because consumers often need to examine apparel products by trying them on. Indeed, according to Kim and Damhorst (2010), fit is one of the most influential factors in consumers' apparel purchase decisions. Furthermore, online apparel shoppers not only consider apparel fit as one of the top criteria for purchase decisions (Gardyn, 2003), but have also been found to be concerned most about the fit and size of apparel when shopping (Beck, 2000). Previous research indicated that virtual try-on technology can reduce consumers' concerns regarding the fit and size of apparel (e.g., Kim & Forsythe, 2007, 2008; Shim & Lee, 2011; Yu & Damhorst, 2015). Given the potential benefits of virtual try-on technology in the online apparel shopping context, it is likely that such technology will continue to develop over time. In the next section, the literature examining the relationship between virtual try-on technology and female baby boomers is examined.

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Virtual Try-On Technology and Female Baby Boomers

Virtual try-on technology allows consumers to try apparel on their own virtual body models (Shin & Baytar, 2014). As a result, consumers can examine apparel fit using their own unique body measurements and shape before purchasing apparel online, and ultimately reduce some of the risk that comes from online apparel shopping (Shim & Lee, 2011; Shin & Baytar, 2013). Indeed, according to Shim and Lee (2011), the use of 3D virtual models can contribute to reducing consumers' perceived risk regarding four apparel attributes: (1) silhouette, (2) color, (3) texture, and (4) fit. The authors found that 3D virtual models help to reduce consumers' perceived risk of apparel fit specifically because these models can represent consumers' actual body shapes (Shim & Lee, 2011).

As a consumer group experiencing age-related body changes, female baby boomers might be able to greatly reduce the risk of online apparel shopping by using virtual try-on technology. As discussed earlier, age-related body changes have been found to contribute to problems with apparel fit among female baby boomers (Howarton & Lee, 2009). To be specific, not only is there a need for larger sizes, but also modified designs that reflect posture changes (e.g., a forward tilt of the head and shoulders) and upper body changes (e.g., lowering of the bust line). Such changes mean they have different fit problems with apparel than when they were younger (Ashdown & Na, 2008). As a result, this consumer group is more likely to have difficulty in finding well-fitting clothing, and especially when they shop for apparel online as compared with younger women. Moreover, online apparel retailers tend to use young, thin models to display apparel products on their websites (Kim & Damhorst, 2010; Shin & Baytar, 2013), making it harder for older consumers to guess how the apparel will fit on their own bodies. However, with 3D technology, apparel fit can be examined using virtual models that

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represent their own bodies. Thus, understanding the extent to which body changes that occur with age play a role in female baby boomers' perceptions of virtual try-on technology was an important aim of the dissertation.

Technology has been discussed as an effective tool that can improve quality of life for older consumers (Mostaghel, 2016). For example, the convenience of online shopping is valuable for older consumers as mobility becomes more difficult. In this regard, the convenience of virtual try-on technology may be highly valued. Seo and Fiore (2016) indicated that age-related body changes among older female consumers can make for challenges when trying on apparel, including lack of accessibility in the fitting room environment. Challenges with trying on apparel in stores can be overcome by the use of virtual try-on technology. By examining apparel fit on 3D avatars, the process of trying on apparel becomes easier, particularly for those who have physical challenges. Thus, in this dissertation, virtual try-on technology in the online apparel shopping context was examined in relation to physical challenges derived from aging, such as a decline in physical strength due to muscle loss.

Overall, virtual technology has the potential to greatly enhance the online apparel shopping experiences of female baby boomers. Virtual try-on technology can help female baby boomers overcome the limitations of online apparel shopping, the main one being that they cannot try on a garment before purchasing it. Using virtual try-on technology, baby boomer consumers can gain a better idea of how apparel looks on their bodies by examining apparel fit on a 3D avatar (Lee et al., 2012). Moreover, virtual try-on technology can enhance the convenience of online apparel shopping, which is something that has been found to be important for this cohort (Rahman & Yu, 2018). Hence, the dissertation offers insight into how the overall

apparel shopping experience can be improved for female baby boomers through the use of virtual technology.

Conceptual Framework

In this section, a discussion of the conceptual framework used for this dissertation is provided. I begin with an overview of social cognitive theory and why the theory was selected to develop the framework for this dissertation. Next, the three components of social cognitive theory, (1) personal factors, (2) behavior, and (3) environmental factors, are summarized to address how social cognitive theory integrates the three areas of the literature review discussed in the previous sections: (1) age-related changes, (2) age and consumption behavior, and (3) virtual technology and consumption. This explanation will be used to illustrate how the framework helps to explain female baby boomers' apparel consumption behaviors and virtual technology in the online apparel shopping context.

Social Cognitive Theory

Social cognitive theory provides a theoretical framework for understanding psychosocial mechanisms that influence human thought, affect, and behavior (Bandura, 1986). Originally, social cognitive theory was developed in the field of Social Psychology to understand human behavior (Bandura, 1986; Komendantova, Yazdanpanah, & Shafiei, 2018; Phipps et al., 2013). Albert Bandura, a psychologist, extended social learning theory to include social cognitive theory in order to account for cognitive factors as influences on human behavior (Bandura, 1986; Komendantova et al., 2018). Bandura (1986) argued that human behavior is caused by personal, behavioral, and environmental factors, de-emphasizing environment as an exclusive determinant of human behavior. For example, a person's thoughts and feelings can influence how he/she behaves as much as a particular environment can (Bandura, 1986). Thus, social cognitive theory

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is structured based on a reciprocal relationship among personal factors, behavior, and

environmental influences (Bandura, 1986). As a result, social cognitive theory explains human

behavior within the interaction of personal, behavioral, and environmental factors as

determinants of each other, as illustrated in Figure 4 (Bandura, 1986).

Figure 4. Bandura's (1986) Model of Social Cognitive Theory
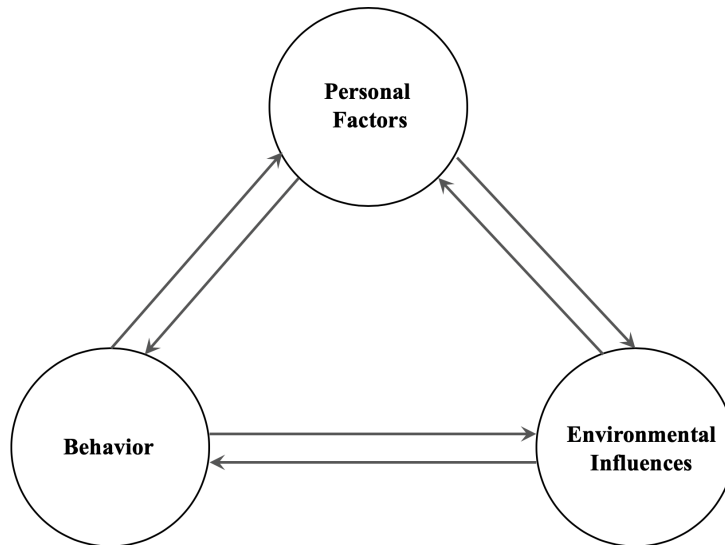
Social cognitive theory explains how people adopt certain behaviors (Komendantova et

al., 2018) and why people change behaviors (Bandura, 1986; Ratten & Ratten, 2007). Hence,

social cognitive theory has been employed in multiple studies for understanding human behavior

(Komendantova et al., 2018; Ratten & Ratten, 2007). Social cognitive theory has primarily been

utilized in health communications and education. For example, Young et al. (2005) employed

social cognitive theory to examine consumers' intentions to communicate with physicians in

response to direct-to-consumer advertising of prescription drugs.

Several studies also use social cognitive theory to examine consumption behavior,

particularly sustainable consumption behavior. For example, Komendantova et al. (2018)

investigated the patterns of energy use behavior of younger consumers, and ultimately their

willingness to use renewable energy sources based on social cognitive theory. Johnstone and Hooper (2016) explored how consumers' social environments influence their green consumption behaviors within a social cognitive framework. Phipps et al. (2013) proposed a new approach to examine sustainable consumption using social cognitive theory. Preko (2015) used social cognitive theory in the green marketing context to examine consumers' purchase decisions of green sachet drinking water that includes eco-information. In these studies, social cognitive theory was employed to determine the personal, behavioral, and environmental factors that influence sustainable consumption behavior. For instance, Preko (2017) found that personal factors, such as age, income, education level, and gender, have a positive impact on consumers' decisions to buy a green product. Phipps et al. (2013) also suggest that not only personal factors (e.g., self-efficacy or competence), but also environmental factors (e.g., situational or social influences) influence sustainable consumption behavior.

Social cognitive theory has also been utilized in research on consumers' adoption of technological innovations (Compeau et al., 1999; Ratten & Ratten, 2007). To be specific, Compeau et al. (1999) examined consumers' behaviors relative to computing technology via social cognitive theory. The authors found that consumers' computer self-efficacy and outcome expectations impact both affective (affect and anxiety) and behavioral (usage) responses to information technology. Ratten and Ratten (2007) also utilized social cognitive theory to examine younger consumers' intentions to use a wireless application protocol (WAP) technology in the form of a virtual banking service. In their study, consumers were more likely to use WAP banking when they have awareness of the technology and value the outcome of using the technology. Overall, previous studies suggest that social cognitive theory is useful for

examining the adoption process of technology by understanding what factors influence consumers' intentions to use new technology (Compeau et al., 1999; Ratten & Ratten, 2007).

Some researchers (c.f. Phipps et al., 2013) have pointed out a lack of use of social cognitive theory in the field of marketing. Indeed, social cognitive theory is useful in marketing and consumer behavior research largely because it enables researchers to have "a more integrated and dynamic perspective of the relationship between and within each factor," which can eventually result in a deeper understanding of consumption behavior (Phipps et al., 2013, p. 1232). Through the interaction among the factors, social cognitive theory is helpful to explain how behavior is changed by personal and environmental factors, and how behavior influences personal factors and the environment (Phipps et al., 2013). In this dissertation, social cognitive theory was applied to better understand how female baby boomers' apparel consumption behaviors, such as apparel needs and online apparel shopping patterns, are influenced by personal (e.g., age, body changes, preferences), and ultimately environmental (e.g., virtual technology for online apparel shopping) factors.

According to social cognitive theory (Bandura, 1986), (1) personal factors influence behavior, (2) behavior influences personal factors, and (3) both impact environmental influences, and vice versa (see Figure 4). As applied to the dissertation topic, female baby boomers' personal factors (e.g., age-related changes and cohort characteristics) and shopping environment influences (e.g., virtual technology) can impact their consumption behaviors (e.g., apparel needs and preferences, online apparel shopping patterns). This explanation frames changes in consumption behaviors based on age. All three (personal factors, apparel consumption behaviors, shopping environment influences) can be used to understand virtual technology behaviors in the online apparel shopping context. As a result, social cognitive theory is helpful

to interpret and understand female baby boomers' experiences with apparel shopping using virtual technology in the online context by identifying important personal, behavioral, and environmental factors. Figure 5 illustrates the three factors as they pertain to the topic of the dissertation.

Figure 5. The Conceptual Framework Based on Social Cognitive Theory
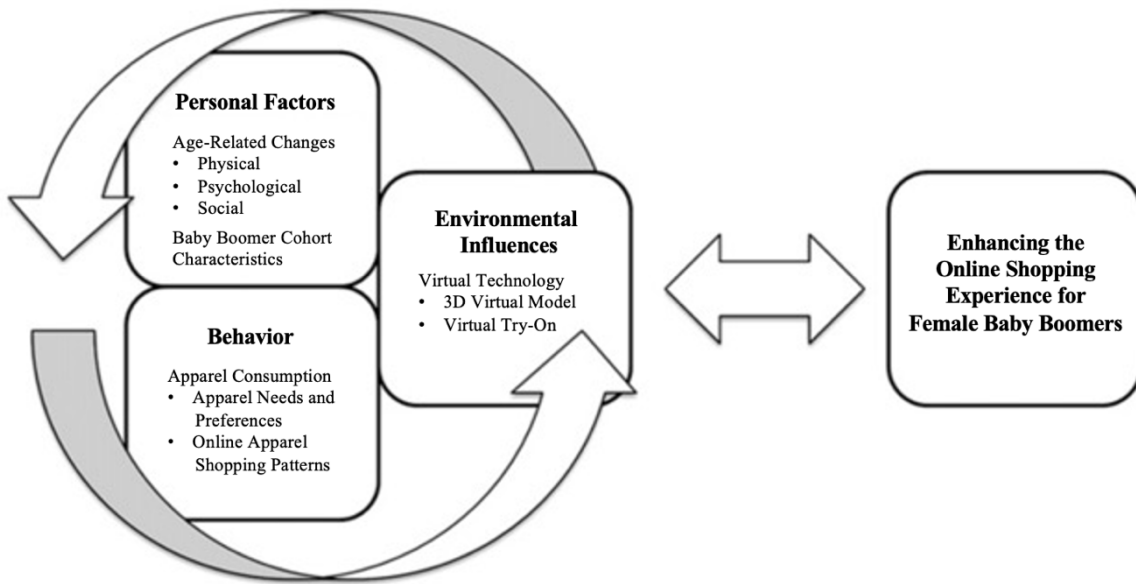
Note. Sourced from Bandura (1986) and Phipps et al. (2013)

Each of three components of social cognitive theory will be discussed in the following paragraphs to explain how they connect with the three main areas of the literature, and ultimately how the theory forms the overall conceptual framework for this dissertation.

Personal Factors

Personal factors include individuals' traits, knowledge, instincts, drives, and motivations related to behavior adoption (Bandura, 1986; Komendantova et al., 2018). As discussed earlier, in this study, personal factors are operationalized as age-related changes and baby boomer cohort characteristics because, as a generational cohort and as females, baby boomers experience

physical, psychological, and social changes with age. To be specific, age prompts female baby boomers to experience body-related and personality-related changes, declines in physical and cognitive abilities, and changes in roles and social relationships. These age-related changes have implications for how female baby boomers adopt or maintain certain behaviors (Gregorie, 2003; Kwon & Noh, 2010; Moschis, 1994).

Age-related changes can impact female baby boomers' apparel needs, preferences for apparel shopping, and perceptions of virtual technology use in online apparel shopping. For example, female baby boomers have been found to change their apparel consumption behaviors in terms of their needs and preferences as they age. As discussed earlier, physical changes derived from aging prompt changes in needs and preferences for apparel fit, such as larger sizes in areas of the waist, hips, and chest due to posture changes (Howarton & Lee, 2009). A preference for shorter pant and sleeve lengths results from height loss that occurs with age (Lee et al., 2012). In addition to apparel fit, female baby boomers desire to wear specific styles that work best for their aging bodies, such as wrinkles on the neck and graying hair (Howarton & Lee, 2009). To cover changes in body appearance associated with aging, they tend to choose styles that disguise visible signs of aging (e.g., longer sleeve lengths) (Lee et al., 2012). Along with these physical changes, age-related social changes lead female baby boomers to redefine their apparel needs. For example, studies have found that after retirement, female baby boomers need apparel for various social and travel activities due to an increase in leisure time (Hyllegard et al., 2006; Lehto et al., 2008; Menchin, 1991).

Age-related changes have also been found to influence female baby boomers' preferences for a shopping environment that enables them to compensate for physical and psychological changes that occur with age (e.g., brighter lighting, slip-resistant flooring) (Seo & Fiore, 2016).

Due to the decline in physical and cognitive abilities, female baby boomers are more likely to change where and how to shop for apparel as they age. Specifically, they prefer a shopping environment that is more physically accessible (McGee, 2018; Seo & Fiore, 2016). For instance, enlarged text and images of products on apparel shopping websites help to compensate for a decline in visual acuity. Moreover, being able to shop for apparel online allows for the shopping experience itself to be more convenient (Rahman & Yu, 2018). Decline in cognitive abilities that result from aging (e.g., declines in memory and cognition) may result in a tendency to search fewer product possibilities, making the decision-making process different than for younger consumers (Sorce et al., 2005).

Female baby boomers' generational cohort characteristics can also influence their apparel consumption behaviors and perceptions of virtual technology use in online apparel shopping. As discussed in Chapter I, female baby boomers have been identified as an important consumer cohort in the fashion market due to their high purchasing power and significant disposable income, in addition to their sheer numbers (Hernandez et al., 2011; Mumel & Prodnik, 2005; Twigg, 2013). The baby boomer cohort is the third largest group when it comes to apparel expenditures, while being the biggest consumer group overall in the US (U.S. Bureau of Labor Statistics, 2022). Female baby boomers as a cohort have been distinguished from previous generations of older women, and ultimately considered "new older consumers" because they exhibit different apparel consumption behaviors when compared with previous generations of older women (Rahman & Yu, 2018; Toossi & Torpey, 2017). For instance, female baby boomer consumers need more career apparel and activewear later in life because they tend to postpone their retirement and actively engage in outdoor activities thanks to their healthier bodies and longer life expectancy compared to previous generations of older women (Rahman & Yu, 2018).

Moreover, this cohort's tendency to explore different cultures based on their experiences with social and cultural changes between the 1960s and 1990s results in different needs for apparel for various activities, including travel and social activities, after retirement when compared to the Silent Generation (Lehto et al., 2008; Menchin, 1991).

Female baby boomers' characteristics as a cohort are important, as these characteristics have been shown to impact how they shop for apparel. Based on their unique life experiences, including the consumption boom of the 1980s and 1990s, female baby boomers are likely to focus on hedonic values in apparel consumption (Twigg, 2013). With the disposable income to buy apparel stemming from their active participation in work through adulthood, they enjoy learning about fashion trends and exploring the aesthetic aspects of apparel when shopping (Rahman & Yu, 2018). Female baby boomers have also had more opportunities to shop for apparel through the Internet compared with previous generations of older women. This cohort's experience with the technological innovations during the 1990s, such as the emergence of personal computers and the Internet, enables them to be identified as active online shoppers, and make them open to using new technologies for shopping (LeRouge et al., 2014; Zickuhr, 2011). In this regard, female baby boomers are more likely to have positive attitudes and greater willingness to use new technology, such as virtual try-on technology, for their online apparel shopping.

The literature indicates that age-related changes do in fact influence female baby boomers' apparel consumption behaviors. In the same vein, age-related changes may influence how female baby boomers perceive virtual technology for online apparel shopping. As described earlier, female baby boomers can create 3D virtual models that reflect their body changes derived from aging. In addition, virtual try-on technology enables consumers to examine apparel

on their own virtual avatars before purchasing something online (Shin & Baytar, 2013). This process can reduce the risks involved in online apparel shopping given the cohort's concerns with fit and size of apparel (Howarton & Lee, 2009; Rahman & Yu, 2018; Shim & Lee, 2011). Furthermore, virtual try-on technology enhances the convenience of apparel shopping by allowing them to virtually try on apparel. Therefore, because of these personal factors it is possible that female baby boomers will view virtual technology positively.

Behavior

Individuals decide to maintain existing behaviors or change behaviors based on their experiences with performing certain behaviors and receiving feedback regarding these behaviors (Bandura, 1986). Phipps et al. (2013) provided an example of this via social cognitive theory in their study of the effect of past consumption behaviors on future sustainable consumption behaviors. Specifically, unexpected benefits of engaging in sustainable consumption behaviors (e.g., recycling paper, water conservation) can reinforce both current and future sustainable consumption behaviors (Phipps et al., 2013). For example, if consumers start to engage in car sharing to save money (economic benefits), but encounter more benefits of car sharing, such as meeting new people and exploring a wide range of cars (hedonic benefits), they are more likely to use car sharing frequently and participate in other types of sustainable consumption behaviors, such as renting products (Phipps et al., 2013).

As was discussed in the previous section, female baby boomers' needs and preferences directly influence their online apparel shopping behaviors. For example, female baby boomers' desire to wear age-appropriate apparel is one reason why they engage in online apparel shopping as a behavior, as the online channel typically provides a greater variety of styles and sizes compared to brick and mortar stores (Howarton & Lee, 2009). Moreover, female baby boomers

are motivated to shop for apparel online due to the convenience it affords, which they consider to be an important criterion for apparel shopping (Rahman & Yu, 2018). The convenience of online apparel shopping may be considered more valuable as female baby boomers age if they experience difficulty with mobility (Rahman & Yu, 2018). However, online apparel shopping can make it hard to find the right size and fit compared with in-store apparel shopping. This problem may be worsened by changes in body shape that occur with aging (Kirkova, 2013; Rahman & Yu, 2018). As a result, the fact that they cannot try on a garment before purchasing it might prompt female baby boomers to be more concerned about apparel fit and size compared to when they were younger, and ultimately result in negative expectations of and experiences with online apparel shopping. Based on previous experiences with online apparel shopping, female baby boomers might change their online apparel shopping behaviors to adjust, such as ordering several sizes at once, purchasing only from specific websites, and visiting physical stores before ordering apparel online. In the same way, the online apparel shopping process can be changed with virtual technology. That is, virtual try-on technology reduces some of risks inherent to online apparel shopping. Reducing the risks could result in a greater willingness to use virtual try-on and ultimately engage in online apparel shopping more frequently.

Environmental Influences

According to social cognitive theory (Bandura, 1986), different environments influence how individuals perform a behavior. For example, the availability of products and shopping channels can impact how people consume and purchase apparel products. Moreover, environmental factors can facilitate or impede an individual's desire to engage in a certain behavior (Bandura, 1986; Komendantova et al., 2018). For example, the lack of appropriate apparel for female baby boomers in the current fashion market is a barrier, which has an impact

on how they perceive and deal with age-related changes, especially related to apparel consumption. Older women's marginalization due to the idealization of beauty based on youthful characteristics (e.g., small waist, no wrinkles) in the fashion market can shape the negative stereotypes of age-related appearance changes, and ultimately a women's identity as she ages (Barnhart & Penaloza, 2013).

In the shopping environment, technology has been employed to enhance consumers' shopping experiences (Forrester, 2017; Gorra, 2022). Likewise, technology plays a crucial role in shaping the fashion industry, including how products are produced and what services are provided (Dogadkina, 2022; Loker et al., 2008; Sumner, 2018). The employment of technological innovations in a shopping environment (e.g., online shopping, virtual technology) likely influences how female baby boomers, as consumers, shop for apparel. For example, they can use various shopping channels, including their smartphones and tablets as well as virtual technology that retailers provide to assist them with shopping for apparel online.

As mentioned earlier, in the online store environment, virtual technology can enhance female baby boomers' experiences with online apparel shopping. For example, they can use a 3D virtual model that reflects their own body shape when shopping for apparel online. According to the literature (Rahman & Yu, 2018), female baby boomers are hesitant to purchase apparel online due to the age-related body changes they have experienced. In this regard, a 3D virtual model of their own measurements would be helpful for them to find the right size when shopping for apparel online. Virtual try-on technology also can help them to get more accurate information about apparel fit than regular photos of products on apparel shopping websites because retailers tend to present their products using young and thin models (Kim & Damhorst, 2010; Shin & Baytar, 2013). Further, by virtually trying on apparel, the apparel shopping

process can be more convenient for those who face physical challenges due to difficulty with mobility (Seo & Fiore, 2016). Consequently, as was found in studies with younger consumers (Shin & Baytar, 2013; Yang & Wu, 2009), it is likely that virtual technology will positively influence female baby boomers' purchase decisions and intentions to shop for apparel online. In this regard, virtual technology is considered an effective tool in the online store environment to enhance female baby boomers' online apparel shopping.

In summary, the three factors of social cognitive theory (i.e., personal factors, behavior, and environmental influences) frame an exploration of why and how consumption behaviors change with age. That is, the interaction among age-related changes, apparel consumption behavior, and virtual technology offers a better understanding of how female baby boomers likely shop for apparel online in later life, and specifically using virtual technology. As depicted in the conceptual framework, the ultimate goal of investigating the interaction between the three factors was to develop an in-depth understanding of the potential role of virtual technology in the experience of online apparel shopping among this consumer group.

Guiding Research Questions

As stated at the beginning of this chapter, the three research objectives of this dissertation were: (1) to examine age-related needs and expectations of female baby boomers as older apparel consumers, (2) to investigate how these needs and expectations can be addressed in the online context, and specifically through virtual technology, and (3) to explore how virtual technology can enhance the online shopping experience for this group of consumers. The following section discusses how these objectives are addressed via the conceptual framework.

Age-Related Needs and Expectations (Personal Factors)

The first objective of this dissertation was to examine age-related needs and expectations of female baby boomers as older apparel consumers. It is important to explore age-related changes to understand the apparel needs and preferences among female baby boomers. The literature indicates that consumers experience significant changes during the aging process, and these age-related changes impact consumption behavior (Gregorie, 2003; Moschis, 1994; U.S. National Library of Medicine, 2018a). Thus, a guiding research question was: *What age-related changes and generational cohort characteristics are related to female baby boomers' apparel consumption and technology expectations?* To this end, data collection focused on the age-related changes that female baby boomers experience and how these changes are addressed through their apparel consumption behaviors.

Online Apparel Shopping Behavior (Behavioral Factors)

The second objective of this dissertation was to investigate how age-related needs and expectations can be addressed in the online context, and specifically through virtual technology. As previously discussed, technology has influenced consumers' apparel consumption behaviors. The Internet allows consumers to shop for apparel whenever they want using their computers and smartphones. Moreover, online apparel shopping has advantages, such as convenience and a greater variety of products, as compared to in-store shopping (Kwon & Noh, 2010). The literature defines female baby boomers as active online apparel shoppers (Binkely, 2009; eMarketer, 2013; Pando, 2018). Therefore, it is important to understand how female baby boomers shop for apparel online, and ultimately whether their age-related apparel needs are met in the online context. Thus, a guiding research question was: *How do female baby boomers shop*

for apparel online? To address this guiding research question, the data collection methods allowed for investigation of the apparel shopping behaviors of female baby boomers.

In the online apparel shopping context, virtual technology has been identified as an innovation that can improve consumers' shopping experiences (Flanagan, 2014; Jones, 2017; Kim & Forsythe, 2007). According to the literature, online shoppers are expected to use virtual technology for apparel shopping in the near future (Flanagan, 2014; Jiang, 2017; Jones, 2017; Loker et al., 2008). As a result, it is important to investigate the role of virtual technology relative to online apparel shopping. Thus, a second guiding research question to address this objective was: *How might virtual technology become an important part of the online apparel shopping experience among female baby boomer consumers?* To this end, through the process of data collection, female baby boomers were asked to talk about their expectations of the online apparel shopping process and their perceptions of virtual technology relative to this process.

Use of Virtual Technology in Online Apparel Shopping (Environmental Factors)

The third objective of this dissertation was to explore how virtual technology can enhance the online shopping experience for female baby boomers. With rapid advancements in virtual technology, online retailers will likely provide consumers with such technology to assist in their online apparel shopping process and ultimately facilitate their purchase decisions. In this regard, it is important to examine the role of virtual technology and the direction of online apparel shopping in the future, especially among female baby boomers who, as a cohort, are active online shoppers and interested in exploring new technologies (Coleman et al., 2006; LeRouge et al., 2014). Therefore, the final guiding research question was: *In what ways can online apparel retailers better serve the female baby boomer cohort using virtual technology?* Data collection efforts were focused on the potential for using virtual technology in the online

shopping process, therefore, findings offer in-depth insight into what female baby boomers think of virtual technology for shopping online, which can help online fashion retailers better target this large and important group of apparel consumers.

Summary

In this chapter, an overview of the literature relevant to the focus of this dissertation was provided. Specifically, the literature review addressed three main facets of the topic: age-related changes, female baby boomers' consumption behaviors, and virtual technology. Through the examination of the literature, gaps in the existing research were identified related to the goals and objectives of this dissertation. Lastly, the conceptual framework was discussed. In the next chapter, the methodological framework and methods that were used to collect data are explained, as well as the participant sample and approach to analysis.

CHAPTER III: METHODOLOGICAL FRAMEWORK

The purpose of this dissertation was to understand female baby boomers' perceptions of and experiences with apparel shopping using virtual technology in the online context. Three research objectives were developed to address this purpose: (1) to examine age-related needs and expectations of female baby boomers as older apparel consumers, (2) to investigate how these needs and expectations can be addressed in the online context, and specifically through virtual technology, and (3) to explore how virtual technology can enhance the overall online shopping experience for this group of consumers. As discussed in the previous chapter, this dissertation addresses gaps in existing research because few relevant studies examine older consumers, whereas numerous studies on younger consumers have been conducted in the areas of online shopping and virtual technology.

In this chapter, the research methodology to be employed in this dissertation is explained. First, qualitative inquiry is discussed, along with the phenomenological research design used to address the purpose and objectives of the present study. Next, the methods that were used to collect data are discussed in detail, followed by a description of the participant sample and selection process. Lastly, the approach to analysis and interpretation of data is discussed.

Phenomenology as Qualitative Inquiry

As indicated in the previous chapter, quantitative approaches are most often used in existing research on consumers' online apparel shopping behaviors and virtual technology in the consumption context. Hence, qualitative research is needed to offer different perspectives on these topics. As the goal was to understand female baby boomers' apparel and technology consumption behaviors, a qualitative research design was employed for this dissertation because qualitative research aims to understand rather than predict human behavior (Willis, 2007).

Qualitative inquiry was in part derived from inquiry developed in such disciplines as Sociology and Anthropology to understand people and their actions (Denzin & Lincoln, 2000). Anthropologists who explored other cultures sought a means to go beyond positivism's aims to provide "valid, reliable, and objective interpretations" (Denzin & Lincoln, 2000, p. 12). As a result, a new approach to knowledge in the social sciences emerged and came to be called "qualitative" (Denzin & Lincoln, 2000; Hultgren, 1989). As with Anthropology, qualitative methodology has advanced in Sociology as it has been applied to the purpose of understanding social behavior (Denzin & Lincoln, 2000; Pernecky, 2017). Consequently, qualitative methodology has been considered novel inquiry, particularly in the study of humans and society (Pernecky, 2017).

Qualitative researchers assume that individuals have their own ways of perceiving reality, thus there are multiple realities, rather than one single reality (Pernecky, 2017). This view positions the nature of reality as subjective and variable based on different individuals in different social and cultural contexts (Anderson-Hudson & Ozanne, 1988; Pernecky, 2017). Also known as interpretivism, this view emphasizes the socially constructed nature of reality and is derived from constructivism (Denzin & Lincoln, 2000; Pernecky, 2017). Interpretivists' stance on reality has a direct relationship with how knowledge is defined (Mason, 1996). In an interpretive paradigm, multiple realities cannot be studied through a monolithic view of the world (Denzin & Lincoln, 2000). In other words, there is no general cause that drives human behavior in one single reality (Anderson-Hudson & Ozanne, 1988). Human behavior can be studied and understood through exploration of multiple causes that occur simultaneously, wherein the world is constantly changing (Denzin & Lincoln, 2000). Consequently, the aim is to generate idiographic knowledge because knowledge is situated in subjective realities (Anderson-

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Hudson & Ozanne, 1988; Willis, 2007). That is, knowledge can be gained through "an emic, idiographic, case-based position" (Denzin & Lincoln, 2000, p. 10).

Given the interpretivist stance on ontology and epistemology, a primary goal of qualitative research is to find answers to questions regarding "how social experience is created and given meaning" (Denzin & Lincoln, 2000, p. 8). For phenomenology, the epistemological goal is to understand the meaning behind a social experience (van Manen, 1984). According to van Manen (2017), phenomenological research refers to "the study of lived experience – the world as we immediately experience it pre-reflectively rather than as we come to conceptualize, categorize, or reflect on it" (p. 2). Phenomenology emphasizes experience and interpretation. Specifically, a phenomenological approach to qualitative research focuses on the essence, or structure, of an experience (phenomenon) (van Manen, 1984). Thus, the aim of phenomenology in research is to describe the essence or basic structure of lived experience, and ultimately to gain a deep understanding of it (Merriam, 1998; van Manen, 1990). As this dissertation aimed to understand female baby boomers' experiences with online apparel shopping using virtual technology, a phenomenological approach was deemed appropriate.

Phenomenology asks the question, *What is a particular experience like?* (Hultgren, 1989). To this end, lived experience is both the starting and ending point of phenomenological research (van Manen, 1990). In this dissertation, online shopping for apparel using virtual technology is considered a lived experience, therefore the phenomenological approach was employed to better understand the meaning of this experience for female baby boomers. According to interpretive ontological and epistemological assumptions, an individual's lived experience can be fully understood from his or her own perspective (Pernecky, 2017). Therefore, in the next section the interpretive, and specifically phenomenological methods that

were used to collect data are discussed in order to interpret online apparel shopping using virtual technology through rich descriptions of meaning derived from participants' lived experiences (Denzin & Lincoln, 2000).

Data Collection Methods

From an interpretivist ontological perspective, understanding multiple realities requires the use of multiple methods of inquiry (Denzin & Lincoln, 2000). Specifically, data collected using different methods enables researchers to develop a more diverse, and, it is hoped, accurate interpretation of participants' lived experiences (McAlexander, Dufault, Martin, & Shouten, 2014). Thus, the overarching purpose of this dissertation was achieved through a multi-method approach: (1) in-depth interviews with participants, (2) online observation, (3) participant journaling, and (4) focus group interviews. These four qualitative methods were employed to obtain thick descriptions of lived experience from the participants' perspectives (Pernecky, 2017; van Manen, 1990). The data collection process consisted of two phases: (1) examining age-related apparel needs and expectations through in-depth interviews and online observation and (2) exploring how virtual technology can enhance online shopping experiences via personal journals as well as focus group interviews. Figure 6 depicts the two phases and related data collection methods.

Figure 6. Data Collection Process

Phenomenological Approach

Phase I: Examining Age-Related Apparel Needs and Expectations

In-Depth Interviews		**Online Observation**
Apparel consumption - Clothing choice behavior - Apparel needs	Apparel shopping behavior - Use of technology in the apparel shopping process	Social media activity - General understanding of apparel consumption behavior

Phase II: Exploring How Virtual Technology Can Enhance Shopping Experiences

Personal Journals	**Focus Group Interviews**
Online apparel shopping experience - Shopping details - Virtual technology use	Virtual technology video - Use of virtual technology for online apparel shopping

Interpretation
Triangulation

Data Collection Phase I

To examine age-related apparel needs and expectations of participants as female baby boomers, two data collection methods were used: (1) in-depth interviews with each participant and (2) online observation of social media activities relevant to apparel consumption. Both are discussed in this section.

In-Depth Interviews

In-depth interviews are the primary means of collecting data within most types of qualitative research (Carson, Gilmore, Perry, & Gronhaug, 2001; Guest, Namey, & Mitchell, 2013; Marvasti, 2004; Myers & Newman, 2007). Interviews play a significant role in qualitative research because they help researchers to better understand behavior that cannot simply be

observed (Merriam, 1998). For example, interviews enable researchers to interpret how people feel, how they form attitudes, and why they behave in certain ways (Merriam, 1998). As a result, interviews are considered an effective qualitative method to explore feelings, perceptions, and experiences (Milena, Dainora, & Alin, 2008). Moreover, interviews provide the opportunity to explore how individuals perceive and interpret the world around them (Merriam, 1998; Milena et al., 2008; Weiss, 1994).

Interviews can be considered as a type of conversation, but there is a significant difference between interviews and conversations in terms of goals (Merriam, 1998; Rubin & Rubin, 1995). Unlike ordinary conversations, interviews have specific goals to gain appropriate and detailed answers and ultimately address research questions (Rubin & Rubin, 1995). Moreover, Merriam (1998) indicated that the purpose of interviewing is "to obtain a special kind of information" (p. 71). Therefore, interviews are used as a qualitative method technique to gain rich data that enables researchers to explore a topic from participants' perspectives (Kelly, 2010; Milena et al., 2008). As a result, interviews allow researchers to have access to participants' views and behaviors, and eventually gain deeper insight into their lived experiences (Kelly, 2010; Weiss, 1994). In-depth interviews were used as a primary data collection method in this dissertation in order to attain an in-depth understanding of female baby boomers' apparel consumption and online shopping behaviors.

To be specific, semi-structured interviews were conducted with a total of 20 participants. According to the literature on the interview method, there are three types of interviews: (1) the highly structured/standardized interview, (2) the semi-structured interview, and (3) the unstructured/informal interview (Merriam, 1998). In the highly structured interview, interview questions, and the order in which they are asked, are determined in advance (Merriam, 1998;

Myers & Newman, 2007). This approach to interviewing does not allow researchers to ask

additional questions that might emerge during the process (Merriam, 1998; Myers & Newman,

2007). This approach can limit access to the participant's perspective because all questions are

fixed from the researcher's perspective (Marvasti, 2004; Merriam, 1998). However, the highly

structured interview can be useful and efficient for acquiring particular data (e.g., demographic

data) from participants (Marvasti, 2004). The consistency of the highly structured interview,

particularly the content and sequence of questions, enables researchers to ask the same questions

in the same way to all participants (Marvasti, 2004; Merriam, 1998).

The semi-structured interview allows more flexibility compared with the highly

structured interview (Kelly, 2010). Specifically, the semi-structured interview involves a set of

predetermined questions, but researchers can also ask new and additional questions emerging

from the context of participants' responses (DiCicco‐Bloom & Crabtree, 2006; Guion, Diehl, &

MacDonald, 2001; Kelly, 2010). Moreover, the order and words of predetermined questions can

be changed based on the conversation between the researcher and the participant (Merriam,

1998). The flexibility of the semi-structured interview allows for exploration of participants'

views and for their perspectives on the topic to emerge (Merriam, 1998).

Lastly, the unstructured interview does not involve predetermined interview questions

(Merriam, 1998). The process of the unstructured interview is similar to everyday conversations

(DiCicco‐Bloom & Crabtree, 2006; Marvasti, 2004). Because the unstructured interview

includes few, if any, questions ahead of time, most questions are determined based on

participants' responses during the interview itself (Marvasti, 2004; Myers & Newman, 2007).

This flexibility enables researchers to gain diverse and novel insights on a topic from

participants' perspectives, which are particularly useful for the investigation of unexplored topics

(Merriam, 1998), but this flexibility also makes it challenging to manage the interview process (Merriam, 1998). For example, the researcher might not be able to gain information relevant to a research topic from participants' responses due to a lack of control during the unstructured interview. Thus, skill in handling the unstructured interview is critical (Merriam, 1998).

For this dissertation, semi-structured interviews were used due to the flexibility this approach affords when compared with the highly structured interview (Goodman, 2001; Yeung, 1995). For example, this approach allowed for opportunities to ask additional questions immediately and to edit interview questions based on participants' responses to previous questions during the interview process. This approach permitted the collection of rich data that resulted in deep insight into the topic (Goodman, 2001; Yeung, 1995). Along with flexibility, the semi-structured interview allowed for information relevant to the topic to be obtained because the interviews were guided by questions that were prepared beforehand (Merriam, 1998).

To this end, interview questions were developed to address the purpose and objectives of the research and based on the literature discussed in Chapter II (see Appendix A: Interview Schedule). During the interviews, participants were asked to describe any age-related changes they have experienced, particularly in relation to their apparel consumption behaviors. They were also asked about their experiences with online apparel shopping and changes in apparel shopping behaviors with COVID-19. Lastly, they were asked to provide examples of their social media posts and explain how they use social media for their apparel shopping, if they have any social media accounts. Questions included probes to encourage participants to explain issues and topics in depth (Kelly, 2010). Each semi-structured interview was conducted online through

Zoom, and the time was arranged based on availability of the participants. Each interview was recorded for later transcription.

Online Observation

Participants who have active social media accounts were asked to share information about their social media activities (e.g., blog, Facebook, Instagram). When the participants showed their social media during the interviews, the extent to which their social media accounts were active or not were observed. In this study, a social media account was considered as active if the participant had posted at least four times during the past month. As a result, eight out of twenty participants had active social media accounts. Seven were active with Facebook and one with Instagram. Using the netnographic approach (Kozinets, 2006), participants' social media activities were observed for a period of four weeks to gain a general understanding of their apparel-related behaviors (e.g., lifestyle, usage of technology, relationship with apparel shopping). Participants' social media activities relevant to apparel consumption were treated as digital data, in that they were reviewed and their activities and interactions were recorded, including posts and comments, based on topics, brands, and issues addressed in each post (see Appendix B: Observation Template).

Data Collection Phase II

Once the interviews were complete, the participants were divided into two groups: (1) Group A (6 participants) who were asked to complete personal journals and (2) Group B (12 participants) who participated in focus group interviews. Two participants out of twenty did not complete the second phase of data collection. The goal of Phase II was to explore participants' views on how virtual technology may enhance their online shopping experiences. To this end, all participants were asked to watch a video that provided an overview of how virtual technology

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could work in the online apparel shopping context. The virtual technology video was created using a PowerPoint presentation and YouTube videos (see Appendix C: Virtual Technology Video).

The virtual technology video consisted of three sections. First, an introduction of the study was provided, including the topic, purpose, objectives, and data collection process. Second, an overview of virtual technology in fashion was provided. To be specific, how virtual technology has been used in the fashion industry was explained, and particularly how it has been used to enhance consumers' apparel shopping experiences. Lastly, participants were shown Youtube videos about 3D avatar rotation and virtual try-on technology as part of an apparel shopping website. The videos focused on the use of the virtual technology to examine fit and size of apparel (e.g., virtual try-on of clothing, tension map). After watching the virtual technology video, participants were asked to express their thoughts about the potential for using virtual technology during the online apparel shopping process through either a personal journal or a focus group interview.

Group A: Personal Journals

Each participant in Group A (6 participants) was asked to keep a journal and record details regarding at least 3 online apparel shopping experiences over a five-week period. Details of these online apparel shopping experiences indicate all activities (e.g., browsing, searching, etc.), therefore each did not necessarily require a purchase. In other words, participants could write their personal journals with or without making an actual purchase. Six Google Docs were created for each participant to use for journaling.

Participants were asked to first watch the virtual technology video and then to answer questions related to virtual technology considering the particular online shopping experience that

they wrote about for their journal entry. The participants focused on different online apparel shopping experiences for each entry, so they needed to think about how virtual technology could impact each online shopping experience individually. Participants only had to watch the video one time, but, if necessary, they were asked to review it more than once to refresh their memory as they completed each journal entry.

Participants were also asked to describe their process of shopping for apparel online in their journal entry (e.g., how they started shopping, what information they used to search, what devices were used, and why they made any purchase decisions). They were asked to record any thoughts or feelings related to their online apparel shopping experiences (e.g., satisfaction/dissatisfaction with the shopping experience, suggestions for retailers). To guide participants' involvement in the journals, a basic journal entry template was provided (see Appendix D: Journal Entry Template).

According to Moule and Goodman (2009), journals are a common means of recording participants' thoughts, feelings, and reflections in qualitative research. Personal journals allowed participants to record their experiences with online apparel shopping as they occurred, resulting in more accurate data compared with interviews due to the limitations of short-term memory loss (Moule & Goodman, 2009; Nicholl, 2010). Moreover, individuals often feel more comfortable expressing their feelings and opinions when writing in journals (Sprague, 2005). Participants described their online shopping experiences and opinions regarding virtual technology in their own words, and therefore the journals offered thick descriptions of the experience and perception from participants' perspectives. Consequently, the journals offered insight into how participants interpret their online apparel shopping experiences, and ultimately helped to achieve an in-depth

understanding of their online apparel shopping behaviors and perceptions of using virtual technology.

Group B: Focus Group Interviews

Each participant in Group B (12 participants) was asked to participate in a focus group. To be specific, three focus group sessions of four participants were conducted. According to Kitzinger (1999), focus group interviews use group interactions between participants as qualitative research data. In other words, focus group interviews focus on group processes rather than those of an individual (Merriam, 1998), thereby allowing researchers to consider group dynamics during data collection (Kitzinger, 1999). To be specific, researchers can gain insights on topics as they investigate consensus as well as conflict between participants about a particular topic (Kitzinger, 1999). Focus group interviews enabled an ample amount of data to be collected about participants' perceptions and opinions of virtual technology, adding to the scope of data collected for this dissertation.

According to Kitzinger (1999), there are two types of focus group interviews: those with pre-existing groups and those with unrelated groups of people. In focus group interviews with unrelated groups of people, unnatural relationships between participants could make it difficult for the researcher to lead and facilitate conversations (Rubin & Rubin, 1995), but, at the same time, the researcher can explore diversity more than with a homogenous sample (Kitzinger, 1999). In this dissertation, three focus group interviews were conducted with unrelated groups of four participants. These unrelated groups of participants allowed for the exploration of diversity in terms of the sample, such as different backgrounds, including level of experience using a computer, type of job, and income level.

Participants in Group B were asked to attend one Zoom session among three options of virtual focus group interviews based on their availability. At the beginning of each focus group, they watched the virtual technology video created for the study. Participants were then asked the focus interview questions, which focused on the overall perception of virtual technology in the video and how virtual technology could play a role in their online apparel shopping experiences (see Appendix E: Focus Group Interview Questions). Specifically, the participants were asked to explain their feelings about and attitudes toward virtual technology. They were also asked to describe their thoughts about the potential for using virtual technology during the online apparel shopping process. Lastly, they were asked to discuss how the COVID-19 pandemic has impacted their online apparel shopping behaviors. Focus groups were recorded. The relatively unstructured focus group sessions with unrelated groups of participants allowed for unexpected and new insights (Kahn, Anker, Patel, Barge, Sadhwani, & Kohle, 1991) into the topic of this dissertation to emerge.

Participant Sample and Selection

In qualitative research, sampling strategies do not involve identifying random, probabilistic, and representative samples because the aim of qualitative research is not to generalize (Carson et al., 2001; Goodman, 2001; Kelly, 2010). Because qualitative methods are used to obtain information about a research topic relative to specific individuals, the sample tends to be targeted (Carson et al., 2001; DiCicco‑Bloom & Crabtree, 2006; Goodman, 2001). Therefore, a purposive sampling strategy was employed to select participants for this dissertation. This strategy resulted in interview participants who had information or experience specific to the topic of this dissertation (Carson et al., 2001; DiCicco‑Bloom & Crabtree, 2006;

Goodman, 2001; Kelly, 2010). In other words, females who are members of the baby boomer cohort and have experiences with purchasing apparel online.

As females in the baby boomer cohort tend to have distinct needs for apparel due to diverse body changes women experience during the aging process, they were purposively selected for the study (Patton, 2002). Because the baby boomer generation tends to use technology more than previous generations of older adults (LeRouge et al., 2014), the sample focused on female baby boomer consumers, and particularly the younger group of baby boomers (born between 1955 and 1964) due to their high exposure to technology. According to the literature (eMarketer, 2018b; Green, 2006; Morton, 2001; Reuteman, 2010), baby boomers tend to be divided into two age groups (i.e., older vs. younger baby boomers). This distinction is derived from the difference in major life influences (Green, 2006; Mortan, 2001; Reuteman, 2010). For example, older baby boomers are more influenced by the Vietnam War and the Civil Rights Movement, while younger baby boomers are more influenced by emerging technology and Reaganomics (Mortan, 2001). As a result, younger baby boomers are identified as digital users who are not only familiar with using the Internet, but also have smartphones and use social networks, characterized as early adopters of the personal computer and email (Dolliver, 2018; eMarketer, 2018b). The sample was limited to younger female baby boomers who have experience with online apparel shopping because the primary goal of this study was to understand consumer experiences with online apparel shopping and perceptions of virtual technology. Table 2 includes participant information with basic shopping details, such as how much they spend on apparel per year and where they typically shop for apparel. Names of participants have been changed to preserve confidentiality.

Table 2. Participant Information

Name	Birth Year	Phase II	Yearly Apparel Expenditure	Preferred Brands
Mary	1960	Focus Group	$300-400	Amazon
Jennifer	1957	Personal Journal	$3500	Chico's, J Jill, Macy's, Belk
Linda	1962	Personal Journal	$3000	Bloomingdale's, Talbots, Saks Fifth Avenue, Saks off Fifth
Victoria	1961	Personal Journal	$1000	Belk, Dillard's, Stein Mart, LL Bean
Barbara	1962	Personal Journal	$1000	Chico's, LL Bean
Diane	1960	Focus Group	$2000	LL Bean, Amazon, Land's End
Jessica*	1957	N/A	$800-900	Walmart, Land's End, LL Bean, Ross, Marshalls
Sarah**	1961	Focus Group	$2000-2500	Poshmark, Nordstrom, Nieman Marcus, Zara, H&M
Susan*	1957	Focus Group	$2000	Eileen Fisher, eBay, Bloomingdale's
Emily*	1959	Focus Group	$800-1000	Mall, Kohl's, Talbots, Loft, Land's End
Michelle	1958	Personal Journal	$2000	Nordstrom, Lord and Taylor
Amanda*	1957	Focus Group	$5000	Chico's, Danskin, Costco, Walmart
Melissa*	1956	Personal Journal	$15000	Talbots, Boutique stores, Belk,
Stephanie	1961	Focus Group	$300	Belk, Macy's, Amazon
Cynthia	1962	N/A	$600-1000	Talbots, Chico's, Coldwater Creek, Macy's
Kathleen	1958	Focus Group	$2500	TJMaxx, Marshalls, Belk, Athleta
Amy	1958	Focus Group	$2000-3000	Target, Chico's, QVC, Christopher and Banks
Megan*	1958	Focus Group	$5000	Chico's, Dillard's, Boutiques
Nicole	1964	Focus Group	$500-600	Boutiques, Walmart
Anna*	1962	Focus Group	$750-1000	Belk, Talbots

Note. * Indicates Facebook Observation. ** Indicates Instagram Observation.

To recruit the participants, administrators of Facebook discussion groups relevant to baby boomers and older women and fashion blogs targeting female baby boomers were contacted via email to ask for permission to post a participation invitation flyer on their websites and social media pages (see Appendix F: Participation Invitation Flyer). Participants were recruited via social media, specifically, the participation invitation flyer was posted on group pages related to baby boomers and older women on Facebook. A snowballing sample strategy was used to recruit participants who met the criteria for the study through referrals (Carson et al., 2001; Goodman, 2001). Each participant was asked to help recruit additional participants who fit the study criteria, and to share the flyer with their friends. Approval to conduct data collection was received by UNCG IRB (see Appendix G: IRB Approval).

Data Analysis and Interpretation

Once data collection was complete, the recordings of the in-depth and focus group interviews were transcribed verbatim. Completing transcriptions of these data provided the opportunity to become more familiar with them and ensure their accuracy (Merriam, 1998). Wengraf (2001) suggests a detailed process of transcribing, such as writing short memos or organizing ideas regarding data analysis next to the verbatim transcriptions. Doing so helped facilitate a more insightful data analysis (Wengraf, 2001).

After transcribing, the data were analyzed and interpreted as suggested by Spiggle (1994). According to Spiggle (1994), analysis involves analytical procedures to organize data, whereas interpretation "makes sense of data through more abstract conceptualizations" (Spiggle, 1994, p. 497). Thus, interpretation allows for the identification of the meanings of the experiences, which results in a deeper understanding of lived experience (Spiggle, 1994). A

thematic interpretation was developed and the emergent themes were examined relative to the literature and the theoretical framework.

Following Spiggle (1994), data were first categorized by labeling and coding. Then, identified categories were grouped more generally based on conceptual ideas through abstraction (Spiggle, 1994). This step was followed by comparison, in which categories were examined for similarities and differences across the data (Spiggle, 1994). This approach was applied to all of the data collected, including interview and focus group transcripts, personal journals, and social media digital observations. Specifically, transcripts were compared with personal journal entries and online observation data for categorization of meanings and identification of emergent themes. This analysis was an iterative process to identify categories that were used to structure emergent themes (Spiggle, 1994).

As discussed earlier in this chapter, the phenomenological approach focuses on understanding the meaning of lived experiences that are context-bound (Merriam, 1998). According to van Manen (1990), thematic interpretation is the process of uncovering the essence of lived experience. Specifically, thematic interpretation enables one to decipher the meanings that participants attach to lived experience (Spiggle, 1994). Based on the analysis of the data, the interpretation of meaning was approached through discussion of emergent themes, which comprises Chapters IV-VI. Moreover, interpretation involves integrating these meanings with the broader theoretical issues relevant to the topic (Spiggle, 1994). Therefore, the emergent themes were examined relative to the theoretical framework to develop an in-depth understanding of female baby boomers' perceptions of and experiences with online apparel shopping using virtual technology, which comprise Chapters VII and VIII.

To enhance the credibility of the interpretation, the concept of triangulation was employed. Triangulation involves the use of multiple methods to explore research questions in a multi-faceted way (Mason, 1996). To enhance trustworthiness of the interpretation (Hodges, 2011), all participants were asked via email to review their transcripts, and a total of four were reviewed. In qualitative research, researchers play a significant role in data analysis as well as data collection as the primary instrument (Merriam, 1998). The process of member checks allowed for an assessment of how my own analytical lens is part of the interpretation process (Mason, 1996).

Summary

In this chapter, the methodological framework that was used to collect data for the dissertation was discussed. The phenomenological approach to qualitative research was explained as the means 22to gain an in-depth understanding of female baby boomers' experiences with online apparel shopping using virtual technology. The methods used for data collection were described, as was the participant sample and selection process. Finally, the approach to data analysis and interpretation was discussed. The next chapter is the first of three chapters discussing the themes that emerged from the analysis and interpretation of the data.

CHAPTER IV: THEMATIC INTERPRETATION PART I, APPAREL AND AGING

As discussed in Chapter II, age plays an important role in consumers' apparel consumption behaviors due to various and significant physical, psychological, and social changes that occur later in life. In this chapter, part I of the thematic interpretation of the data, the relationship between apparel and aging is examined. Through this examination, the goal of the thematic interpretation in this chapter is to gain a deep understanding of how aging has impacted the apparel needs and preferences of participants as female baby boomers.

After examination of similarities and differences across participants' in-depth interviews, personal journals, and focus group interviews, four themes emerged and are used to structure the main sections of this chapter: (1) *Expressing the Aging Self*, (2) *The Elements of Style*, (3) *Garment Fit and Size*, and (4) *Lifestyle Considerations*. In the next section, the first theme will explore how aging has impacted the role of apparel for participants in terms of identity and expression of the self.

Expressing the Aging Self

According to the literature, women tend to keep their interests in fashion in later life (Kozar, 2005; Lee et al., 2012). This was also found to be the case for participants, in that, when asked if apparel is important to them, most responded with a high degree of interest. For example, Jennifer said, "I tell you, three closets and an attic full of clothes...I would say I've always liked clothes." In a similar vein, Linda explained her interest in fashion throughout her life saying, "[Apparel] has always been important to me since I was a kid...I would say that I've been interested in fashion my whole life." Some participants even mentioned that apparel has become more important as they get older than compared to when they were younger. For example, Kathleen and Amy both shared a desire to look fashionable and stylish, as a way to

"keep them from looking old." It appears that they have become more conscious of what they wear because they want to make sure that they do not look out of style, and ultimately "old." Another participant, Megan, emphasized the importance of clothing in today's society. She considered apparel more important as she has gotten older due to the fact that more selections in apparel styles are available now as compared to when she was younger.

Along with an interest in fashion, during the interviews participants talked about their use of apparel to express their identities and for pleasing themselves. To be specific, apparel plays a key role in communicating who they are and helping them feel better about themselves, especially as they age. This section examines how apparel relates to the self, especially for participants as female baby boomers and older female consumers. To understand the relationship between apparel and the self during aging, two subthemes emerged in the data and are discussed in the following sections: (1) *Self-Image* and (2) *Self-Satisfaction.*

Self-Image

Many participants explained that apparel is important to them because it is a means of expressing the self to others. For example, Linda believes that fashion communicates about the self and particularly how individuals treat themselves. That is, fashion communicates the respect one has for one's self, which, in turn, influences how others treat you:

> I think that um...I think that fashion...and how you put things together, the look you're going for um…I think it tells people a lot about you. Um...and I think it tells people about how you feel about yourself...I think that how you present yourself is very important, and it also, it's a clue to people about how you expect to be treated.

She then discussed how a person's appearance implies the time and effort they put into selfcare and presenting the self, which, in turn, impacts how others treat them:

> Yeah, if you...you know, if you look like you don't care about yourself, then...I mean we should all treat everybody with respect. I'm not saying that I believe this. But I think if you show people that you respect yourself and you [stay] within your budget, you know

want to look nice and...and you take some time on your personal appearance, then unfortunately, I think people are much more likely to take you seriously and to treat you well. (Linda)

Linda highlighted the importance of apparel to the self by describing apparel as "a reflection of you, [your] self-image and your self-esteem." Similarly, for Megan, "Clothing makes a statement to people," therefore she wants to stay on trend because she wants to prompt others to think that she "takes care of herself" through her fashion choices.

For Kathleen, the significance of apparel is that it is "a bigger picture of you [the self]." She explained that apparel speaks about the self, including one's confidence and success level:

I mean I like that little...phrase "dress for success." I think that your appearance, kind of reflects a bigger picture of you. Now I don't want you to think I'm having to look like all that all the time because I'm not AT ALL. I can look wretched [laugh]. I can look terrible, but I do think particularly...yeah I think your dress kind of speaks about you and your confidence and your kind of interest. So yes, I think there is a definite marriage between the two. So like saying that I like to dress as a confident...you know, successful person that is out there to do something in the world and not just hanging out. (Kathleen)

Overall, apparel directly influences participants' self-image, especially in terms of confidence and self-esteem. For participants, what they wear does not just speak for who they are as individuals, but it represents how older women stay up to date with current fashion trends, helping them to feel "not too old" and ultimately confident with their self-image. In addition, apparel serves as a medium to show that they are continuing to invest time and effort in presenting themselves well to others.

Self-Satisfaction

Most participants expressed that apparel is a vehicle for achieving self-satisfaction. That is, the main purpose for dressing well is to achieve a sense of happiness that comes from internal gratification, rather than from external sources. For instance, Susan mentioned that she tries to dress well, even when she stays at home, because it is something that makes her happy:

I like apparel purchases and accessories for myself. Even when I'm just at home, I don't...you know, I still try to dress to make myself happy [laugh], even if I'm not going out to see other people. (Susan)

Susan's example highlights that participants do not always dress to impress or receive validation from others, but rather, do so in order to please themselves. This phenomenon appears to become magnified as participants have grown older. For instance, Anna mentioned that she enjoys fashion to make herself feel good, not necessarily to gain others' approval:

Now that I'm older. I really don't care. And I wear what I want to wear. I'm not trying to please anybody anymore. I am pleasing myself. That's what you get when you're 58 years old. You're just, you know, "hey you've learned" [laugh].

Similarly, Jessica pointed to achieving self-satisfaction through apparel by indicating that her decisions about what she wears are not influenced by other people's opinions. Participants overall tended to emphasize that, as they have aged, they have become more likely to wear what they think looks good on them and what they enjoy wearing.

Along with its more general role in aging, the focus of dressing for self-satisfaction might also be a cohort characteristic of baby boomers. When asked to describe the style of female baby boomers in the interviews, participants responded overwhelmingly that there is not a specific style for female baby boomers. Rather, they emphasized individualism and the value of personal preferences as the main characteristics of female baby boomers' style. Sarah discussed various styles seen among female baby boomers:

I think that they're the generation that is a lot more unique and individual because anything goes, I look at people that are my age or approximately my age or a little bit older. And they're doing whatever they want. Some are old hippie, some are boho, some are classic, some are Western, I mean they're just all over the place. (Sarah)

Megan also described diversity as a trait of the baby boomer generation and characteristic of their style: "My generation is full of different people. They wear all different things...We all dress different, [I see] all of those differences."

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Linda explained that the individualism of the female baby boomers' style could be linked to the influence of the changing social environment of the 1960s and 1970s:

> I think it was sort of a rebellion to a prior generation that, "Oh you have to wear this and you have to do this" and in a whole lot of lifestyle things that...and based on you know, the 1960s and 70s in our country with, which was in our childhood, but there was a lot of changes going on in society and a lot of rebellion. And I think some of the rebellion has meant that maybe there are sort of less formal rules.

She described the impact of such rebellion on individualism as well as the importance of self-satisfaction in dress.

> And like I said, I think there's more freedom and more individualism in that, but I do think it's important, um...to...I would kind of say, make your own rules in a way that...that works for you and...shows that you feel good about yourself.

With the increasing degree of social freedom, rebellion against convention became a characteristic of female baby boomers, which impacted their fashion choices. For participants, this means that as female baby boomers, they have focused on what they want to wear instead of following the existing rules of fashion. For example, Mary emphasized the focus on the self when describing the style of female baby boomers:

> We don't go for the old grandma-looking clothes anymore. Um...we are...I mean I'm 60 years old, but I don't feel 60. So I don't want to dress like...what a 60-year-old should wear you know um...I just and I think the majority of us just buy what we like not what our teenage daughter is wearing or what our grandma wore. If it's something we like, we will wear it. I don't think it has to do with... like the teen section or the old lady section. If you're walking through somewhere and you see it, you just [think]...that's what I like. (Mary)

This focus on the self means that participants have a tendency to develop their own styles, and to ultimately wear different styles from each other. In this regard, Susan stated: "I think that I have my own style, and I...don't even, I can't really say there are a few of my friends who have a similar style, but probably most of them don't [laugh]."

In addition to different styles, participants indicated that their preferences for what they wear come from their own personal style, rather than from sources like fashion magazines and social media influencers. That is, when asked if they get ideas about what to purchase or wear from others, most participants replied with a negative, and explained that they know what they like to purchase and wear. For example, Mary responded, "Not really [laugh]. I wear what I like and as I said earlier, I've kind of got [the] attitude [that] if you don't like it, I'm sorry, I do [laugh]." Similarly, Sarah explained:

> I know my own style...I don't talk to a friend and say, "Oh do you like this?" No, I know my style. I'm very secure in what I like and what I don't like so um...I don't. If I see somebody wearing something gorgeous, I will ask...say, "Where did you get it? Do you mind me asking where you got that?" If I see something gorgeous, I will do that. But that's the only time where I'm actually interacting.

As they have grown older, participants have been able to spend time exploring different styles and finally finding what works best for themselves. Cynthia and Melissa mentioned that they developed their own styles and ultimately got to a point where their styles had evolved. As a result, participants know what they like, therefore it is more important for them to consider their own opinions regarding what they purchase and wear rather than the opinions of others, such as friends, acquaintances, and co-workers.

As most participants have developed their own individual style over the course of their lives, they voiced that they have difficulty finding apparel that fits their style due to the marketplace's generalization of styles for older consumers. For example, during the focus group interview, Amanda suggested that designers should provide style variety for consumers who are over 60 years old:

> I just think, I wish that the suppliers and the designers would not box us in. I think they...you see a lot of examples of what they think people in their 60s are wearing, which doesn't resemble anything in my closet [laugh].

She then gave the example of the limited colors for bathing suits available in her size:

> Like if I go shopping for a bathing suit, a bathing suit is a good example. Now I wear like a size 16 in a bathing suit, but mostly in that size, you see mostly black. YEAH, I want the bright pink, I want the teal, I want the yellow, I want you know, I want all that, sometimes I have to dig to find the vibrancy in stuff that I'm looking for, because I'm not going for just the black tank, you know [laugh].

Kathleen agreed with Amanda and pointed out the importance of apparel by not stereotyping what people should wear: "Good girl, but that's true. Don't stereotype. If your size is a little larger or if you're a little older, we should not be stereotyped that we don't want [bright colors]. [Or] we don't enjoy them yeah, yeah, I agree." Clearly, styles based on generalized stereotypes of older women's fashion preferences do not meet participants' desire to achieve the self-satisfaction derived from portraying their own individual styles through apparel.

In summary, the focus on the self for the purpose of dressing and one's own choice of style appeared to be significant not just for participants as individuals, but may also be a quality or characteristic of the broader baby boomer cohort. The role of apparel in self-image has been important for participants as female baby boomers as they age because apparel is a means of not only communicating the self to others, but also communicating that they care enough about themselves to avoid looking "old." In addition, participants' selections of what to purchase and wear are based on what they like, rather than the opinions of others. This emphasis on individual preference and style could be seen as a hallmark of the baby boomer generation. However, similar styles did in fact surface among participants, especially those that are linked to age-related physical, psychological, and social changes, as discussed in the next section.

The Elements of Style

According to prior studies, female baby boomer consumers tend to change their style preferences in order to compensate for age-related changes (Howarton & Lee, 2009; Rahman &

Yu, 2018; Rahulan et al., 2015). Particularly, body changes resulting from aging relate to their

apparel needs and preferences for apparel (Howarton & Lee, 2009). The same link was found in

the data collected for this dissertation. Although participants select different styles based on

their own individual preferences, there are certain styles that they all seemed to search for and

purchase that are linked to changes associated with aging. These styles are explored through the

following three subthemes: (1) *Age Appropriate Style*, (2) *Classic/Traditional Style*, and (3) *Style*

for Slenderizing.

Age Appropriate Style

When participants were asked if age is important to their decisions regarding what to

purchase and wear, many responded that it is, to the extent that they want to look like their age.

All participants talked about their desire to wear apparel that is appropriate for their ages. In

other words, age influences the styles they purchase and wear. For example, Victoria does not

want to look either younger or older than she actually is:

> I don't want to try to make myself look younger than I actually am. So I'm not going to go
> to the teenage section and buy something [laugh]. And at the same time, a lot of
> clothes...a lot of apparel in stores are geared toward really old people [laugh]. And I don't
> want to look really old either. I don't want to look, I want to look my age. I don't want to
> look younger, I don't want to look older.

Some participants, including Linda and Kathleen, look for styles that make them look youthful

and stylish, but not too young:

> This is kind of funny [laugh]. I'm just gonna be honest with you. I never want to look like
> an old lady. So I've had my 60th birthday, so I really...I'm very CAREFUL not to try to
> look like I'm 25, that is not my goal. But my goal is to look like a very stylish person of
> my age. So I want to dress appropriately, but I don't want to dress frumpy, you know
> [laugh]. (Kathleen)

In a similar vein, Linda tries to use bright colors to look youthful, but not "silly." It is important

for her to make sure that she looks appropriate at her age:

Um yeah I mean…I want to look youthful, but I don't want to look silly. Because I'm not fooling anybody…you know about my age. So you know, I'm chubby, so I want to look appropriate and...but I don't want to look old. Um…let's say youthfully appropriate. I think that's why I like bright colors, because to me, it's a way to look youthful, but not silly because you know, young people don't just own bright colors you know. (Linda)

Participants also mentioned that there is a difference in what they wear now versus what they wore when they were younger. For most, their clothes have become more "conservative" when compared to the clothes they wore when they were younger. Anna said that her tastes have changed as she has aged, which led to her choices in apparel becoming more conservative. She stated caring more about the length of skirts and sleeves and the design of the neckline:

My skirt like knee-length or below and...I'm trying to think, I don't wear sleeveless anymore because I feel like my arms don't look as good. Um...I don't wear low cut anymore because age spots [laughs] and you know, just certain things you know, I don't want to bring attention to. (Anna)

Jennifer also said that she has become more conservative in the way she dresses by making sure that her clothes are not "too revealing."

Many participants also talked about becoming more "self-conscious" of what they wear as they age. This change is in response to physical changes that have come with aging. For example, Barbara explained that she has gotten heavier during the process of aging, which makes her very self-conscious about what she wears. It is important for her to "look nice" and "feel good when putting something on," but she cannot buy all styles that she likes due to the changes to her body. Likewise, Anna experienced body changes as she gained weight due to aging. As a result, she has also become more self-conscious about her body, which, as she explained, makes it more difficult for her to find appropriate clothes compared to when she was younger:

I've gotten much larger. And...that's one of the reasons I don't like clothes shopping as much as I did. I'm very self-conscious about that area [bust]. And...I tried to downplay it. I am just very self-conscious, but yeah...definitely the clothes don't look as well and so I have to work even harder to find stuff that looks good. When I was young, anything I put on, I liked. (Anna)

Participants talked about not wanting to wear styles that are too revealing (e.g., sleeveless tops, low cut necklines, shorts, sundresses) or too trendy (e.g., distressed jeans, neon colors, crop tops/sweaters). For them, such styles are not age-appropriate for women of their age group. The importance of age-appropriate styles was seen in Jennifer's journal entries regarding her online apparel shopping behavior. For instance, she wrote about returning a pair of pants with a zipper in the back, which she considered to be too trendy and inappropriate for her age:

> I ended up keeping two ¾ length sleeve tops and a pair of earrings. Way more than I normally would have paid. I returned the sweater and the pair of pants. The pants had a zipper in the back?? Who wears pants with a zipper in the back? Not this baby boomer. (Jennifer)

During a focus group interview, Nicole talked about the difficulty of knowing whether a style is appropriate for her age when shopping for apparel online: "What looks nice in the picture...you know, it doesn't quite fit my age." It was hard for her to decide whether something is age-appropriate or not in the online context because she cannot try it on before purchasing. In this regard, virtual try-on technology might have enabled her to examine a style on a 3D model of her own body prior to purchase.

Classic/Traditional Style

Overall, the participants seemed to prefer classic/traditional styles when they decide what to purchase and wear. As Megan explained, she likes a classic style because "classic to me is always in style." She wants to stay in style, as it helps her take pride in the effort she puts into her appearance. In this respect, a classic style helps her to always stay on trend, especially by adding "jewelry to it or a jacket or a vest or something to...or scarf to change the look of it, and either dress it up or dress it down."

According to Amy, classic styles are considered to be more appropriate at her age than styles that are too trendy: "I tend to buy more traditional, more classic styles that are going to last

for a while. I'm not going to buy anything that's too trendy...you know, that it's not going to look appropriate on someone my age." Jessica also indicated that she seeks a classic, traditional style instead of a fad style that is considered more appropriate for younger consumers:

> Trying to find things that are classic and will not date easily. And you [don't want to] make it look like…you know, I'm trying to be a younger person wearing fad clothing and it's like, no, get something traditional. (Jessica)

Another participant, Cynthia, thinks that solids are more of a classic style as opposed to patterns. As she has aged, she tends to prefer more "classically designed clothes" that do not go out of fashion quickly. She gave an example of a fashion brand, Talbots, that targets older women. She commented that Talbots' clothes "tend to be more the classic design as opposed to trendy" because their main consumers, who are older women, want classic style. Participants' preference for class/traditional style seemed to derive from the aging process. With aging, a classic/traditional style was considered more appropriate than a trendy/fad style, therefore, while they all talked about being individual in their styles, as members of this age group and the boomer cohort, they also wanted to be dressed "appropriately" for their age via classic styles.

Style for Slenderizing

As part of the aging process, most participants experienced a significant increase in body weight. This body change, in turn, meant that participants sought styles that would make them look slimmer. In fact, when asked to describe the styles that they liked most, nearly all of them mentioned styles for slenderizing. Susan and Stephanie used colors for slenderizing, such as black pants and dressing in monochromatic tones. Amanda, Victoria, and Anna considered patterns and solids for slenderizing. To be specific, Amanda is careful to select stripes because they are "hard to balance with weight issues." Thus, she looked for stripes and prints that can slenderize. Victoria avoids wearing clothing with horizontal stripes. She wrote in her journal: "I

saw many shirts in my size with horizontal stripes. I wear a 1X. I have not had a shirt with

horizontal stripes in 10 years. It looks awful." Likewise, Anna tries to select patterns that de-

emphasize her size and ultimately make her look slim:

> I'm a solid girl...like I said, I want to take away from emphasizing my size. So I don't like the paisley, I don't like the really busy prints. I mean if it's something very subtle and...just it has to be a very particular pattern, you know like a slimming pattern, but...typically I stay away from, I do not like patterns. That's mainly because of my size. (Anna)

Nicole and Kathleen also prefer to wear specific styles for slenderizing. Nicole likes to wear A-

line tops because "they come straight down and have a slimming effect." Kathleen explained her

favorite style that gives "the illusion of a slender look," even though she has not gained much

weight as she has gotten older:

> Um...I love a style that is slenderizing, but not form-fitting. So I think that's why when I talked about maybe...and I've got a pretty flat stomach, so okay, this is something I could put together and feel good in it. I could do like some skinny jeans or skinny pants or something like that, that was you know, more fitted…and maybe a loose-fitting top, but then maybe that tuck front, which shows that I don't have a big belly hanging out, you know and can feel slender. (Kathleen)

Participants looked for styles that did not make them appear larger, using specific colors,

patterns, and types of apparel to achieve this goal. Concerns for dressing the body were directly

linked to changes stemming from aging. Along with styles that slenderize, age-related changes

to body size and shape also influenced participants' apparel needs and preferences in terms of

both garment fit and size, which are explored in the next theme.

Garment Fit and Size

Age-related changes have impacted participants' apparel needs and preferences.

Particularly, physical changes with age, such as changes to body shape and size, are associated

with what participants searched for and purchased when shopping for apparel. In this section,

participants' needs and preferences for apparel fit and size are examined in depth. Three

emergent themes help to shed light on the role of aging in apparel fit and size: (1) *Achieving Greater Comfort*, (2) *Avoiding a Tight Fit*, and (3) *Going a Size Larger*.

Achieving Greater Comfort

Participants in this study were asked to talk about the factors that influence what they purchase and wear. All mentioned that comfort is important to their apparel decisions. For example, Stephanie emphasized "comfort" as the key factor in her apparel choices. Further, she expressed her unwillingness to wear anything that is not comfortable. When asked to elaborate on what comfort means to her, Stephanie responded:

> Free movement like…some fabrics are, even though they're not tight, they just are not comfortable to move around in. So I tend to like cotton because that's more movable, more breathable.

Stephanie liked fabrics, such as cotton, because the garments feel like they move better. Similarly, for Susan, comfort implies things that are "looser and stretchy." Like Stephanie, she considered comfort as the most influential factor in her apparel purchase decisions.

Mary and Barbara mentioned specific types of apparel that are comfortable for them. For example, leggings and jeans with spandex are usually "not tight," which means comfortable to Mary:

> Comfort for me is something that's not tight...leggings, leggings are very comfortable… So, um...jeans with spandex in them that aren't real tight and constricting, and leggings are my everyday wear.

Barbara also indicated her preference to wear shorts "because they're comfortable, and they're usually a little more...roomy." Shorts are everyday wear for Barbara during summer, as leggings are for Mary. Thus, specific types of comfortable apparel have become the norm for what they usually purchase and wear.

Interestingly, when participants talked about their preferences for comfort in their clothing, they also mentioned their age. For instance, Mary stated: "That's basically comfort when I'm 60 years old. So to me, comfort is number one." Victoria also mentioned that aging increases the significance of comfort regarding what she wears:

> Now I enjoy more loose-fitting, comfortable [clothes]. I don't want to be...I don't want things to feel tight. I don't want to feel squeezed. I don't want to feel you know, uncomfortable. Comfortability has become very important…the older I get.

On the flip side, as participants grow older, they talked about not wanting to feel uncomfortable. To this end, two participants, Sarah and Emily, expressed that they avoid wearing uncomfortable shoes. Sarah talked about how, with aging, she has changed her choice in shoes from high heels to flats for comfort:

> I would dress...first of all, I would wear a lot more high-heeled shoes [laugh] than I do now. I tend to wear flats now, just because I don't want to fall and break my leg, but that sounds terrible, but it's just I walk across the campus...I, you know I'm walking a lot. So like I said, comfort is important.

She prefers comfortable shoes to walk more easily. For Emily, comfortable shoes are "the most important feature of her dress." As she has aged, she has started to care more about comfortability than the appearance of shoes. However, she is still "picky" about shoes when she decides what to buy and wear.

In addition to aging, participants talked about considering comfort in their apparel purchases and choices as a result of COVID-19. For instance, Cynthia's style has become more comfortable with COVID-19, as well as with aging. She is more likely to wear comfortable clothes, such as "knit jeans as opposed to denim jeans," "tennis shoes instead of high heels," and "flip flops as opposed to enclosed flats," especially during the pandemic. Moreover, due to COVID-19, participants talked about fewer opportunities to engage in the kinds of social

activities that they would normally dress up for. Kathleen highlighted the importance of comfort for her clothing, and that her style became more comfortable due to COVID-19:

> I love to be cheeky, but I HAVE to be comfortable. So I really come...I dress with a style that can [be considered] shabby chic, but I've got to be comfortable and particularly now with COVID [laugh], I'll put on a pair of dress pants and oh I just can't, I can't do this [laugh].

Overall, comfort plays a critical role in what participants purchase and wear. In general, what comfort means to participants are garments and shoes that are "not tight" and "easy to move in." This preference involves not just the types of apparel they want to buy and wear, but comfort is also associated with apparel fit and the sizes they need and prefer. In the next subtheme, participants' needs and preferences for apparel fit are discussed in depth.

Avoiding a Tight Fit

Participants' preferences for comfort in apparel also reflects their favorite styles in terms of apparel fit. When asked to describe the styles that they like most, they mentioned "flowy" and "loose" fitting. For example, Cynthia enjoys wearing "knit pullover shirts" that are loose-fitting. Linda focuses on looseness in her decisions of what to wear because loose-fitting clothing makes her feel better:

> It's pretty rare that I would wear...wear sweaters or tops that are really close-fitting. I like a little...I like a little looseness. Because that just feels better, less restrictive to me.

In a similar vein, Victoria explained that she dislikes tight-fitting styles. Instead, she prefers "long tops and tunics" that are loose, and ultimately comfortable for her.

The preference for flowy and loose-fitting garments appears to stem from participants' focus on comfort rather than trendiness, especially as they have aged. For example, Nicole mentioned that her style has become loose and flowy as she ages because she no longer considers others' opinions regarding what she wears:

I wear things that are loose and flowy...I would NEVER have worn like jogger pants out in public with the elastic waist with the pockets, never. Even though these are really cute with, you know, they've got the speckles and the galaxy on them, I wouldn't have worn those out in public. But now I will...just because they're more comfortable. I'm older, who cares much anymore? [laugh].

With aging, she has changed the fit of clothing she wears based on her focus on the self rather than others. She tends to wear flowy and loose-fitting styles to achieve comfort. This echoes participants' emphasis on dressing to please themselves, rather than others, as discussed in the previous section.

Along with comfort, participants talked about the desire to cover specific parts of their bodies using clothes that are loose. This aspect of "flowy" clothes seems to be important for many of the participants because they tend to be more conscious of their bodies with aging. For example, when Amy explained how she decides what to wear, she makes sure that she wears a long top for "full coverage" when she wears leggings. Similarly, Barbara indicated that her favorite styles are tunics and flowy dresses, which helps her cover up parts of her body:

Um...I like tunics because they help to cover up my thighs and my rear-end. And...I like very flowy kinds of dresses for the summer, um…that can either be worn casually or just with like some kind of accessory. I'd like it to be able to be used both ways. (Barbara)

Linda looks for tunic-style blouses to conceal the middle part of her body. For instance, she wrote in her journal that: "I was browsing on the Talbot's website for a tunic style blouse. I was looking for a nice full cut to conceal my flabby middle." Moreover, participants employ loose-fitting clothes to cover the parts of their bodies that have changed with age. According to Susan, she has a different body shape compared to when she was younger. Such change has prompted a tendency to wear looser rather than fitted clothing as she ages:

I had a really nice figure when I was younger [laugh], so I wore a lot more fitted clothing, especially through the waist. I wore a lot of dresses that were, you know really fitted or like I said, sleeveless dresses um...I had a certain style that I think was mine then that if I

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still had that body shape, I'd still wear it, but my body isn't that shape anymore, so I have to wear looser clothes now. (Susan)

Body changes associated with age impact the kind of fit participants prefer and how they use styles to cover specific parts of their bodies or de-emphasize body shape changes derived from aging. Along with garment fit, age-related body changes have also impacted participants' needs for garment sizes, which is discussed in the following section.

Going a Size Larger

During the focus group interviews, participants actively discussed the body changes they have experienced with aging. For example, Mary said, "Like we were talking about a while ago, you know we're not teenagers anymore. So we have certain body parts that aren't as firm or as perfect as they used to be." Particularly, all of the participants experienced changes in body weight during the process of aging, and most experienced a significant increase in weight as they have aged. Jessica experienced weight loss and Kathleen has maintained her weight, but the other 18 participants all indicated that they have gotten much larger with aging. Due to the significant increase in weight, participants have had to change their preferred sizes to be larger. For example, Amy usually makes an adjustment for her size: "I used to be really really thin and now not so much. So that's been an adjustment, so I have to wear larger sizes so that's been an adjustment." Victoria indicated that she used to wear size 8 or 10, but size 10 no longer fits her body due to weight gain as she has aged.

Many of the women talked about how, when they reached menopause, they experienced an increase in weight. For instance, Nicole wore a very small size, but shared that she gained a lot of weight with aging, especially when "menopause hit." When asked about the influence of reaching menopause on body size and shape, Diane commented, "Once you hit menopause,

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you're gonna get a little pooch [stomach pooch]...and it doesn't go away." She was asked to give

examples of her body size and shape changes:

> Well…my chest has gotten bigger. My torso, my midsection is a little bit thicker. That's…about all you know. You lose your butt. If you have a good nice firm, little perky butt, it goes away. It looks like you sit on a chair all day long [laugh]. (Diane)

Melissa also indicated significant changes in her body size and shape as she has aged:

> My body size and shape has changed DRAMATICALLY [laugh]. I used to be very tiny. And I wore like size four and smalls in the early days. And...probably when I turned about 48 to 52 and that age when I started becoming perimenopausal, I hadn't, that's when my body's changed. I started getting sick. I started having a hard time losing weight. And so now, I'm a 16 extra large and I am petite in stature. My legs are very short. I'm long waisted and very short.

She discussed how aging impacts a woman's body in different ways. In her specific case,

Melissa went through changes in her body shape affecting her trunk area:

> So...yeah I don't like how I look now [laugh]...every woman it affects differently. For me, it's been through my trunk, the middle of my stomach, like if you look at me from my back, you can't tell that I'm big. But when I've turned to the side, you can see it [laugh].

As participants age, they have tended to gain weight disproportionately such that the

weight gain is localized to specific body areas. For example, Sarah has gained a little weight

with aging, but she had to change her size for bottoms significantly because she gained weight

disproportionally there as compared to her top. She shared that her top size remains relatively

the same, but her bottom size continues to get larger as she ages:

> There are things that I cannot wear anymore because I've just a little bit larger on my bottom half than I was. Um...all my tops, I can pretty much wear. But I have gotten a little bit bigger...I used to be like a size two, and now I'm a size eight. So I mean that's not what I would call a huge change, but I can't wear the things that I used to wear that were size two anymore [laugh]. And so that is frustrating. (Sarah)

Barbara also experienced disproportionate weight gain with aging. She explained that the

increased gain is concentrated in her thighs, rear, and stomach areas, which has resulted in her

body becoming pear-shaped. Similarly, Linda experienced a significant change in the middle

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part of her body. She explained that she needs different styles as well as sizes due to this kind of body change:

> I know you definitely get sort of thicker in the middle, there's not as much...there's not as much definition between your bust line and hips, you know it becomes less defined. So finding styles that kind of work with that. (Linda)

Five participants, Barbara, Susan, Stephanie, Anna, and Linda, indicated the need for plus-sizes as a result of weight gain they experienced from aging. For example, Susan mentioned that she went from size 6-8 to 18-20 due to the significant increase in weight she has experienced:

> Well I think the biggest change is just my...you know, I used to have a really small waist... you know [laugh] like 23 inches or you know, very small waist. And I was like a woman size between a six and an eight, six to eight, so quite small. And I don't know, I guess I've just put on lots of weight, so...now I'm more like you know, size 20 probably 18 to 20…I'm just bigger all over. (Susan)

Susan shared that she shops for apparel online because she thinks it is hard to find a variety of styles in plus size at the local stores. As she explained, "I'm plus size, so it is helpful to be able to shop online because local stores don't have a very big selection of plus size." Similarly, Linda wrote in her journal that she shopped at two websites to find plus-sized apparel because of their large selection: "I extensively browsed the Amazon and Bloomingdales websites for plus-sized long blouses and the selection was large on both sites."

Participants have changed not only the sizes they wear but the styles that work for their aging bodies. Age-related body changes have led participants to change their preferences for apparel fit and needs for apparel sizes. Moreover, as baby boomers, they also want to maintain their particular style. In the next section, age-related social changes, particularly in terms of lifestyle changes, are examined as another major influence on participants' apparel needs and preferences later in life.

Lifestyle Considerations

Lifestyle has been found to be a key influence on older consumers' apparel consumption behaviors in prior studies (Rocha et al., 2005; Thomas & Peters, 2009). Likewise, participants in this study tended to select their clothing based on their lifestyles, and especially the social changes they have experienced stemming from aging. Two such changes are examined through the following sub-themes: (1) *Transitioning from Work to Retirement* and (2) *Active Aging*.

Transitioning from Work to Retirement

For those participants who are still working, decisions regarding what to wear tend to be based on their jobs. These participants select styles that work best considering their roles in the workplace and work environments. When they were asked to explain how they decide what to wear, most responded that they wanted to wear appropriate styles for their jobs. For example, Emily runs her own business, therefore she considers apparel to be more important than before she opened her business. When she meets with her clients or other business people, she prefers to wear business casual that consists of "slacks that are not blue jeans...and often collared shirts, sometimes a jacket, usually a necklace and earrings." In a similar vein, Sarah also decides what to wear based on her work role:

> Um...and now I tend to dress a little bit more conservative, but again, I'm also in an academic role where I'm in a fashionable department, but I'm also an academic. So I think that I have changed my dress slightly because of the role that I have in my career more so than just my personal like, oh, aesthetics.

Another participant, Anna, talked about preferring to wear styles that are comfortable for her because she has a sedentary job. She likes to wear casual clothes, including blue jeans, sweaters, and t-shirts, in order to "be comfy" when she is working. Generally, participants' everyday wear depends on what kinds of job they have.

As the baby boomer generation is turning at least 60 years of age, some of the

participants had already retired. Due to retirement, they can wear whatever they want in

everyday life, which for them means their styles have become more casual and comfortable

compared to when they were working. Jessica mentioned that she rarely wears business suits or

dresses now that she is retired. She explained the change in what she now wears after retirement:

> Yeah my style has changed, definitely since I retired because I don't…have to be in the workplace. And speaking to faculty and I was on a lot of committees, sitting on committees and doing all the work. At that point, I thought I needed to look more professional. Professional doesn't matter now [laugh]. (Jessica)

After retirement, her decisions about what to wear became easier for her because she does not

have any expectations to dress appropriately in the workplace. She wears "jeans and a sweatshirt

or a t-shirt every day" because she is not doing anything "fancy."

At the same time, however, many of the participants talked about how they still make an

effort to look good after retirement. That is, although their styles have changed to become more

comfortable after retirement, they still desire to look stylish and nice. For example, Kathleen

said that she has experienced the biggest change regarding what she wears since retirement.

After the end of her professional life, she wants to be comfortable, but at the same time, stylish,

as she still has a love of clothes and wants to keep her own style, which she calls "cheeky

casual." Similarly, Nicole started wearing comfortable rather than dressier clothes after

retirement, but this change does not mean that she no longer cares about her style:

> Um...I'm a little bit more laid back now. When I was working, I had to wear dressier clothes. Now I'm more comfortable. But I still don't want it to be, I don't want to look like a bum or a sack of potatoes when I go out. I want to look nice, but not dressy. I've changed styles completely in the last...say three years so. (Nicole)

Retirement seems to have relaxed these participants' styles, going from professional attire

to comfortable, casual wear since they do not have to follow a specific dress code for the

workplace, which impacted what they usually wore when they were working. Nevertheless, this change does not mean that participants are no longer interested in what they wear. Indeed, apparel is still important to them, and they still want to present themselves as fashionable and stylish. This interest links to their desire to avoid looking unstylish and ultimately, old, as was revealed in the first theme of this chapter. It is also related to their high degree of interest in appearance and fashion trends as a generational cohort (Howarton & Lee, 2009; Rahman & Yu, 2018; Twigg, 2013). After retirement, participants' choices in apparel seem to be based on the activities that they are engaging in, especially as they have more leisure time.

Active Aging

For participants who are retired, what they purchase and wear seems to largely depend on the specific situations or activities that they are engaging in. During the interviews, participants were asked how they decide what to purchase and wear. Melissa responded that she decides what to wear based on the activities that she is engaging in:

> Okay let me think about that um...first of all, what to wear is based upon what activity I will be doing, okay? whether it's being invited to a wedding, where of course I would purchase something a lot more, you know elegant so to speak, or which is not my normal [laugh], I'm very casual normally. Or...I'm thinking...this is one that I think will come up to be a good answer. When my husband and I are planning a trip, I will think about where the trip is and what clothing I will need for that trip. And then I go online, and I start shopping. And...based upon what I need and...I have done this for vacations, for trips. I've done this kind of shopping for several years.

For Melissa, events and travel prompt a need for specific types of apparel and then she starts shopping for it. As she now engages in more travel, shopping specifically for trips has become routine for her during the past several years.

Many participants talked about actively engaging in outdoor and physical activities, which, in turn, increased their need for casual and athletic wear. For example, Michelle

explained that her apparel purchases are related to the outdoor activities that she does in the winter:

> Well there's no occasion anymore [laugh]. Things that I have bought in the past couple of months have been related to...not working, and knowing that we would be doing more activities outdoors in the winter. (Michelle)

Kathleen also indicated that she has become "active casual" after retirement. She described wearing "yoga pants every day or more athletic clothes." This change has influenced her apparel shopping patterns. She typically purchased more professional and dressy attire before retirement, but now she purchases fewer dress clothes. She tends to buy dressy clothes only for special occasions, such as for attending weddings. Similarly, Emily purchases sportswear more frequently now based on the increased athletic activity she has engaged in since retirement:

> Yeah I do buy sometimes, um...you know blue jeans or if I'm going to be doing some kind of athletic activity, then I really like to buy nice sneakers or tennis shoes. And I often change them, I often get a new pair every four to six months.

Retirement has also meant that participants have fewer social events that they need to dress up for. For example, Amanda explained that her social life does not require she wear "glittery formal things" after retirement:

> Yeah the given level of how much I would wear it. Like I said, I may see something fancy that I really like and it's pretty and it's a good price, but I know that my social life doesn't really...you know really maintain anything where you have to wear glittery, you know glittery formal things, so I will appreciate it, but I wouldn't buy it, you know.

> For all of the participants, whether retired or not, COVID-19 led to a decrease in social

and travel activities due to social isolation. Megan shared that she tends to buy casual wear for traveling, and even though she did not travel during the pandemic, she did purchase apparel for a cruise that she was planning to go on when COVID-19 subsided. Like Megan, many participants actively engage in travel and physical activities, which reveals a more active approach to aging when compared to the previous generation of older consumers. This active focus aligns with

characteristics that the baby boomer cohort has become known for: better health and wealth in old age compared to previous generations of older women (Lehto et al., 2008). As a result, participants expressed a greater need for active clothing as a cohort. It is important to note that COVID-19 also meant that participants purchased their clothing online more frequently instead of in stores. The next chapter will explore participants' online apparel shopping experiences in detail.

Summary

In this chapter, the influence of aging on participants' apparel needs and preferences was explored. Data were interpreted through four emergent themes that help to explain what participants look for in apparel and what they purchase as older consumers. The four themes offer insight into the changes in apparel needs and preferences that come with aging, but also shed light on factors that may be linked to the baby boomer generational cohort more broadly. In the next section, how apparel needs and preferences of participants are addressed in the online shopping context is discussed.

CHAPTER V: THEMATIC INTERPRETATION PART II, THE ONLINE EXPERIENCE

As discussed in Chapter II, age plays an important role in apparel consumption behaviors among female baby boomers due to various and significant age-related changes that occur. In this chapter, I present the second part of the thematic interpretation of the data: *The Online Experience.* Participants' online apparel shopping experiences are explored to understand how their age-related needs and expectations are addressed in the online environment. Although each participant's experiences are unique, several themes emerged across their responses. Specifically, five themes are used to describe participants' experiences while shopping for apparel online: (1) *Why Online*? (2) *Where It All Began*, (3) *What Matters Most*, (4) *Frustration Drivers,* and (5) *Sticking to My Preferences*. Each theme will examine the role of aging in the overall process of online apparel shopping.

Why Online?

The data revealed that participants have a variety of reasons for engaging in online apparel shopping. While participants have different reasons for shopping online, there are also common motivations among them. In this section, four common reasons are examined to understand why participants started shopping for apparel online and what made them engage in online apparel shopping, especially as they grow older. Subthemes include: (1) *It's So Convenient,* (2) *Greater Availability and Access,* (3) *It's Fun,* and (4) *COVID Made Me Do It.*

It's So Convenient

When asked to explain the reasons why participants started to shop for apparel online, many responded that it was the convenience it affords them. For instance, Jessica considered that the convenience of online apparel shopping is the most important reason for doing it. The Internet means that the overall process of shopping for apparel is easier, especially in terms of

the search, purchase, and return of items. Moreover, it appears that the convenience of online apparel shopping prompts participants to shop more often. In this regard, Linda explained that she is more engaged in apparel shopping when she shops online due to convenience: "Just the convenience of it. I was very busy and um...and it was just easier. I mean that's why I'm doing more of it, because it's easy, it's quick you know, it's convenient."

Many participants value the convenience of online shopping in the interest of saving time. The Internet allows consumers to shop for apparel at home. As a result, they do not need to spend their time driving to stores. For example, Anna stated: "Easy, you don't have to get out in traffic...it [is] just easier." Cynthia also explained how online shopping enables her to save time and ultimately makes the shopping process easier when compared to shopping in person:

> Probably for the convenience. It was just much more convenient than either leaving work or giving up time on the weekend...saving time and it was just...it was just easier to shop online than getting in a car and fighting traffic.

When Cynthia is busy with work, the Internet helps her to spend her time more effectively while apparel shopping. Similarly, Stephanie talked about saving time by getting and returning items via mail instead of driving to the store and waiting in line:

> I want to be able to look and see a lot of things, so the convenience of them delivering it here and if I don't like it, I can send it back...without having to drive to the store, and stand in line, and try to return it.

This convenience of online apparel shopping is "the number one thing" that prompts her to go online.

In addition to saving time, participants can shop online whenever they want. Megan explained that she can shop for apparel in the middle of the night, as well as while watching TV at home:

> It's so easy and convenient. And you can do...you know, if you wake up at one o'clock in the morning, and you can't go to sleep, you can pull that iPad out and start shopping. I

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mean you know, you can't go to the store, get dressed, go to the store and go shopping at one o'clock in the morning, when you're not sleeping. You know, but you can at home [laugh]. It's bad [laugh]. It's good and bad. It is, it is. It is because like, right now, I'll be shopping, I'll just look, I'll be looking. And we're watching TV, my husband and I are sitting here watching TV. And I'll be looking, and then you find (...) something you just can't live without.

Using the Internet, Megan has no restrictions on when she can shop for apparel, as the online retail environment is not bound by business hours and can be done 24/7.

For participants, the convenience of online apparel shopping is even more important when there are issues with mobility, especially those that come with aging. For example, Susan mostly shops for apparel online because of difficulty with mobility:

I had surgery on my foot this summer. And I've had some health issues related to my knee into my foot. So it made it pretty painful for me to go shopping, you know, just to walk around in a mall or at a bigger store. A small boutique, I can handle, especially if it's when I can just drive up to and get out and go in and look inside. But I think because of my...how much pain I was in, I wasn't going into stores very much because I just...it hurt, you know took too much energy. (Susan)

Similar to Susan, other participants prefer to shop for apparel online versus offline because it allows them to do so in the comfort of their homes, without investing a lot of physical energy or extra effort.

Greater Availability and Access

Another common reason that participants shop for apparel online stems from the lack of availability of apparel stores near where they live. According to Nicole, she can buy her apparel only in "a couple of little boutiques" or "mom and pop stores," which leads her to shop for apparel mostly online. Likewise, Jessica currently purchases all of her apparel online because she moved from a big city to a small town after retirement. There is no apparel store close to where she lives and the nearest store is an hour's drive:

I purchase all online. I live out in the middle of nowhere...there's nothing close to me. The closest, I have a grocery store four miles away, but the closest clothing shopping is about 65 miles away. (Jessica)

In addition to limited access to stores, participants also tend to shop online due to the wide variety of styles and sizes available. For example, Diane talked about a lack of stores because those located around her focus on styles for younger consumers:

Like there's no stores. There's no stores here. Like I said, Walmart, that is our only store to get clothes from. But I guess at the mall, there's more, but that's geared more towards younger women, young girls. So there's just no place to shop here. And so if you want something, you get it online. (Diane)

Participants also highlighted how online apparel shopping provides more options in terms of size. As discussed in Chapter IV, participants wear a range of sizes, including plus sizes, as their body weight has changed with aging. They tend to go online to find their sizes across a variety of brands. For example, Susan likes to shop for apparel in local boutique stores, but she often buys her apparel online because "there aren't very many boutiques that carry plus sizes." Anna also has needed plus sizes more as she has aged, which draws her to online shopping because brick and mortar stores provide limited options for plus-sized apparel:

The big thing is, you know, you have trouble with sizes. You probably spend more than you want because you buy more and...because you know, the stores don't have everything like online does. And like you know, Belk doesn't have half the stuff that they're online [store] does. So you're like, "oh well, that's good. I think I'll get that too." (Anna)

Consequently, Anna said that she purchases more clothing online compared to in stores, especially from certain brands, including "Belk, Talbots, and J Jill."

Overall, participants are motivated to shop for apparel online to overcome the lack of access to stores and limited product availability. Particularly, age-related changes, such as moving after retirement to a locale that does not have many stores, looking for a variety of styles,

and the need for plus-sized apparel, have accelerated participants' preferences for buying apparel online later in life.

It's Fun

Interestingly, when participants talked about their online apparel shopping experiences during the interviews, they seemed to consider it to be a "fun thing to do." For instance, Amanda mentioned: "It [online apparel shopping] has always been...an indulgent thing, you know for me. It's always been fun. It's always been something I've enjoyed, it's fun." Similarly, Barbara indicated in her journal that she initially started shopping for apparel online because she enjoyed seeing what was offered, and this has evolved into something she does to kill time and deal with boredom:

> Overall, it was fun to browse and see what items are available. Maybe for a special occasion, I would consider purchasing one of the shawls with a special brooch. But for now, it is just some browsing out of boredom. (Barbara)

Jennifer also shops for apparel online "for entertainment." As she has become familiar with the online apparel shopping process (i.e., choosing sizes, buying from specific brands), she tends to buy her clothes online more than in stores. This tendency prompts her to think about shopping online when she is looking for something fun. In a similar vein, Sarah explained how the Internet enables her to enjoy shopping for apparel by allowing her to have access to the entire world at her fingertips to find what she is looking for:

> It's shopping at your fingertips, you don't have to leave your home, you can search the whole world to find what it is you're looking for. And...you can easily find what you're looking for as well, or you can just spend time just...shopping for fun like on a site like Poshmark or other sites.

The Internet allows participants to browse various styles and explore new trends, therefore it offers them hedonic value along with the more practical features of convenience and access.

COVID Made Me Do It

Due to COVID-19, participants frequently found themselves shopping for apparel online while at home. When asked whether there had been any change in their apparel shopping behaviors due to COVID-19, all participants responded that they have experienced shopping for apparel "more online" since COVID-19. They rarely visited stores to shop for apparel during the pandemic, which means that most of their recent apparel purchases have been made online. For example, Susan stated: "Definitely more online because I just haven't really gone to the store very much. I mean...department store, you know I've gone there one time in the past year [laugh]." Amy indicated that 80% of her apparel shopping in the past year has been online due to COVID-19. The main reason is that she can shop for apparel at home safely by going online. Likewise, as Jessica explained, she shops for apparel online because "it [home] is safer than being out with people who might have COVID."

With COVID-19, participants were limited in their options for apparel shopping in stores, especially in terms of time and place. That is, many apparel stores offered limited hours, and some stores went out of business due to COVID-19. Moreover, COVID-19 impacted the range of availability of products in stores, including limited quantities of sizes and styles. For instance, Megan indicated that she bought apparel more online since COVID-19 due to the difficulty of finding apparel in the stores around where she lives, because many of them were closing down:

> I buy more online now because the stores around here where I'm at, a lot of stores are closing down. So the stores that are open are selling out of the clothes in my size a lot. So I just do it online now, and hoping new stores come in. (Megan)

Interestingly, Megan said that she "barely did any online shopping, at least not for clothing" prior to COVID-19, but since COVID-19 most of her shopping has been online.

Other participants expressed similar changes in their apparel shopping behaviors. For example, Victoria explained how her apparel shopping behavior has gone from offline to online because of COVID-19. She pointed out the fact that COVID-19 has eliminated the most important benefit of shopping offline, which is being able to try on garments before purchasing. In the COVID-19 era, even if Victoria went to the stores, she could not try on apparel due to store restrictions. This restriction has forced her to purchase clothes first and then try them on:

> Now that we are in a pandemic, my buying habits are quite different. You can't try on clothes at stores anymore or at least right now. You have to almost check them out like a library book [laugh]. And then take them back if they don't fit. And that's sort of a pain, that's not fun for me. I like to try things on. Um...so because you can't try things on in stores, I have shopped more online than in the past because of the pandemic. (Victoria)

Similarly, Kathleen also saw a difference in her apparel shopping behavior between pre and post onset of the pandemic. Before the pandemic, she preferred to shop for apparel in stores, but has since purchased "way more online" because she cannot go into stores. During the focus group interview, she asked the others what they thought about shopping online, and particularly for jeans:

> I think the world is kind of being forced because probably the ladies that are here, like trying on jeans, I can't imagine ordering my jeans online [laugh], right? But you know what? I bet if we did it some and saw and had some success in it, that we probably you know, our age group would probably be more interested in even giving it a try, don't you?

She went on to explain that COVID-19 has forced many to change what they shop for:

> Because I order items online all the time, but you know...clothes like a top that's a small, medium and large, like athletic wear, but when it comes like pants and shoes, you know it's still...I think our generation really likes to try them on, but I think that we are going to be forced into a change partially. I don't know about you other girls but... (Kathleen)

While participants like Kathleen do not mind buying tops online, she found it more difficult to buy jeans/pants without first trying them on. COVID-19 impacted what type of apparel she purchased online as well as how she shopped for apparel. Particularly, COVID-19 forced her to

get used to buying apparel without trying it on first, but it ultimately changed her shopping preference from offline to online. Kathleen believes that she will continue to shop for apparel more online than in stores due to the convenience of it, a realization that emerged from her experiences during the pandemic. Other participants in the focus group interview agreed with Kathleen and thought that they will continue to prefer to shop online, even after the pandemic.

For participants, COVID-19 has meant that they shop for apparel online rather than offline more often, if not all the time. As they gained more experience with online apparel shopping, they have gotten more comfortable with it and find it more convenient. Interestingly, many think they are now more willing to shop for apparel online. The next section looks at what typically prompts participants to engage in the online apparel shopping process.

Where It All Began

According to participants, there are several starting points for beginning their online apparel shopping process. Specifically, the data suggest three common sources that participants use to get them started: (1) *Social Media*, (2) *Email*, and (3) *Catalogs*.

Social Media

Many participants start the online apparel shopping process with social media, such as Facebook, Instagram, and Blogs. In personal journals, several indicated that seeing a social media post got them online to shop for something. For example, Jennifer described how she began one shopping process from a brand's advertisement of a sale on Facebook: "Today I saw an ad on the Facebook site for J Jill. Items were 60% off and sweaters an extra 25% off." Similarly, Melissa gets information regarding sales and new arrivals through Facebook Live videos, which often prompt her to make an apparel purchase:

> Facebook live feed each day. The owner has been advertising on FB great one-day deals which encourages me to look daily. (Melissa)

Examples of this approach also surfaced during the interviews, wherein participants shared that their apparel purchases were prompted by social media. For example, Jennifer described a recent apparel purchase, which was prompted by an advertisement on her Facebook feed of a particular dress she had seen in the physical store:

> I'm on Facebook and I see J Jill ads on Facebook, so I might have seen it there. And when I saw like, the particular dress, I think I saw it in the store. But when I saw that it was 40% off, then I bought it. (Jennifer)

Through social media, many participants are able to purchase apparel from stores that are geographically far away from them. For example, Mary explained that she visits a particular store's Facebook page where they host a live video every Wednesday night to showcase their merchandise. This store is approximately 30 miles away from her home, so social media is a convenient way for Mary to purchase apparel from it:

> I purchased from a store that's about 30 miles from me that they have a Facebook page and they do...um...a live Facebook on Wednesday nights where they show different pieces of clothing, and then you just contact them and tell them what size and give them your credit card number, and they'll ship it to you.

In a similar vein, Sarah recently purchased a sweater using Instagram. In this case, a consignment store that is located in a different state from where she lives had posted items through its Instagram account, so she was able to see them on Instagram and make the purchase via phone. Sarah mentioned that she has purchased numerous apparel products from different companies via Instagram posts, and especially through links that are available on these posts to connect with brands' websites. She follows various people, such as fashion brands, interior designers, visual merchandising companies, and celebrities, who influence her apparel purchases and ultimately prompt her to use Instagram "pretty frequently" for online apparel shopping.

Amy looks at fashion blogs to get ideas of "what's current, what they recommend, and what they think looks good." She not only gets fashion information from bloggers, but shops for apparel through the links that the bloggers provide:

> Well so I look...every day or every other day. And I get ideas from them, once in a while, I'll go...I'll shop through their links that they have for the different clothing. (Amy)

There are five blogs that she goes to on a regular basis: *Over 50 Feeling 40, A Well Styled Life, 50 is Not Old, The Vivienne Files,* and *Southern Hospitality*. She gave an example of her apparel purchases from blogs. Although Amy does not typically like to purchase from a new apparel brand, she made an apparel purchase from a new brand's website based on the blogger's recommendation, along with a good discount. Overall, Amy's apparel purchases frequently start from and are significantly influenced by fashion bloggers.

Most participants seemed to actively use social media for apparel shopping. Most indicated using Facebook in particular for online apparel shopping by following apparel brands' pages. They can see posts from apparel brands on their Facebook feeds, which sometimes prompts them to start shopping. Personalized advertisements based on what participants bought before are particularly good for triggering their engagement in online apparel shopping. In this regard, Jessica shared how social media and personal advertisements influence her shopping behavior:

> Especially now, I get Facebook postings or emails for retailers I bought things from before, and they'll say "oh because you bought from us before, you might like this." Or they'll send me coupons online, essentially a discount online and so...that's how sometimes I find out that something I like has gone on sale.

Another participant, Melissa, frequently uses Facebook Live videos for online apparel shopping. During the interview, I asked her to show me her Facebook page and explain how she uses

Facebook for apparel shopping. She started with her favorite boutique, where the store

showcases its products during a live stream session, often with discounts:

> Now the stores that do online, Facebook, online sales, like my friend that I was telling
> you about that has the store and she'll stand there and say, "This is all of our tops like this
> brand, they are on sale today, 30% off." And she goes through her rack and shows what
> she has. I purchase that way. (Melissa)

Melissa uses her social media account to start shopping, and will often start by first commenting

on a boutique's post about new arrivals. As an example, she commented on one of the Facebook

videos posted by her favorite boutique: "I love every one of the tops! I hope I can get to see y'all

soon before my size is all gone!," further highlighting the impact of social media on her online

apparel shopping.

Social media provides a space to communicate between brands and consumers, which

can have a positive impact on their shopping behaviors. For instance, Amanda actively

communicates with her favorite brand, Chico's, through Facebook. During my observation of

Amanda's social media, I noticed that she often posted feedback on styles that were introduced

via the brand's posts and live videos. For example, "the high rise jeans on the model were great,

always looking for a higher rise in the jeans line" and "oh that jacket in lavender, can't wait."

The brand would then reply to Amanda's comments, such as letting her know about the

availability of products and providing website links to make a purchase.

In addition to interactions with a brand, several participants use social media to interact

with other consumers. Two participants, Amanda and Megan, use Facebook discussion groups

for apparel shopping. Specifically, both of them use Chico's shoppers' groups on Facebook to

share their outfits with others and get product information. For example, Megan explained that

she uses the "Chico's shoppers group to communicate with ladies that shop at Chico's." She

frequently posts about her outfits on the group page and shares information regarding apparel

products with other group members. Group members ask her about the name or SKU number of the Chico's products that she is wearing, and then she posts that information to allow other members to find her items on the brand's website. In a similar vein, Amanda described how she also uses the Chico's shoppers' page when shopping, where group members communicate with each other by posting pictures of what they bought, as well as product specific information and where to buy the items for those who are interested:

> Everybody posts pictures of what they bought and stuff. And if I see something I like, then I would go from there...and go to the Chico's page. There's no link, I mean there's no link on that group page, but you know, sometimes people will post and give you the name of what it was they bought and then [you] go Chico's [website]. (Amanda)

For Amanda, posts on the group page, along with product specific information, provide what she needs to start the online apparel shopping process.

Clearly, social media plays an important role in many of the participants' online apparel shopping experiences, and especially as a starting point. Social media offers a variety of ways to engage and begin the shopping process, such as brand pages, advertisements, live videos, discussion groups, as well as direct links to brands' websites for shopping. As a result, social media enhances their opportunities to get information about apparel, and, ultimately, provides more reasons to start shopping for apparel online.

Email

Another source that was used as a starting point for many participants' online apparel experiences is email, and particularly messages that are sent from online fashion retailers. Along with social media, fashion retailers and brands often communicate about deals (e.g., sales, clearance, coupon promotions) via email. As a result, most participants indicated that their online apparel shopping experiences will start with these messages. Indeed, among the participants who provided personal journal data, most pointed to emails as a starting point for

online apparel shopping. For example, Melissa described how she started shopping for something by clicking the link in the email she received from an apparel brand: "I received a Zulily email and clicked on the provided link." Another online apparel shopping instance was also started from an email, which provided Melissa with a discount offer:

> I received an email with 30% off. This caught my eye so I started shopping. I need some new casual tops and would like a new light weight jacket. I have yet to find the jacket for which I am searching. (Melissa)

Similarly, Michelle started to shop for something online after she received an email regarding "new items on sale." From the email, she went to the sale section on the Nordstrom website and explored the items. In the same vein, when Barbara received an email from an apparel brand regarding items being on sale, she immediately began browsing there "to check out what they had" on sale.

In one of Barbara's journal entries, she described how she went shopping for apparel online because of an email about a coupon: "I began shopping as I received an email from L.L.Bean saying that I had a $10.00 coupon that was about to expire." This email reminded her of the need for a second pair of colored jeans, the first of which she had purchased two months before. Moreover, email is used by brands to share coupons on a regular basis. For example, Victoria stated that she usually goes shopping for apparel online when she receives her "weekly coupon" from Belk. Email is clearly an important gateway for online apparel shopping, as participants frequently receive messages with discounts and coupons for their favorite stores.

Catalogs

Some participants start their online apparel shopping process after they look at a mail order catalog sent from an apparel brand. Jennifer mentioned the use of catalogs for online apparel shopping during the interview as well as in her personal journal, indicating that a catalog

that she received in the mail "enticed" her to go online to shop for something. Victoria also

wrote in her journal that she goes online apparel shopping when prompted by a catalog:

> After receiving my L.L.Bean catalog and seeing a jacket I liked, I decided to shop online
> for it to see what was available in my size/color. (Victoria)

Similarly, Susan said she enjoys looking at catalogs and usually when she finds something she

likes in a catalog, she will then go online to order it. For Emily, catalogs are sources of ideas

about what to purchase and wear. It is interesting to note that four out of twenty participants

reported still using catalogs for apparel shopping, but for all of them, catalogs served as just a

starting point, using them for the initial search. When it came time to make a purchase, they

went online to make the final decision about whether to buy the item.

What Matters Most

This section examines the factors that participants most often look for when buying

apparel online, and considers the influence of aging on these factors. The following four

subthemes emerged as the main factors in the decision-making process among participants as

older female consumers: (1) *Quality*, (2) *Price*, (3) *Color*, and (4) *Sustainability*.

Quality

During the interviews, participants were asked about what is important to them about an

item when shopping for apparel. Seven out of twenty participants mentioned quality as the most

important factor. For example, Anna said quality was her "big consideration," and as a result,

she tends to spend a significant amount of time examining the quality of products while looking

online. According to Victoria, quality is important to her, to the point that she is willing to pay

more for a higher quality product:

> My main consideration is...quality...fabric quality, garment quality, stitching. I do not
> mind paying more for an item that's a good item that I can keep in my closet for a long
> time and get a lot of wear out of it. (Victoria)

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Similarly, Amy focuses on quality rather than price: "I'm not going to spend less money if it's not worth the purchase. So quality is important."

Participants indicated that quality has become more important when buying apparel as they have aged. When asked whether there is a difference in what they wear now versus when they were younger, Sarah pointed out how she now better understands and appreciates the quality of garments:

> When I was in my 20s, I really didn't think about how things were made or where they were made, or for that matter, I didn't really think about the quality much. But as I got older and also being in the fashion industry...gave me a better understanding of the quality of garments and how they're made.

She then explained her experience with poor quality in apparel, where a hole appeared quickly after wearing it for few times. This problem resulted in frustration and led her to stop purchasing poor quality garments:

> And then just experiencing the lifetime of a garment...as I got older, certain garments, you wear them two or three times, and they have a hole. And that's very frustrating, so as a consumer, I stopped purchasing things from...you know companies or places where I knew the quality was going to be minimal at best. (Sarah)

Sarah has gotten to know the quality of apparel better as she has had more opportunities to examine diverse products based on her personal and professional experience with apparel shopping. Like Sarah, Emily also mentioned that she wears "a little better quality" now compared to when she was younger.

Preferring to buy a quality product, Megan tends to shop more for apparel at specific stores that provide better quality clothing as she has aged: "I like to buy good stuff, I buy...good clothing. I like to buy that at Chico's and Dillard's. Chico's and Dillard's have a better quality of clothing for me for my age." When asked to elaborate on what better quality of clothing means to her, Megan responded that "it's just high quality, lasts longer, and it looks good."

Another participant, Barbara, also shared what quality means to her. She explained that she expects high quality apparel to last longer and not lose its shape or shrink after washing:

> The fabric. If it will last longer, if it's good fabric, rather than you know, sometimes you'll see something you really like, but when you get it, the fabric is not what you thought it would be. And it loses its shape or it shrinks or something when you wash it. So the feel of the fabric is really important to me.

As they age, many participants have started to buy apparel that lasts longer, so they tend to examine the fabric of an apparel product for its durability before deciding to purchase it. In addition, participants want to buy a quality product at a reasonable price. As a result, they look for sales and specials, both of which are discussed further in the next section.

Price

Many of the participants talked about making an effort to buy a quality product at a reasonable price when they shop for apparel online. According to Linda, "high quality for a reasonable price" is her number one consideration when buying apparel online. During the interviews, most participants said that they consider price to be a very important factor. At the same time, participants want to find a quality product. Both seem to prompt them to look for sales. For example, Barbara explained that she considers both price and quality to be important when making purchase decisions for apparel. As she does not want to give up quality, she often looks for sales in order to meet the price factor, because quality clothing is typically expensive:

> Well...price, but yet quality factors in, sometimes it may be inexpensive, but it's not well made and it's not going to hold up, then I just wasted a lot of, you know money anyway. So...I always look for sales, the biggest sales I can find [laugh]. And try to buy...more quality over quantity if possible.

Similarly, Kathleen indicated a preference to find "high-quality bargains," or to look for quality clothing at an affordable price. She described how she begins her apparel shopping by first checking out the sales section and then moving on to look at the full-priced section:

"Champagne taste and a beer pocketbook" like I'm always looking for the deal. I like really nice quality things. Have you heard of that? It's a slang way of saying...you know, the obvious. You like the very very nice, but you can maybe only afford cheaper things [laugh]. I love to find bargains, high-quality bargains, even you know, online or in a department store. I go to the sale rack first [to see what] they have before I move to, you know, to full-priced.

Like Kathleen, several other participants begin the shopping process by looking at the sale section of a website. This tendency was also seen in participants' journals. For example, Melissa wrote that she goes online "to see what is on sale," and Michelle also does this "to see what is offered on sale." Michelle wrote that she ended up doing her online apparel shopping without an actual purchase in this instance because nothing she needed was on sale. In the same vein, Barbara mentioned in her journal that she went online to "check out Talbots to see what might be available in their sale section." In this instance, though she found several things that she was interested in, she did not make a purchase because the prices were too high. Price is clearly a key factor in participants' decision-making process when shopping online, even though many wanted quality at the same time.

Color

Along with quality and price, color emerged as a key factor for participants' apparel decision making. When describing online apparel shopping experiences in their journals, color was often mentioned as an influential factor leading to the decision to purchase or not. For instance, Victoria described a time when she was shopping for a jacket online. She visited three apparel websites (i.e., L.L.Bean, Land's End, and Dicks Sporting Goods) and purchased the jacket from L.L.Bean because she found the color that she wanted there: "In the end, I purchased the jacket from L.L.Bean because they had the size and color I wanted. The other two companies did not have the colors I wanted at all." Similarly, color played an important role in an experience that Melissa wrote about, where she found many t-shirt designs that she liked, but she

did not end up making a purchase due to limited color options that did not go well with her

complexion:

> The shirts had birds on them that reminded me of one of my favorite nature artists, Charlie Harper. This ad and the Zulily shop enticed me to look in more depth. There were many t-shirt designs from which to choose, however the colors were limited to two that do not look well with my complexion. I did peruse more items and clicked on several hoping for more appealing colors. (Melissa)

Melissa also mentioned color in another journal entry, where she described searching for sale

items, mostly casual long-sleeved t-shirts and light-weight sweaters. In the end, she did not

make a purchase because she "didn't see what I wanted in colors I wanted."

> According to Linda, color was a key reason for being satisfied with one online apparel

shopping experience, as well as the decision to purchase:

> I realized pretty quickly that Amazon had great colors and plus sizes to choose from so I bought two pairs, one a plum purple and the other is a dark steel gray. They both fit really well and are very comfortable. The shades of color are as I anticipated as well as the sizing. (Linda)

For many participants, available colors determined whether they made a purchase and whether

they were satisfied with the online shopping experience.

Sustainability

> Some participants mentioned that they consider sustainability when shopping for apparel

online. Victoria, for one, shared the importance of sustainability to her and that she considers a

company's sustainability practices when making purchases:

> Now I will say that sustainability is very important to me. And so a company's sustainability practices and...their carbon footprint is important.

As a result, she prefers to shop for apparel online from specific brands that she knows engage in

sustainable practices. Linda also indicated that sustainability is relevant to her online apparel

shopping decisions. As someone who is concerned about the planet, she emphasized the positive

aspect of online apparel shopping (e.g., and not have to "uselessly drive around") as one of the key reasons she shops for apparel more often online.

Another participant, Sarah, tries "to be as sustainable as possible" in her apparel purchase decisions, which impacts where she shops online for apparel. For example, she specifically shops through Rent the Runway as well as Stitch Fix. On top of having a sustainable element, Sarah explained that using these services offers the benefit of being able to try clothing from many different brands that are often high quality:

> I will tell you that last year before the pandemic, so it's the end of 2019 and into 2020, I used Rent the Runway for a while. And I really enjoyed that. And I've also done Stitch Fix, I did Stitch Fix for a number of years. And like that, but I do like Rent the Runway better. Because there's a sustainable element about Rent the Runway, and I can...try a lot of different brands, and they're all very, very high quality.

Sarah went on to explain how much she loves Rent the Runway and its business model, which works well for her. Due to the lack of need for work-related apparel caused by COVID-19, Sarah stopped using Rent the Runway, but she expressed her willingness to use it again after the pandemic:

> And...they do a really good job of choosing the sizes that will fit me. Oh I love Rent the Runway. I think that's a great...a great kind of business model that works for me. So that I really enjoyed and you know, if I hadn't been sitting at home for a year, I probably wouldn't be done using it. But this year, I haven't used it yet, but I will probably go back to Rent the Runway when we're back to normal. I really enjoy that.

Sarah shared that even after she stopped using Rent the Runway, she continued sustainable practices in online shopping mainly through second-hand shops. For example, she purchased apparel on Poshmark and from consignment stores through Instagram: "I've been buying more things in a secondary market, so like Poshmark...purchasing from the consignment store on Instagram." The Internet helps Sarah shop for apparel in a sustainable way by allowing her to do so without the limitations of a physical location. Overall, sustainability emerged as an important

factor in some participants' online apparel shopping and particularly in terms of products, brands, and location.

Frustration Drivers

All of the participants in this study are familiar with using the Internet. None of them talked about having any technical issues with online apparel shopping. However, participants did encounter some common issues during the online apparel shopping process. In this section, challenges faced by participants when shopping for apparel online, especially as they have aged, are examined. Four subthemes are used to explore this issue: (1) *Unavailable Products*, (2) *Inconsistent Sizing*, (3) *Inaccurate Information*, and (4) *Inappropriate Models*.

Unavailable Products

When participants wrote about the process of online apparel shopping in their journals, many shared that sometimes the products they wanted were not available to purchase. For example, Barbara could not make a purchase due to the product being out of stock: "After going to the site, the pair that I wanted was not in stock in my size and color choice." Linda also had a similar issue, where she found a blouse she wanted to purchase from Talbot's website but was faced with disappointment after learning that it was back ordered and unavailable:

> I was browsing on the Talbot's website for a tunic style blouse. I was looking for a nice full cut to conceal my flabby middle. I was disappointed that the shirt was back ordered so I decided not to purchase because I will wait and see if it is available later or I might find something I like a bit more. (Linda)

As explained in the previous chapter (Chapter IV), participants tend to prefer longer tops and tunics to cover the changes to their waist and hip measurements brought on by aging. In this regard, Linda looked for a specific style, but she ended her online apparel shopping without completing a purchase because the particular garment that she wanted to buy was unavailable.

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In addition to style, most participants need certain sizes that are different than what they used to wear. For instance, participants who need plus sizes seemed to have more of an issue with products being unavailable. Two participants, Linda and Victoria, also mentioned the lack of styles that are fashionable and attractive for plus-sized consumers. For instance, Linda shopped for her clothing on two specific websites that offer a large selection of plus sizes, but even there she does not always complete a purchase due to the lack of fashionable styles:

> I extensively browsed the Amazon and Bloomingdales websites for plus-sized long blouses and the selection was large on both sites but despite the number of items I felt the styles were dowdy and unfashionable, so I was [not] satisfied. (Linda)

At the end of her journal, she suggested that designers "should think more about styles that look better on a woman with a thicker mid-section." In a similar vein, Victoria complained about the absence of attractive products for her size when she shopped for apparel from Belk's website:

> It was easy not to purchase this time. I only saw one "top" or shirt that I even remotely wanted. The rest of the tops were quite unattractive. I am not sure who Belk is targeting but it was not me. (Victoria)

Victoria elaborated upon this issue when making suggestions for retailers in her journal. She provided a specific example where Belk did not take into account how their plus size shirts with horizontal stripes look on plus-sized consumers such as herself. This example illustrated that simply having plus sizes is not enough. As Victoria stated, designers and retailers should start paying more attention to styles that actually look good on plus-sized women:

> One thing I did like is that I chose my size and got models that are my size. Not all websites offer that. However, Belk needs to look around them and see what people are interested in. I saw many shirts in my size with horizontal stripes. I wear a 1X. I have not had a shirt with horizontal stripes in 10 years. It looks awful. I searched for tops in my size (not just "all tops"). They actually [had] shirts in 1X with horizontal stripes thinking people would buy them. (Victoria)

Clearly, for many participants, the issue of product availability hinders the online shopping experience. Participants had difficulty buying the styles or sizes they wanted, and this

resulted in their dissatisfaction with the online apparel shopping experience overall. This issue

tends to become more intensified as participants have aged, because of the need for specific

styles and sizes. As a result, participants wanted retailers to pay attention to them in order to

help them solve the issues that they encountered when trying to find clothing they liked online.

Inconsistent Sizing

When participants shared their experiences with online apparel shopping during the

interviews, inconsistent sizing among brands frequently surfaced as a challenge. For example,

Amy explained that the apparel size systems from different brands are not standardized. This

inconsistent sizing leads to frustration and challenges for her:

> The thing is...each manufacturer, their sizes are so different, like a size 12 in one brand is
> different from a size 12 [in another], and the way it's cut, like sometimes the style is more
> for women who are thinner in the hips, are narrower in the hips, some are cut, you know
> differently, so that makes a big difference. There's a lot of inconsistency.

Similarly, Stephanie described the issue with inconsistent sizing among brands as the worst part

of online apparel shopping: "Um...probably the sizing is the worst part. Getting the size...I don't

think each brand, an extra-large is an extra-large in every brand. There's not...continuity is not

there...and [it's] inconsistent."

This issue with inconsistent sizing also appeared in participants' journal entries. For

instance, Barbara wrote about the difficulty caused by inconsistent sizing and the need to visit a

physical store. In addition to inconsistent sizing among different brands, she even noticed

inconsistent sizing within the same manufacturers because they had made changes to their sizing

system:

> Overall, another basic fishing expedition. It is difficult to find a special occasion dress
> that is simple and can be worn for other situations. This is probably one purchase that I
> will need to go to a physical store for, so that I can try on the dress. My weight and body
> proportions have changed since the last time I needed to purchase anything like this, so I
> will definitely need to try on different styles and sizes. I've also noticed that some

manufacturers have changed their sizing. So, what may have fit well in the past, may not fit the same now.

Changes in sizing between different retailers heightened her concern with fit while shopping for apparel online. Thus, she indicated the need to try on apparel before purchasing, which kept her from making any purchases during her online apparel shopping trip.

Inconsistent sizing seemed to pose the biggest challenge for participants when buying pants online. Consequently, many prefer to buy pants in a store after trying them on to find the right size. For example, Mary explained that she cannot just rely on size when shopping for pants because every manufacturer cuts them differently, resulting in more variability in fit:

> Um...purchasing pants is probably the worst thing to buy online, just because every manufacturer cuts a pair of pants differently and you can't just go by size. So normally if I have to have jeans or pants or something, I will go to the store to get those just because they all fit different.

Pants are also the most difficult thing for Barbara to buy online "because different brands are cut differently." One way that several participants dealt with the issue was to rely on their previous experiences with brands when looking for pants online. For example, Jessica makes sure to buy pants from a specific manufacturer or designer that she has purchased from previously "because theoretically there are standards for clothing but different manufacturers run tighter or longer." Moreover, Amanda sticks with a particular brand when she buys pants online because the brand has kept its sizing consistent, which allows her to confidently make a purchase, knowing that the pants will be a good fit:

> Um...quite say probably pants, um...that's why, that would be why I shop mostly Chico's because their sizing is such that...it stays the same. It's like I know, if I go online to order a size there and one of their lines, I know it's gonna fit. If you go to Macy's and do a size 16, or you go to Walmart or JC Penney and do a size 16, there might be a wide variety of differences according to the design and manufacturer. (Amanda)

Inconsistent sizing created a challenge when participants shopped at different websites. Participants talked about having to guess their sizes because they cannot try on garments online, making it more difficult to select the right size if they did not have previous experience with a brand. As a result, participants were hesitant to shop for apparel from a new or unknown website. For instance, Victoria stated that it is difficult for her to purchase from an unknown website or company because there is no universal standardization of sizing:

> It is hard for me to purchase an unknown item from a company or website I have never been to. There is supposed to be a "standard" fit for sizes universally, but in my experience, this is not true.

Inconsistent sizing across brands has a negative impact on whether participants will make an online purchase. For instance, Melissa wrote in her journal that she chose not to purchase due to questions about size: "I was disappointed because I definitely would have purchased a t-shirt if I felt confident about sizing."

When shopping online, participants are not able to know how apparel fits their bodies prior to purchase. This problem is made worse by the absence of a standard sizing system. As Nicole put it: "You're not sure about the sizing because different companies make different things and so you don't know what's what, you know and [you have to] approximate." Anna also talked about uncertainty about what she will get when buying something without trying it on first, as relying on the inconsistent sizing system is like playing a guessing game:

> You know in today's society, you don't know what you're going to get, somebody's Extra Large is...another group's Large. And so you kind of...just kind of guess what sizes to order because you don't know what really you're going to get. You got a good estimate, but is it really like an extra large? or is it more like a 2X? or a large? (Anna)

As participants have more opportunities to buy apparel from retailers outside of the country through the Internet, they have experienced the issue of inconsistent sizing more frequently. In this regard, Jennifer shared her online apparel shopping experience with different sizing between

the US and China, emphasizing the importance of providing accurate information about the size on a website. The need for accurate information is discussed in depth in the next section.

Inaccurate Information

Due to inaccurate product information provided on websites, participants often face the challenge of receiving products that are different than they expected. In particular, inconsistent sizing means insufficient information. For example, Nicole mentioned that she has "made way too many mistakes over the years" when buying apparel online because the sizing information was not accurate. From these experiences, she has decided only to purchase apparel from websites that provide actual measurements for each size. Similarly, Kathleen shared an experience she had with poor fit due to inaccurate information. To be specific, she ordered a dress that was labeled as "form-fitting," but she returned it because it was actually too large. She expressed that online retailers need to provide detailed, accurate information about their apparel products so that consumers can buy exactly what they need and want and feel confident about the information provided on the website.

During the interviews, some participants made suggestions for fashion retailers to provide accurate sizing information on their websites. For example, Anna suggested making more clear and detailed size guides because currently most are too generic:

> I think it would be really nice if they could somehow make the sizes clear. Um...when you look at the size guide, it's just generic. And you know, this manufacturer does not go by that and this manufacturer, no doesn't go by it either, so...that's the biggest difficulty.

She pointed to the problem of using the same size guide despite inconsistent garment sizing among apparel manufactures.

Along with sizing, Emily talked about inadequate information about materials, and made suggestions for retailers to make shopping for apparel online better overall by providing a

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detailed guide that is specific to the item instead of having a general guide for all apparel. Such a

guide should ideally provide detailed information regarding materials, including fiber content,

washing instructions, and the weight of the fabric to give an idea of drape and opacity:

> I think that they should have a sizing guide that is specific to the item, and not a general sizing guide. You can find out what the material, what an item is made out of, what material and you can find the washing instructions. Um...the t shirts...I don't know if you could specify the weight of the fabric. So the t shirts, and you know sometimes you get fabric that's like so thin [laugh], you know it's gonna fall apart, it's just not gonna wear, it's yeah. And...whether material is see through or not. I think it's the same thing. So that would be really helpful. So those things would be really helpful. (Emily)

In the same vein, Jessica wants fashion retailers to accurately portray the material,

particularly patterns and textures of fabrics online: "Do better descriptions of...the piece of

apparel like the weight of the fabric or…does it have a shine or a sheen? Or does it have glitter or

decorations on it?" Participants had to guess at how apparel products actually look and feel

based on information provided on the website. Accurate information would positively impact

their purchase decisions, while it would also help to narrow the gap between what participants

expected to get and what they actually received, which would ultimately make them more

satisfied with the online apparel shopping experience. In the next section, the role of models in

communicating accurate visual information about a product is discussed.

Inappropriate Models

In the context of Internet apparel sites, products are typically displayed using models to

help consumers get a better idea of how apparel looks on the body (Kim & Damhorst, 2010; Shin

& Baytar, 2013). Participants indicated that the models on websites played a significant role in

helping them acquire accurate information regarding a product. For example, Anna looks

closely at the models to examine what an apparel product looks like: "Does it fit well? Is it tight?

Where is it tightest?" Moreover, participants seemed to prefer shopping at websites that show

different-sized models wearing the same item. For instance, Victoria explained the importance

of fit in her decision-making process and the preference for different shaped models. This

enables her to examine apparel fit on a model who closely resembles her form, to allow her to be

more certain that it will fit her body:

> Well if I can guarantee that it will fit my body, I am more likely to purchase it [laugh].
> Yeah I mean I would love to be able to have the ability to make sure that something fits.
> And also I want to see that garment on different people. I don't want to just look at one
> model. I want to see, I would love to see...that garment on two or three different shaped
> ones. So I can find something that more closely matches me. (Victoria)

Through different sized models, she can better assess what a garment might look like on her

body. Thus, accurate visual information regarding fit would facilitate her online purchase

decisions.

Victoria also made a suggestion to online retailers regarding the use of models that are

appropriate for specific sizes: "I would like to see a model in the size that I want to order. So if I

wear an extra-large, I would like to see that garment on someone who is extra-large. That's the

biggest suggestion I have." Similarly, other participants mentioned a need for "real models"

instead of thin models. For example, Amanda explained how she often found it helpful to see

other consumers' posts of what they wear on Facebook because something that looks good on

ultra thin models does not guarantee that it will look good on people who are not, such as herself:

> Um...the only thing I would say probably is to use real people in their modeling instead
> of...I know, we've often said this on the Chico's Facebook page and stuff when we see
> something on each other...you know a picture somebody posted. It looks so much nicer or
> it would look nicer on us because if you see something on somebody who's 110 pounds
> and you just like, "yeah sure, good on them." But then when you see it on someone of
> your own age group or your own size, and you think, "dang that does...that works" you
> know. So I think maybe using real people as models, you know and not just...like I said
> 110 pounds, tiny creatures [laugh].

Although most styles look good on thin models, all participants talked about the need to figure

out how such styles may fit their own bodies. As Barbara put it, information about fit

communicated by thin models is inaccurate, and she would like to "better envision what apparel would look like on me, rather than on the size 4 model."

When it comes to plus sizes, participants were more vocal about the issue of inappropriate models. For example, during the interview, Susan explained that she encountered a problem with models while shopping for apparel online due to "skinny" plus-sized models. This problem creates frustration for Susan, because she still has to imagine whether an item will be a good fit on her:

> A lot of times with plus size, they don't show the clothing on a plus-size model. Or they'll show it on kind of a skinny plus-size model. And so it's...you have to kind of use your imagination a little bit, as to how it's going to fit and look on you. And that can be a little bit frustrating, so I mean the idea of an avatar that would be the real me, I guess, and see like is it going to be too tight in the arm? or [laugh] how long is that sleeve really? Something like that could definitely be helpful. (Susan)

Even retailers that employ plus-size models to display apparel tend to use models that do not represent the body shapes of plus-sized consumers. In this regard, Susan expressed her willingness to use an avatar for her online apparel shopping, if it meant that she had a model that represented her own body.

The prevalence of thin models created more challenges for participants in light of age-related body changes. Susan needs plus size apparel, as she experienced an increase in body weight with aging, and would like the models to be similar. Barbara also mentioned the inappropriate use of thin models on apparel shopping websites, especially those targeting older apparel shoppers. She would much prefer a model who accurately portrays her body shape to provide better representation of how clothing will look on her:

> I think showing true photos of somebody who is a pear-shaped wearing an outfit rather than you know, you're looking say at size 16, but the model they're showing is clearly a size five [laugh]. You know, showing true body shapes. They really, you know, I know everybody wants to see a skinny model, but they do a disservice to a majority of older shopper groups by you know, using these people who are not always the norm for body

size. And I think it's easy to kind of picture yourself looking like that other body size. But you know, the reality is you're not. (Barbara)

For Barbara, the issue of unrealistic models is a major problem because her purchase decisions depend on apparel fit. During the online apparel shopping process, she gets an idea of fit by examining it on the model (i.e., if it is cut really tight or if it has more room). Thus, an inappropriate model is an obstacle for her when she is trying to buy apparel online.

In a similar vein, Melissa wrote in her journal regarding the negative influence of an inappropriate model on her purchase decision. To be specific, she found two items that she liked during the online apparel shopping process, but she chose not to purchase because "the pictures were modeled by a woman much younger than me." The use of a younger model meant she had no idea what size to purchase. She elaborated on the need for using models who are appropriate due to body shape changes associated with aging, such as a thicker waist:

> As far as size and fit goes, the t-shirt models were all much younger than me with a premenopausal figure. My figure definitely changed after menopause. My waist became much thicker and my stomach larger. My bottom also started to sag. Just because I am older doesn't mean that I don't like wearing a t-shirt. (Melissa)

Melissa experienced significant changes in her body size and shape after menopause, and suggested that retailers should "have at least one model that is over 40" so that she could examine apparel fit with a model that reflects typical age-related body changes among women.

On the whole, participants had problems with models used in apparel websites, and particularly in terms of body size and age. They consider young and thin models inappropriate for them because they cannot see how apparel would look on their bodies through such images. Given that fit is one of the most influential factors in participants' apparel purchase decisions, it is critical for fashion retailers to provide models that are age and size appropriate to make the

online shopping experience better overall. Ways that participants deal with challenges they encounter during the online apparel shopping process are discussed in the next section.

<h2 style="text-align:center">Sticking to My Preferences</h2>

Participants prefer to shop for specific brands or use particular sources when shopping for apparel online. By shopping on certain websites, they can better address the specific challenges they encounter. Further, some features of apparel websites make the overall process more convenient. Those features have become more important as participants have aged. In this section, five subthemes are examined to understand participants' preferences: (1) *Brand Loyalty*, (2) *A User Friendly Website*, (3) *The Sorting and Filtering Feature*, (4) *Easy Returns*, and (5) *A Bigger Screen*.

Brand Loyalty

Data collected for this study reveal that participants have strong brand loyalty when they shop for apparel online. In their personal journals, many participants indicated that they have specific brands that they start with when shopping for clothing. For example, at the beginning of the shopping process, Barbara usually browses a few of her "regular sites." Melissa also indicated a specific brand that she starts with: "Talbots is often my first 'go-to' store when looking for basic things." When asked whether they shop for specific apparel brands or not, most participants responded that they prefer to shop from specific brand websites. The main reason for this seems to stem from inconsistent sizing among brands. For example, during the interview, Victoria explained that she usually shops for apparel online at a specific apparel brand website because it offers a better fit than other brands:

> Of course not every company carries clothing that are the exact size that you need, I mean sizes change. I mean the sizes at Walmart are different than the sizes I wear at L.L.Bean because they're not as concerned with fit as L.L.Bean is. (Victoria)

She typically goes to L.L.Bean when shopping for apparel online, and likes to stick with this particular brand. In fact, she has "not ever purchased much of anything elsewhere." Similarly, Melissa shops for apparel from the same online sites because they offer consistency in regards to sizing:

> That's why I stay with several of the same stores online because NORMALLY their sizes stay true, and a size 16 today, will be a size 16 next month, the same size. Whereas...you know, going from store to store to store, 16 in these different stores is not a 16, is not a standard, like men have. Men, their size 34, 32 pants is a 34, 32 pants. And women's [pants] aren't like that [laugh]. (Melissa)

Diane also has specific brands she shops at online "mainly because of the consistency in sizing." She explained that she would not know what she would end up with if she ordered from other brands.

Many participants talked about shopping for apparel online through the websites that carry the sizes and styles that they need. For instance, Nicole tends to stick with a specific brand to get a certain size from that brand: "If it's a pair that I know I wear a certain size in [from] that brand, and I will look for that specific brand because I know that size fits." Similarly, another participant, Michelle, wrote in her journal that she began her online apparel shopping process at a specific brand's website that "has petite clothes." Participants also can find styles that they want by shopping for specific apparel brands. According to Amanda, she will find styles that she wants based on her previous experiences with a brand. Rather than going to the department stores where there are too many different styles for her to search through, Amanda prefers to shop at specific stores that have always offered styles that align with her preference:

> I usually...I stick to the same places that I normally shop simply because I know that I can find the styles that I like there. Um...I like Chico's because I'm always able to find things that I like there. I don't, I don't...I pretty much stopped going to the department stores because of...they're so spread out, and they have so many different styles like for young women and you know, men and boys and girls, you know, kids and everything. I like my boutique simply because they're geared for chicks like me [laugh]. (Amanda)

By shopping at a specific apparel brand's website, she can easily find styles that she likes, which makes her online apparel shopping process more convenient. In a similar vein, Linda mentioned the convenience of online apparel shopping when she shops at specific apparel websites because she is familiar with the brand and feels comfortable buying clothing from it online, without having to confirm it by visiting the physical store:

> Um...it typically is because back when I shopped less online, I already had a good relationship with the brand. And so now because I know what the brand is, now it's become a lot more convenient. And I don't feel like I need to go into the store to, you know confirm that it is what I think it will be. Um...so I would say, you know brands I'm less familiar with, I would want to see them in person and try them on. (Linda)

During the interviews, many participants indicated their preferences for shopping at certain websites because they know they will find what they need in terms of size and fit based on their previous experiences. For example, Cynthia mainly shops at three apparel brands (i.e., Talbots, Chico's, and Coldwater Creek) when shopping online because she has had enough experience shopping and ordering from them that she knows "what sizes will fit." Likewise, Emily tends to go to certain websites because she knows "what size should fit" as well as assurance that the clothing she buys will be of high quality:

> Because if I order it from a store that I know, like a Talbots or Macy's or Kohl's or something, I already know the quality of the material and the construction. So I already have a trust in that, and I already know about what size should fit. (Emily)

When participants shop from brands that they are familiar with, they get a better idea of how things will fit. In this regard, Anna had confidence in her online purchase decisions because she knew that clothing would be of high quality as well as good fit for her based on her past purchases:

> I know the brands I like...Because they typically fit the same way every time. And I like the way they're made...I know that the most likely it will be good quality...because I've purchased from them in the past. And...I have confidence, so I go to the brands I like. (Anna)

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For Anna, fit is crucial in her decision to purchase something: "Fit can be very crucial. That's why I typically just buy online like the tops and the brands that I know that will fit."

By shopping only at certain online sites and brands, participants reduce the uncertainty involved in garment fit and size, and ultimately, the risks involved in online apparel shopping. As a result, most participants in this study tend to shop from their favorite brands. Conversely, participants do not generally shop for apparel on websites that they have not made prior purchases from. For example, Melissa stated that she has not shopped for apparel on a new website in a long time:

> I know that I can count on the sizes and the quality and everything. And I usually don't try...I haven't tried a new place in a long time, a new online store in a long time.

As they have gotten older, participants have accumulated more experience with online apparel shopping in general and this has gotten them used to specific apparel brands. This knowledge helps to reduce the risk of online apparel shopping that comes from not being able to examine an actual garment before purchasing it. Ultimately, participants' preferences for certain apparel websites have resulted in strong brand loyalty as they have aged.

A User Friendly Website

Most participants talked about preferring websites that are "user friendly." For example, Diane stated that she does not care what websites look like, but they should be user friendly. When asked to give an example of a user-friendly website, she replied that it needs to have appropriate filters: "If you're looking at a tall item, just put the talls. Don't put petites with it." Victoria described some other ways a good online apparel shopping site can be user-friendly. To her, this means having a simple and easy-to-use payment system as well as having clear and easy to see pictures of garments:

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So...it's good if the website works properly. It's good if my payment is easy to submit. It's good if I can zoom over the garment and look at it and get an up-close picture of what the fabric looks like. My experience is good if the description of the garment is correct. In other words like...what type of material it's made out of, if that's accurate, that's good. I consider it good if the pictures of garments are clear and easy to see.

Victoria also wants to shop for apparel on a website that provides accurate and clear information, which ultimately allows her to complete the online apparel shopping process without any problems. In a similar vein, Sarah described shopping at "a very user-friendly website" that provided a seamless process, from searching to purchasing the product. She described the importance of employing robust search functions with good dropdown menus in order to make the navigation and search process easy and smooth:

> I think that there are websites that are more...user-friendly. I think the Nordstrom site is a really good example of an excellent website, it's easy to navigate, easy to see, easy to find what you're looking for, but I think most sites these days have created...very good search functions, very good dropdowns. So you don't have to get lost trying to find what you're looking for. I think the more user friendly the website is, the more likely the purchase intention is. (Sarah)

A user-friendly website enables Sarah to shop for apparel online easily, and in turn, purchase things more easily. Moreover, she emphasized the importance of a user-friendly website in the online apparel shopping process for older consumers:

> So that...goes without saying...and I think smaller, smaller companies would do well to spend more money to make sure that they have a website that is easy to navigate for the consumer, particularly for older consumers like myself. (Sarah)

Participants talked about the importance of user-friendly features when sharing bad experiences with online apparel shopping. For instance, Stephanie shared an experience she had with a website that she considered to be not very user friendly. She explained that a user-friendly website should have a basket function with an option to quickly add and remove items from the basket, as well as easily go back to shopping after making changes to the basket:

Last night, I had a terrible website [experience]. It was really old, and it was not user-friendly. So it needs to be…a quick response. It needs to be able to see what you got in your basket. And in the basket, you need to be able to delete or change the basket. And you should always be able to go straight back to shopping if you are within that basket in case if you take something out, you want to go back in and look again. And I think again, having one more screen that definitely shows, you know this is what you're ordering. And then, it's great [when] they go ahead and send you an email with your purchases. (Stephanie)

Several participants mentioned features of apparel shopping websites that help to make the process easy. For example, Melissa mentioned the convenience of a return-to-top function: "Those kinds of things like...make it easy to get back to the top of the page more easily, some places don't say 'return to the top'." Michelle also explained that offering videos of an item allows her to easily visualize how apparel might look in motion.

Some described apparel shopping websites as user friendly if they are easy to use. This is because those websites make the online apparel shopping process easy, and, in turn, more convenient. Because participants are largely motivated to shop for apparel online due to convenience, they are not willing to engage in online apparel shopping if the process is not easy. For instance, Kathleen stated that convenience and making it an easy process should be top priorities for retailers when it comes to online apparel shopping:

Retailers, I think it is all about convenience. Um...and making it an easy process for the consumer. I think that's everything because if it's a hassle, I'm not gonna do it.

In the next section, specific features of apparel websites that make it easier and that participants prefer to use when shopping online are explored.

The Sorting and Filtering Feature

When discussing the advantages of online shopping, many participants talked about the importance of having a sorting and filtering feature on a website. They prefer to use this feature because it contributes to the ease and convenience of the overall process. As there are a variety

of products typically available on a given website, participants want to sort and filter products by color or size based on their needs and wants. By doing so, they are able to find what they are looking for more quickly and easily. For example, Michelle shared an experience in her journal. With a sort feature, she was able to easily limit what she looked at, which made her feel positive about the overall shopping experience. During the interview, Michelle explained how she can find what she is looking for easily using the sorting and filtering feature. She specifically filtered by size, price, and type of apparel in order to quickly search through and find what she is looking for:

> Well I think it's so easy, you can...you know, decide I only want to see six petite, in jeans that cost between $50 and $100, and it's done. You know, you don't have to look at a bunch of things. You can sort and filter and...you know, if I'm looking for new running shoes, I know I wear an eight and a half, I know that I wear a neutral, like I know exactly what I'm kind of looking for. You know it's just easy that way. (Michelle)

The availability to sort and filter products by different categories (e.g., type of apparel, size, color, price) seemed to positively influence the overall online apparel shopping experience. Moreover, the sorting and filtering feature also impacted participants' decisions about where to shop for apparel online. For example, Amanda indicated that her choice of websites depends on "how easy it is to sort."

Online shopping makes available products "searchable," which allows participants to shop for apparel conveniently. In this regard, Jennifer prefers to shop for apparel online rather than in a store because she can complete shopping tasks faster than compared to shopping in person:

> I mean it's fast. It's also searchable. So...like if you're interested in a particular color or size, it's much faster than going to the store and going through, and you know trying to find or you know they have it or they don't have it. (Jennifer)

In addition to saving time, participants simplify the shopping process by narrowing down the options. For instance, Nicole explained how she can quickly limit her options when she shops for apparel online by using specific filters: "If you want a short sleeve black shirt, you can find that 'short sleeve black shirt' because you can put in specific terms and it will pull those items up, then you just have to pick which one."

Easy Returns

Participants prefer to shop on websites that offer easy returns if the purchase does not work out. When asked to explain where they typically shop for apparel online, some participants mentioned specific brand websites that have easy return policies. For example, Michelle highlighted "ease of return" as Nordstrom's strength, where free shipping and returns are available, which leads her to shop there a lot:

> I would say ease of return is important. Um...and I think having experience with the store is important. So in the past, I would order a lot from Nordstrom, because I was used to being in Nordstrom and they have a really good free shipping, free returns. (Michelle)

In a similar vein, Melissa considers ease of returns to be one of the influential factors leading to her decisions about where to shop for apparel online: "The stores that I deal with online or that have the EASY return, are the ones that I shop with."

Many participants emphasized that purchasing apparel without trying it on is not as big an issue when they can easily return something if it does not work for them. According to Megan, she is not willing to buy apparel online if she cannot return it, because a return option is necessary in order to compensate for not being able to try on apparel prior to purchase:

> I'm okay with not trying on merchandise, as long as...their policy is that they will take a return. No if there's no return, if you can't return it, no I would not buy it.

Clearly, how a brand handles returns is related to where participants usually shop for apparel. For example, Victoria shops for apparel with a specific brand due to its generous policy on returns, which allows her to try on a garment and simply return it if it does not fit well:

> The reason that I like that online format with L.L.Bean is because they are extremely happy to take back whatever doesn't fit and provide you with another option. (Victoria)

In addition to the brand accepting the return, participants think it is important that the brand have a free return option. With free returns, participants can further reduce the risk involved in not being able to try something on before purchasing it. For example, Jessica explained how she prefers to make purchases from websites that allow free returns to have an option to return items that she is unsatisfied with:

> If they don't fit, I'm not afraid to return things online. Because normally I try to buy from places to allow for free returns, so I don't have to pay the shipping back if it turns out it's an unsatisfactory item.

Like Barbara, many participants expressed negative views about paying for return shipping, therefore they only buy from websites that offer returns with no shipping charges.

A Bigger Screen

Several participants prefer to use an iPad or a desktop rather than a mobile phone for online shopping. The bigger screen allows participants to view pictures more closely and in greater detail. As discussed in Chapter II, visual representation is one of the main methods of communication in online shopping. Thus, a bigger screen allows participants to get more accurate visual information about a product. For example, Amy mentioned that she prefers to use a laptop due to the larger screen. Similarly, Melissa talked about her preference to use an iPad that has a bigger screen, which allows her to zoom in and examine products in more detail:

> My iPad. And sometimes if I'm...somewhere I might use my phone. But mostly my iPad...because it's easier for me to see. You know the bigger screen I can zoom in and see it better.

The bigger screen tends to help as participants have experienced changes in vision. For

example, Amanda stated that she prefers either her desktop or iPad rather than her phone because

she cannot see as well when using her phone. Victoria felt similarly, in that her vision has

declined with age, leading her to prefer to use a bigger screen rather than her phone:

> I can use my phone, but it's smaller and I'm almost 60 and my eyes are not as great as
> they used to be. And so...I like looking at a big picture.

As many participants have experienced declines in their vision, they prefer to use specific

devices when shopping online.

Interestingly, some participants use their phones initially to browse apparel shopping

websites, but they ultimately use an iPad or a laptop if they decide to make a purchase. For

example, Stephanie explained that she starts searching for apparel online through her phone, and

once she finds a product she likes, she will switch to her computer and examine it further:

> So typically, what I'll do is I may start playing around on my phone. But then if I really
> want to see it better, I get on my computer and pull it up, so I can really see it better
> because it's a bigger screen. That's what we do at our age, we need to see a bigger screen
> [laugh].

Susan also looks at pictures of apparel products on her computer to decide what she likes.

Similarly, Cynthia will send emails to herself when she finds something that she likes using her

phone, and then looks at larger images of the products on her desktop to make the decision

whether to purchase:

> Usually my Mac desktop and sometimes my iPad...[Phone], not usually, the screen is
> usually too small. So if I do see something on my phone that I like, I will email myself
> the link and then get on my computer and look at it that way. (Cynthia)

Participants were likely to use different devices during the same online apparel shopping

process. That is, they usually started shopping for apparel online using their phones because the

phone is handy, but because the phone is considered "too small" to examine apparel products

closely, they used another device to make the final decision. Thus, participants usually completed their online apparel shopping using an iPad or a laptop. For example, Emily mentioned that she used her phone for starting shopping and browsing, but made orders using different devices: "I would use a laptop or an iPad...I might look at it on the phone, but I don't think I've ever ordered using the phone. I want a bigger image."

Overall, participants' preferences when shopping for apparel online are shaped by the challenges they face. In addition, participants seek to use specific features of websites or certain devices to make the online apparel shopping process easier. Ease of shopping was critical for participants, as it enhanced the convenience of shopping online, which they greatly valued, and particularly so as they have aged. In the next chapter, virtual technology is discussed in light of participants' experiences and in the context of online apparel shopping.

Summary

In this chapter, participants' online apparel shopping experiences were explored through five emergent themes, including their motivations to shop for apparel online, where they begin shopping online, the considerations for online purchasing, the challenges they face while shopping online, and their preferences when online apparel shopping. These five themes provide an in-depth understanding of online apparel shopping behaviors among participants as older female consumers. Moreover, the themes illustrate some of the age-related needs of participants when shopping for apparel online. The next chapter examines the role of virtual technology in online apparel shopping, and particularly to address age-related needs.

CHAPTER VI: THEMATIC INTERPRETATION PART III,

FILLING THE VOID THROUGH VIRTUAL TECHNOLOGY

As explained in Chapter II, virtual technology has the potential to positively impact the

online apparel shopping experience for female baby boomer consumers. Because the primary

limitation of online apparel shopping is that consumers cannot try on items prior to purchase,

previous research has examined whether virtual try-on technology reduces consumers' concerns

regarding apparel fit (Kim & Forsythe, 2007, 2008; Shim & Lee, 2011; Yu & Damhorst, 2015).

The previous two thematic chapters highlighted the importance of apparel fit in the overall online

apparel shopping experience for participants. For example, all participants described being

concerned about garment fit and size when they shopped for apparel online, especially due to

age-related body changes. Ultimately, apparel fit was one of the most influential factors in

participants' purchase decisions.

In this chapter, part III of the thematic interpretation of the data, virtual technology is

examined in the context of online apparel shopping to understand how participants perceive

virtual technology, and ultimately the extent to which they think that virtual technology can

enhance their online shopping experiences. Four themes that emerged through the analysis of

data shed light on the potential for using virtual technology: (1) *A Sure Fit*, (2) *A Game Changer*,

(3) *My Virtual Paper Doll*, and (4) *The Down Side*.

A Sure Fit

As explained in Chapter III, at the beginning of the second phase of data collection, all

participants watched a video on virtual technology to gain an idea of how it can be integrated

into the online apparel shopping context. After watching the video, participants were asked

about their perceptions of and willingness to use virtual technology. Most participants indicated

that they would use virtual technology mainly because it would allow them to assess apparel fit more accurately. That is, it affords the possibility of examining apparel fit on customized 3D avatars to further assess how garments will fit their bodies. To understand the positive potential impact of virtual technology for assessing product fit, three subthemes are discussed in the following sections: (1) *A Model Like Me*, (2) *The Right Size*, and (3) *The Right Style*.

A Model Like Me

When participants explained why they would use virtual technology for online apparel shopping, the main reason was that they could use it to create virtual models that look like them. All participants wanted to create their own 3D avatars to be able to examine apparel fit on models that reflect their own body measurements and shapes. For example, Nicole explained how being able to try apparel on a 3D avatar that reflects her own body shape would allow her to better assess how apparel will look on herself:

> I would. I love being able to shop online. And the measurement thing has always gotten me, being able to put those clothes ON ME in my shape and to see where the tight spots are, that's GREAT. I think that's AMAZING and...yeah I'll buy clothes that way [laugh]. (Nicole)

Similarly, Amy considered virtual technology to be "cool" and "unique" because she could have "an avatar that matches my particular size." By having a customized 3D model that reflects individual body measurements, participants would be able to better visualize how apparel fits their own body shapes, and ultimately assess apparel fit accurately. In this regard, Barbara wrote in her journal about how virtual technology might benefit her online apparel shopping experience by allowing her to create a 3D avatar that reflects her body shape. Ultimately, virtual technology can eliminate the majority of the guesswork regarding fit prior to purchase, which is a major limitation present in the online apparel shopping experience:

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> After watching the video, I found the concept of being able to create an avatar to reflect my body image quite intriguing. I would love to have a tool like that available when shopping for apparel online. It would certainly take a lot of the guesswork out of wondering how a particular piece of clothing might fit my body shape. Because so many sites don't show what an article of clothing would look like on my particular body, it would make a world of difference in how I decide what I will or will not purchase. (Barbara)

Barbara added that virtual technology would be particularly helpful for older female consumers, because it would give them "a sense of empowerment and control over choosing a wardrobe that suits them, rather than shopping being a guessing game." That is, virtual technology can help older female consumers see how apparel will fit on their own bodies because most online sites use younger models with distinctively different body shapes.

As explained in the previous chapter, many of the participants found it difficult to determine how clothing actually fits their own bodies due to the prevalence of thin models. During the focus group interviews, several participants talked about the positive impact of virtual technology on online apparel shopping to solve the issue of inaccurate visual information derived from thin models. For instance, Mary stated that virtual technology could benefit participants because it would enable them to "make our avatar like us and try on the clothes on that avatar to see how it would fit, how it would look before we actually bought it." As a result, virtual technology can fill the gap between guessing how something would fit and how it actually fits:

> Well you can see something that you like online...and think that it would look good on me. But until you get it home, and...it was on a size 2 person online and then you get home and you're size 14, it's not gonna look the same. So having that virtual model, me being able to put in my body measurements, I could actually see what that top or that bottom would look like on a person my size. (Mary)

Megan also shared a similar problem with the gap that exists in online apparel shopping due to the difference between a model on the website and what a garment looks like when she puts it on her body:

I want to make sure how it fits my body, if it fits my body like I want to fit. And it looks...it looks right, you know, things online, so it just looks good on a model on the site. But when you put it on you, it still looks different. You have to see it on yourself. (Megan)

This appearance gap has grown larger as she has aged because she has a different body shape compared to when she was younger: "I'd like to see the body proportions...like we are. Like they [other participants in the focus group] said, we're not in our teens anymore, the 20s, whatever. And we're different now, we're totally different."

Due to body changes that come with aging, it is important for participants to see appropriate models not just in terms of size, but also in terms of age. For example, Susan pointed out how even with plus size models, the age appropriateness of a model on apparel shopping websites is often ignored, as only young models are used:

I mean even with plus size, when they show things on a model on a website, where they show the clothes on plus-size models, I mean that's getting there, so that's a positive, but they always use someone who's pretty young and firm.

By neglecting the age factor, Susan further explained that even if plus-size models are used, they do not accurately portray body changes experienced by older women, as these models are always someone who is very young:

[Laugh] they don't usually use...even if they actually go ahead and they use like a size 18 or 20 because there's been a lot of body positivity changes lately. It's never someone who's a size 18 or 20 that's an older person. It's always someone who's pretty young and firm, even if they are a plus-size individual.

Susan pointed out that not all plus-size individuals are the same, and the current use of young plus-size individuals is a barrier for her when it comes to online apparel shopping. As a result, she shared that she would prefer to create her own 3D avatar, rather than using a default avatar on a website, and ultimately indicated being willing to use virtual technology for online apparel shopping.

Many of the participants discussed a lack of models on apparel shopping websites that are appropriate for them in terms of size and age. As discussed in Chapter IV, participants have tended to gain weight as they have aged. As a result, they desire models that reflect their aging body proportions to gain a better idea of how apparel looks on their bodies. Thus, many participants greatly valued the possibility of creating a 3D model like them to be able to accurately assess apparel fit when they shop for apparel online.

The Right Size

Using virtual technology, participants would be able to virtually try on clothing before they receive it from online retailers. As revealed in the previous two chapters of the thematic interpretation (Chapters IV and V), apparel fit and size are influential factors in participants' apparel purchase decisions. According to Victoria, it is important for her to purchase a "sure fit" when she shops for apparel online. Thus, she wrote in her journal regarding the potential benefits of virtual technology in her online shopping experience. Victoria could get instant verification regarding a sure fit by trying on garments virtually rather than having to wait to receive the items via mail and then physically trying them on:

> It would have been very helpful to use virtual technology on the Soft Surroundings website. I could have virtually tried on leggings to see how they looked and fit right away and would not have to wait to receive the purchase, try it on, and decide on whether or not to keep it. Had I used VT [Virtual Technology] to "try on" the garment, I would have tried on several sizes to discover how they size their clothing and would have been more likely to purchase the item. (Victoria)

She then discussed her willingness to pay more to purchase apparel if a sure fit was guaranteed. Victoria even mentioned that a higher price would be justified in this case and that she would be willing to pay a premium if fashion retailers implemented virtual try-on technology on their websites to allow a sure fit:

> They are a little out of my price range, but if I could have used VT [Virtual Technology] and seen what I was buying, I would have taken the time to weigh my options. Do I purchase a "sure fit" at a higher price and save myself the trouble of trying to find it somewhere cheaper? If the item I liked cost $65 but I knew it would fit and I liked what I saw, I would have purchased despite the higher price because I would be purchasing a sure fit that I liked. (Victoria)

Through virtual try-on technology, Victoria could try on a garment in different sizes prior to purchase, and ultimately choose the best size. Doing so means it is less likely that she would return the item and, at the same time, make the overall online apparel shopping process easier. In this regard, virtual technology would also enhance the convenience of apparel shopping, which many participants emphasized as important while shopping for apparel online, as discussed in Chapter V.

The role of virtual technology as tool to find the right size is particularly significant for participants due to the issue of inconsistent sizing. The difference in sizing among brands means participants frequently encounter problems with determining the appropriate garment size, as discussed in Chapter V. In this regard, virtual technology could help them know what each size means for each brand, resulting in more accuracy and less mystery. For example, Amy explained her frustrations with inconsistent sizing and thought that having her own personal avatar would alleviate this issue:

> You know sometimes the fit difference retailers have, like a size 12 in one retailer isn't going to be the same as a size 12 at a different retailer. So...and I mean, I just have a terrible problem with sizing that way. So I think if I had the avatar, it would make the sizing a little more accurate. (Amy)

For Amy, having an avatar that is specific to her own measurements would benefit her when shopping for apparel online because it would give her the confidence that comes from knowing that she is making the right decision.

Conversely, virtual technology can also find the shopper's own particular size for her. Participants would not need to find it themselves. Based on the body measurements of the 3D avatars, the website itself would communicate to participants the sizes that they need to order. This automatic size selection would allow participants to skip one step of the online shopping process that they usually put a significant amount of time and effort into due to inconsistent sizing among brands. For example, Diane mentioned the possibility of knowing the right size based on a personal 3D avatar instead of having to remember or worry about the sizing system herself:

> So many of the online places that I shop...a large is a 12, 14 on one place, and it's an extra-large on another website or a different catalog. And so yeah people get an avatar and say, "okay this is my size, what will fit here?" (Diane)

> Sarah agreed with Diane regarding the issue of inconsistent sizing in the fashion industry.

She also explained how the size selection process can be simplified through using virtual technology:

> I think one of the main issues is that...there are no rules with regard to sizing in the industry. There's no law saying you have to have, you know that a medium has to be this size and so...from brand to brand, customers really do not know what their size is, to Diane's point. So if you have virtual technology where you can go on the site and really hone in on what size I need to order because it varies from brand to brand, I think that can help simplify the process. (Sarah)

A 3D avatar that reflects the body measurements of a shopper makes it easy to know what size to order across websites, even though the specific size may differ. This personalized approach would make the overall online apparel shopping process simple and more satisfying for the participants. As discussed in Chapter V, many participants frequently ordered multiple sizes or returned a lot of orders due to inconsistent sizing among brands. In this regard, for retailers, virtual technology has the potential to reduce the costs of returns derived from multiple size orders and ultimately increase profit.

The Right Style

As emerged in Chapter IV, participants want to wear apparel that they feel is appropriate for their age and therefore this is an important factor when shopping online. In this respect, virtual technology can help them to decide if something is appropriate or not before buying it. To be specific, 3D avatars can reflect age-related appearance changes (e.g., graying hair), which would address participants' needs for models that are more like them in appearance. For example, Nicole explained that a 3D avatar reflecting her age can allow her to better gauge if a particular style is age-appropriate for her:

> Well if my avatar looked as old as I am, then I guess if you put the clothes on the avatar, you're more apt to say, "no that looks a little too young for me." Or you know, what looks nice in the picture...you know, it doesn't quite fit my age. (Nicole)

In a similar vein, Kathleen shared an experience with online apparel shopping and explained how virtual technology could have helped her to determine if the style was appropriate for her age and body shape. She was looking for a dress for a wedding and found a beautiful example online, but the back was lower than where the bra strap would be. She was unsure how it would look on her own body just based on the picture of a younger model on the website. Thus, she explained that a 3D avatar would allow her to know if she "looks too old to have on that dress...I think if I had an avatar, like if I could have put it on a [form] that was like me, I could have looked at it more subjectively." As explained in Chapter IV, most participants considered styles that are too revealing to be age-inappropriate. Thus, by using 3D avatars that reflect the individual's body measurements, participants could examine how apparel looks on their bodies in terms of length and cut, and to see whether it is "too revealing."

All participants acknowledged the value of virtual technology for addressing the challenges they face when purchasing apparel online, especially as aging consumers. Virtual try-

on technology would allow them to make more informed decisions about a product in terms of fit, size, and style while they shop for apparel online. This information could mean that not only do they have fewer issues, but could purchase apparel online more simply and easily, therefore facilitating more purchases and purchasing with confidence, leading to fewer returns. Thus, virtual technology could be a tool to enhance several facets of the experience of online shopping among participants as older female consumers.

A Game Changer

As discussed in the previous section, all participants indicated that virtual technology would be a benefit to them when shopping for apparel online. During the focus group interviews, most participants mentioned that virtual technology would even change how they shop for apparel online. To understand how participants view virtual technology as a "game changer" when it comes to shopping for apparel, three subthemes emerged: (1) *Building Confidence*, (2) *Simplifying the Process*, and (3) *Offering New Possibilities*. Each subtheme examines the potential impact of virtual technology on participants' shopping behaviors as older consumers.

Building Confidence

Participants think that they would do more apparel shopping online if virtual technology was available because they would feel more confident about their decisions. As discussed in the previous subtheme, virtual technology could enable participants to solve issues that they typically encounter, especially uncertainties regarding garment fit and size. These uncertainties make participants hesitant to order, and sometimes even decide not to purchase something online. Because virtual technology would allow them to virtually try a garment on their own 3D avatars, it would provide accurate information about a product prior to ordering it. This accurate

information would then help participants know they are making the right decisions. For

example, Sarah described that a 3D avatar would provide her with confidence when making a

purchase decision online:

> The fact that you can go in and customize your own measurements into the avatar gives me a lot more confidence in whether I would actually purchase...that particular garment in whatever size, you know seems to be the right one. (Sarah)

With confidence, Sarah is more willing to make a purchase. Similarly, Barbara described the

positive potential impact of virtual technology on her purchase decisions: "I would probably be

more engaged or interested in shopping if the site provided virtual technology. Now that I realize

there is a tool available like that, [I'd be] much less reserved in making a purchase." Both Sarah

and Barbara were more willing to shop for apparel online with virtual technology. Further,

Megan mentioned that she might only shop online for apparel with the use of virtual technology

rather than shopping in stores. For instance, Megan said: "I am really interested in trying it. If

this works, I might not go shopping [in person] anymore [laugh]."

Interestingly, some participants indicated that virtual technology will likely play an

important role in their online apparel shopping experiences in later life because they think they

will shop for apparel online more as they continue to age. As participants age, they experience

less mobility, resulting in the preference for shopping for apparel online rather than in stores.

For example, Amy mentioned that she would shop more online in the near future when she "will

be using the computer more than leaving the house." Nicole also explained the convenience of

online apparel shopping for someone who is not able to get out as much:

> Convenience, as boomers age, it's gonna be easier to shop because we're not able to get out as much. We're not able to get around as much. (Nicole)

Stephanie echoed Nicole's opinion regarding the importance of online apparel shopping

considering the physical challenges and difficulties with mobility, particularly as they develop

age-related medical conditions, such as arthritis:

> Something as far as those kinds of things...arthritis, you know, you're at home, you can move around instead of trying to get out of the car in the rain and walk into the building, you know I think that's a big part. It would be GREAT because they don't have to try to get in the car, drive there, walk around, find somebody to help them, go bring me a different [item] you know, I think with the actual physical limitations, that would help. (Stephanie)

Virtual technology would make shopping for apparel easier as they age. As Anna put it: "We're

getting older. And it's going to be...we may start having trouble getting around, so virtual

shopping will be...online shopping will be our way of getting apparel."

When participants were asked to describe how important it is to use virtual technology in

the online apparel shopping process, specifically as they age, they indicated that it is very

important. For instance, Melissa wrote in her journal about the convenience of online apparel

shopping with the use of virtual technology, where she is able to shop for apparel online anytime

she wants day or night, in the comfort of her home:

> Convenience of not leaving the house when not able to and at times when stores would not be open...Perhaps using more virtual technology to shop would keep me from having to leave the comfort of my home, especially in bad weather. Also as a baby boomer, I don't always sleep the whole night through due to hormonal changes, therefore I am awake sometimes 1-2 hours during the night. I could certainly go online to shop then. (And I have!) (Melissa)

For participants, virtual technology is considered to be a tool to facilitate their online

apparel shopping. Virtual technology can reduce their concerns with the process by examining

apparel on 3D avatars before purchasing. Moreover, virtual technology can improve the

convenience of online apparel shopping when participants experience the reduced mobility that

comes with aging. The next section will discuss how virtual technology would allow

participants to shop for apparel more easily and ultimately enhance the overall shopping experience.

Simplifying the Process

Participants shop for apparel online mainly due to convenience, as discussed in Chapter V. Many noted that they tend to value the convenience of online apparel shopping more as they have aged. A similar view was held regarding their perceptions of the value of virtual technology for online apparel shopping. Specifically, they viewed the usefulness of virtual technology as simplifying the online shopping process. For example, there would be no need to try on a garment to find the right size by using virtual try-on technology. According to Nicole, the virtual try-on process would be much simpler when compared to physically trying on a garment:

> You don't have to take stuff off and on yourself because you don't have to mess up your hair, you don't have to readjust what you're wearing, you don't have to take your shoes off, you know, [you can put] all these other clothes on without doing anything [laugh]. (Nicole)

Participants with age-related mobility issues valued the use of virtual try-on technology in the online apparel shopping process. For instance, Susan experiences difficulty due to an age-related foot problem. This difficulty makes it hard for her to try on a garment as well as to walk around while shopping for apparel in a store. As a result, she was interested in the benefits provided by virtual technology:

> I had surgery in the past year. I mean it was during COVID too, so it's kind of a double whammy. But like you know, it was difficult for me even before COVID for a while to kind of go shopping like I would want to because I couldn't stand on my foot that was going to be operated on. And so being able to try things on for people who maybe have mobility issues or health-related issues. I think that is also something really lucrative about it. (Susan)

Similarly, when talking about the convenience of virtual technology while shopping for apparel online, Sarah emphasized the fact that "all baby boomers are getting old."

Using virtual try-on technology, participants can gain a better idea of how apparel fits their bodies, resulting in less possibility of having to return something purchased online. For example, Amy tends to buy multiple sizes and then return those that do not fit. In this regard, she thinks that virtual technology can simplify the process by allowing her to buy the one, right size:

> It [virtual technology] would eliminate, you know maybe getting the wrong size, you know sometimes I'll buy two sizes, just to make sure, and then return one of them. But I think the avatar might be a little bit more convenient, might be a little more helpful, you know.

Victoria also wrote in her journal regarding the positive impact of virtual technology on decreasing the number of returns, as well as frustration in online shopping experience:

> As an older, yet still very busy and active adult, the time spent purchasing and returning items that don't fit is a problem for me. Virtual Technology would cut down on a great number of returns due to lack of fit, and lead to less frustration in shopping online.

Because shopping for apparel online has resulted in many returns, Victoria thinks that virtual technology "would help a great deal with making the online shopping experience faster, more efficient, and fun." In a similar vein, Melissa indicated that if she could use virtual technology for online apparel shopping, "it would possibly reduce the number of clothing items I would have to return due to improper fit." Thus, virtual technology can provide mutual benefit for both retailers and consumers, because retailers can reduce the costs associated with returns, while consumers do not have to go through the hassle of ordering multiple sizes knowing that they will have to return some of the items.

Virtual technology can be used to help participants search for products based on their sizes, which also makes the shopping process efficient. As discussed in the previous chapter,

there are a variety of styles and sizes available across apparel shopping websites, therefore

participants prefer to use website sorting and filtering features. Virtual technology would enable

participants to see what is available for them based on the sizes of their individual 3D avatars.

For example, Susan described the use of virtual technology as a filtering feature of a website,

which allows her to only view items that will be a good fit for her from the beginning:

> I think you know, when I go onto a website that has the capability to do a filter right from
> the start, so that I can only be looking at the things that they have on site that are my size.
> I appreciate that a lot because it's super frustrating to go in and you find something that
> you really love and then they don't even make it in plus size. And this is even from
> companies that normally [laugh], they would carry those things. So anyway, if you could
> narrow it down and say, "okay here's my avatar, but I only want to look at things that will
> fit my avatar," like if it doesn't fit my avatar, then don't show it to me. (Susan)

Using virtual technology, participants would be able to see apparel products that are available for

specific sizes right away, helping them to find what they want quickly and easily. This way,

participants can avoid the frustration of finding clothing styles that they like but that are not

available in their sizes.

Overall, participants thought that the shopping process could be simplified if they could

use virtual technology when shopping for apparel online. Through virtual technology, they

would be more confident about making a purchase without trying it on first. They also could

complete the entire online apparel shopping process more efficiently, not have to return anything

due to fit, and be better able to find products that they need quickly. Simplifying the process

would make it more convenient and they appreciated the need for greater convenience as they

age.

Offering New Possibilities

According to several participants, virtual technology opens up new possibilities for online

apparel shopping. As discussed in Chapter V, participants tend to shop for specific apparel

brands because of the inconsistent sizing among stores. By sticking with certain brands, they can better know what size they need and how something might look on their bodies. However, participants also indicated that they would be more willing to shop for apparel on new/different websites if they could use virtual technology. For example, Amanda explained that virtual technology would open up new possibilities for her, and that she would be more willing to shop at different websites:

> I think it would open up more possibilities as far as places you can shop because I stick to the same stores most of the time because I know how it's gonna fit me. I don't...you know I'm hesitant to go to a new store because I'm not sure, everybody's lines can be so different you know. So that would open up some new possibilities for shopping. (Amanda)

Virtual technology would help to reduce concerns with fit and sizing when shopping for apparel on new or unknown websites. As a result, participants could demonstrate less brand loyalty through the use of virtual technology. In this regard, fashion brands may not be willing to share their virtual technology across websites, and ultimately make a consumer's avatar exclusive to the site to preserve brand loyalty.

In addition to new places to shop, participants indicated a willingness to try new styles when using virtual technology. Through virtual try-on technology, they can easily try a variety of styles on their 3D avatars. As a result, they would have more opportunities to try on different styles while online, and ultimately find new styles that they have never tried before. In this regard, Linda stated how a 3D avatar may allow her to find a new style that would not have grabbed her attention otherwise:

> If I had been able to design an avatar that looked similar to me and has my measurements though I might have realized that something that didn't grab my attention might have actually been very flattering.

In a similar vein, Nicole mentioned that she would have more options to try on apparel using virtual try-on technology:

> More options. If you can see all the different things instead of having to read, you know, the measurements, if they have them. Then I mean, you can put anything on you and just try everything, whereas before you're limited to this, this, or this based on the size. (Nicole)

Virtual try-on technology means fewer limitations for trying on apparel and expanded options in terms of size and style. In this respect, virtual technology offers participants hedonic shopping value, as is discussed in the next section.

My Virtual Paper Doll

Prior studies on virtual technology in the consumption context have indicated its hedonic as well as the utilitarian value (e.g., Rese et al., 2017). Specifically, consumers see the entertainment value of virtual technology in the online apparel shopping context (Kim & Forsyth, 2007; Pantano et al., 2017; Yang & Wu, 2009; Yu & Damhorst, 2015). This hedonic value has been found to positively impact consumers' purchase intentions when shopping for apparel online (Yang & Wu, 2009). Likewise, the participants in this study also perceived the hedonic value of virtual technology in online apparel shopping. Two emergent themes help to shed light on this idea: (1) *Playing Around* and (2) *Recreational Shopping*.

Playing Around

As with previous research (Kim & Forsyth, 2008), participants in this study saw the hedonic value of virtual try-on technology. That is, in addition to utilitarian purposes (e.g., examining apparel fit on individual 3D avatars, finding the right size), participants talked about wanting to use virtual technology to have "fun" while shopping. For example, Stephanie wanted to use virtual technology for her online apparel shopping because she "could really have fun with it." During the focus groups, many participants talked about playing around with a 3D avatar by

changing its appearance to either look like them or not look like them. For instance, Mary

wanted to make her 3D avatar with different hair colors to have fun, which could very well be

her actual hair color one day:

> I think just the way that you can adjust the avatar to...I mean I have brown hair, but I
> could make my avatar with bright red hair and...you know that I could actually be one
> day if I wanted to be [laugh]. Just being able to play around with it and adjust it so, I
> think that would be fun.

Using virtual technology, participants can also try on styles that they normally would not.

For instance, Kathleen likes "the whole concept of trying on" because virtual try-on technology

enables her to try on something, such as "jeans with a crop top," as she "would never do that in a

store." She even suggested using virtual technology while shopping for apparel online more for

hedonic purposes: "I think I could do more playing dress up...like paper dolls." In a similar vein,

Susan described how an avatar would be like "a paper doll":

> One of the things that you were showing was, you know, like changing hairstyles and
> hair colors and flat shoes and high heeled shoe, and you know, different kind of like a
> little...paper doll I guess. "Oh I think I'll make myself have red hair today." And I'm
> gonna give myself bright green sparkly shoes or something.

For some participants, the ability to create a "virtual paper doll" was the most interesting part

about virtual technology.

Victoria wrote in her journal regarding the fun possibilities of virtual technology, and

ultimately the positive impact it could have on her purchase decisions:

> Had I used an avatar, I could have virtually tried on items to see how it looked and fit on
> me. I went to the Belk website this time. While I was in the market for shirts, I would
> have taken my avatar to the formal wear to try on fun possible formal apparel. How fun it
> would be to try on "mother of the groom" dresses for my son's wedding. With the
> pandemic, I will not likely need a formal dress, but if I found one that looked good on me
> on the website, I may have bought it just for fun!! Retailers don't know what they are
> missing by not having virtual technology.

She suggested that fashion retailers could benefit by having virtual technology available on their websites, as it may lead to purchases that would have never happened in the absence of the 3D avatar. Overall, participants saw the possibility of gaining enjoyment from virtual technology in the online context, and therefore shared positive perceptions about and willingness to use virtual technology. This view aligns with the focus on hedonic values in apparel consumption seen more generally among the baby boomer consumer cohort, which is explored in the next section.

Recreational Shopping

Previous research has found that older consumers tend to enjoy shopping for hedonic purposes (Gregorie, 2003). Particularly, female baby boomers have been characterized as recreational shoppers who consider hedonic values important in the apparel shopping process (Kim et al., 2007; Twigg, 2013). As discussed in Chapter V, the hedonic value of online apparel shopping is one of the main reasons participants do it. In this regard, virtual technology can enhance and enliven the overall shopping experience. For example, Victoria wrote in her journal that she would have "a more enjoyable experience" with online apparel shopping if she had an avatar to try on various items:

> It would be so nice if shopping online were more fun and I think having an avatar try on clothes for me would be so much fun!

As participants age, they tend to have more leisure time, especially due to retirement. As a result, participants talked about using virtual technology to make their online apparel shopping more fun. For instance, Emily stated how she would find making adjustments on her avatar fun and entertaining:

> I think it looks like it would be fun to adjust if I were to take the time. I mean, we do have time because things are kind of boring [laugh]. I think it would be fun to do the adjustments and make it either look like you or not look like you, like, what would purple hair look like, right?

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Interestingly, in her journal, Melissa talked about using virtual technology for the social aspect of apparel shopping. She explained that she could use virtual technology to get her friends' opinions regarding her purchases:

> I think I would enjoy using virtual technology more if I could have a friend on their iPad also looking at the same store, discussing the pros and cons of the items I am thinking about purchasing. For me, shopping has always been a social event with my family and friends. (Melissa)

Like Melissa, several participants, including Amanda and Anna, talked about the social nature of the apparel shopping process. Although they have not shopped for apparel with friends and family in stores since COVID-19, they still want to have conversations with their friends when shopping online. For example, Anna said that she still communicates with her sisters and mother when making apparel purchase decisions by sending them snap shots:

> I took snap shots and sent them to my sister in Tennessee and my sister here and mom and said, "What do you think about this? Do you think this will work on me?"

Virtual technology can provide participants with important visual information (e.g., pictures and videos of 3D avatars) regarding a product while shopping for apparel online. These sources can be used to get opinions from other people about a product before making a purchase decision. This aspect of virtual technology might help them to overcome the lack of social interaction in the online shopping environment, and eventually make these experiences more social.

The Down Side

During the focus group interviews, participants were asked about concerns they may have regarding the idea of using virtual technology for online apparel shopping. Likewise, in their journals, some shared their opinions regarding the negatives about virtual technology. Three factors that participants were commonly concerned about when using virtual technology

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emerged, and these factors relate to what they consider to be important when they are shopping online, as well as changes derived from aging, such as age-related body changes. The three factors are explored through the following subthemes: (1) *Age Appropriateness*, (2) *Accuracy*, and (3) *Ease of Use*.

Age Appropriateness

Participants were concerned about the age appropriateness of 3D models. Because the virtual technology examples used during data collection included Youtube videos, the examples of 3D avatar rotation and virtual try-on technology were shown based on default avatars that look like young, thin women. Participants pointed out the inappropriateness of the body size and appearance of the 3D models in the video. For example, Jennifer wrote in her journal that the 3D avatar was not appropriate for her age, and she was unwilling to use virtual technology for her online apparel shopping:

> I do not believe that the avatar looks like the body of a 60+ year old female. The face is too young also. So I do not see myself using this technology. If the item did not fit, I would ship back if I ordered anything.

Similarly, Emily explained that younger looking avatars are not appropriate for participants in terms of age, which poses the exact same issues as the websites featuring photos of young models:

> What I would not like about it is, I did NOT like the example of young women, and we are not young women [laugh]. So I don't like...if Chico's had a 20 year old body on their website, it would be a turn off because no one is 20 [laugh] when you go into a Chico's store [laugh], so that...so it would be a turn off if the avatar did not really reflect the ideal customer.

As a result, she said that she would "have been more convinced if the avatar really looked like the body build of a baby boomer."

When asked what the least interesting aspect of virtual technology was for them, most participants talked about the age of 3D models used in the video. Their concern about age derives from the difference in body shape and appearance between younger and older women. For example, Mary suggested having avatars of a different age range:

> I think it would be great if they could have like avatars from 20 to 40, and from 50 to 90, you know, because there is a difference in the look of the face and the body...itself.

Participants want 3D models that reflect their age-related body changes. In this regard, Susan pointed to the use of a 3D scanner as a way to capture age-related appearance changes in creating a 3D avatar:

> I'd really love to have my body scanned because then I would trust it more because I know another thing that happens, especially for us, as we get older is different parts of our bodies kind of sag down a little bit differently, you know, the bust or the stomach or, you know, even hips and things like that. So it's also kind of vertically, like where that weight is distributed, and I think that might be a little hard to capture with an avatar where you're just...you know, using those certain points, I guess.

Participants described experiencing different changes in their body shape and appearance with aging. For example, they tend to gain weight disproportionally, as discussed in Chapter IV. Because age-related body changes are significantly related to participants' needs and preferences for apparel, they expressed concern about the lack of similarity of the face and body between the avatars and themselves as older consumers. This lack of similarity could result in inaccurate information regarding garment fit and size when participants try apparel on 3D avatars during the online apparel shopping process. Ultimately, participants' concerns about the lack of age appropriateness of the 3D avatars could negatively impact their willingness to use virtual technology.

Accuracy

When asked about their willingness to use virtual technology for online apparel shopping, most participants responded that they would try it and see "if it matched up." For example, Mary responded that she is willing to try virtual technology a few times, but if it failed to capture her measurements accurately, she would stop using it:

> I think I would try it for...you know, a few items and then if...putting in all my avatar, adjusted to my size, and ordering it, and then if I got it after two or three items, and it just wasn't working, then I would probably not use the avatar anymore. Yeah I would want it to...if it fits on my avatar with my measurements, then I would expect it to fit on me when it got here. (Mary)

Similarly, Megan thought she would like to experiment with virtual technology with different items first, to see if it works accurately: "I would definitely try it, I would. If it worked a few times on different items, I would use it." Participants' primary concern with the accuracy of virtual technology was apparel fit, which as pointed out, is one of the most influential factors in their purchase decisions. In this regard, Amy voiced concern regarding the accuracy of the fit that virtual technology is supposed to provide:

> The accuracy of the fit. That's the big issue...or my big concern. The concern that I would have, "Is it gonna actually work? Is it gonna be what it says it is?" That's...because if it doesn't work, then I'm not going to be interested.

Emily also indicated that her major concern is that "the virtual technology does not match the true sizing of the garments." On the flip side, she thought that virtual technology would be "a total game changer" if it were accurate.

Although apparel fit can be assessed by using virtual try-on technology, participants still cannot touch the fabric in the online shopping environment. Many were concerned about inaccurate information regarding apparel fit derived from the fabric of the garment. As discussed in Chapter IV, comfort is very important to participants' apparel preferences and

choices. In this regard, Kathleen was concerned about the limitation of virtual technology for examining the feel of fabric on her body: "Touching the fabric, but also feeling the fabric on your body, like [is] something not comfortable." Other participants also mentioned that virtual technology would not alleviate the lack of information regarding the feel and quality of the fabric in the online apparel shopping process. For example, Anna explained how she is unable to feel the fabric or assess the quality of apparel properly, which is a down side to online shopping that even a 3D avatar would not be able to solve:

> One problem I could see with doing the avatar and virtual shopping, you still do not get the feel of the fabric or the quality of what you're buying. When you're in the store, you can feel it, you can see that it's thin, you can see that it will pick. I mean you know, you just get so much that you cannot get online in an avatar, even though it'd be great for trying on. You're not going to get the feel of the material.

As revealed in Chapter V, quality is one of the main factors that participants take into consideration when purchasing apparel. Thus, they expressed concerns that virtual technology would not allow them to feel confident about the feel of the fabric or the quality of the garment. According to Sarah, the virtual experience "can't replace all of the aesthetics of the garment because you're going to be missing some." Not being able to experience the tactile nature of the garment was a big concern in terms of the information participants need to make a purchase decision.

Ease of Use

Several of the participants expressed concerns regarding whether or not they will be able to adopt and effectively use virtual technology while shopping for apparel online. For example, Melissa expressed concerns in her journal entries about whether virtual technology would actually be easy to use: "I think that I honestly would get very frustrated with all the "tweaking"

I would have to do." In a similar vein, Amanda was concerned about the uncertainty of how much time and effort would be spent during the process of making her 3D avatar:

> I don't know, if it was simple enough to figure out, you know, I would love it, but I worry that you know, how challenging it's going to be.

These participants are not willing to use virtual technology if it is not easy to create their own avatars. For example, Victoria wrote that she is willing to use virtual technology but only if she can easily upload her measurements to create her own 3D avatar: "I am not willing to invest the time to find out."

Another concern with using virtual technology expressed was the possibility of having to recreate a 3D avatar for different apparel shopping websites. Because they were concerned about how much time and effort they would need to spend to create an individual 3D avatar, participants talked about not wanting to repeat the process. For example, Susan described her concerns on this issue:

> If I had to build my avatar on every single one of those sites, I think I'd be getting kind of tired of it. So I think it would be really, really good if there was some way that my avatar could go with me. So that I didn't have to enter the measurements again and again and again and again and again.

Susan then discussed the need for a portable avatar that allows her to use the same avatar in different websites:

> I could just take my avatar literally shopping online [to] the different stores and it would be the same avatar so I didn't have to redo it every time.

Anna agreed, and wanted to create her own 3D avatar one time and then be able to "copy and paste." Some participants even said that they would give up using virtual technology if they had to recreate their 3D avatars every time they shop at different online apparel stores. Ultimately, ease of use plays a critical role in participants' views regarding whether they would use virtual technology when shopping for apparel online.

Overall, participants perceived virtual technology positively because it could help them make more informed decisions about garment fit and size, as well as provide more entertainment when shopping for apparel online. These positive aspects of virtual technology led to participants' willingness to use virtual technology. Moreover, participants believed that virtual technology has the potential to change their future apparel shopping behaviors. However, even if virtual technology becomes a game changer, many voiced an unwillingness to utilize the new technology if it is too complicated or time consuming for them to adopt. Therefore, it is crucial for fashion retailers to take user experience into account to meet the needs of their target consumers when implementing virtual technology on their websites.

Summary

In this chapter, the potential for using virtual technology in the online apparel shopping process was explored. Participants perceived the value of virtual technology for addressing the drawbacks of purchasing apparel online, especially as older apparel consumers. The four themes that emerged from the data illustrate both positive and negative potential aspects of virtual technology. In the next chapter, the thematic interpretation of data is examined through a theoretical lens and findings are discussed relative to the conceptual framework used to guide this dissertation.

CHAPTER VII: DISCUSSION

In this dissertation, data were collected using multiple methods to explore participants'

online apparel shopping experiences and their views on the role of virtual technology. As seen

in the thematic interpretation of the data, the impact of age-related changes on participants'

apparel shopping behaviors in the online context framed their perceptions of virtual technology.

Themes offer a deep understanding of the motivations for and meanings of online shopping

among the participants as older female consumers of the baby boomer generational cohort.

Themes give shape to the purpose of this dissertation, which was to understand female baby

boomers' perceptions of and experiences with apparel shopping using virtual technology in the

online context. In order to fully address this purpose, this chapter provides a discussion of the

findings relative to the conceptual framework and literature discussed in Chapter II.

As discussed in Chapter II, the conceptual framework developed for this dissertation (see

Figure 7, same as Figure 5 on p. 65) illustrates the interactions among three important influences

related to female baby boomers' online apparel shopping behavior using virtual technology.

According to social cognitive theory (Bandura, 1986), it is important to consider personal

factors, behavior, and environmental influences in order to understand human behavior, because

each influences the other, and ultimately determines a given outcome. As a result, social

cognitive theory has been utilized in prior studies to explore why consumers adopt or change

certain behaviors, such as the adoption of new technologies (Compeau et al., 1999; Ratten &

Ratten, 2007) or new sustainable consumption behaviors (Johnstone & Hooper, 2016;

Komendantova et al., 2018; Phipps et al., 2013; Preko, 2017), by identifying important personal,

behavioral, and environmental factors. In this study, personal, behavioral, and environmental

factors frame an exploration of why and how apparel and technology consumption behaviors

change with age. Specifically, personal factors include age-related changes (i.e., physical, psychological, social changes) and baby boomer generational cohort characteristics. Behavior focuses on apparel consumption, including apparel needs and preferences, as well as online apparel shopping patterns. Environmental influences are framed as virtual technology, such as a 3D virtual model and virtual try-on technology, in the online store environment. Considering the interaction among these three factors helps to shed light on how female consumers shop for apparel online later in the lifecycle, the role of generational cohort characteristics in this behavior, and how these factors impact their views on virtual technology.

Figure 7. Conceptual Framework
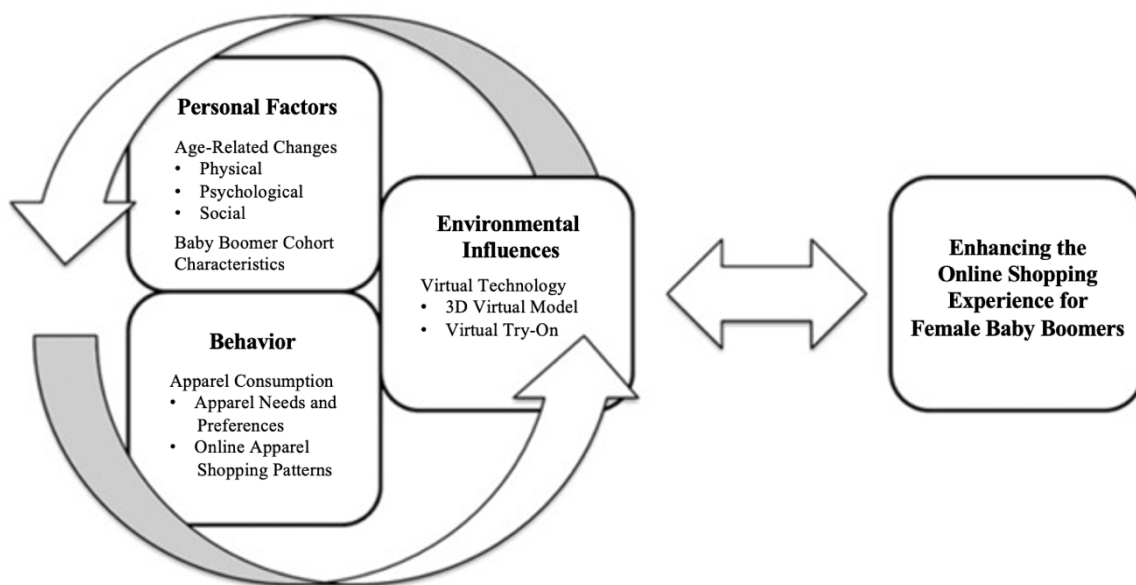
In this chapter, relationships among the factors in the model are explored in detail, which, when combined, shape female baby boomers' virtual technology consumption behaviors in the online apparel context: (1) *Determinants of Apparel Consumption Behavior,* (2) *Perceptions of the Online Shopping Environment,* and (3) *Considerations of Virtual Technology*. The literature

discussed in Chapter II as important to shaping this dissertation is examined in this chapter in light of the thematic interpretation of the data.

Determinants of Apparel Consumption Behavior

The first objective of this dissertation was to examine age-related needs and expectations of female baby boomers as older apparel consumers. To this end, the following guiding research question was developed: *What age-related changes and generational cohort characteristics are related to female baby boomers' apparel consumption and technology expectations?* This question was used to frame the discussion of how the data explain the age-related changes that female baby boomers experience, and how these changes are addressed through their apparel and technology consumption behaviors. That is, it was used to explore how personal factors (i.e., age-related changes and baby boomer cohort characteristics) influence behavior (i.e., apparel consumption behavior) based on the conceptual model developed for this study. According to social cognitive theory (Bandura, 1986), an individual's personal factors influence how he or she behaves. Applied in the context of this study, the age-related changes that female baby boomers experience, along with their cohort characteristics impact their apparel consumption behaviors in a variety of ways. The following two sections discuss findings relative to the interaction between personal factors and behavior: (1) *What I Need at My Age* and (2) *How I Shop for Apparel Online*.

What I Need at My Age

Review of the relevant literature on age-related changes in Chapter II revealed that changes that occur with aging alter the consumer's needs and preferences regarding apparel (Howarton & Lee, 2009; Lee et al., 2012). According to Gregorie (2003), physical, psychological, and social changes play a crucial role in determining consumer behavior in later

life. Findings of the interpretation indicate that participants have changed in terms of their needs

for specific styles and their preferences for fit as they have aged. In this section, participants'

physical, psychological, and social age-related changes are examined to understand how personal

factors, operationalized as age-related changes and cohort characteristics, influence their

consumption behaviors.

Fit Preferences and Physical Changes

The literature has shown that females experience age-related physical changes, and

particularly changes to body shape, during the aging process (Moschis, 1994). These changes

impact how clothing fits, and ultimately female consumers' needs and preferences for garment fit

and size (Campbell & Horne, 2001; Goldsberry et al., 1996). The interpretation of the data

collected for this dissertation indicates that participants' preferences for apparel fit are derived

from physical changes that they have experienced with aging. Most participants prefer flowy

and loose-fitting styles to avoid tightness around the waist, which has grown larger as they have

aged. For example, Susan explained why she prefers to wear looser clothes now, in contrast to

the more tight-fitting clothing she used to wear:

> I had a really nice figure when I was younger [laugh], so I wore a lot more fitted clothing,
> especially through the waist. I wore a lot of dresses that were, you know really fitted or
> like I said, sleeveless dresses um...I had a certain style that I think was mine then that if I
> still had that body shape, I'd still wear it because I thought it [was] beautiful, but my body
> isn't that shape anymore, so I have to wear looser clothes now.

All participants stated that their body sizes and shapes have changed with aging.

According to the U.S. National Library of Medicine (2018a), most individuals tend to experience

weight gain with aging. As revealed in Chapter IV, most participants experienced a significant

increase in weight during the aging process, particularly after menopause, which resulted in the

need for larger sizes in clothing. Many participants gained weight in the mid section of their

body. For instance, Michelle and Cynthia stated that they experienced an increase in weight with aging mostly around the abdomen, resulting in a wider waist. Linda also mentioned having a less defined waistline as part of her aging body: "I know you definitely get sort of thicker in the middle, there's not as much definition between your bust line and hips, you know it becomes less defined." As previous studies have found, this change in fit preference among older women is due to the age-related body shape change from an "hourglass" to that of an "apple" (Kirkova, 2013; Rahman & Yu, 2018).

In addition to the need for larger sizes and loose-fitting styles, participants preferred apparel styles that hide age-related body changes (e.g., long tops and tunics), including a larger waist and hips. Some participants sought to hide age-related skin changes, such as wrinkles and sagging skin. As an example, Kathleen talked about her desire to avoid styles that are revealing to hide skin that "is not quite as tight" as a result of aging. Similar to skin change, participants experience hair color change with aging. For instance, Jessica explained how her apparel color preferences were affected when her hair color went from dark to white:

> So there's certain colors that I like to wear. Um...I have white hair now. I used to have very dark hair. And when I had dark hair, I would choose different colors than I do now that my hair is white. So those factors of my coloration and what the occasion is that I'm dressing for, helps me decide what to wear.

Indeed, participants talked a lot about considering age-related changes in terms of skin and hair, which are visible and noticeable signs of aging, when making decisions about what to wear and purchase. Similar findings were discussed by Howarton and Lee (2009), who pointed to the use of color to hide "figure flaws." As seen in Chapter IV, participants tend to consider specific colors for slenderizing when selecting apparel, especially due to the increase in their body weight, confirming that the role of color in apparel selection changes as female consumers

age. This finding provides an example of how age-related changes, as personal factors, influence apparel consumption behaviors with the social cognitive framework.

The interpretation of data revealed that apparel fit is one of the most influential factors in participants' apparel purchase decisions. This finding supports Holmlund et al.'s study (2011), which indicated that good fit is one of the most important aspects when older female consumers buy clothing. Due to a widespread focus on the younger consumer among fashion retailers (Schofield et al., 2006; Shim & Bickle, 1993), some participants expressed difficulty finding well-fitting clothing. As Anna put it, older consumers "have to work even harder to find stuff that looks good." Although female baby boomers tend to be healthier than previous generations of older women (Howarton & Lee, 2009; Rahman & Yu, 2018; Toossi & Torpey, 2017), findings of this study confirm that they have experienced significant changes in their body size and shape with aging, which, in turn, alters their need for apparel size and preference for fit and style as they age. According to Shim and Bickle (1993), well-fitting clothing is essential for purchase satisfaction. Therefore, this finding highlights that fashion retailers should aim to close this gap to provide older female consumers with well-fitting garments that reflect age-related body shape changes, as well as provide styles that deemphasize the particular visible signs of aging that they prefer to hide.

Psychological Needs for Apparel

Previous research has found that female baby boomers perceive themselves to be younger (cognitive age) compared to the age they actually are (chronological age) (Rahman & Yu, 2018; Wray & Hodges, 2008), and that their cognitive age is related to their psychological needs in apparel (Rahman & Yu, 2018). Participants were found to hold similar perceptions. For instance, Mary shared: "I'm 60 years old, but I don't feel 60. So I don't want to dress like...what a

60 year old should wear, you know." Some participants want to look youthful, therefore prefer to wear stylish and fashionable clothing, as was found by both Howarton and Lee (2009) and Rahman and Yu (2018). Fashionable clothing is important to participants, as they indicated that it did not make them feel "too old" and ultimately helped them be confident with their self-image. This finding aligns with those of prior studies (Holmlund et al., 2011; Lee et al., 2012) that indicated the important role of fashionable clothing in expressing identities among older women and particularly members of the baby boomer cohort.

All participants talked about the importance of age appropriateness when they make decisions about what to wear and purchase. They shared their desire to wear styles that make them look neither too young nor too old compared with their age, which aligns with previous research regarding female baby boomers' preferences for styles (Howarton & Lee, 2009; Rahman & Yu, 2018). Participants see themselves as different from previous generations of older women. That is, when asked to describe the style characteristic of female baby boomers, many participants emphasized that they are a different generational cohort of older women compared with their mothers and grandmothers. Consequently, they do not want to wear the same clothing styles. As Sarah shared, "We dress a little younger than the previous generation did, like when I think about my parents, I think, 'Oh god, they're so old.' I don't feel like my parents did at this age." Victoria also pointed out that her generation as a cohort "dresses younger" than the previous generation of older women, thus styles for someone that was 60 "look a lot older" to females of the baby boomer cohort.

Likewise, participants tend to distinguish themselves from previous generations based on their casual styles. Many participants gave examples of their mothers' or grandmothers' conservative styles when compared to their own styles as females of the baby boomer

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generation. For example, Megan shared that her grandmother always wore dresses and never wore pants. Similarly, Amanda talked about wearing blue jeans often even at her current age, which she never saw her mother wear:

> I would say that my mother used to like, I remember her liking bright colors. But...she stayed mostly conservative as far as...slacks like, I don't remember ever seeing my mother in blue jeans. And I practically live in blue jeans.

Some participants talked about the stereotypes of what the previous generation of older women wore, which they do not want to follow. For instance, Jessica talked about "the stereotypical portrayal of a woman who is retired, normally would be someone who is wearing something that they might have worn back in the 50s or early 1960s." She then stated that she "does not want to look like that." Another participant, Michelle, pointed out changes in the acceptance of what people can wear as compared with the past:

> In the old days, if you're going on a trip on an airplane, you would dress up a little bit. Now if we're going on an airplane, it's like you're going comfort all the way. My mother would NEVER have like gone to the grocery store, in shorts. But...I'll go to the grocery store in leggings. I'll go to the grocery store in shorts. So I think there's...a degree of acceptance...now that the older generation didn't have.

Mirroring the changes in social norms that started in the early 1960s (After Fifty Living Inc., 2016), participants' styles have become more relaxed and are less formal than previous generations of older women. This cohort characteristic enables them to be identified as the "young" old consumer group when compared with the generations before them. This finding supports prior studies (Kim et al., 2007; Twigg, 2013) that distinguish baby boomers from the previous generation of older women through their clothing styles. As a result, age-appropriate styles designed for the previous generation of older women do not reflect preferences of may female baby boomers. This was also found to be the case in Howarton and Lee's (2009) study, as nearly all of the female baby boomers who participated expressed difficulty finding

appropriate apparel due to lack of attention to their likes and preferences by fashion retailers. Therefore, findings from this dissertation further exemplify the need for retailers to make styles that females of the new older generation prefer in order to satisfy their unique apparel needs, and not those of older women "in general."

Apparel Needs and Lifestyle Changes

Individuals experience changes in roles as they age (Gregorie, 2003; Hyllegard et al., 2006; Lehto et al., 2008; Menchin, 1991). Interpretation of the data revealed that the most significant role change impacting participants' apparel needs and preferences was retirement. That is, retirement changes an individual's lifestyle and ultimately alters what type of apparel she wears and purchases. Because retirement increases total leisure time, those participants who were retired indicated that they actively engage in outdoor activities, which translates into the need for activewear apparel. In addition, participants indicated that retirement means there are fewer formal events that they need dressy attire for. As a result, their apparel purchases are mostly comprised of casual and athletic wear, except for special events such as an occasional wedding. This finding illustrates how lifestyle plays a role in changing apparel needs, echoing previous research on older consumers' consumption behaviors (Howarton & Lee, 2009; Rocha et al., 2005; Schau et al., 2009; Thomas & Peters, 2009). Moreover, the interpretation of the data highlights the significance of investigating consumers' lifestyles based on generational characteristics, rather than based solely on age, because what they experience as a cohort significantly shapes their lifestyle, and ultimately their attitudes and behaviors relative to apparel consumption (Rahulan et al., 2015; Solomon, 2012). For example, participants in this study tend to actively engage in travel and social activities after retirement due to their broader experiences with traveling and greater willingness to explore other cultures as compared to previous

generations (Lehto et al., 2008; Menchin, 1991). This tendency results in different needs for types of apparel in later stages of life, particularly the need for more casual wear and activewear apparel. Consequently, this finding points to the need for segmenting older female consumers as part of the baby boomer generational cohort who share similar lifestyles rather than lumping all older women together by age.

For those participants who have not yet retired, the workplace was a key criterion for choosing apparel. As Rahman and Yu (2018) found, participants in the present study prefer to wear clothing that is appropriate in the work environment and tend to consider their roles in the workplace when purchasing apparel. For example, Emily prefers to wear "business casual" as a business owner: "[Apparel] became more important when I opened my own business. And I started...I went from...dressing casually to work with children to wearing business casual and trying to look nice, nicer." According to Diane, apparel is more important for female baby boomers compared with the previous generations of older women because more of them have careers than in the past:

> Um...yeah you know because my mother was like wearing her dress with an apron and sensible shoes but…and most of the women didn't work...outside of the home so they didn't have to dress differently every day. (Diane)

Baby boomers have been found to live healthier lifestyles compared with previous generations, which allows them to remain in the workforce and actively engage in physical activities longer (Rahman & Yu, 2018; Toossi & Torpey, 2017). Consequently, such cohort characteristics point to the need for career and activewear apparel in later life, an idea that is supported by the participants' experiences in this study. Thus, it is crucial to consider specific activities and situations that female baby boomers are engaging in to address their needs for apparel as unique and different from those of the generations of consumers that came before them.

How I Shop for Apparel Online

In addition to apparel needs and preferences, age-related changes influence participants' online apparel shopping patterns. As discussed in Chapter II, age has been examined as an influence on consumers' online shopping behaviors (e.g., Hashim et al., 2009; Iyer & Eastman, 2006). Likewise, the interpretation of the data collected for this dissertation reveals that age-related changes, including physical, psychological, and social changes, have impacted how participants shop for apparel online. In this section, the influence of personal factors (i.e., age-related changes and cohort characteristics) on participants' online apparel shopping patterns is discussed based on the conceptual model and prior studies.

Shopping Preferences and Physical Changes

As discussed in the previous section, participants have experienced changes in body shape and size during the aging process. Such physical change that comes with age is often associated with participants' concerns with garment fit and size when shopping for apparel online. Due to body changes, their uncertainty regarding correct garment fit and size increases, resulting in an increase in the risk inherent to online apparel shopping. This finding aligns with Rahman and Yu's study (2018), which found that older female consumers tend to hesitate to buy apparel online due to age-related body changes because it is difficult to find the right size without trying a garment on first. For similar reasons, participants also talked about not wanting to make apparel purchases on new or unknown websites. In other words, they prefer to stick with certain brands that they have prior experience shopping with because they know what size will fit. This preference reinforces participants' brand loyalty, as a result of inconsistent sizing among different websites. Consequently, several participants suggested that fashion retailers, specifically new brands who target female baby boomer consumers, provide a detailed sizing

guide that includes measurements for each individual garment, rather than using a general sizing system for all garments.

According to the U.S. National Library of Medicine (2018a, 2018b), individuals normally experience a decline in physical strength due to muscle loss during the aging process. When explaining body changes with aging, Stephanie pointed to a loss of energy as the biggest change that she experienced with aging: "So whatever weight you're at girl, you better hold on to it [laugh]. The energy is not what it used to be. It's VERY CRAZY." In a similar vein, several participants talked about saving physical energy as a primary reason for preferring to shop for apparel online rather than in stores. Participants value the convenience of online shopping, as it enables them to make purchases from home, especially when they have mobility difficulty. For instance, Susan, who experiences difficulty with mobility, explained how painful it has been for her to shop in a mall or at a big store. As a result, she purchases most of her apparel online and does not prefer to shop in stores: "I think because of my...how much pain I was in, I wasn't going into stores very much because I just...it hurt, you know, took too much energy."

Interestingly, most participants indicated that they expect that they will shop for apparel more online as they age because they think they will experience physical challenges and difficulties with mobility that stem from age-related health issues, such as arthritis. According to the literature (Coleman et al., 2006; LeRouge et al., 2014; Zickuhr, 2011), female baby boomers are expected to use technology in later life more than previous generations due to their familiarity with using technology, which is derived from their experience with technological innovations that occurred when they were younger, such as the personal computer and the Internet. Findings of the interpretation support this idea by demonstrating participants' willingness to engage more in online apparel shopping as they age. As the interpretation of data

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reveals, all participants are online active shoppers, and their positive attitudes toward using technology for apparel shopping resulted in their expectations of online apparel shopping as an acceptable way to shop for apparel as they continue to age. Overall, age-related physical changes and cohort characteristics clearly influence participants' preferences for shopping for apparel online rather than in stores.

Online Shopping and Psychological Changes

Age-related changes also affect participants' decisions when shopping for apparel online. The literature indicates that age-related psychological changes involve a decline in cognitive abilities, which leads to a preference for fewer options when shopping online (Gregorie, 2003; Sorce et al., 2005; Yoon, 1997). In the same vein, findings of the present study reveal that many participants prefer to use sorting and filtering features on websites to narrow down product possibilities and, ultimately, to simplify the shopping process. Participants also indicated a preference for shopping user-friendly websites, which provide a simple and easy shopping experience. For instance, Sarah highlighted the crucial role of a user-friendly website in the online apparel shopping process for older consumers like herself: "Companies would do well to spend more money to make sure that they have a website that is easy to navigate for the consumer, particularly for older consumers like myself." This point could be linked to age-related declines in problem-solving and cognition (Moschis, 1994). According to the National Institute on Aging (2017), cognitive performance decreases with age, which may result in a general unwillingness to engage in cognitively demanding activities. This tendency may reinforce the value of convenience in terms of the online shopping process, as well as the preference for shopping on websites that offer ease of search, order, and return.

The interpretation of the data suggests that the convenience of online apparel shopping in participants' experiences is the most important reason for doing it. Participants have particularly come to value the convenience of online apparel shopping more as they have aged. This finding aligns with Miles' (2019) study, which identified baby boomers as "convenience-driven" consumers because this generation takes convenience into consideration more than other generations. This cohort characteristic also explains why website features that make the shopping process simple and easy appear to be more important to the overall online shopping experience among participants as they experience age-related changes in cognitive abilities. In this regard, fashion retailers who target female baby boomers should consider employing advanced technologies, which could enhance the convenience of shopping online by simplifying the process, including purchasing and returning products.

Hedonic Value and Social Changes

As they have grown older, participants have also experienced social changes. In particular, they tend to have fewer roles and responsibilities (e.g., retirement). As indicated by Gregorie (2003), an increase in leisure time later in life allows participants to have more time to browse and shop for apparel online. As a result, many participants considered shopping for apparel as a "fun" activity or as "entertainment." This finding aligns with Gregorie (2003), who framed older consumers as recreational shoppers. The baby boomer consumer is particularly known to focus on hedonic values in apparel consumption stemming from greater access to and experience with buying apparel when compared to prior generations, especially through the consumption boom that occurred during the 1980s and 1990s (Twigg, 2013). Due to this cohort characteristic, the hedonic value of online apparel shopping seems to be more important among participants who have experienced an increase in leisure time after retirement. For example, the

interpretation of the data reveals hedonic and leisure time as main motivations for starting a

shopping trip online. This finding highlights the need for fashion retailers' attention to hedonic

values in order to enhance female baby boomers' online apparel shopping experiences because

they look for not only well-fitting clothing, but also fun aspects that they can enjoy during the

shopping process.

In sum, the literature on age-related changes presented in Chapter II explained the variety

of age-related physical, psychological, and social changes that female baby boomers may

experience as they age (Gregorie, 2003; National Institute on Aging, 2017; U.S. National Library

of Medicine, 2018a, 2018c, 2018e). Findings of this dissertation illustrate how these changes are

linked to apparel needs and preferences. Interpretation of the data articulates how age-related

factors and cohort characteristics contribute to online apparel shopping behaviors among female

baby boomers (see Figure 8).

Figure 8. Conceptual Framework: Determinants of Apparel Consumption Behavior

Determinants of Apparel Consumption Behavior
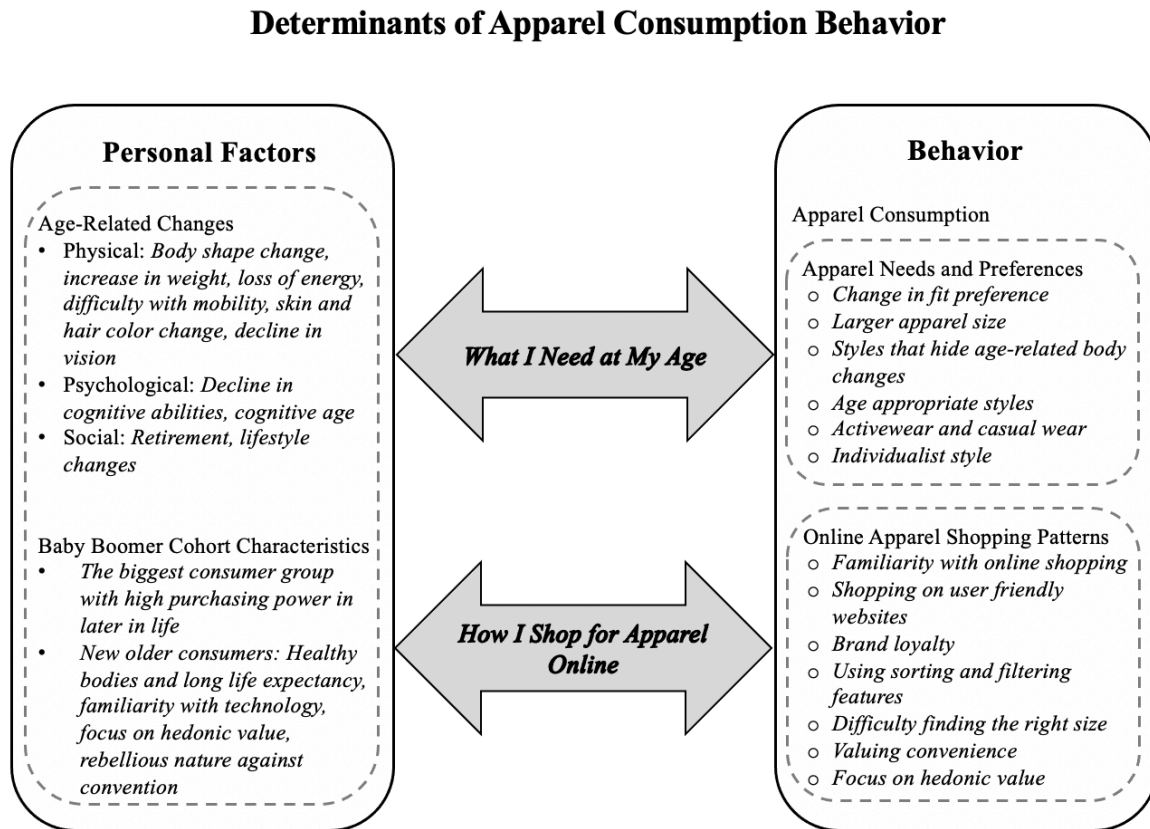
As seen above in Figure 8, and according to social cognitive theory (Bandura, 1986), personal factors, including an individual's traits and characteristics, can affect their behaviors. In this study, participants' personal factors (i.e., age-related change and baby boomer cohort characteristics) were found to prompt changes in their apparel consumption behaviors. That is, age-related physical, psychological, and social changes led to different apparel needs and preferences, and ultimately, different online shopping patterns. Based on the relationship between personal factors and behavior in the conceptual framework, findings of this study offer an understanding of participants' needs for apparel and their preferences when shopping for apparel online by connecting their age-related changes and cohort characteristics with their apparel consumption behaviors. That is, the interaction between personal factors and behavior

helps to address the first guiding research question, which was to identify age-related changes and cohort characteristics that are linked to female baby boomers' apparel consumption and technology expectations. In the next section, how participants shop for apparel online and the extent to which virtual technology may become an important part of their online apparel shopping experiences are discussed.

Perceptions of the Online Shopping Environment

The second objective of this dissertation was to investigate how age-related needs and expectations can be addressed in the online shopping context, and specifically through virtual technology. To address this objective, two guiding research questions were developed: (1) *How do female baby boomers shop for apparel online?* and (2) *How might virtual technology become an important part of the online apparel shopping experience among female baby boomer consumers?* In this section, these questions are used to situate the discussion of the data relative to the literature on online shopping behavior and virtual technology, as well as the conceptual model used in this study. The conceptual model, developed based on social cognitive theory (Bandura, 1986) depicts the role of participants' apparel consumption behaviors in their views on virtual technology, which is an environmental influence in the online apparel shopping context. The following two sections offer explanation of how participants' needs and preferences for online apparel shopping enter into their perceptions of and willingness to use virtual technology: (1) *Age-Related Needs and Views on Virtual Technology* and (2) *Views on Virtual Technology and Shopping Preferences*.

Age-Related Needs and Views on Virtual Technology

The literature points to the important role of age in female baby boomers' apparel consumption behaviors, including clothing choice as well as apparel fit and style concerns

(Howarton & Lee, 2009; Rahman & Yu, 2018). As discussed in the previous section, age-related physical, psychological, and social changes are important to participants' apparel needs and preferences. The following subsections examine how these age-related needs and preferences are related to participants' perceptions of virtual technology: (1) *A Good Fit* and (2) *Age Appropriateness.*

A Good Fit

According to the literature, older females have particular needs for apparel, such as that it fits well and is age-appropriate (Coleman et al., 2006; Jackson, 1992; Lee et al., 2012). Findings of the interpretation highlight that well-fitting clothing is a top priority for participants. However, purchasing well-fitting clothing is a challenge when they shop for apparel online. Because they cannot try on something before purchasing it, it becomes a "guessing game" regarding fit and ultimately often results in difficulty finding the right size. In this regard, participants saw virtual technology as a positive option because it would enable them to virtually try on apparel and gain a better idea of how garments fit their bodies prior to ordering. As a result, virtual technology would make participants feel more confident about sizing and about purchasing items that will be a good fit. This finding supports previous studies that revealed positive attitudes toward using virtual technology for online apparel shopping among younger consumers (Kim & Forsythe, 2007, 2008; Pantano et al., 2018; Rese et al., 2017). As discussed in Chapter II, existing research on virtual technology in the consumption context has focused on younger consumers, and therefore, the findings of this present study fill a gap in research by shedding light on older apparel consumers' views.

As participants have experienced physical changes with aging, buying well-fitting apparel online has become more difficult for them. As discussed earlier, most participants in this

study have gained weight as they have aged, which creates the need to buy larger sizes. Some

participants need plus-sizes for their apparel as they have aged. For example, Susan experienced

a significant increase in weight as she has aged and eventually needed to change the size of her

clothing from small-medium to plus-sizes. Such size change with aging causes the most problem

with fit for her upper arms because plus-sized apparel is usually in larger sizes simply based on

standard measurements. She explained,

> I'm just bigger all over. I think one thing that's really hard for plus-sized women is this part, arm, the upper arm. A lot of times I think they just size up...a size up, but they don't make allowances for making the arm big enough. So sometimes it'll fit through the shoulders or through the bust, and then the arms are too tight.

Susan discussed the frustration stemming from "the use of skinny plus size models," resulting in

a positive perception of a 3D avatar that would enable her to create her own virtual model and

eventually assess apparel fit, especially in the arms:

> A lot of times with plus size, they don't show the clothing on a plus-size model. Or they'll show it on kind of a skinny plus-size model. And so it's...you have to kind of use your imagination a little bit, as to how it's going to fit and look on you. And that can be a little bit frustrating, so I mean the idea of an avatar that would be the real me, I guess and see like is it going to be too tight in the arm? Or [laugh] how long is that sleeve really? Something like that could definitely be helpful. (Susan)

Changes in apparel size that come with aging has prompted participants to value the fact

that virtual technology could provide them with the possibility of a customized 3D avatar. Shin

and Baytar's study (2014) found a positive relationship between female college students'

concerns with apparel fit and their intentions to use virtual technology in the online apparel

shopping context. Findings of the interpretation of the data collected for this dissertation extend

this idea to include older consumers. That is, participants' intentions to use virtual technology

for online apparel shopping due to the increase in their concerns with apparel fit largely stems

from the size changes that have occurred with aging.

In addition to the size changes with aging, participants prefer to wear specific styles that work well with their bodies, such as flowy and loose-fitting styles, as discussed earlier in this chapter. The interpretation of the data indicates that participants seek to avoid a tight fit that causes discomfort. For example, Barbara always seeks to ensure her clothing is "roomy" enough in order to achieve the desired comfort level. The role of comfort in clothing choice was found to be important in previous studies with female baby boomer consumers (Rahman & Yu, 2018; Rahulan et al., 2015). With aging, most participants consider comfort more important than trendiness. As the data revealed, participants focus on what they want to wear rather than others' opinions regarding what they should wear as older women. Due to the high degree of social freedom and individualism derived from dynamic social changes of the 1960s (After Fifty Living Inc., 2016; Lehto et al., 2008), baby boomers show their tendency to "rebel against the prior generations." This cohort characteristic results in participants' tendency to not follow the existing rules of fashion (e.g., less formal wear), and ultimately to focus on selecting styles for self-satisfaction. This tendency accelerates their desire to wear comfortable clothing because they do not want to dress uncomfortably as they have grown older. As a result, achieving comfort is a major factor in apparel shopping among participants.

Participants also prefer to wear styles that are not tight around the middle section of the body in order to compensate for age-related body changes, which is similar to findings of Howarton and Lee's study (2009). This finding provides an explanation of why female baby boomers prefer specific fits and styles. As an example, Linda explained that the styles she likes most are long tops and tunics because they conceal the middle part of her body that became larger during the aging process. This preference is derived from disproportionate weight gain with aging, which means that participants tended to gain weight mostly around their waist,

resulting in having an apple figure. Consequently, many participants talked about the positive aspect of a 3D virtual model that reflects their individual aging body proportions to better assess how apparel will fit on their own bodies, and ultimately achieve their preferred fit from their online apparel purchases.

Age Appropriateness

In addition to loose-fitting styles, participants want to wear styles that are appropriate for their age, which is related to psychological needs for apparel, as discussed previously. The importance of age appropriateness has been found in previous studies regarding female baby boomers' apparel consumption behaviors (Howarton & Lee, 2009; Rahman & Yu, 2018). However, it is difficult for participants to determine if styles would look either too young or too old on them because most apparel websites employ young and thin models. As found in the literature (Kim & Damhorst, 2010; Shin & Baytar, 2013), the prevalent use of young and thin models to display apparel on websites increases the risks involved in online apparel shopping for older consumers. These risks are more critical when it comes to participants who have experienced changes in body size and shape. All participants shared that they experience differences in apparel fit between models used on retail websites and when they put the clothing on their own bodies. Because participants rely on models to envision how apparel will look on themselves, they consider thin models inappropriate to convey accurate visual information regarding apparel fit. As an example, Barbara emphasized the inappropriateness of using a thin model for older online shoppers:

> I know everybody wants to see a skinny model, but they do a disservice to a majority of older shopper groups by, you know, using these people who are not always the norm for a body size.

By creating their own 3D avatars, participants could examine apparel products on models that reflect their particular body measurements and shapes. Through this examination, participants can decide if a particular style is age-appropriate or not. For example, participants consider styles that are too revealing to be inappropriate for them as older consumers. In this respect, Kathleen indicated willingness to use virtual technology to examine if a dress is too revealing or not on her own body, and ultimately confirm if it "fits her age." Virtual technology would also help Kathleen find styles that cover areas that have become less toned with aging, which she feels is important to her style selections. Thus, participants perceived the usefulness of virtual technology in terms of assessing apparel fit more accurately based on using their own individual 3D avatars.

Participants highlighted a lack of models that are appropriate for them in terms of both body size and age when shopping for apparel online. Participants frequently mentioned that they look "totally different" now compared to when they were in "their 20s." This appearance gap results in participants' desire to see models of their own age group. In this regard, Emily highlighted the significance of age-appropriate models on apparel shopping websites:

> If Chico's had a 20-year-old body on their website, it would be a turn off because no one is 20 [laugh] when you go into a Chico's store [laugh].

In the same vein, some participants talked about the age appropriateness of 3D virtual models. They pointed out "a difference in the look of the face and the body" between themselves and the younger looking avatars that were used for data collection in this study. As Jennifer put it, the avatar in the video does not look like "a 60+ year old female. The face is too young also." This lack of age appropriateness of 3D avatars could result in an unwillingness to use virtual technology because of the concern that the avatars would give them inaccurate information regarding garment fit. Consequently, participants' willingness to use virtual technology for

online apparel shopping is directly related to the possibility of reflecting age-related appearance changes when creating a 3D avatar. By reflecting age-related appearance changes (e.g., body shape change, graying hair), participants thought that they would be better able to find particular fit and styles that they desired.

Overall, participants' positive attitudes and willingness to use virtual technology depends on their needs when shopping for apparel online. They considered their needs derived from age-related changes that they experience when discussing the benefits of using virtual technology for their online apparel shopping. This finding illustrates the extent to which participants' perceptions of an environmental influence (virtual technology) are determined by their behaviors (apparel needs and preferences) which are derived from personal factors (age-related changes and cohort characteristics). As a result, social cognitive theory helps to identify the determinants of participants' perceptions of virtual technology in the online apparel shopping context.

Views on Virtual Technology and Shopping Preferences

According to the literature, older consumers exhibit distinctive online apparel shopping behaviors when compared to younger consumers, such as search patterns (Hashim et al., 2009; Iyer & Eastman, 2006; Law & Ng, 2016; Lian & Yen, 2014). As discussed in the previous subtheme, age-related physical, psychological, and social changes are important to how participants shop for apparel online. In this section, participants' online apparel shopping patterns are examined in relation to how they think the use of virtual technology would impact their online shopping process. The two sections that follow discuss participants' views of what virtual technology would mean as part of their online apparel shopping experiences: (1) *More Convenient* and (2) *More Fun*.

More Convenient

According to Rahman and Yu (2018), baby boomers rate convenience as the most important factor when they make decisions about where to shop for apparel. Likewise, the findings of the interpretation suggest the significant role of convenience in participants' motivations to shop for apparel online. Participants identified convenience as one of the top considerations when they shop for apparel online. Moreover, they also engage more frequently in shopping online due to the convenience it affords. For example, many participants value the convenience of online apparel shopping in terms of saving time and being able to shop from home at anytime. As discussed earlier, some participants valued the convenience of online apparel shopping due to some of difficulties they have with mobility as they have aged. Health issues that require surgeries or simply experiencing age-related energy loss make shopping for apparel online easier for participants when compared to shopping in stores. In addition to health issues with aging, participants tend to value the convenience of online apparel shopping more as members of the baby boomer cohort, who tend to place a higher value than any other age based cohort on convenience in the shopping experience (Wilson, 2017). Consequently, findings of the present study point out the increasing significance of convenience in female baby boomers' apparel shopping experiences as they age.

It appears that the crucial role of convenience extends to participants' attitudes toward using virtual technology for apparel shopping. That is, participants viewed virtual technology positively because they think it would enhance the convenience of shopping for apparel online. By assessing apparel fit more accurately using a personal 3D avatar, participants thought that virtual technology would mean that they would not have to return items due to "improper fit." Furthermore, participants explained that virtual technology would make the online apparel

shopping process easier. For example, based on the body measurements of the 3D avatars, the website itself would communicate to participants the size that they need to order. As Diane said, "People get an avatar and say, 'Okay this is my size, what will fit here?'" Automatic size selection would allow participants to skip one step of the process that they usually put a significant amount of time and effort into due to the prevalence of inconsistent sizing among brands. Overall, participants perceived the usefulness of virtual technology as simplifying the online shopping process, and ultimately enhancing the convenience of it, which again, this cohort is known to significantly value when apparel shopping (Miles, 2019; Rahman & Yu, 2018; Wilson, 2017).

Prior research has found differences in technology consumption behaviors between baby boomers and previous generations of older adults (LeRouge et al., 2014). As a cohort, baby boomers are more likely to use technology for shopping as well as are open to explore new technologies when compared with the generations of older consumers before them (Coleman et al., 2006; LeRouge et al., 2014). Such difference is derived from baby boomers' experiences with the emergence of technological inventions (e.g., personal computers) when they were younger (LeRouge et al., 2014; Zickuhr, 2011). Due to having greater access to personal computers as compared with the previous generation of older adults, baby boomers tend to exhibit more positive attitudes toward the use of new technology in later life (Coleman et al., 2006; LeRouge et al., 2014). Indeed, as found in this dissertation, all participants were familiar with using the Internet and held positive attitudes toward technology in apparel shopping. For example, many talked about the advantages of using the Internet to shop for apparel, such as making the process "easy," "fast," and "convenient." Similar views were expressed when participants talked about their perceptions of virtual technology, as they described it as

"interesting," "pretty cool," and "fascinating." Indeed, all of the participants indicated that they wanted to try virtual technology for their online apparel shopping.

Participants have grown more accustomed to doing online apparel shopping not only as they have aged but also due to the impact of COVID-19. Participants value the convenience of online apparel shopping more and prefer to shop for apparel online rather than in stores. Participants considered virtual technology to be an effective tool that could enhance the convenience, and ultimately, the overall experience of online apparel shopping. Due to convenience, participants expected that the role of technology in their apparel shopping experiences would become more important, especially when they have mobility issues. In this regard, participants viewed virtual technology positively because it could facilitate their online apparel shopping by helping them to deal with the physical changes that occur as they age. This aspect of virtual technology aligns with Mostaghel's study (2016), which emphasized the role of technology in improving quality of life for older adults. Mostaghel (2016) showed that technology is an effective tool in healthcare by providing virtual sessions and accessible communication tools. In addition to the utilitarian value of virtual technology to enhance the convenience of online apparel shopping, the interpretation of the data reveals the positive potential for virtual technology to provide female baby boomers with more opportunities to shop for apparel online as a leisure activity, which is discussed in more detail in the next section.

More Fun

Among baby boomers, the hedonic value of shopping for apparel appears to be one of the main reasons for doing it (Gregorie, 2003). Indeed, findings of dissertation indicate that participants enjoy spending time browsing new styles and exploring fashion trends online. Due to its hedonic value, online apparel shopping is considered to be a fun activity that participants

engage in, especially those who have more leisure time after retirement. Participants viewed the entertainment value of virtual technology in the online apparel shopping context similarly. That is, they thought that virtual technology would make the experience of shopping for apparel online more fun. For instance, many wanted to "play around" with a 3D avatar by adjusting its hair color, such as to purple, brown, or red. Participants also liked the idea of "playing dress up" with a personal 3D avatar and trying on styles that they have never tried on their actual bodies. Virtual technology provides the possibility to change the appearance of a 3D avatar as well as easily try on various styles to have fun. Thus, the hedonic value of virtual technology is important to participants' positive perceptions and willingness to use it in the online apparel shopping context. This finding aligns with previous research focused on the hedonic role of virtual technology in online apparel shopping experiences among younger consumers (Kim & Forsyth, 2007; Pantano et al., 2017; Yang & Wu, 2009; Yu & Damhorst, 2015), but adds to this literature by demonstrating the positive potential of using virtual technology to enhance older consumers' online apparel shopping experiences in similar ways. That is, fashion retailers can employ virtual technology on their websites to increase the fun of online apparel shopping for a cohort known for its focus on hedonic value, and ultimately enhance the overall online apparel shopping experience for not just younger consumers, but older consumers as well.

Notably, some participants indicated that the hedonic value of virtual technology in online apparel shopping is the most interesting aspect of it. For example, Stephanie said that the most interesting part of virtual technology is "playing with it." She then discussed how she could "really have fun with virtual technology" especially trying on formal "dresses for a wedding." The important role of fun in participants' perceptions of virtual technology might be derived from their generational cohort characteristics, as baby boomers tend to enjoy apparel

shopping with hedonic purposes (Twigg, 2013). Indeed, the entertainment value of virtual technology emerged as a key factor in participants' views on using it for their online apparel shopping. Kim and Forsythe's study (2007) revealed the influence of hedonic and perceived entertainment value of virtual technology on younger consumers' motivations to use it for online apparel shopping. Findings of the present study extend this idea to include older consumers, a largely unexplored group within the literature regarding virtual technology in the online apparel shopping context.

In this section, the relationship between participants' apparel consumption behaviors and their views on virtual technology were examined based on the conceptual framework (Figure 9). That is, the interaction between behavior and environmental influences within social cognitive theory is utilized to examine how participants' apparel needs and shopping preferences are linked to their perceptions of and willingness to use virtual technology when online apparel shopping.

Figure 9. Conceptual Framework: Shopping Environment Influences

Shopping Environment Influences
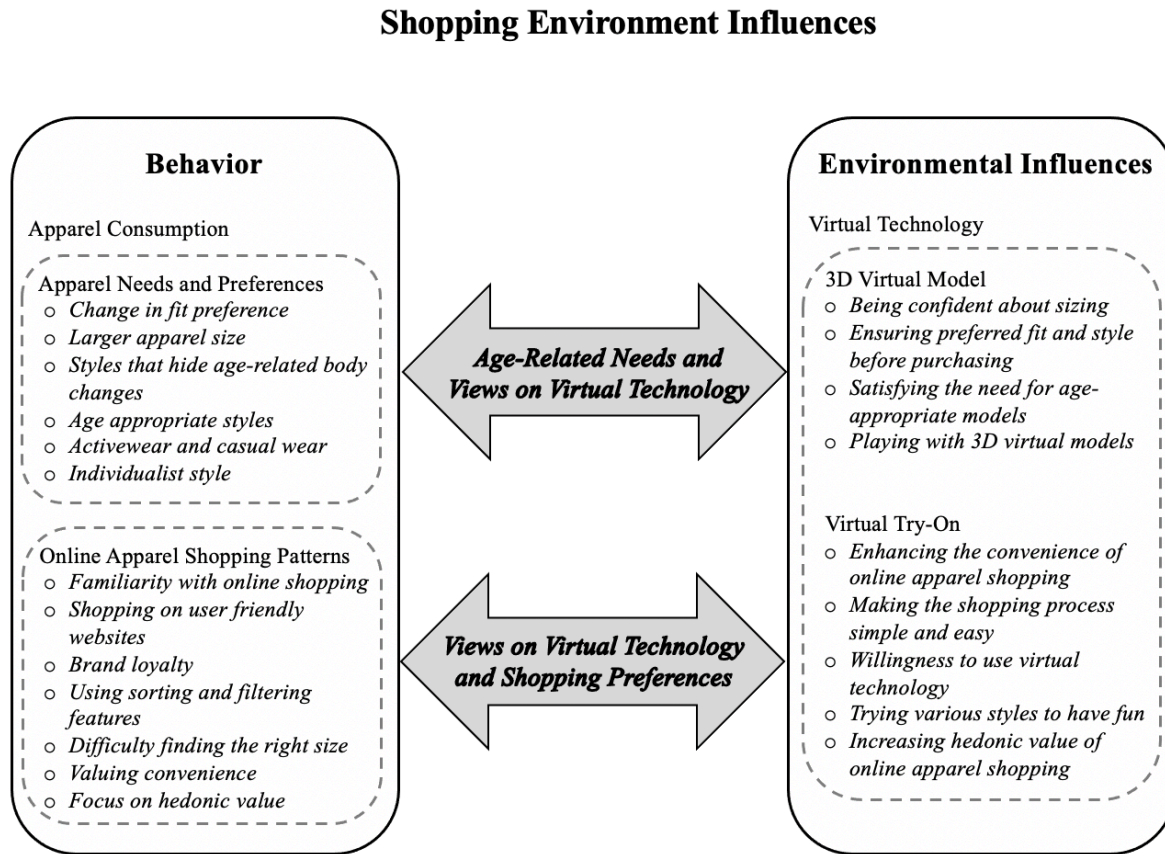
Social cognitive theory (Bandura, 1986) helps to explain the link between behavior and environmental influences. This study reveals that participants' apparel consumption behaviors are important to the virtual technology adoption process in online apparel shopping. Participants' experiences with online apparel shopping were explored to address the research question of how female baby boomers shop for apparel online, and ultimately to understand their online shopping behaviors (e.g., age-related needs and shopping preferences). Such online shopping behaviors were further examined to address the research question of how virtual technology might become an important part of the online apparel shopping experience. For this investigation, participants' thoughts about the potential for using virtual technology during the online apparel shopping process were explored relative to their apparel needs and preferences for

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shopping online. As a result, the interpretation of the data reveals that participants view virtual technology positively and are willing to use it for online apparel shopping because it can facilitate the shopping process and help them to meet their age-related apparel needs. As found in this dissertation, it is crucial to examine how behaviors (i.e., apparel needs, online shopping patterns) are shaped by personal factors (i.e., age-related changes, cohort characteristics), to fully explore how participants view shopping environment influences (i.e., virtual technology) and understand why they may want to use such technology when shopping online. The next section examines the reciprocal relationship among three factors of the conceptual framework to explore the overall potential for virtual technology to enhance participants' online apparel shopping experiences.

Considerations of Virtual Technology

The third objective of this dissertation was to explore how virtual technology can enhance the online apparel shopping experience for female baby boomers. To address this objective, a final research question guided the exploration of the thematic interpretation: *In what ways can online apparel retailers better serve the female baby boomer cohort using virtual technology?* This question is used to structure the discussion of the data relative to the literature presented in Chapter II, as well as the conceptual model used in this study. Social cognitive theory is used to link three important factors (personal factors, apparel consumption behaviors, shopping environment influences) to understand how participants might use virtual technology for their online apparel shopping. The following two sections discuss the role of virtual technology relative to the three factors: (1) *The Silent Salesperson* and (2) *Changing It Up.*

The Silent Salesperson

As discussed in the previous section, participants considered the fact that they will continue to age when thinking about the usefulness of virtual technology for online apparel shopping. As older consumers, participants saw the value of virtual technology for assisting them in solving issues they encounter when shopping for apparel online. In this regard, virtual technology could play a role in participants' online apparel shopping experiences as a "silent salesperson," via a virtual model that can help them to find the right size for their age-related needs as well as appropriate garment fit and style given their preferences.

A Model My Size

Virtual technology enables consumers to create their own individual virtual body models (Shin & Baytar, 2014). This aspect of virtual technology was the most significant for the participants in this study, as they expressed a desire to create their own 3D avatars that would be helpful in finding the right size when shopping for apparel online. Online apparel shopping for participants tends to involve a significant number of returns due to problems with apparel fit, such as ordering multiple sizes and returning those that do not fit. For example, Victoria said, "I do like to do online shopping because it's so easy. But...I find that I have to return a lot of things." In a similar vein, Emily emphasized the importance of examining apparel fit before purchasing to avoid the return process: "Because I've made mistakes before and then I have to figure out how to return it and...I don't like to have to deal with that." The fit problem stemming from online apparel purchases has become worse as participants have changed sizes as a result of age-related body changes. As discussed earlier, most participants must buy larger sizes, but they cannot achieve a good fit just by sizing up because they have experienced weight gain disproportionally. As a result, participants tend to have distinctive and unique body shapes

stemming from aging. 3D virtual models that reflect their individual body shapes would provide assistance regarding which size fits best on their bodies. Consequently, participants highly valued the possibility of creating a "model like me."

Age-related body changes have also prompted participants to change their preferences in regards to apparel fit. While many tended to wear a tight fit in their younger days, most now prefer loose-fitting styles and comfort in apparel as they have aged. In this regard, virtual technology could help them to better meet their needs and preferences for apparel fit. For example, virtual technology can help Barbara, who prefers to wear flowy dresses, by allowing her to virtually try apparel on her avatar. Virtual technology could allow Barbara to make sure a garment has enough room around her waist, which is important for her to achieve her desired comfort level. For Amy, who desires to cover her waist and hips that became larger with aging, virtual technology would enable her to see if tops are long enough to cover her back area. Using individual 3D avatars, participants would be able to examine apparel fit on the specific areas of their bodies that they have become more self-conscious about as they have aged. As a result, 3D virtual models that represent participants' actual body shapes could reduce the risk inherent in apparel fit when shopping online. Although Shim and Lee's study (2011) found a similar result with consumers between 18-30 years of age, older consumers might consider this possibility to be even more important than younger consumers because they experience age-related body shape changes that result in magnifying the risk of apparel fit when online shopping. Consequently, fashion retailers might see more positive results from employing virtual technology in their online stores when focusing on older versus younger consumers.

Overall, virtual technology would play an important role in helping participants to find the right size when shopping for apparel online. Participants can use virtual technology to

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examine apparel fit on their own 3D avatars or when selecting a size based on the measurements of their 3D avatars. Moreover, through a "model my size," participants would be able to meet their age-related needs and preferences for apparel fit. The possibility of creating personal 3D avatars may be even more valuable for older consumers when compared with younger consumers due to the lack of older models on apparel websites. How 3D avatars can alleviate and address issues arising from the lack of older models is discussed in the next section.

A Model My Age

Participants emphasized the need for models on apparel shopping websites that appear closer to their own age. This need is derived from their desire to wear styles that they consider age appropriate. The interpretation of the data reveals that age appropriateness is one of the most influential factors in terms of participants' apparel purchase decisions, which aligns with the findings of previous research on female baby boomers' apparel consumption behaviors (Howarton & Lee, 2009; Rahman & Yu, 2018). Moreover, according to Rahman and Yu (2018), female baby boomers tend to consider cognitive age instead of chronological age when examining age appropriateness of clothing. Thus, it is critical for female baby boomer consumers to have models that they consider to be of the same cognitive age group when shopping for apparel online in order to accurately evaluate the appropriateness of the apparel for themselves. To examine if a style is appropriate for their age or not, participants need models that "look like their age." Participants pointed out the prevalence of young and thin models on apparel shopping websites, which poses a challenge for them when trying to figure out how styles will look on their own bodies. Many participants experience a major difference between comparing how something looks on a model on the website versus when they actually put it on their own bodies. For example, Megan stated: "It looks good on a model on the site. But when

you put it on you, it still looks different. You have to see it on yourself." In this regard, virtual technology would help participants to fill a key gap in their online shopping experience.

Most retailers tend to employ models to display apparel products on their websites in order to help consumers gain a better idea of how garments look when worn on the body (Kim & Damhorst, 2010; Shin & Baytar, 2013). Findings of this disseration support the important role of models on websites for acquiring accurate information regarding a product. As a result, the need for age-appropriateness of these models appears to be a factor that greatly affects participants' overall online apparel shopping experiences. For instance, participants expressed their unwillingness to shop for apparel on websites that target older females but display younger models. Some participants mentioned the use of social media to see other similarly aged consumers' posts of what they wear, and ultimately view items on "real models" instead of the young and thin models on websites. This information is helpful for participants to better estimate whether styles will look good on them or not.

The use of young and thin models becomes a bigger challenge for participants when it comes to the absence of a universal sizing standard. Inconsistent sizing across brands leads to difficulty in finding a good fit. Moreover, online retailers tend to provide a general size guide (e.g., tops, pants, skirts) instead of specific measurements for a specific item. As a result, visual information provided through the use of a model is an important factor in the process of guessing how an item will look on them and ultimately in making their purchase decisions in the online apparel shopping context. Therefore, virtual technology could contribute to presenting a diversity of models in terms of age as well as size. This use of virtual technology to meet the need for age-appropriate models is critical for participants to fulfill their apparel needs (i.e., age appropriate style) and to have accurate information when shopping for apparel online, ultimately

facilitating less risky purchase decisions. As found in studies examining virtual technology in the consumption context, virtual technology would improve participants' experiences with products, and eventually their purchase decisions when shopping for apparel online (Beck & Crie, 2018; Oh et al., 2008; Park & Kim, 2021; Yang & Wu, 2009). Similarly, findings of this study indicate that virtual technology can be an effective tool that fashion retailers could employ on their websites to meet older women's age-related needs when shopping for apparel online, and ultimately increase revenue generated from the large number of female baby boomer apparel consumers. Female baby boomers have been identified as a critical consumer cohort in the fashion market because of their purchasing power (i.e., one fourth of total U.S. apparel expenditures) along with their sheer numbers (i.e., the largest consumer group) (U.S. Bureau of Labor Statistics, 2022).

Changing It Up

The literature has shown that virtual technology can help consumers reduce the risks involved in online apparel shopping, especially regarding garment fit and size (Kim & Forsythe, 2007, 2008; Lee et al., 2021; Shim & Lee, 2011; Shin & Baytar, 2013; Yu & Damhorst, 2015). The interpretation of the data collected for this dissertation highlights the positive potential impact of virtual technology on participants' purchase decisions when shopping for apparel online. Participants indicated that virtual technology could reduce their concerns with apparel fit, therefore they would purchase more frequently online. Consequently, they viewed virtual technology as changing up the shopping process, not just because they would do more apparel shopping online if it was available, but because it would make them feel more confident about their purchase decisions. In this section, the potential role of virtual technology in changing participants' online apparel shopping behaviors is discussed.

Where I Shop

  Findings of the interpretation reveal participants' willingness to engage in online apparel shopping more frequently if they could use virtual technology to do so. During the pandemic, participants experienced a significant change in their apparel shopping behaviors, such that they were "ordering way more online" and "getting more used to doing [online shopping]," as Kathleen mentioned. However, some participants remained hesitant to make purchases online due to uncertainties regarding garment fit and size. For example, Melissa chose not to purchase items because she "had no idea what size to purchase." In this respect, many participants thought that virtual technology would help them to make the right decisions about apparel size, and that a purchase would result from the online shopping process. Some participants expected that they would shop for apparel completely online if virtual technology became available. For instance, Megan said that she "might not go shopping anymore" if virtual technology were to become widely available.

  Participants emphasized the potential positive impact of virtual technology on enhancing the convenience of online apparel shopping, which they considered important as they continue to age. By allowing them to shop at home and to virtually "try on" apparel before purchasing, participants viewed virtual technology as a way of facilitating their online apparel shopping. For example, Anna thought that online shopping with virtual technology would be the main way that she would purchase apparel as she gets older. Participants' positive views of shopping for apparel online using virtual technology might be derived from their cohort characteristics as baby boomers. As discussed in Chapter I, baby boomers display significant differences in technology usage, experiences with technology, and openness to using new technology when compared to previous generations (LeRouge et al., 2014). Baby boomers are also expected to

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use new technology in later life due to their experiences with the major technological breakthroughs of the 1990s (LeRouge et al., 2014; Zickuhr, 2011). In this regard, this study adds to the literature by demonstrating female baby boomers' willingness to use new technology for online apparel shopping.

In addition to the change in shopping channels (online vs. offline), the interpretation of the data reveals the potential role of virtual technology for disrupting participants' brand loyalty and ultimately prompting them to explore new places to shop. Due to the limitations inherent to online apparel shopping, participants prefer to shop for specific apparel brands while online because they know what sizes they need and how apparel would fit based on their previous experiences with those brands. Moreover, findings of the interpretation indicate that inconsistent sizing among brands magnifies participants' concerns with fit and sizing when shopping on new websites. In this respect, virtual technology could change participants' online shopping patterns. That is, the interpretation of the data reveals that participants tend to start a shopping trip at their "regular" websites. If they can shop for apparel online with their portable 3D avatars that help them to find the right size, the starting point of that shopping journey might be different. As a result, well-established online fashion retailers might benefit from offering features of 3D avatars as a marketing strategy in order to reinforce brand loyalty among participants. At the same time, more innovative online fashion retailers might want to incorporate 3D avatars in order to maximize the probability of female baby boomer consumers giving new brands/websites a chance, and thereby disrupting their brand loyalty.

How I Shop

Throughout the interpretation of the data, findings highlight the potential for using virtual technology to enhance the overall online apparel shopping experience. Likewise, the literature

has indicated that virtual technology could change consumers' overall online shopping experiences (Dogadkina, 2022; Gorra, 2022; Loker et al., 2008; Jiang, 2017; Jones, 2017; Pando, 2018; Porta et al., 2008). In this section, the ways that virtual technology could ultimately make the shopping experience better are explored.

As just discussed, the interpretation of the data reveals that participants tend to start with specific brands when shopping for clothing online. However, virtual technology might lead participants to begin the shopping process from random sites instead of their "first go-to" or "regular" sites. Virtual technology could allow consumers to create their own 3D avatars and examine apparel fit prior to purchase, and to ultimately reduce their concerns regarding fit and sizing. Reducing the uncertainties regarding garment fit and size would create new possibilities in terms of places to shop online. Moreover, participants described new possibilities of styles they could try using virtual technology. By trying a variety of styles on their own 3D avatars, participants thought that virtual technology could make their online apparel shopping experiences more "fun." Because many participants already tend to consider online apparel shopping as a fun activity, virtual technology would contribute to the increase in its hedonic value, which could mean that participants would spend more time engaged in online apparel shopping, especially when they have a greater amount of leisure time after retirement.

Through virtual try-on technology, participants viewed the process of trying on apparel from a new perspective. That is, they recognized that the virtual try-on process could have both utilitarian and hedonic purposes. For example, they could virtually try diverse styles on a 3D avatar to have fun as well as to examine fit and find the right size, all while online. This fun aspect of virtual technology could motivate participants to shop for apparel online more than in-store. Moreover, the possibility of trying on a variety of styles could lead participants to make

more purchases while shopping online. Several participants, including Linda, mentioned the possibility of purchasing a new style that "did not grab her attention," if it were not for virtual try-on technology. According to Nicole, virtual try-on technology would enable her to overcome the limitation of style options based on size and eventually "put anything on her and just try everything." Another participant, Victoria, thought that fashion retailers could increase sales by providing virtual technology on their websites, as it would allow consumers to find something that looks good on them while trying it on "just for fun." Therefore, virtual technology could lead to a change in what participants purchase and how much they purchase when shopping for apparel online.

Virtual technology could help participants be more confident in their size selection by allowing them to assess apparel fit more accurately while shopping online. Confidence has been found to positively affect consumers' purchase decisions in previous studies examining virtual technology in the online apparel shopping context (Beck & Crie, 2018; Park & Kim, 2021; Yang & Wu, 2009; Yu & Damhorst, 2015). In addition to the positive impact of virtual technology on participants' purchase decisions, the overall shopping process could be simplified, as revealed by the fact that participants talked about the use of virtual technology to filter items by size based on their own 3D avatars. For example, Susan explained that virtual technology could narrow down her options saying, "Okay here's my avatar, but I only want to look at things that will fit my avatar." Furthermore, virtual technology could allow participants to skip the size selection process altogether when shopping for apparel online. Based on the measurements of individual 3D avatars, the site could automatically select the right size for participants once they choose the styles that they liked. As an example, Sarah explained that virtual technology could let her know "what size she needs to order." Ultimately, she thought that virtual technology "can help

simplify the process" because the sizing systems "vary from brand to brand." Due to inconsistent

sizing across websites, many participants had to make a great number of returns. For example,

Amy tends to buy multiple sizes while shopping online: "I'll buy two sizes, just to make sure,

and then return one of them." For participants, the return process is considered a "frustration in

shopping online," as Victoria stated. Consequently, reducing the number of returns with the

automatic selection of size based on a 3D avatar could enhance the overall shopping experience

by making it simpler, less risky, and more fun.

According to Seo and Fiore (2016), older female consumers tend to experience

challenges when trying on apparel due to age-related body changes. When participants

experience physical challenges due to age-related mobility issues, virtual try-on technology

would enable them to examine apparel fit much more easily when compared to physically trying

it on in stores. As Susan put it, virtual try-on permits the ability "to try things on for people who

maybe have mobility issues or health-related issues." Online apparel shopping is often an added

value when compared with the shopping process in physical stores. In stores, consumers

normally try to find styles that they like first, and then select the size to try on. However, with

virtual technology, participants could load their own 3D avatars into an apparel shopping website

and try on their size first in a variety of different styles. Then, they could make a purchase

decision about styles that work best for their avatars. Because apparel fit is typically the most

important factor in apparel purchase decisions among older women consumers (Howarton &

Lee, 2009), participants might value the possibility of examining apparel fit for a variety of

styles through virtual try-on technology.

Virtual technology could also enhance participants' engagement in social activities while

they shop for apparel online. The interpretation of the data reveals that participants tend to

actively use social media for apparel shopping, as prior research has also found (Lee et al., 2019). For example, Barbara frequently uses her Facebook account to interact with her favorite brand by commenting on the brand's posts and replying to other consumers' comments on the posts. In this respect, virtual technology would allow participants to interact with other consumers as well as retailers using their 3D avatars in the virtual shopping environment (Porta et al., 2008). In doing so, virtual technology can offer additional kinds of visual information, such as images and videos of 3D avatars, which could be used when participants want to get others' opinions regarding a product in order to make purchase decisions. To this end, Melissa mentioned the use of virtual technology to discuss "the pros and cons of the items" with friends when she shops for apparel online. Indeed, several participants mentioned the importance of the social aspect of apparel shopping even when online. For instance, Amanda and Megan use Facebook discussion groups to get product information and share their outfits with others. According to Rainie (2012), baby boomers engage in social networking site use more frequently (46%) than the Silent generation (20%). In a similar vein, the findings of this study revealed the active use of social media for online apparel shopping among participants. Megan enjoys posting about her outfits and communicating with other group members about them. Virtual technology would allow participants to use more visual sources, such as images and videos of products, to communicate with others about the shopping experience. As a result, participants' online apparel purchase decisions could be influenced by feedback from others, such as friends or family members, during the shopping experience.
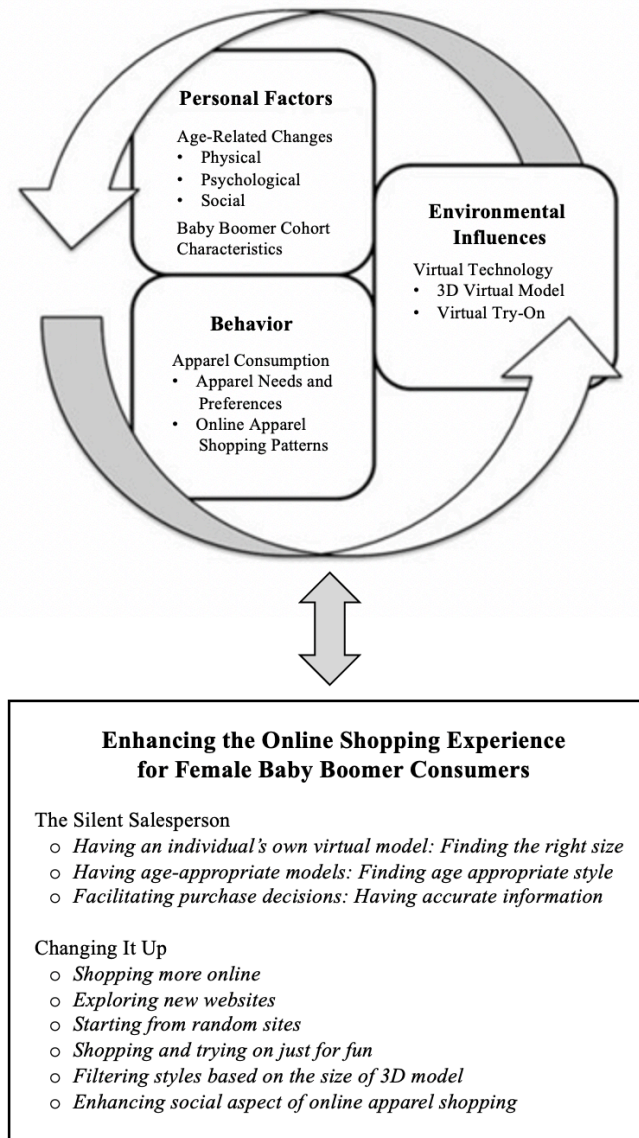
Virtual technology has the potential to change the consumer's overall experience of online apparel shopping. To address the final research question of exploring ways that online apparel retailers can better serve female baby boomers using virtual technology, this section

focused on understanding the value of virtual technology for enhancing the online apparel shopping experience among participants. In the present study, virtual technology has been identified as a helpful and interesting tool, which can increase the hedonic value of online apparel shopping as well as enhance the convenience of it. By simplifying the process in terms of where and how participants shop, virtual technology would become a shopping gamechanger. With virtual technology, participants are likely to not just shop for apparel more online than in stores, but also order more items when they are online. In addition, their online apparel shopping patterns could be significantly changed, for example by starting a shopping trip from new or random sites with their portable 3D avatars and skipping the size selection step through automatic size selection. Virtual technology also would allow participants to try on a broader number of styles first and then find what they like, instead of looking for their preferred styles first before trying anything on. This possibility could prompt them to shop for apparel online more frequently due to the increased hedonic value of the experience.

This dissertation sought to explore important influences relevant to female baby boomers' virtual technology consumption behavior in the context of online apparel shopping. Through the conceptual framework (see Figure 10), who participants are as individuals influences their online apparel shopping needs and ultimately shapes how they view virtual technology as a tool for their own online apparel shopping behaviors. Through the interaction among the three factors of the conceptual framework, findings shed light on how female baby boomers have come to shop for apparel online in later life, and how they likely will use virtual technology in the process in the future. Thus, findings from this dissertation reveal how virtual technology could change the overall experience with online apparel shopping among participants. Through the value of virtual technology, such as creating a customized avatar that

reflects their own bodies, the common drawbacks of purchasing apparel online among older female consumers could be addressed.

Figure 10. Conceptual Framework: Key Findings

Personal Factors

Age-Related Changes
- Physical
- Psychological
- Social

Baby Boomer Cohort Characteristics

Environmental Influences

Virtual Technology
- 3D Virtual Model
- Virtual Try-On

Behavior

Apparel Consumption
- Apparel Needs and Preferences
- Online Apparel Shopping Patterns

Enhancing the Online Shopping Experience for Female Baby Boomer Consumers

The Silent Salesperson
- *Having an individual's own virtual model: Finding the right size*
- *Having age-appropriate models: Finding age appropriate style*
- *Facilitating purchase decisions: Having accurate information*

Changing It Up
- *Shopping more online*
- *Exploring new websites*
- *Starting from random sites*
- *Shopping and trying on just for fun*
- *Filtering styles based on the size of 3D model*
- *Enhancing social aspect of online apparel shopping*

Findings highlight the usefulness of social cognitive theory to explain why participants' apparel consumption behaviors change with aging and how they might adopt virtual technology in the online apparel shopping context to address these changes. Although social cognitive

theory has been used to examine consumers' adoption of technological innovations (Compeau et al., 1999; Ratten & Ratten, 2007), this dissertation is among the first studies to use social cognitive theory to examine technology consumption behavior among older consumers. This examination is important because, as findings demonstrate, personal factors are key to determining consumption behaviors later in life. Findings of this dissertation therefore extend the application of social cognitive theory for understanding consumption.

Moreover, by applying the social cognitive framework, findings of this study enhance understanding of the virtual technology adoption process for online apparel shopping in ways that application of the Technology Acceptance Model (TAM) would not. As discussed in Chapter II, previous research has mainly employed TAM to examine consumers' adoption of virtual technology for online apparel shopping, which results in the need for employing other frameworks. With TAM, previous studies focused on aspects of the virtual technology itself as the main determinants of the technology adoption process, specifically the usefulness of the technology and the ease of using it. However, as this dissertation reveals, it is important to examine consumers' personal factors to fully understand how and why they may adopt virtual technology. This finding reflects the notion that, per social cognitive theory (Bandura, 1986), personal factors as influences on human behavior must be considered, and environment (e.g., virtual technology) is not an exclusive determinant of a behavior. Thus, this study fills the gaps missing from TAM as a result of neglecting the consumer in favor of focusing on the technology alone. Consequently, the findings of this dissertation support the use of social cognitive theory to gain a more in-depth understanding of technology and consumption behaviors, especially among older consumers.

Summary

In this chapter, findings were discussed based on relationships among the three factors (i.e., personal factors, behavior, and environmental influences) comprising the conceptual framework, and based on the literature discussed in Chapter II. In doing so, participants' views on virtual technology and apparel consumption behaviors in the online context were explored through discussion of the theoretical implications of the thematic interpretation. In the next chapter, conclusions are offered and suggestions for future research on the topic are provided.

CHAPTER VIII: IMPLICATIONS AND REFLECTION

This dissertation is one of the first academic studies to explore the potential impact of virtual technology on the online apparel shopping experience among female baby boomers. The aim of this dissertation was to develop an in-depth understanding of the potential for virtual technology in shopping for apparel online in the context of aging. To this end, I sought to explore age-related needs and expectations, and to investigate the role of virtual technology in addressing those needs and expectations. As a result, findings of this study address gaps within the consumer behavior literature regarding apparel and technology consumption behaviors among older female consumers, and specifically those of the baby boomer generational cohort.

Findings of this dissertation shed light on female baby boomers' perceptions of and experiences with online apparel shopping using virtual technology. Specifically, findings reveal the extent to which aging and cohort characteristics are determinants of potential virtual technology consumption behaviors. As a result, this dissertation highlights the role of female baby boomer consumers' personal factors (i.e., age-related changes, cohort characteristics) in understanding their perceptions of virtual technology. In addition, findings of this study reveal implications for online fashion retailers who wish to better serve female baby boomer consumers using virtual technology. As the final chapter of this dissertation, this chapter aims to discuss the research process and to consider the relevance of findings for both theory and practice. To this end, this chapter is divided into four sections: (1) *Theoretical Implications of the Outcomes*, (2) *Practical Implications of the Outcomes*, (3) *Reflecting on the Process*, and (4) *Limitations and Suggestions for Future Research.* In the first section, the findings that emerged through data interpretation, and the implications of these findings, are presented. Next, my reflections on the goals and objectives relative to the methodological process employed to collect and interpret data

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are discussed. Lastly, I conclude with a discussion of the limitations of this study and suggest potential future areas of research.

Theoretical Implications of the Outcomes

As discussed in previous chapters, virtual technology has the potential to enhance the consumer's overall online apparel shopping experience. Therefore, it is to be expected that fashion retailers will eventually employ virtual technology to better serve online shoppers. To this end, researchers have pointed out the importance of understanding consumers' attitudes toward and willingness to use virtual technology (Loker et al., 2008). Likewise, studies have pointed to the need for more research regarding shopping behaviors among older consumers in general (Holmlund et al., 2011; Iyer & Eastman, 2006; Kwon & Noh, 2010; Lee et al., 2012; Lian & Yen, 2014; Peter et al., 2011; Rocha et al., 2005). Thus, the investigation into the role of virtual technology in the online apparel shopping experience among aging female baby boomers offers findings that have implications for such topics within the academic literatures of consumer behavior and marketing. In this section of the chapter, the discussion of implications is organized around the following topics: (1) *Aging and Consumption*, (2) *Generation Baby Boomer*, (3) *Why Virtual Technology*, and (4) *Applying Social Cognitive Theory*.

Aging and Consumption

As pointed out earlier in this dissertation, very little existing research has addressed older consumers' apparel needs relative to their technology consumption behaviors. Previous research on the topic of online apparel shopping and virtual technology has focused solely on younger consumers, and primarily college students. Moreover, most studies focus on older apparel consumers as a generalized group, unlike this study, where the baby boomer cohort was specifically addressed and explored. Therefore, a key theoretical implication of this study is that

it sheds light on how age and generational characteristics play a role in shaping women's apparel consumption behaviors. Findings indicate that age-related changes significantly impact consumer behavior in later life, such as older consumers' distinctive needs (e.g., age appropriate styles and styles for slenderizing) when shopping for apparel compared to younger consumers, and therefore emphasizes the need for further research on aging and apparel consumption.

As depicted in the conceptual framework developed for this study, changes that occur with aging often alter consumption behavior. In Chapter VII, it was noted that three categories of age-related changes (i.e., physical, psychological, and social changes) relate to female baby boomers' apparel consumption and technology-related behaviors. A key finding from this study is that identifying diverse aspects of aging is fundamental to understanding how and why apparel consumption behaviors change with aging. That is, it is not only physical age-related changes, but also psychological and social changes associated with aging that play an important role in determining older consumers' apparel needs and shopping preferences.

Although all participants tend to experience similar kinds of physical changes as they have aged (e.g., a loss of energy, an increase in weight, hair color change), psychological and social changes that occur with aging vary by individual. As the data revealed, nearly all of the participants (90%) in this study reported a significant weight gain associated with aging when compared to roughly half (45%) reporting that they have retired, exemplifying how a great degree of variance exists in age-related social changes when compared to physical changes. Based on these findings, this group of consumers could be segmented based on different stages of the aging process, especially in terms of social changes, which significantly impact the types of apparel they need and how much apparel they need in later life. For example, participants who are retired indicated their need for activewear apparel to engage in outdoor activities, while

participants who are working mainly considered their roles in the workplace when making

apparel purchase decisions. Consequently, the variance that exists in terms of age-related social

changes indicates that this cohort should not be viewed as a homogenous group of apparel

consumers based solely on age-related physical changes, which most previous studies tend to

focus on. The next section further explains the findings relative to importance of considering the

unique and varying characteristics inherent to older consumers.

Generation Baby Boomer

The consumer behavior literature highlights the importance of cohort characteristics in

shaping consumers' attitudes and behaviors (Lehto et al., 2008; Rahulan et al., 2015; Solomon,

2012). Likewise, this dissertation found that the generational cohort approach is key to

understanding the online apparel shopping experience and perceptions of virtual technology in

this experience. That is, the thematic interpretation of the data revealed that participants' cohort

characteristics as female baby boomers were important to the meaning of their experiences while

shopping for apparel online and their views of virtual technology. Prior to this dissertation,

studies on older women's apparel consumption behaviors focused on examining differences

between older and younger women consumers based on age factors. As a result, older women

have been considered one demographic of consumers, resulting in the fact that differences in

consumption behaviors of older women among different generational cohorts have gone

unstudied.

Although there is currently a debate around whether generational cohorts actually exist

(Cohen, 2021; "Talking About My Generation," 2021), findings of this dissertation revealed that

the baby boomer consumers that participated in this study do in fact view themselves and their

behaviors as distinctly different from other cohorts. As discussed in Chapter I, baby boomers as

consumers are considered to be different from previous generations of older consumers due to their cohort characteristics, such as their large numbers, high expenditures on apparel, and significant amount of disposable income (Howarton & Lee, 2009; Kiersz, 2018; McGee, 2018; U.S. Bureau of Labor Statistics, 2022). Baby boomers have been identified as "new older consumers" due to their familiarity with technology and tendency to try new things, which is derived from their experiences with technological and social changes that occurred between the 1960s and 1980s (Coleman et al., 2006; Kumar & Lim, 2008; Lehto et al., 2008; Staff, 2016). These cohort characteristics play a crucial role in shaping participants' apparel consumption behaviors, such as their preference for shopping for apparel online and their openness to exploring new technologies for online apparel shopping. As apparel consumers, participants tended to distinguish themselves from the previous generations of older women, indicating their need for styles that are different from what the previous generation of older women, such as their mothers, wore. As an example, participants indicated that they do not want to look like their mothers or grandmothers, who dressed more formally, and, instead, prefer to emphasize their individualism and wear whatever they want. Therefore, a key finding of this study is the extent to which the aging female baby boomer cohort views itself as different from previous generations of older women when it comes to apparel consumption.

As illustrated in the conceptual framework guiding this study, baby boomer cohort characteristics, such as active engagement in work and outdoor activities, rebellion against convention, and familiarity with technology, were explored as personal factors that determine apparel consumption behaviors as well as perceptions of virtual technology in the context of online apparel shopping. This investigation revealed how aging is viewed differently by this generational cohort and ultimately influences their consumption behavior in distinctive ways,

especially in terms of employing fashion as a means of expressing their identities as they age. For instance, participants do not want to follow the rules of existing older women's fashion that conforms to social norms, and, instead, seek to focus on achieving self-satisfaction through expressing their individual styles. Moreover, most participants have maintained a keen interest in fashion trends as they have aged because apparel makes them confident with their self-image as older women by not looking "too old."

Overall, a key academic contribution of this study is that it sheds light on apparel consumption behaviors of aging female baby boomers, who have been identified as the "new older consumers" (Coleman et al., 2006; Kumar & Lim, 2008; Staff, 2016). As discussed in Chapter I, baby boomers contribute to the rapid growth of the U.S. older population, and ultimately now represent the majority of older consumers in the marketplace. According to the U.S. Bureau of the Census (2014a, 2014b), in 2020, older consumers consisted mostly of baby boomers (54%), and this cohort is expected to constitute about 88% of the total U.S. older population in 2030. Therefore, findings of this study are important to understanding consumption behaviors among older consumers in the fashion market, which largely reflects the baby boomer cohort's attitudes (McGee, 2018), yet overlooks their needs and preferences by focusing on the younger consumer. Moreover, cohort characteristics were also found to be important to the adoption of virtual technology for online apparel shopping, and are discussed in the next section.

Why Virtual Technology

As discussed in Chapter II, previous research has focused on consumers' adoption of virtual technology for online apparel shopping (Kim & Forsyth, 2007, 2008; Nantel, 2004; Shin & Baytar, 2014; Yu & Damhorst, 2015). Because college student samples have been used in

most of the extant research, little is known about how older consumers make decisions regarding technology, and particularly virtual technology for online apparel shopping. As a result, a key implication of this study for advancing the literature is the finding that age-related changes experienced by consumers impact their perceptions of and willingness to use virtual technology. Based on the interaction between personal factors (age-related changes) and environmental factors (virtual technology) per the conceptual framework, the thematic interpretation of the data revealed the potential of using virtual technology for online apparel shopping to address age-related needs and expectations, and ultimately enhance the overall shopping experience among participants. That is, virtual technology would allow participants to access age-appropriate models and gather accurate information regarding apparel fit through customized 3D avatars that reflect the distinctive body proportions brought on by aging. Moreover, virtual technology can make the online apparel shopping process both simple (e.g., selecting the right size based on individuals' 3D avatars) and fun (e.g., playing with virtual paper dolls). By investigating how aging influences the adoption of virtual technology through a qualitative approach, findings of this dissertation enhance the overall understanding of how and why older consumers are willing to use virtual technology in the context of online apparel shopping.

Another key theoretical implication of this study is that female baby boomers' cohort characteristics as personal factors play an important role in their intentions to use virtual technology. As this study found, cohort characteristics, such as a focus on hedonic values in apparel consumption and an openness to using new technologies, impact the extent to which participants perceive the benefits of using virtual technology for online apparel shopping. For example, participants perceived virtual technology positively due to the hedonic value of it, such as changing the appearance of their 3D avatars and trying on various styles for fun. They also

expected that they would do more online apparel shopping due to the hedonic value afforded by virtual technology.

Based on these findings, this study highlights the importance of personal factors (i.e., age-related changes, cohort characteristics) in consumers' perceptions of and decisions to use virtual technology. To be specific, participants viewed virtual technology as an effective tool to help them solve issues derived from age-related changes (e.g., difficulty with finding the right size and age appropriate styles) as well as to increase the hedonic value of online apparel shopping (e.g., lower risks of returns). Thus, participants' perceptions of and willingness to use virtual technology depends on their goals for apparel consumption, and not just on the technology itself. In this regard, this study demonstrates the need for research that examines diverse influential factors related to personal traits, such as consumers' needs and preferences, to understand how and why they adopt new technology for shopping.

As discussed in Chapter II, previous research has typically employed the Technology Acceptance Model (TAM) and therefore focuses on aspects of the technology (e.g., ease of use, perceived usefulness) as the most influential factors when consumers make decisions to adopt virtual technology. To fill the void, this dissertation employed social cognitive theory to develop the conceptual framework, which, in turn, enabled exploration of the role of personal factors (i.e., age-related changes and cohort characteristics) in consumers' perceptions of and willingness to use virtual technology. More research is needed that employs theories or frameworks other than TAM to explore consumers' needs and goals relative to the virtual technology adoption process. The next section further discusses the implications of applying social cognitive theory as the theoretical framework for this study.

Applying Social Cognitive Theory

As discussed, TAM has been primary employed in previous studies examining the adoption of virtual technology and especially in the consumption context. In particular, it was noted in Chapter II that two variables of TAM, *perceived usefulness* and *perceived ease of use*, have most often been used to explain why consumers accept or reject virtual technology. To this end, consumers' decisions to adopt virtual technology have been explained mainly by aspects of technology (i.e., how consumers perceive the usefulness or ease of use of virtual technology). Although this theory offers insights into consumers' adoption of virtual technology for online apparel shopping, the present study reveals the need for research that addresses consumer-specific factors, such as personal factors, that influence their intentions to use virtual technology.

According to social cognitive theory (Bandura, 1986), it is essential to consider an individual's traits and knowledge to understand how they adopt certain behaviors. As discussed in the previous section, findings reveal the important role of personal factors (age-related changes and cohort characteristics) in participants' willingness to use virtual technology for online apparel shopping. In addition to personal factors, participants' apparel consumption behaviors in terms of their apparel needs and shopping preferences were also found to influence their decisions to use virtual technology for online apparel shopping. Participants showed their willingness to use virtual technology for online apparel shopping because it can help them to find their preferred styles (e.g., age-appropriate, loose-fitting) by trying on various items on virtual models that "look like their age." Moreover, they valued virtual technology due to its potential to simplify the online apparel shopping process (e.g., no size selection, less possibility of a return), and ultimately enhancing the convenience of online apparel shopping. These findings contribute to the consumer behavior literature by identifying important influences on female

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baby boomer consumers' decisions regarding the adoption of a new technology (e.g., virtual try-on) for shopping. This framework can be generalized to any targeted consumers to include their personal factors and consumption behaviors, rather than focusing just on the perceived usefulness and perceived ease of use of the technology itself.

This dissertation is among the first to utilize social cognitive theory to examine the adoption of technological innovations in the context of apparel shopping. Moreover, this dissertation is the first to use social cognitive theory to examine apparel consumption behavior among older consumers, and specifically baby boomers. The theoretical framework developed based on social cognitive theory enabled a deeper understanding of why female baby boomers have changed their apparel consumption behaviors with aging, and how likely they are to use virtual technology in the online apparel shopping process once it becomes available. Social cognitive theory explains that human behavior is determined through the interaction of personal, behavioral, and environmental factors (Bandura, 1986; Komendantova et al., 2018; Ratten & Ratten, 2007). By exploring this interaction, findings of this study explain why and how women's apparel consumption behaviors change over the lifespan.

As framed by social cognitive theory, findings emphasize the complex nature of aging through the physical, psychological, and social changes that occur. For example, participants expressed their apparel needs and preferences based on all three age-related changes that they have experienced, e.g., larger sizes and loose fit derived from physical change, psychological needs for age appropriate styles, and increased need for activewear after retirement, among others. Therefore, this study supports the applicability of social cognitive theory in exploring the experience of aging as a key determinant of older consumers' consumption behaviors. That is, for understanding not just what they buy, but how they buy. Consequently, findings of this study

extend the potential applications of social cognitive theory, and especially within the context of consumer behavior and marketing.

In sum, this study highlights the need for qualitative examination of older women's consumption behaviors. Older women exhibit distinctive consumption behaviors compared with younger women due in part to changes experienced during the aging process. However, this difference is not just derived from an increasing chronological age. In other words, based on the findings of this dissertation, ignoring the unique experiences of and among aging female baby boomer consumers as just those of "older women" means limiting age to only a number. Instead, age must be viewed comprehensively, including personal and subjective meanings and experiences. Framing the aging process as lived experience is essential to developing an in-depth understanding of what this process means for consumption behaviors in later life.

Practical Implications of the Outcomes

Along with the theoretical implications of this study, several practical implications also emerged. For example, it is apparent that participants, as female baby boomer consumers, perceive an overall lack of attention by fashion retailers, which results in difficulty finding well-fitting clothing. Although online shopping provides greater options in terms of style, color, and size, participants expressed a lack of appropriate apparel available for them, which they defined as clothing specifically for those who are experiencing age-related changes, like disproportionate weight gain and hair color change. As the data suggest, as baby boomers, participants distinguish themselves from previous generations of older women. Thus, it would be wise for retailers and marketers to provide clothing options specifically designed for this "new older consumer" to satisfy their needs.

As findings suggest, fashion retailers need to consider both physical and psychological comfort to meet female baby boomers' apparel needs. For example, participants talked about the body changes they have experienced with age, which are related to apparel fit. They tend to need larger sizes as they have grown older. More importantly, they need modified patterns that reflect posture (e.g., a forward tilt of the head and shoulders) and silhouette (e.g., sagging of the bust line) changes. Such changes create fit challenges for this consumer that cannot be met just by larger standard sizes alone. That is, offering larger sizes based on standard measurements does not satisfy their specific apparel fit needs.

Many female baby boomers have active lifestyles, which enable them to engage more in outdoor activities in later life compared with previous generations (Howarton & Lee, 2009; Rahman & Yu, 2018). In this study, participants talked about their active engagement in outdoor and recreational activities along with the concomitant need for sportswear. This active lifestyle may mean that they experience slower levels of muscle loss, which would ultimately result in a decline in physical strength to a lesser degree when compared to previous generations of older women. Consequently, retailers should investigate the age-related body changes specific to female baby boomers, rather than generalizing from previous generations. Retailers could then create specialized apparel sizing for this cohort as they do for other specialized consumer groups, such as "plus-size" or "petite." With such specialized attention, female baby boomers' expectations would be better met because they place importance on finding apparel that they like and that fits their changing bodies.

In addition to physical comfort, retailers need to better understand how female baby boomers form their style preferences because they tend to select specific styles based on psychological comfort. This dissertation found that participants had strong preferences for styles

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that represent their lifestyles as well as styles which are considered "age appropriate." Age appropriate styles are important because apparel plays a significant role in expressing their identities as older women. Thus, designers should understand why female boomers prefer specific types of apparel. For instance, their active lifestyles should be considered, such as their increasing engagement in social and travel activities after retirement, as well as longer time spent in the workforce. Importantly, the significant disposable income of this cohort enables them to participate in various leisure activities, such as going on a cruise, and particularly in later stages of life (Howarton & Lee, 2009; McGee, 2018). As the data revealed, it is essential to understand what female baby boomers consider to be important activities in order to meet their particular needs for apparel.

Designers also can take inspiration from the periods of fashion that influenced female baby boomers throughout their lives. To be specific, they can incorporate components of the 1950s, 60s, and 70s fashion trends in new designs created for female baby boomers. Doing so would foster the hedonic and recreational motivations among these consumers, and prompt nostalgic pleasure. As the data revealed, participants consider hedonic values important when shopping for apparel. This focus on hedonic values as a cohort means they consider online apparel shopping as a fun activity, which prompts them to be recreational shoppers and thus to go online to explore new styles, not just to make a purchase. They also show a keen interest in fashion, resulting in an interest in following trends. Overall, retailers should consider female baby boomers as a new segment of older women who are not just looking for clothing to buy, but also to have a fun experience through shopping in the online environment.

Female baby boomers in this study revealed how their preferences for buying apparel in the online shopping environment are shaped by various factors. For example, this dissertation

found that selecting the right size is one of the most challenging aspects of the online apparel shopping process. Indeed, size issues are the primary reason for returning items purchased online. As a result, participants want apparel websites to provide detailed sizing guides, which include measurements for individual items, instead of using a generalized sizing system. Thus, virtual technology could help them select the right size with greater ease. Retailers could allow online apparel shoppers to avoid size selection altogether if virtual technology could offer automatic size selection based on the measurements of personal 3D avatars. This possibility would also enhance the convenience of online apparel shopping, which participants, as female boomers, consider important when shopping for apparel in any environment, not just online. Doing so would also address the needs of consumers of all ages who do not fit the standard body shape and size of the thin models typically used on apparel shopping websites.

Based on the findings of this study, age-appropriateness appears to be a significant factor for participants throughout the entire online apparel shopping experience. That is, they consider age-appropriateness when making decisions about where to shop as well as what to purchase. As findings of the interpretation reveal, models that retailers employ to display apparel products on websites play a crucial role in providing participants with accurate information regarding products. As a result, participants indicated a preference to shop for apparel on websites that have models who appear to be in their age group. Because virtual technology enables female baby boomer consumers to create their own 3D models, retailers could meet their desire for age appropriate models by employing virtual technology that permits the use of these models on their websites.

Baby boomer consumers have been identified as hedonic shoppers when it comes to apparel (Twigg, 2013). This dissertation supports this finding, as many participants indicated

that they frequently start to shop for apparel online with hedonic goals. For example, many participants went online to browse various styles when they looked for a "fun thing to do." In a similar vein, participants pointed out some of the hedonic values of virtual technology, which they indicated as one reason for their willingness to use it for online apparel shopping. Thus, retailers could employ virtual technology to increase the hedonic value of online apparel shopping in addition to the functional value (e.g., examining apparel fit on virtual models to select the right size). Moreover, findings suggest that virtual technology could be used to enhance social activities while shopping for apparel online. For example, retailers could provide a "virtual village" on their websites where shoppers can interact with other consumers using their 3D avatars. They could also offer diverse features of virtual models to allow older consumers, and especially baby boomer consumers, to play around with their 3D avatars as one would with paper dolls. Based on findings of this dissertation, this possibility would help retailers make the female baby boomer cohort not only more engaged in online apparel shopping, but also lead to more purchases by allowing them to discover new styles through virtual try-on.

Findings offer several considerations for retailers when employing virtual technology on their websites, particularly in order to be able to leverage the advantage of virtual technology directly through the target market of female baby boomers. Retailers need to take user experiences among female baby boomers into account when implementing virtual technology because, as this dissertation found, this group of consumers is not willing to use it if it is too complicated or time consuming to adopt. Moreover, retailers need to be concerned with the age-appropriateness of 3D avatars, which was one of the key factors for this cohort when considering using virtual technology for their online apparel shopping. Overall, the practical implications offered by the findings are important for retailers who seek to better serve older consumers, and

specifically those of the female baby boomer cohort, through virtual technology. Virtual technology could help them solve the challenges they face while shopping for apparel online, and ultimately, enhance their overall apparel shopping experiences in a multitude of ways.

Reflecting on the Process

In this study, I employed a phenomenological approach to explore the lived experiences of female baby boomer consumers. The phenomenological approach allowed me to examine participants' experiences with age-related changes and to understand the role that these changes play in their online apparel shopping experiences and perceptions of virtual technology. To explore participants' perceptions of and experiences with online apparel shopping using virtual technology, I employed multiple data collection methods, including interviews, online observation, personal journals, and focus groups. Through the phenomenological approach, I was able to gain rich descriptions of participants' lived experiences and, ultimately, to understand the meanings of these experiences from their own unique perspectives.

Due to the COVID-19 pandemic, the entire data collection process had to be completed virtually, which led to several challenges that arose during the data collection process. For instance, to recruit participants, I posted a participation invitation flyer via social media, such as Facebook discussion groups and fashion blogs related to baby boomers and older women. Although my interactions with the bloggers and administrators of the group pages came without much difficulty, I received fewer responses from group members and audience members than I had anticipated. However, they tended to respond to my participation invitation and show their willingness to participate in this study when they were directly referred by their friends or other group members. Thus, I was able to obtain participants through personal acquaintances who were female baby boomers, and those participants subsequently referred me directly to their

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friends by sharing my flyer on their social media accounts. The purposive sampling strategy employed to select participants enabled me to recruit participants with reliable information and relevant experience regarding the topic (DiCicco-Bloom & Crabtree, 2006; Goodman, 2001). Overall, most participants for this study were recruited through personal acquaintances and connections with the initial few participants I was able to recruit through advertising. Ultimately, I found that many social media users seemed to be wary of interacting with an unknown person within their group pages.

Along with difficulty recruiting participants, another challenge was to effectively build rapport with participants during the online interviews and focus groups. I had not established a relationship with most of the women prior to beginning this research, except for two participants whom I have personally known during my graduate studies. Given the nature of virtual communication, I experienced difficulties when it came to helping participants to feel comfortable to share their experiences and views with me, especially at the beginning of the interview. To acquire in-depth data, building rapport with participants is crucial because interview quality is significantly based on the interaction between researcher and participant (DiCicco-Bloom & Crabtree, 2006; Merriam, 1998). I found that participants tended to be more willing to share their experiences when I explained the study in a way that included my personal stories, including the reason why I was interested in this topic. They were also more likely to be enthusiastic when they understood the importance of their participation to complete my study and potential implications of findings from this research. Moreover, I found that when I tried to offer participants some personal examples relevant to the interview questions, they tended to be more inclined to join in on the conversation by talking about their shopping experiences and personal stories relevant to apparel consumption. Therefore, I found it necessary to develop

strategies to facilitate discussion and more active participation during the online interview. For example, visual sources were incorporated, such as a short presentation explaining the purpose of the study to open up the interviews. Another strategy involved using specific examples and asking interview questions to encourage participants to be open and responsive, and ultimately to gather more in-depth data through the online interviews.

During the interviews, I asked participants to show me their social media pages and to explain how they used them for apparel shopping. This information was very helpful to acquire rich descriptions regarding participants' apparel and technology consumption behaviors. For example, participants showed me specific brand pages and posts to give me examples of how they use social media for apparel shopping. Similarly, I was able to see participants' social media activities relevant to apparel consumption through online observation using the netnographic approach (Kozinets, 2006). Such data allowed me to establish an understanding of participants' perspectives and experiences relevant to apparel consumption, particularly as specific examples of things they talked about during the interviews. As a result, I found that online observation was a useful method to support the interview data and eventually obtain thick descriptions of participants' experiences, which is the purpose of using different methods to collect qualitative data (McAlexander et al., 2014).

For the second phase of the data collection process, seven participants were asked to complete personal journals regarding their online apparel shopping experiences and thoughts about virtual technology. Initially I thought journaling would be the easiest part of the data collection process because participants simply had to follow a template and write journal entries whenever they had available time, thereby not requiring me to set up a specific meeting date and time. Although I was able to complete the journal data collection process, I encountered several

challenges that I had not anticipated in the beginning. Although the majority of participants were very enthusiastic about writing their experiences as journal entries, there were some participants who provided very short and brief answers, which did not constitute quality data. Not being able to utilize probing questions to further enrich the quality of data, as I was able to do during the interviews, became a limitation. Another challenge arose when several participants requested that I look over their journal entries and provide them with feedback in order to ensure they were completing the task correctly. I had to be very careful not to unintentionally influence participants' answers or subconsciously affect their journal entries through sharing my personal views when I provided my feedback. The last major challenge was that one participant did not complete any journal entries, even with multiple reminders and requests. The reason for this lack of participation might be derived from the first phase of the data collection, which was conducted virtually instead of face-to-face. As indicated previously, online interviews can hinder actual interaction, which became an obstacle for building the relationship necessary for continued commitment in the second phase of the data collection.

In a similar vein, I had difficulty arranging the schedule for one of the three focus group interviews. Coming up with a time where all five participants were available was a difficult task, but I was eventually successful. However, one participant informed me that she was unable to join in the focus group thirty minutes before the scheduled interview time due to her busy work schedule. As a result, I had to cancel this focus group and attempted to reschedule. However, this participant did not respond any further and ultimately did not complete the second phase of the data collection for this study. Such an encounter could be due to the limitations imposed by virtual communication, as discussed earlier, and could have been less of an issue had there been opportunities to build rapport with the participants, especially given that the research design

included a second phase of data collection, which required additional participation. Thus, it would have been helpful to have follow-up meetings or frequent communication in preparation for the second phase of the data collection, especially as the first phase of the data collection was completed virtually.

Employing focus groups as a method was a fruitful decision. One advantage of the focus group interview is that it allowed for more communal discussion (Kitzinger, 1995). For instance, participants were often prompted by others to discuss issues that they may not have thought about on their own. As a result, focus group interviews enabled me to obtain a more comprehensive understanding of participants' views regarding the potential benefits and challenges of using virtual technology for online apparel shopping.

As I began the data analysis process, I had a preconceived notion that participants might face several challenges and difficulties when shopping for apparel online compared to younger women, especially in terms of technical issues. However, as findings revealed, none of the participants had issues using the Internet for shopping and all of them actually enjoyed the online apparel shopping experience. Another preconceived notion I had revolved around the positive potential of virtual technology, which led me to focus on the positives of virtual technology when I first began interpreting the data. However, several participants shared their concerns with using virtual technology for online apparel shopping, which were critical for determining their willingness to adopt virtual technology. As is the case with qualitative research, the researcher has an impact on the research process (Kelly, 2010), including research topic selection, data collection, and data analysis. In particular, I realized how my subjectivity as a researcher could easily influence my interpretation of the data and therefore tried to carefully frame my own subjectivity throughout the interpretation process. In this regard, member checks were helpful to

ensure trustworthiness of the interpretation by receiving participants' feedback regarding the interview transcripts (Hodges, 2011).

Overall, the majority of participants showed their willingness to fully participate and to help me complete this study by spending a significant amount of time to complete both the first and second phases of the data collection and by recruiting additional participants by sending recommendations to their friends. Many participants showed a keen interest in fashion, as found in this dissertation, and expressed interest in my dissertation, especially during the pandemic. Even though I had to make changes to the data collection process by going online due to COVID-19, this particular circumstance actually increased the personal importance of the dissertation topic, as participants began to shop for apparel more online, got more used to doing it, and eventually even preferred to shop for apparel online more than offline. As a woman, much like the participants, I will one day experience similar age-related changes that will impact my apparel shopping experiences, including size changes and different fit preferences. Therefore, my hope is that this dissertation can serve as a means for retailers to be able to better serve older female consumers so that they can continue to use fashion to express their identities.

Limitations and Suggestions for Future Research

In this dissertation, I explored female baby boomers' online apparel shopping experiences relative to virtual technology using a phenomenological approach. This approach allowed me to explore the meanings of participants' experiences with online apparel shopping using virtual technology, specifically in the context of aging and as members of the baby boomer cohort. While findings of this dissertation are crucial to expanding the literature in the areas of both apparel and technology consumption, they are limited to younger female baby boomer consumers who have previous experience with purchasing apparel online. All participants in the

study were familiar with using the Internet for apparel shopping, which might have positively impacted their openness to trying a new technology for apparel shopping. To this end, future studies could include other groups of female baby boomers, such as older baby boomers (born between 1946-1954) and younger baby boomers who may have less experience with technology for apparel shopping. All baby boomers have acquired greater experience with shopping for apparel online due to COVID 19, however, the scope of the study was determined prior to the onset of the pandemic. Thus, future research may not need to make a similar distinction and could instead examine the cohort as a whole. Additionally, most of the participants in this study live in the Southeastern United States. Future studies could examine whether similarities or differences arise that may be related to different backgrounds, including levels of experience using the Internet for apparel shopping, the geographic location, and the age groups within baby boomers. A diverse sample would provide more in-depth knowledge about the topic, as it would provide a different set of experiences to explore.

In the reflection portion of this chapter, I discussed how COVID-19 influenced the data collection process. I had to change my initial data collection plan due to the pandemic, which meant collecting data without face-to-face meetings. To provide participants with examples of how virtual technology could work in the online apparel shopping context, I was initially planning to offer a virtual technology training session, which had to be changed to simply having them watch a video about virtual technology. For the virtual technology training, I had planned to create individual 3D avatars for participants using 3D body scanning and have them use a virtual prototyping software to change the size of their own 3D avatars and examine the fit of a garment (e.g., virtual try-on of clothing, tension and pressure maps) during the training session. This training would have allowed participants to gain hands-on experience with 3D body

scanning and 3D virtual models as well as a more age appropriate avatar. Consequently, participants might have had a better idea of the potential for using virtual technology in the online apparel shopping process when compared to just watching a video. Moreover, participants' actual experiences with virtual technology during the training session would have likely played a role in facilitating discussion during the focus groups, as they could have given more specific examples of their experiences with their own 3D avatars. Thus, future research could incorporate such hands-on experiences along with focus group interviews to explore the experience of using virtual technology in the context of online apparel shopping more deeply.

As discussed in the thematic interpretation chapters, COVID-19 has been an influential factor in terms of online apparel shopping. That is, participants described a difference in their apparel shopping behaviors before vs. during the pandemic. These changes likely influenced how participants perceived the role of virtual technology in their online shopping experiences. Because participants were asked just a few questions relevant to the impact of COVID-19 on their consumption behaviors, future studies could explore COVID-19 as one of the main environmental factors that determine potential virtual technology consumption behaviors in the online context. As indicated in Chapter VII, the topic of online apparel shopping with virtual technology became more important and relevant, as participants became more accustomed to shopping for apparel online due to COVID-19. It is important to continue to develop an in-depth understanding of what virtual technology means for online apparel shopping among all consumers, but especially female baby boomers in order to help retailers address the apparel-related needs of this important consumer group.

To conclude, the purpose of this study was to understand female baby boomers' perceptions of and experiences with apparel shopping using virtual technology in the online

context. By exploring age-related changes and cohort characteristics, I developed an in-depth understanding of what female baby boomers need when shopping for apparel online and how virtual technology could help them meet those needs. This exploration was guided by three objectives: (1) to examine age-related needs and expectations of female baby boomers as older apparel consumers, (2) to investigate how these needs and expectations can be addressed in the online context, and specifically through virtual technology, and (3) to explore how virtual technology can enhance the overall online shopping experience for this group of consumers.

Specific to the first research objective, it was found that female baby boomers have experienced significant physical, psychological, and social changes with aging. All three aspects of age-related changes have altered their apparel needs and preferences in terms of fit and size, style, and type of apparel. In relation to the second objective, female baby boomers prefer to shop for apparel online due to convenience as well as the variety of products available in terms of size and style, which enables them to better find what they need as older apparel consumers. However, the impossibility of trying on a garment before purchasing it and inconsistent sizing among brands causes them to have difficulty with finding the right size when shopping for apparel online. Age-related body shape changes in particular make this challenge worse. In this regard, virtual technology can make a positive difference, because consumers can create their own 3D avatars and ultimately use them to find the right size when ordering apparel online. Relative to the third and final objective, virtual technology was identified as an effective tool to address age-related needs of members of the baby boomer cohort in the online apparel shopping context, such as having age-appropriate models and gathering accurate information regarding apparel fit. In addition, virtual technology can facilitate online apparel shopping by making the process not only simple, through the automatic selection of size based on individuals' 3D

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avatars, but also fun, like playing with virtual paper dolls. In sum, this dissertation revealed the positive impact of using virtual technology for enhancing the online apparel shopping experience among aging female baby boomers.

Female baby boomers exhibit distinctive apparel and technology consumption behaviors due to not only age-related changes but also to certain cohort characteristics. As older women, participants have experienced various age-related changes, which, in turn, have impacted their needs and preferences when shopping for apparel online. These age-related needs and preferences could be addressed in the online context, and specifically with the use of virtual technology. This dissertation illustrates the extent to which participants perceive the value of virtual technology for addressing the drawbacks of purchasing apparel online, especially as older consumers, and as members of the baby boomer cohort, by making the online shopping process more enjoyable. Consequently, findings of this dissertation further highlight the potential for the positive impact of virtual technology on enhancing consumers' overall online shopping experiences as they age.

As revealed through this dissertation, the meanings of the experience of shopping for apparel online while using virtual technology should be viewed in the context of the various aspects of age-related changes and generational cohort characteristics. When it comes to technology-related behaviors, this study demonstrated that it is incorrect to assume a negative relationship between age and the adoption of technology for use in apparel shopping. Moreover, findings of this dissertation establish the significance of apparel for expressing women's identities, regardless of age. By considering the fact that we all age and will ultimately become "older consumers," the hope is that this dissertation will help to shed light on this consistently overlooked apparel consumer demographic.

As the "new older consumer," baby boomers will undoubtedly overhaul existing views in regards to the behaviors of older consumers. Indeed, participants highlighted that age-related changes are not just the same physical changes that everyone goes through, but instead are individualized based on personal experiences, which ultimately shape one's apparel needs and preferences. As a cohort, baby boomers have extensive experience with technological innovation, they were exposed to the introduction of personal computers and the Internet, and now have lived through the COVID pandemic, which led to their increased reliance on technology. As a result, they are a tech-savvy consumer group that has few, if any, technological issues with online apparel shopping. As virtual technology has the potential to address one of their biggest challenges with online apparel shopping, a combination of unpredictable fit and inconsistent sizing, it is not surprising that female baby boomers would be very interested in this new technology. As this dissertation shows, they are not afraid to give it a try, as they are experienced in adopting the many technological advances that have emerged during their lifetimes. As one of the largest consumer groups and one with very high levels of purchasing power, fashion retailers will not be able to continue to ignore female baby boomers. Retailers must change their established views on "older consumers" based on prior generations. Indeed, this dissertation offers evidence that implementing virtual technology specifically for baby boomers to use as the "new older consumer" is an investment worth making, and one with great potential.

Thanks in large part to baby boomers, aging is being viewed in a more positive light than in the past. The baby boomer cohort's focus on healthy aging and their significant disposable income enables many to enjoy advanced stages of life. As a generation, they embrace the idea that age is more than a number, as it represents the totality of one's own life experiences, which

continue to become enriched with aging. With such a shift in society's view of the aging process, future older consumers are likely to continue to exhibit different apparel and technology consumption behaviors based on their own experiences with aging and generational cohort characteristics compared to those of the previous generations, including those of the baby boomers. Therefore, addressing older apparel consumers as "just a number" reflects a limited understanding of what consumers want from the online shopping experience as they age. Continued research on apparel and technology consumption is needed in order to understand each generation's needs and preferences as they, in turn, become the next group of "new older consumers."

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APPENDIX A: INTERVIEW SCHEDULE

Apparel Consumption

1. Tell me about a recent apparel purchase. What did you purchase? Where?

2. Please explain how you decide what to wear and what to purchase.

3. Is apparel important to you? Has this importance changed over the course of your life?

4. Are there certain factors that influence what you purchase and wear?

5. Is age important to your decision of what you wear? Has aging influenced what you purchase? Why or why not?

6. Is there a difference in what you wear now vs when you were younger? Explain.

7. Where do you find apparel that you would consider to be age appropriate?

8. How do you feel about your body size and shape? Has this changed with aging?

9. Think about apparel that you have purchased in the last three months. Are you satisfied with it, especially in terms of the fit and style?

10. What aspects of apparel cause the most problems with fit and style, if any? How do you approach solving these problems?

11. What kinds of apparel products give you the most problem with fit (e.g., pants, tops, etc.), if any?

12. Please describe the styles that you like most. Why?

13. Do you get ideas about what to purchase or wear from others? If so, who?

14. Do you consider others' opinions regarding what you wear? Why or why not?

15. Tell me about the style of female baby boomers. Is there a particular style you try to portray as a female of this generation?

Apparel Shopping Behavior and Experience

16. Where do you typically shop for apparel?

17. How often did you shop for apparel in the last year?

18. Approximately how much money do you spend on apparel per year?

19. How do you prefer to shop for apparel (online, offline, or both)? Why?

20. If you shop for apparel online, when did you start? Why did you start to shop for apparel online?

21. Describe your last apparel purchase online. What and where did you buy? Were you satisfied with the shopping experience? Why or why not?

22. In general, what are your experiences with online apparel shopping?

23. Tell me about your best and worst experiences when shopping for apparel online.

24. What are some of your main considerations when shopping for apparel online (e.g., price, convenience, selection, etc.)?

25. Do you shop for specific apparel brands when shopping online? Why or why not?

26. How important is the need to examine apparel fit before purchasing? Why?

27. For what occasions/activities do you normally buy apparel online?

28. What kinds of sources and devices do you usually use when online apparel shopping?

29. Does technology, such as the Internet or smartphone, influence your apparel shopping experience? If so, in what ways?

30. What are some advantages and disadvantages of using technology for apparel shopping?

31. Have your apparel shopping behaviors changed with COVID-19? If so, in what ways? (This can include online vs. store, less vs. more apparel purchased, or types of apparel purchased).

32. What suggestions do you have for fashion designers/retailers to make shopping online better overall?

Social Media Use

33. Do you have any social media accounts? If so, what types of social media accounts do you have?

34. How often did you use social media for apparel shopping?

35. Would you show me your active social media sites and explain how you use them for your apparel shopping?

36. (For participants who have an active social media account) Would you allow me to observe your social media activities for four weeks? I will observe your social media activities to gain a general understanding of your apparel consumption behaviors. Your activities, such as posts and comments, relevant to apparel consumption will be treated as digital data for my dissertation. Any personal information including your name and account will not be used as data.

37. Is there anything we did not talk about during the interview that you think is important to add?

APPENDIX B: OBSERVATION TEMPLATE

Observation of Participants' Social Media Activities

General Information

1. Name of participant (pseudonym):

2. Observation period:

3. Type of social media:

4. Fashion brands/influencers' page likes or following:
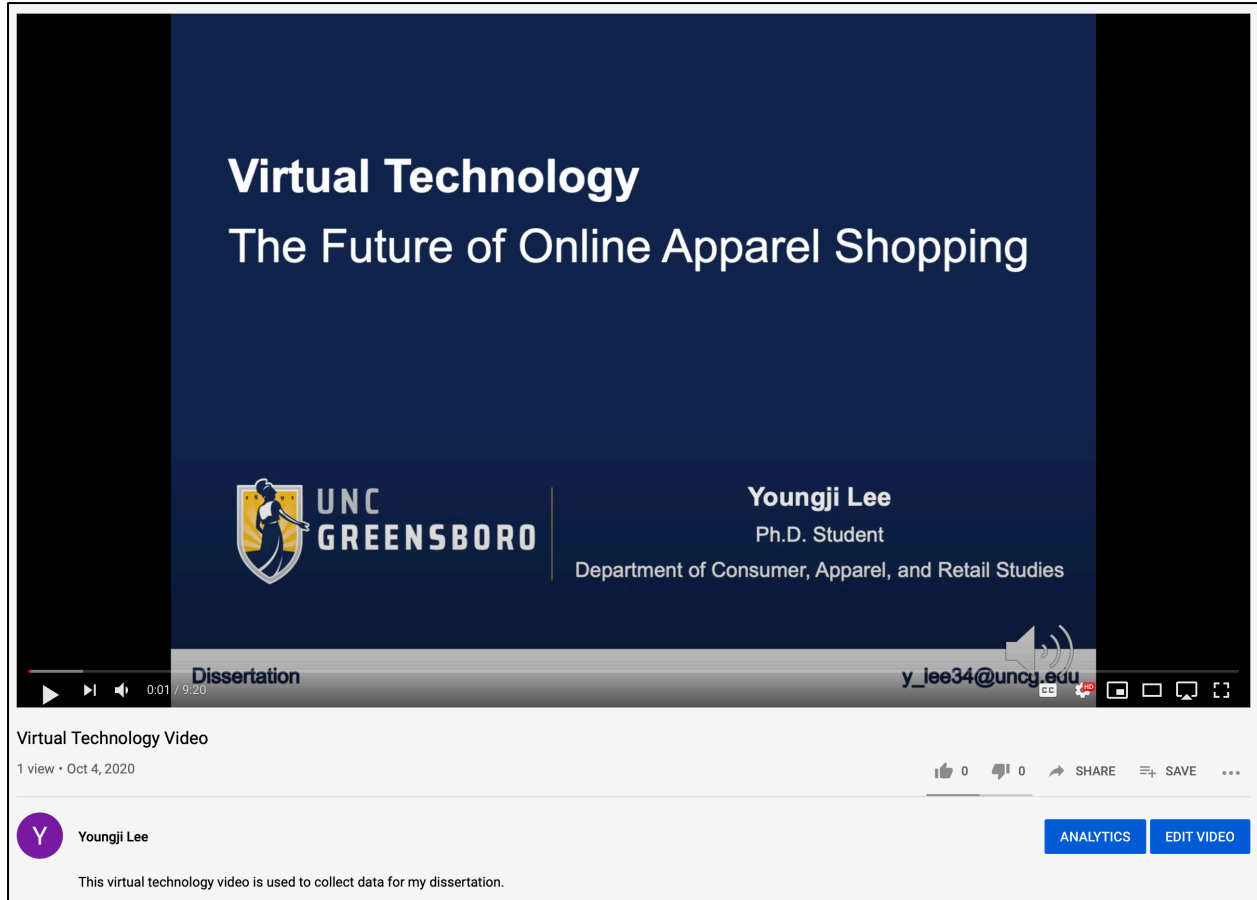
Activities and Interactions

1. Posts

Post #	Date	Title/ Topic	Brands/ Retailers	Contents	Comments

2. Other activities and interactions (e.g., Like, Share, Comment/Response)

Type	Date	Post Title/ Topic	Brands/ Retailers in Post	Post Contents	Comments/ Responses

APPENDIX C: VIRTUAL TECHNOLOGY VIDEO

- Video link: https://youtu.be/5eqj76RB9QQ

APPENDIX D: JOURNAL ENTRY TEMPLATE

Instructions: During the next five weeks, use this Google Doc to record details regarding at least 3 online apparel shopping experiences. Details of these online apparel shopping experiences should include all activities (e.g., browsing, searching, etc.), therefore it does not necessarily require that you make a purchase. Use this template to guide your entries. Please answer the questions included in both Part 1 and Part 2 for each entry:

Part 1: First, please watch this virtual technology video: https://youtu.be/5eqj76RB9QQ. Second, answer the following questions considering the particular online shopping experience that you are writing about for your journal entry. To be specific, you will have different online apparel shopping experiences for each entry, so you need to think about how virtual technology could impact each online shopping experience individually. Note that you only have to watch the video one time, but, if necessary, feel free to review it more than once to refresh your memory as you complete each journal entry.

Virtual Technology

1. Based on what was covered the video, would you want to use virtual technology for your online apparel shopping? Why or why not?

2. How might virtual technology benefit your online apparel shopping?

3. What do you think is important about using virtual technology in the online apparel shopping process, particularly for the specific needs of female baby boomers?

   Part 2: Describe the process of your online apparel shopping. Include in each entry your thoughts and feelings relevant to your online apparel shopping experience.

Shopping Information

1. Date and time (duration):

2. Visited sites:

3. Device(s) used:

Shopping Process

4. Starting shopping: Describe how you began your online apparel shopping experience. Where did you start shopping for apparel online (e.g., promotional email, catalog to online store, etc.)? Why?

5. Browsing: Explain what you searched for and found during your online apparel shopping experience. What kind of apparel did you shop for?

6. Purchasing or Not Purchasing: Describe your decision-making process for purchasing apparel. How did you make the decision to purchase or not to purchase?

7. Post shopping: How do you feel about your shopping experience?

Shopping Experience

8. Overall shopping experience: Describe your overall shopping experience. Are you satisfied with the shopping experience?

9. Suggestions: What are some problems you encountered during the shopping process, if any? Do you have any suggestions for retailers?

10. Is there anything you want to add?

APPENDIX E: FOCUS GROUP INTERVIEW QUESTIONS

1. Based on the video you just watched, what do you think about virtual technology?

2. Would you want to use virtual technology for your online apparel shopping? Why or why not?

3. Would you want to create your own 3D avatar? Why or why not?

4. Can virtual technology address issues with buying apparel online? Specifically those you may have experienced as a result of aging?

5. How might virtual technology benefit you when you shop for apparel online? Please explain.

6. What are some concerns you may have about using virtual technology when you are online apparel shopping?

7. What do you think is important about using virtual technology in the online apparel shopping process, specifically for female baby boomers?

8. What is most interesting to you about virtual technology? Why?

9. What is least interesting to you about virtual technology? Why?

10. Has the COVID-19 pandemic impacted your online apparel shopping behaviors? If so, in what ways?

11. Is there anything we did not discuss that you think is important for me to know?

Participation Invitation

Female Baby Boomers' Online Apparel Shopping with Virtual Technology

Please consider participating in this research, if you:

- are a female who was born between 1955 and 1964;
- have purchased apparel online within the last three months;

You will be asked to participate in two phases of data collection:

- Phase I: One-on-one interview;
- Phase II: Personal journaling or focus group interviews after watching a video on virtual technology

All data collection processes will be conducted virtually.

Your participation will last about an hour for Phase I and two hours for Phase II.

For participation and more information,

please contact Youngji Lee at y_lee34@uncg.edu

APPENDIX G: IRB APPROVAL

UNC GREENSBORO

To: Youngji Lee
Consumer Apparel-Retail Stds
Consumer Apparel-Retail Stds

From: UNCG IRB

Date: 10/26/2020

RE: Notice of IRB Exemption
Exemption Category: 2.Survey, interview, public observation,4.Secondary data/specimens
Study #: 21-0161
Study Title: Exploration of Female Baby Boomers' Consumption Behavior Using Technology:
Online Apparel Shopping with Virtual Technology

This submission has been reviewed by the IRB and was determined to be exempt from further
review according to the regulatory category cited above under 45 CFR 46.101(b).

Study Description:

The purpose of this study is to understand female baby boomers' perceptions of and experiences with
apparel shopping using virtual technology in the online context. Three research objectives were
developed to address this purpose: (1) to examine age-related needs and expectations of female baby
boomers as older apparel consumers, (2) to investigate how those needs and expectations can be
addressed in the online context, and specifically through virtual technology, and (3) to explore how
virtual technology can enhance the overall online shopping experience for this group of consumers.

Investigator's Responsibilities

Please be aware that any changes to your protocol must be reviewed by the IRB prior to being
implemented. **Please utilize the the consent form/information sheet with the most recent
version date when enrolling participants**. The IRB will maintain records for this study for three
years from the date of the original determination of exempt status.

Please be aware that valid human subjects training and signed statements of confidentiality for all members of research
team need to be kept on file with the lead investigator. Please note that you will also need to remain in compliance
with the university "Access To and Retention of Research Data" Policy which can be found
at http://policy.uncg.edu/university-policies/research_data/.