2005

The Retail Wave: A Look Into the Future of the Apparel Industry

Sarah Clemens

THE RETAIL WAVE

A LOOK INTO THE FUTURE OF THE APPAREL INDUSTRY

by

Sarah Clemens

A thesis submitted in partial fulfillment of
the requirements for the distinction of

University Honors

University of Northern Iowa

2005

Approved by _____
Jessica Moon, Director, University Honors Program

_____
James Mattingly, Honors Thesis Advisor

_____
Raj Rajendran, Honors Thesis Advisor

Date May 2, 2005

UNIVERSITY OF

NORTHERN IOWA

ABSTRACT

THE RETAIL WAVE:

A LOOK INTO THE FUTURE OF

THE APPAREL INDUSTRY

By Sarah Clemens

Professor Raj Rajendran
Department of Marketing

Professor James Mattingly
Department of Management

Where is the apparel industry headed? The need for retailers to diversify and understand current consumer needs will be the focus for survival as we move through the information age. Technology has and will continue to push the market into new ideas that allow niche retailers to stay slightly ahead of the game. Software to meet apparel consumer needs may be the answer for high end retailers. These retailers have an opportunity to embrace the consumers' internal problems by affirming that problems such as anxiety, obesity and depression exist. Software could help reach not only the consumer's money, but their humanity by creating an honest inviting environment. Should this proposed software be researched and developed further?

TABLE OF CONTENTS

LIST OF FIGURES

ACKNOWLEDGMENTS

The author wishes to acknowledge the support and advice from professor Raj Rajendran and professor James Mattingly. Their time and involvement has encouraged and motivated the process of a successful project. Thanks and appreciation for their attitude toward student learning beyond the classroom.

The author also wishes to thank family and friends for believing and supporting a new idea.

Chapter 1

A LOOK AT THE APPAREL INDUSTRY

Where is the apparel industry headed? The need for retailers to diversify and understand current consumer needs will be the focus for survival as we move through the information age. Technology has and will continue to push the market into new ideas that allow niche retailers to stay slightly ahead of the game. Apparel retailers have yet to diversify by fully utilizing the future of technological capabilities. Online apparel shopping is the only major advance we have seen as consumers in the last few years. How can we use technology to enhance the shopping experience for the consumer and simultaneously benefit the retailer in market share, market growth, and profitability?

Before answering questions about the future one must understand the industry's past. Technology has played a large role in dramatic changes within apparel retail. Flexible manufacturing has allowed more efficient fashion changes and greater responses to the customers' needs. "The customer is...demanding a greater variety of improved quality goods representing better 'value for money'" (Gower 7). Being able to manufacture more quickly as changes in design occur has allowed stores better opportunities to meet changing consumer trends. This process, known as lean manufacturing and just in time delivery greatly impacted the abilities for retailers to meet the customers' demand of greater variety. Before lean manufacturing, a pair of jeans took up to 40 days to make. Now, retailers could "lower their cost of inventories by dictating what products they wanted and insisting on shorter lead times" (Cortada 336). The customer's demands of greater variety could now be met by more fashion changes and up-to-date trends.

Bar coding also enhanced the apparel retailing industry. It allowed for better inventory management which, in turn made communication between suppliers and retailers more efficient and accurate.

Within the manufacturing realm, CAD/CAM (computer aided design/computer aided manufacturing) systems have made large manufacturing flexibilities possible such as faster market response to design changes and just in time manufacturing. It is also used to communicate with stores, a necessity in a fast moving industry such as apparel. This communication will not only grow more efficient and beneficial to the retailer, but also to the consumer who thrives on setting new trends.

The widespread availability of the internet has been the biggest breakthrough in recent years. From 1994-1996 brick and mortar retailers began to utilize this hungry monster of potential consumers. They began to advertise and create web pages. It wasn't until the end of the century did they begin to sell items directly to customers via the computer (Cortada 341). Retailers soon realized that the internet was an important means to attract and keep consumers as it continued to rise in popularity.

Strictly internet based retailers emerged as well. These retailers have virtual markets and besides an office building and a distribution center, have no store for the customer to walk in. Though these retailers are not the majority of consumer apparel sales, they have shown us the change the internet will foster over the next few years. "'These changes will be so profound that companies will have to realign themselves with an ever sharper focus on the customers than they have now'" (Cortada 344).

Who are the customers that "they have now" and what are the customers' needs? Most consumers today are time crunched, stress driven, self-conscious, visually stimulated, and future oriented. It is my dream for the future to realize software to enhance today's consumers' shopping climate and reduce the negative effects of the shopping experience on the consumers' personal identity. A concept was developed around this dream and I set out to find the answer to the next question in its realization:

Is there sufficient benefit perceived by a substantial consumer segment to merit further development of the concept. If 80% or more of a tested consumer segment perceives to

benefit from or is inclined to utilize such software, then there is evidence to support future development (Dolan).

This benefit must derive from the user – the consumer. Their problems and concerns are the determining factors for whether the proposed software may fix or reduce these concerns and meet their future needs. Consumer problems need creative personal avenues provided by retailers in a nurturing environment whereas consumption problems are directly related to the retailers' ability to create and provide better experiences for the consumers. These two types of problems will be discussed in the following sections.

Chapter 2

CONSUMPTION PROBLEMS

The dressing room has a number of problems: it's small, inconvenient, time consuming, and stressful. The dressing room is where most women spend their apparel shopping minutes. We grab 20 items seemingly our size and struggle to find one that fits, feels good, and will do the job 6 items at a time. "We've all been there: the too-small dressing room with the skimpy curtain, the hideous fluorescent lighting, bad mirrors and the lack of help when you need another size" (H). What is it about dressing rooms, sizes, and the shopping experience that frustrates consumers?

Time

Time is what the world runs on and what everyone else is trying to stop from moving. Time is our most precious asset. We should invest in it wisely – even at the mall. But too much choice has interfered with our ability to shop with efficiency. "...People are saturated looking for ways to simplify their lives and to reduce time spent trying to figure out what to buy" (Trebay). Searching an entire store for not only the right item, but the right size and the right cost only 6 items at a time has inefficiency spread all over it. A study in the UK reported that most people (57%) go to get what they are looking for and get out. Only "...16% claim to enjoy shopping in general" (Design Week). What have retailers done to help the time-pressured customer?

Macy's department store is on the right track. They are appealing to the younger time crunched consumer through their "by appointment" campaign. With a quick phone call, stating what one is looking for, what size, and what designers fit your interest, one can set up an appointment with a personal shopper. Stress is last on the list for this consumer. A private dressing room is available with a robe, bottled water, a relaxing environment, and all the time you need to try on the clothes that have been picked for you. He or she will search the floor for different sizes or other items while you just relax. The personal shopper is a

time saver and a stress-reliever (Neubert). This shopping process would require much more floor space to create multiple private dressing rooms and appeal to all customer segments including those that still enjoy browsing. And, it still doesn't cure the hassles of trying on clothes.

Trying on Clothing

"More and more often, the only try-on occurs in the customer's home, no matter in which channel the purchase was made. [Some] just don't have the time or inclination to spend time in a store dressing room" (Harris 146). And some just don't like the dressing room. It becomes stressful when the purpose is confused. Is one there to try on clothes, fight with a plastic hanger, or find an item to purchase? Probably, the worst shopping horror known to woman, is shopping for a swim suit:

> My humble requirements were as follows: fewer than $35 and making me look like I took off 35 pounds. I arrived at the store and picked out 11 different styles and sizes. They all looked undersized. I headed toward the chamber of horrors called a dressing room and a frowning attendant counted out six suits – informing me that was all that was allowed at one time. 'Can you bring the next size to me?' I pleaded. She...grudgingly agreed. I couldn't see myself walking out in one of them for replenishments with my unshaven white legs and unpainted toes. I undressed and fought my way into the first number, squeezing my eyes tightly. When I opened them, I was horrified. The lighting in those places turns a person yellow and most people look like they are in a police lineup. I was certain that the three-way mirror had to have come from a fun house. I...called for replacements. 'Did you find anything?' I hated the smug look on her face when I muttered a no to her. (Foster)

Sizes

Non-standard sizes have also contributed to the inefficient shopping experience. This is especially true for women. "It is not unusual for a woman to have garments in her wardrobe

labeled from a size 8 to a size 14 depending on the style of garment and the shop from which it was purchased" (Gower). Size variation makes it difficult for the consumer to identify those items which fit him or her. One may be looking through an entire rack of clothes perfect for his or her body and not even know it because the label has eliminated the choice based on the customer's perceived size.

Shopping for Others

Shopping for others can be a chore as well. Now the dressing room is more than inconvenient, it's useless. How does one find the right size, right style, and right price for someone else, when they can't do it for themselves? Think of the savings retailers would see if item returns after Christmas could be reduced. Software may be the only answer.

So what do consumers want? They "want to see a point of view when they are shopping. They want something exciting and they want it edited down...the best style and value for the money" (Trebay). And they want to see it in a unique size. Many problems known to the shopper go unknown to the retailer. The coming age will be insisting that retailers know more about the customer and tailor their experiences to meet these consumer needs.

Chapter 3

CONSUMER PROBLEMS

Consumption problems may not be the only problem when shopping. Consumers walk into a store carrying a history. This includes one's attitude, one's personal problems and one's mental and social conditions. Shopping has consistently been viewed in the past as the stress-relieving activity of the day. Maybe today it has turned into a social anxiety enhancing, depression inducing activity we refuse to see coming.

Social Anxiety

"Anxiety disorders are the growth industry of mental health" (Owens). More common in women, these disorders rank number three following depression. Anxiety includes being afraid of being watched or embarrassed, standing in lines, and avoiding social situations. "She is conscious of the fact that people might be staring at her from the big mirrors" (Richards). Anxiety may not be hindering the shopping experience by everyone, but it certainly is growing in its presence among women. It holds one back in social situations and is often confused with shyness.

"Shyness is experienced by about 40 percent of the population" (Reesal). When this shyness disrupts social situations such as shopping, it could be social phobia or social anxiety. Whether it is labeled shyness or social anxiety some women experience these symptoms. These women may be shopping more online, or buying clothes to try on at home instead of in the store. "People with social anxiety are misdiagnosed almost 90% of the time" (Richards). These people with social anxiety must be exposed to social experiences in order for them to overcome their condition. Social phobia "is an illness for which the economic and social impact for the sufferer and society has been ignored" ("What is Social Phobia").

How might the apparel industry tend to the needs of these consumers and make the shopping experience less prone to such anxieties? Maybe the answer is more accurate online

shopping or more privacy shopping in a store – maybe the answer lies in software. A first step for these individuals may be shopping online or shopping in-store with the use of a computer. Shopping could be an individual experience within a social realm for this large target market.

Depression and Obesity

Those with social anxiety have also been known to suffer from depression and eating disorders. This continuous cycle has been researched suggesting that at least 35% of people with this phobia are more prone to experiencing depression at some point in their life ("What is Social Phobia").

"Overweight and obesity combined afflict almost 65% of Americans" (Stunkard). Research has uncovered a link between obesity and depression, especially among women. These conditions are determined by genetic, environmental, and regulatory factors (Stunkard). The shopping experience is an environmental factor that affects are attitudes, sensory perceptions, and mental state. Not only does shopping cause frustrations, but it may be affecting our mental health and our perception of our physical weight. "Environmental factors clearly influence the development of obesity, as shown by the powerful influence of social class and...the rapid, epidemic increase in obesity in recent years" (Stunkard).

The shopping environment influences more than the retailers' consumption problems. Recognizing that the health and attitudes of their customers are also impacted will enhance the retailers' ability to offer better services. When trying to meet the needs of the consumer and women in particular one must be able to connect to a "woman's specific realities (body size, shape and health)" and respond to "how her emotions around those topics may affect her purchase" (Johnson 31).

Chapter 4

A SOLUTION

What if most consumption and consumer problems could be minimized? It may be closer than one thinks. Retailers who differentiate themselves in order to offer consumers unique experiences may be able to gain a future competitive advantage through the utilization of technology. Virtual fitting room software may be the beginning of a new retail wave in the way that we shop.

"Many [people] feel an almost physical discomfort in response to a marketing effort that discounts them, pegs them as "typical" women…" (Johnson 31). This software is a way in which each individual does not have to be pegged to anyone but themselves and exactly who they are. It is a way of redefining how we serve our customers to meet *their* needs.

This software has many characteristics. These photos taken from MyVirtualModel.com have

similar features to my software product idea. This idea would create a possible new service to the shopping consumer. Instead of a virtual image, as seen in this photo, an exact replica of one's physical being would be present. 3D body scanning technology, already developed and on the market by 2006, would be the enabling technology behind the software program.

3D body scanning is a fairly new concept to most people. It involves a white light scanning one's body with 12 sensors at 4 different angles and 3 different heights (TC2). This process is done in less than 6 seconds and can collect as many as 800,000 data points of one's body (TC2). Current uses of

this technology include medical research, virtual gaming, and apparel manufacturing research for changing sizes in America. Refer to Appendix A for a complete listing of body scanning capabilities.

After having ones body scanned and loaded into the software, one would be able to virtually see the entire store's inventory. This would include shirts, pants, hats, shoes, and anything else that one would normally try on. Another feature of the software is its ability to sort and query search results. Similar to this photo taken from MyVirtualModel.com, a database would allow the user to search the inventory according to certain criteria. These criteria could include size, fit, style, material type, price, sale items, etc. Once one has narrowed the inventory down to his or her preferred selections those items may be virtually fitted on to ones body replica. The software system would adjust fit according to ones likes. If perhaps, one likes t-shirts slightly large, he or she can adjust his or her fit settings for t-shirts to accommodate preferences. Fitting rooms would not be eliminated but rather reduced in number and increased in size. They would become an option rather than a necessity. Relaxing atmospheres and stress-relieving shopping due to more effective shopping is the ultimate goal of such software.

Other capabilities of this software include being able to shop more effectively for others. Christmas shopping would no longer be filled with day-after returns. With a 3D image of anyone one knows, one can shop for them and know that it will fit. Many people don't buy clothing at all for others because of this concern. It no longer has to be a mystery or hassle.

Once an item is selected, finding that item in the store may be easier than ever. Global positioning could be incorporated through the use of radio frequency identification by

locating the exact rack at which one's selection hangs. These added capabilities were not part of the initial concept test, but are possibilities if software moves further into development.

With software such as this the possibilities are endless. Receiving helpful online advice about clothing types and styles best fit for ones body is not out of the question. Shoes, eye-glasses, and jewelry could easily be viewed hassle free. If it saves time for the consumer, lessens inefficiencies, and costs are minimal to the retailer it won't be long until we see an action taken. It will be an effort to listen and respond to much needed concerns from the one producing the sales – the consumer.

There is still a question of how exactly this software might be utilized. Three different options or scenarios have been formulated and used as the basis for predicting future utilization.

Scenario A (In-Store)

The first option and initial idea is to utilize this software from inside the retail store. This photo has been taken from TC2, an apparel research company devoted to 3D scanning and new capabilities within the apparel industry. This picture illustrates what an in-store computer might look like. Using the software in the store has many benefits. One can still enjoy the benefits of social shopping, but also be effective in finding the right item. Instead of browsing the store, one would walk to an in-store computer and upload his or her 3D body image into the program. One's personal file would appear along with the store's inventory. After narrowing the search to preferred selections, a couple items can be chosen in minimal time and still tried on in the fitting room if desired. The in-store software will save dressing room time, allow for socialization and still include the benefits of shopping outside of the home.

Scenario B (PDA)

For those concerned with privacy and security issues, using one's own technology may prove to be more effective. Instead of using a computer in the store one would use his or her own personal digital assistant or other hand held device capable of running software. As a customer, one could access a wireless network simply by walking into the store. The advantages of using a PDA or other like device are clear. Privacy and fear of one's 3D image being seen by others could easily be avoided. Using a hand held device could also increase the benefits of this software. If perhaps, one was shopping at various stores before making a final decision on a purchase, the PDA could help increase effective decision making. The software would allow one to save a few items on the PDA, so that after leaving the store these items could still be viewed. Several items from various stores could then be saved and viewed at home or in the company of someone else before making a purchase decision.

Scenario C (at home)

This final scenario is closest to being realized. Online shopping at home is in the industry's past and will be enhanced in its future. This software is one answer to the fear of buying clothes online. Stores such as Newport-news and Delia's (virtual market retailers) would gain consumers that were once in fear of multiple returns. "Apparel return rates in catalog, TV, and on-line shopping can run at 30 percent or higher" (Harris 146). Being able to virtually try on clothes using ones exact body measurements may even diminish the "size" label on clothing altogether. Stores that have an online presence but also maintain brick and mortar stores could also benefit. Using this software at home would allow someone to

shop and try on clothes at any time of the day. If the actual store was located near them, they may also have the option to save it for pick up the next day during business hours.

Chapter 5

METHODOLOGY AND RESULTS

The study consisted of a focus group, a concept test, and data analysis. The focus group was an informal oral discussion used to further develop the concept before formal testing. Analysis was done using concept testing, rule of thumb, and statistical t-testing.

Focus Group

A focus group was conducted to verify the consumption and consumer problems and gain insight to a clearer product concept. How might one change the shopping process and what does one really want to experience in this process? A group of 11 UNI students including 10 females and 1 male on February 24th of 2005 revealed the truth about their shopping experiences.

The focus group was designed to be a group discussion about the shopping experience. Participants were allowed to take notes, but encouraged to speak to the group at anytime. The research was explained as the beginning process of defining a new product concept. The actual software was not mentioned. This allowed open thinking and more ideas concerning possible changes in the experience.

The risks and benefits of participating in this study were explained. Refer to Appendix B for complete notes and the informed consent.

Topics discussed included emotions, salespeople, dressing rooms, and the perfect shopping experience. Emotions experienced while shopping were listed and then examined further to find the cause of the emotion. Excitement was experienced by the participants when they found a great deal or the perfect outfit. Some were annoyed because of hounding salespeople and the long lines. Others felt depressed because clothing items didn't fit. Frustration was found for some due to size differences according to brands. Guilty was even mentioned as an emotion when spending money one shouldn't or spending someone else's

money. The variation in emotions was large; shopping isn't always the perfect outlet of stress for women. Sometimes it may be the cause. How might software get rid of the negative emotions and keep the positive?

The next discussion concerned salespeople. What are their roles and which are of benefit to the shopping experience? Their helpfulness was viewed as both positive and negative. If one gets help when he/she doesn't want it, it is no longer helpful. So how do we know what each person's threshold is for help? Greeting, opening dressing rooms, informing of deals and opinions when trying on clothes are all good things that turn sour once the customer has had enough. The salesperson also does critical tasks such as cashiering, taking care of customer returns and demonstrating the store's image to the shoppers. Solving the problems mentioned above may entail redefining what the salesperson does. How can we keep the beneficial aspects of his or her job and let the customer decide when and where?

The dressing room was a topic of many negative reactions, though there are some positive reasons for having them while one shops. The dressing room is a place of assurance. If one is not sure of the fit or wants to get excited about the occasion in which one will be wearing the outfit, the dressing room is the place to be. Certain shopping occasions are social events and require fitting rooms before purchase. These would include such items as a wedding dress, prom dress, and many times outfits to be worn that afternoon or evening. The fitting room is often the place for many negative feelings when it is not one of these occasions and is wasting one's time. Frustrations mentioned by the focus group included: re-hanging clothes, ink tags, removing clothes, wasting time, requiring effort, and causing static hair. We assume these frustrations as if there is no way around them, but maybe there is.

The focus group participants were finally asked to think of what their perfect shopping experience would entail. How would one go about shopping and what would be particular about this store? It would have everything that *I* wanted to see. *I* could see the entire store's inventory or just my own size and price range. This store would have less people and no lines for easy check-out. Restrooms would be located in the store along with buzzers inside the fitting room if *I* needed assistance. Finally the store hours would be different, so I could

shop when *I* had time. People wanted a tailored experience to their needs. My original software idea was adjusted slightly according to focus group responses to include the 3 different scenarios of utilization as mentioned above: in-store, via a handheld PDA, and at home.

Concept Testing

New product development often entails an initial internal business screen. This is the first check in most cases followed by a concept test. Concept testing measures "consumers' reaction to a proposed product on multiple dimensions" ("2 Note" 84). Concept testing is used to forecast actual measures of benefit, utilization, preference, etc. As part of data analysis, the concept testing rule of thumb is used to forecast actual usage. The general rule of thumb according to Taylor, Houlahan, and Gabriel (1975) that "...a concept statement should receive 80% to 90% favorable answers to encourage subsequent development work" was used as the basis for inferences drawn.

The virtual fitting software concept was further developed and adjusted through the focus group and then tested for perceived benefit and utilization. The consumer's reaction was measured according to concept clarity, perceived benefit, perceived utilization, perceived benefit when shopping for others, and perceived preference. The tone of the test was mixed between factual and persuasive. The scenario was set in a persuasive tone as it would be in the market, where as the software capabilities that followed were presented factually. Utilization intent may be slightly affected (increased) due to the persuasive tone. Words plus visuals were used to insure clarity of the concept, though this might also affect perceived benefit and utilization in a positive way. Data analysis and conclusions were performed under these considerations.

Participants

39 Males and 70 Females participated in this study. Data was collected from college students attending the University of Northern Iowa, shoppers at the local mall, and various hospital

workers. Age ranged from 14 to 77 years old for the female participants and 19 to 64 for the male participants. A completely random sample is not required for concept testing, nor was it used for the purpose of this study (Dolan). A total of 319 surveys were collected from 113 individuals most of whom participated in all three of the studies. Refer to Appendix B for informed consent transcript. The table below outlines the demographic percentages of participants.

TABLE I

Demographic Descriptives of Sample Groups

	Test A (In-Store)	Test B (PDA)	Test C (At Home)
Gender			
Male	35.24%	37.50%	35.19%
Female	64.76%	62.50%	64.81%
Age			
>50	11.43%	11.54%	12.04%
25-49	20.00%	20.19%	21.30%
<25	67.62%	67.31%	65.74%
Income			
>60K	14.29%	11.00%	15.74%
<60K	84.76%	85.58%	84.26%
Skill			
High	39.05%	40.38%	38.89%
Low	60.00%	59.62%	61.11%

Procedure and Materials

Participants completed the study within a 5 minute time frame. The participants began by reading a brief scenario (either A, B, or C) and the software's capabilities. Refer to Appendix C to view a sample of each information sheet and the formal survey test. They were instructed to rate the following 5 statements according to their agreeability, referring back to the information sheet if necessary.

1. The concept is clear to me.
2. I perceive a benefit from virtual dressing room software.
3. I would utilize this software if it was available to me.
4. This new software would help me shop more effectively for other people.
5. I would prefer a store that had this software.

The statements were rated on a 5-point scale including 1-Strongly Disagree, 2-Disagree, 3-Undecided, 4-Agree, and 5-Strongly Agree. After completing the 5 statement ratings, the participants responded to 4 demographic questions including age, gender, income level, and computer skill level. The concept testing rule of thumb and statistical sample t-tests were used to analyze and categorize the data after collection.

Demographic Groupings

Three different age groups were used (13-24, 25-49, and 50-77). Income was divided at $60,000 for even distribution of participant groupings. Anything over was considered high income and anything below was labeled low. Computer skills were rated on a scale of 0-3, 0 being none and 3 being high. Ratings of 3 were considered high and all other ratings low because of high self ratings. These cutoffs more accurately approximated a normal distribution across categories.

Overall Results and Analysis

All three tests combined did not yield a cause for further development. Concept clarity was high, but no other statements had 80% or better agreement, constituting weak evidence that the software should be researched further as shown in Table II.

TABLE II

Overall Test Scores (A,B, and C)

	Concept	Benefit	Utilize	Others	Prefer
# scoring 4	116	150	114	127	107
# scoring 5	184	100	88	85	80
Total	300	250	202	212	187
Percent	94.64%	78.86%	63.72%	66.88%	58.99%

TABLE III

Overall Test Scores (A,B, and C)

	Concept	Benefit	Utilize	Others	Prefer	Age
High	5	5	5	5	5	77
Average	4.53	4.06	3.77	3.77	3.73	83.71
Low	3	1	1	1	1	13

Averages across all statements did not fall below 3-undecided, though most ranged from 1 to 5 in ratings. The data was analyzed further for variations between scenarios A, B, and C.

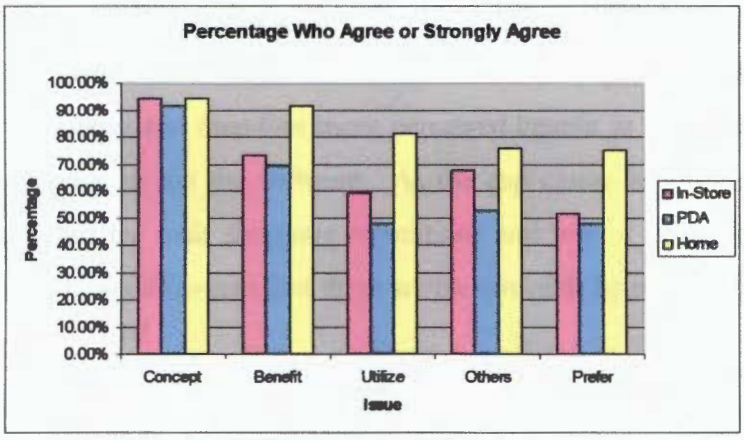
The differences between tests yielded much different results. The 'at home' scenario (scenario c) averaged the highest across all statements followed by 'in-store' and finally the PDA. The difference between scenario averages could be due to current technology knowledge and availability. Most people have a computer at home and if not, know how to operate one. The difference between the perceived benefit for shopping for others at home compared to in the store can be attributed to convenience minus the "fun" factor of shopping in the store (.13). This fun factor could be the fun of socializing while shopping or merely being able to see, touch, buy, and carry the clothes out that day if necessary. This still doesn't explain why perceived benefit differences (.51) across the two tests are much higher than perceived benefit when shopping for others (.13) across the two tests. The differences

TABLE IV

		Concept	Benefit	Utilize	Others	Prefer	Age
In Store	A Average	4.50	3.91	3.72	3.83	3.60	27.93
PDA	B Average	4.47	3.83	3.45	3.50	3.50	28.14
Home	C Average	4.61	4.42	4.13	3.96	4.06	28.34
	C-B		0.51		0.13		

between the two (.38) must have some other cause. It could be embarrassment, self-consciousness, or even lack of software necessity when shopping for oneself. When looking at the differences using the rule of thumb, one can see similar results.

CHART I

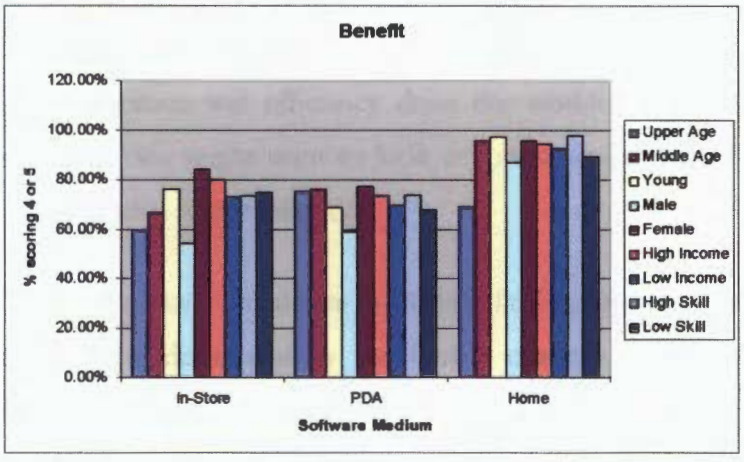


The 'at home' scenario for the software scored above 80% for benefit and utilization. Convenience and pre-acceptability of shopping online for clothes are likely causes for such high response rates.

Demographics were used to categorize results. If certain segments perceived the software to be worthy of future development this should be addressed as well. Each statement was broken down by age (older, middle, young), gender (male, female), income (high, low), and skills (high low) and then compared across each test (A, B, and C).

Concept clarity scored over 80% and most over 90% within each demographic category. The perceived benefit and utilization according to demographic categories is most useful in determining future utilization and research potential. As this chart suggests, the benefit for an 'at home' software is far greater than the other two media.

CHART II

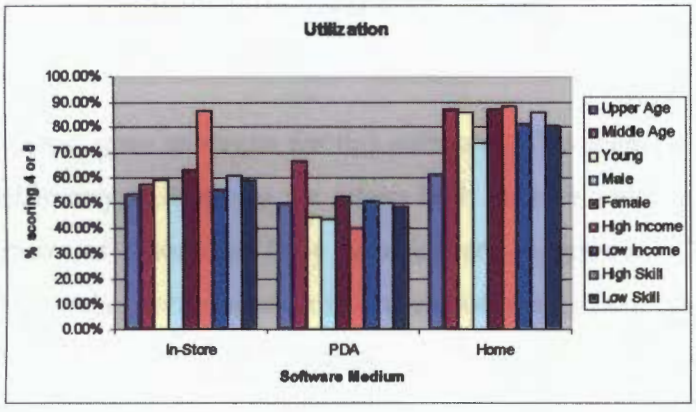


The only category not to perceive benefit at home is the upper age. Older people have not grown up with computer technology and many do not operate nor do they own one. This could be the cause for their lack of

perceived benefit from such technologies and operating them without added assistance.

Before categorizing results according to demographics, no other options appeared to have significant perceived benefit. As the above chart shows, that is no longer the case. Females have over 80% perceived benefit. This may be a segment that needs to be looked at further. The difference between male and female is also quite interesting. Males seem to gain more confidence and therefore more perceived benefit as they move to a more private location – at home, to use the software. As the gap closes between males and females, so does the concern for male shopping reputations and fear of being noticed. Other factors may play into these differences, but these are recognizable by most consumers.

CHART III

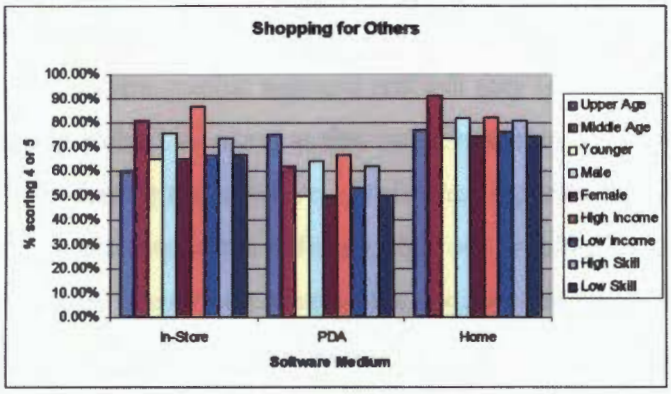


Perceived utilization was fairly consistent with perceived benefit for most demographic categories. The major differences occurred through the in-store and PDA usage. Looking at the PDA responses one can see middle age utilization far exceeds the other categories. This is most likely due to ownership of such hand held technologies. The middle age represents the vast majority of the workforce, who own and use hand held electronics more than other age groups. Even though the middle age bar does not exceed 80%, this option should not be excluded in software development stages. The PDA and other hand-held devices (cell phones, Blackberries™) will continue growing in demand and usage as communication and efficiency drive the workforce. Though this may not be the case currently, one might want to look at future projections of hand-held technology to more clearly predict future utilization.

The above chart also shows interesting findings for in-store utilization. Whereas perceived benefit was dominated by the female category, high income greatly exceeds the other demographic groups. Why is this? This study did not suggest clear causes for outlying data,

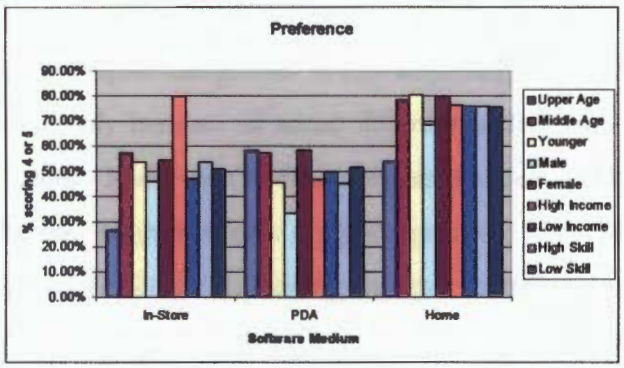
but it does give insight into possible markets for new software. If proceeding studies verify the high utilization of high income consumers, marketing should be directed to high income stores. It also suggests high income females as a target market. This section will yield the highest benefit and highest utilization of an in-store software program.

CHART IV



This chart shows the variation across mediums for the statement, "This software would help me shop more effectively for other people." There is less variation between at home and in-store responses than both the benefit and utilization statements. Middle age users appear again as targets for this software. This segment sees an opportunity to create more efficiency in shopping for others both in-store and at home. This segment of the market, many of whom are baby boomers are go-getters. They are time crunched because of demanding jobs and want to accomplish things faster and more efficiently because they can. If software can help them be more successful at an already difficult process, this target market is the group seeing the most benefit. High incomers should not be left out of this analysis either. Again, they see an in-store and at home effectiveness in shopping for others. One should also consider the number of baby boomers and middle aged consumers carrying upper income salaries.

CHART V



The last statement that demographic groups were compared on was concerning preference of a store with software against one without. None of the categories scored over 80%, but some were fairly close. Younger, Females preferred to have software at

home as opposed to no software for shopping online at home. Because the other demographic categories of the at home medium were fairly close to these 2 groups, one should not conclude that these are the only two categories preferring this software as an online resource. The upper age did score quite low again on preference at home. This is another category of concern for the future. Even though the chart is flashing "Don't market to them", one might want to consider the upper age category in the future. Who will make up this demographic segment and will they be more technologically advanced than the older group today? Looking at this category within the in-store scenario, there is an even smaller % preferring the software. Preference suggests that if two stores were identical except for the availability of the software, that one would pick the one with the software. Older aged shoppers often don't have a time concern and prefer old fashioned ways as long as they still work. Change is a process and takes more than entering a product into the market before people will accept it. The low preference rate of the older-aged crowd is not surprising considering their shopping habits and stage in life.

The above chart also depicts the high preference among high incomers for the in-store scenario. This group also scored high on utilization. Not only will this group use software if it's made available, but they are more likely to pick a store with it over one without. Further research about this segment of consumers will be needed to support these statements. If more support is received, this is an important conclusion for high end retailers. If they market to high-income consumers, they have possibilities of making themselves distinct and the chosen store for the future.

So far the highest scores have come from the female, high-income, and middle aged demographic categories. Is this surprising? No. The gender differences for benefit are clear. Not only because of social differences discussed earlier, but also in shopping and buying habits. Males don't often shop as a social activity. It's a task in which the less help the better. High-incomers is a good group to have utilizing such a software. High-end retailers are more likely to be willing and able to endure these costs if there are long term gains from their high end consumers. High income usually means a greater willingness to pay for

services once thought to be time consuming and wasteful to one's day. Indirect costs will be allowed by this segment more if perhaps garments are marked up to eliminate total costs to the retailer.

Statistical Results and Analysis

The 2-tailed t-test was used to test whether the difference in means observed in the data were statistically significant. The hypothesis used on all tests regarding the mean was 0. Alpha was set at .05. All statistically significant differences have been indicated with an X in the tables below. When reading the tables F/M refers to female and male, O/Y refers to old and young, HI/LI refers to high income and low income and HS/LS refers to high skill and low skill. The sample data collected and used for testing is not a clear random sample. Therefore, inferences drawn in this section should be noted as possibly skewed or too hastily generalized. The statistical analysis does give more support to the above analysis, but also draws interest to other areas that may need to be considered in the next development.

TABLE V

Significant Mean Differences in Score of Concept Clarity:

	F/M	O/Y	HI/LI	HS/LS
In-Store			X	
PDA				X
Home				

The mean difference between groups for concept clarity was significant for income and skill. High incomers understood the concept more clearly than low incomers for the in-store scenario and high skilled participants understood the concept more for PDA usage. It is possible that likelihood of usage skewed their responses to clarity of the concept. This would make sense because high income scored high on utilization and preference. Although, it might also be that high income stores are closer to a technology like this and may have other computerized equipment allowing those consumers to grasp this concept slightly more. The

difference in skill level is fairly simple. Those with more computer skills, and hence more technology skills understand the ability and capabilities of software on a hand-held PDA.

TABLE VI

Significant Mean Differences in Perceived Benefit

	F/M	O/Y	HI/LI	HS/LS
In-Store	X			
PDA	X			
Home				

The mean difference in perceived benefit is similar to that found in the rule of thumb tests. Females had a significantly higher mean than males. The t-critical deviation for differences in means between males and females in the 'in-store' condition was 2.00. Against the critical t-statistic value of 2.00 the calculated value for females was 3.49. The PDA condition yielded similar results with the calculated value of the t-statistic being 2.88.

TABLE VII

Significant Mean Difference in Perceived Utilization

	F/M	O/Y	HI/LI	HS/LS
In-Store	X		X	
PDA				
Home	X			

This table represents the mean differences in likely software utilization. There is a significant difference in means between males and females but for different scenarios than observed for software benefit perceived. PDA is the most difficult scenario to grasp and most high skilled users understood the concept better. It could be that more of the high skilled users are males than females and therefore lessen the variation between female and male utilization. The difference of high to low income is clearer. T-critical is 2.07 and the calculated value was significantly different at 2.25. Earlier graphs depicted this large difference in utilization between high income and low income earners.

TABLE VIII

Significant Mean Difference in Perceived Benefit for Others

	F/M	O/Y	HI/LI	HS/LS
In-Store			X	
PDA				
Home	X			

Differences in means for perceived benefit was only significant for two demographic categories. High income earners have a significantly higher mean than low incomers for the in-store medium. Females also had a significantly higher mean than males when seeing a benefit for utilizing the software when shopping for others at home. The benefit may be larger here because shopping for others is more likely to be done alone. Because shopping online is not considered a social activity at the mall, it is perceived as more beneficial for shopping for others. It can be done faster, more effectively and without the unnecessary trip to the mall.

TABLE IX

Significant Mean Difference in Perceived Preference

	F/M	O/Y	HI/LI	HS/LS
In-Store				
PDA	X			
Home				

Preference is harder to measure than the others, especially when the product is still just a concept. Females expressed greater preference than males in the PDA condition. However, this difference may need to be further tested, as it appears to be counter intuitive.

Conclusion

As both the rule-of-thumb and statistical t-tests have shown, there are certain segments of consumers to whom this software is appealing. The middle-aged, high-income, female is a person noteworthy of future research attention. We will call this woman "Becky". Becky could possibly be a target market for online software and in-store software.

TABLE X

The Generations

Generation	Born	Age in 2003	Estimated Pop.	Women Pop.
Y	1980-1997	6-23	74.2 million	36.2 million
X	1965-1979	24-38	62.1 million	30.8 million
Baby Boomer	1945-1964	39-58	80.2 million	40.8 million
Mature	Before 1945	59+	50.7 million	28.7 million

(Johnson 84)

As Becky becomes older, she may still see interest in shopping online and in-store via this new technology – contrary to what these results reveal about the older segment. "Baby boomers are the largest, most affluent, most gadget-grabbing generation in American history" (Harris 108). Becky's PDA usage may not increase as she moves out of the workforce, but her offspring may be more familiar with the hand-held devices. As her daughter, Peyton, moves into the workforce and starts earning a similar income she may be more inclined to use her own futuristic cell phone capable of all hand-held technologies, when shopping for whomever and wherever she may be. "Echo boomers represent nearly as big a population as the baby boomers. They are growing up with technology as a passive influence on everything around them, and will be in a great position to become 'customers for life' if influenced early" (Harris 109). What is it about this generation Y that makes it a promising market for virtual dressing room software? They are "optimistic", "technology savvy", "doers", "entitled", "multicultural", "individualistic", "education focused", "socially conscious", confused and stressed", "independent", and "entrepreneurial" (Johnson 85). If that doesn't look like opportunity, nothing will. Both of these generations should be understood and targeted for any products involving technologies in the future. Not only should they be targeted to, but more importantly listened to.

Boomers, like Becky want more out of their shopping experiences. "Shopping for clothing used to be a miracle cure for baby boomer women" (Harris 137). So what happened? The boomer moved through life, but the apparel industry did not follow. Sizes were separated into misses and plus-size, the boomer got bigger in size, and her life got more hectic. If we

listen to this segment's needs we are able to see an exciting future in apparel. These women want to be served to directly. As an ad in More Magazine suggested, "If you want my money, stop showing me pictures of my daughter in underwear". The technology researched is a perfect way to give the boomer a tailored experience – an ability to see clothing on real bodies and not size 2 models. "The customer is dying to be heard" (Harris 147).

Chapter 5

WHERE ARE WE HEADED?

The Next Steps

A more in-depth product development test is the next step in the market entry process of apparel software. A more extensive survey may be directed towards our possible target, "Becky". She will tell us what she wants out of the software and how she wants to interact with it. This will aid in developing a prototype or model of the software to be pilot tested and tweaked. Before these next big steps a more appropriate avenue may be involvement with retailers. If there is no interest from the investor, there is no product for the market.

As mentioned previously, the test is a rough indicator of interest. Presenting results to a high-income retailer and suggesting further development should be considered. Working with the investor of such a product could generate higher market interest and possible funding for product development. Their interest is more important than the consumer's interest at this stage. Consumer interest is merely a means of receiving retailer interest.

Software Issues

Many other issues not clearly addressed involve the virtual representation of a garment to be placed on a 3D body image. "The problem of accurate representation of flexible materials on a computer screen remains one of the most fundamental left to solve" (Gower 118). Many virtual clothing problems relate to the shape and geometry of the garment, material behavior and how it interacts with the environment. Cotton behaves much differently than spandex and spandex much differently than mesh. Included in these differences are friction rates, fabric wrinkles, and gravity. Resolution of these issues will determine where and when software technologies may take the industry.

Future for Apparel Retailing Industry

Where is the technology going? Its interaction with the customer has increased immensely just within the last few years. In-store computer touch screens are making their way into retail stores. Many opportunities exist for retailers to make the most of these systems to increase customer satisfaction. This may include global positioning for easy item location within the store and in-store computer touch screens for customer accessibility (Gower 126). Catalogues may eventually be on CD-ROM someday and tailored to one's own body shape and size (Gower 127).

Retailers are also looking for ways to reduce their costs. Self-service is one way to achieve lower costs. In grocery stores, "self-checkout systems, which cost about $80,000 apiece, can pay for themselves in less than a year and a half" (Spector 64). But that's not all they can do. Self-checkout systems or other self-service devices enable more employees to be focused on helping the customer in other ways. One advantage of consumer apparel software is a decrease in the sales force and more opportunities to help when one can't help himself.

Apparel retailers need to be considering the wants and needs of the customer. Getting rid of shopping hassles and frustrations will separate the leaders of the industry from the followers. This means appealing to both the young and older shopper and listening to what they want: more mirrors, more dressing rooms, and more space even if that means giving up choices. "Reviving interest from younger shoppers through innovation, while keeping the general customer happy with efficiency, appears to be the primary design challenge for the industry" (Design Week).

Innovations such as virtual reality are inevitable in the fashion world. Technology will increasingly be used to redefine the processes and relationships between suppliers and retailers. Even now, the potential and capabilities are near to reality. "To capitalize on its potential the clothing and textiles market needs to embrace 3D as an unavoidable step on the

path to a virtual catwalk show" (Gower 118). Virtual catwalks are already here. The next step will be reality catwalk shows seen on an in-store computer screen without touching a garment. "Retail technology is about to take a giant leap. And it promises to be a profound – and profitable – one for both retailers and consumers" (Kharif).

BIBLIOGRAPHY

"1600 Shoppers Define 'Ideal' Shopping Trip" Market Wire 21 Jan. 2005. LexisNexis. 17 Feb. 2005

After Fifty: How the Baby Boom Will Redefine the Mature Market. Ed. Leslie M. Harris. Ithaca, New York: Paramount Market, Inc., 2003.

Allison, Kelly C., Myles S. Faith, and Albert Stunkard. "Depression and Obesity: A Complex Relationship." Psychiatric Times 1 Oct. 2004, sec. 1: 81. LexisNexis. 17 Feb. 2005

Berke, Beverly, and Debbie A. Gioello. Language of Fashion Series: Figure Types and Size Ranges. New York City, New York: Fairchild Publications, 1979.

Chase, Renee W. CAD for Fashion Design. Upper Saddle River, New Jersey: Prentice Hall, Inc., 1997.

Cortada, James W. The Digital Hand. New York City, New York: Oxford UP, 2004.

Crawford, Merle, and Anthony Di Benedetto. New Products Management. New York City, New York: McGraw-Hill Irwin, 2003.

Dolan, Robert J. "Concept Testing." 1989.

Geissler, Gary L. "Targeting Tourists: An Exploratory Study of a Proposed Online Grocery Delivery Service." Journal of Vocation Marketing 8 (2002)

Gray, Stephen. CAD/CAM in Clothing and Textiles. Brookfield, Vermont: Gower, 1998.

Johnson, Lisa, and Andrea Learned. Don't Think Pink. New York City, New York: American Management Association, 2004.

Kharif, Olga. "How Retailers Are Turning to Tech." Business Week Online. 31 Aug. 2004: LexisNexis. 8 Apr. 2005

Kravetz, Stacy. "If That's Me in the E-Dressing Room, Why Doesn't This Fit?" The New York Times 20 Sept. 2000. 8 Apr. 2005 <http://partners.nytimes.com>.

H, Heather. "Trauma-Free Swimsuit Shopping on the Today Show." Shop Talk 5 Apr. 2005. 8 Apr. 2005 <http://www.shopetc.com>.

Magnenat-Thalmann, Nadia, and Pascal Volino. Virtual Clothing: Theory and Practice. New York City, New York: Springer, 2000.

"Mintel: Shoppers Prefer Flying Visits, Not Queues." Design Week 18 Nov. 2004. LexisNexis. 8 Apr. 2005

Moran, Michelle. "Innovative Technologies: The Store of the Future is Here." The Gourmet Retailer 1 Sept. 2004. LexisNexis. 17 Feb. 2005

My Virtual Model. 2004. My Virtual Model Inc. 18 Feb. 2005 <http://www.myvirtualmodel.com>.

Neubert, Cheryl R. "Imagine: Clothes Brought to You in a Private Dressing Room - For Free." The Orange County Register 11 Dec. 2003. LexisNexis. 8 Apr. 2005

Owens, Anne M. "Psychiatric Analysis Comes to the Local Shopping Mall." National Post 10 May 2004, sec. A. LexisNexis. 8 Apr. 2005

Ozer, Muammer. "Concept Testing of Internet Services." European Journal of Innovation Management 5 (2002)

Reesal, Robin. "Social Anxiety Often Goes Unrecognized." Calgary Herald 6 May 2004, sec. E. LexisNexis. 8 Apr. 2005

Richards, Thomas. What is Social Anxiety? Social Anxiety Association. 8 Apr. 2005 <http://www.socialphobia.org>.

Smith, Scott. "Psychology: Social Anxiety Affects Millions." The Capital 9 Oct. 2003, sec. C. LexisNexis. 8 Apr. 2005

Spector, Robert. Category Killers: The Retail Revolution and Its Impact on Consumer Culture. Boston, Massachusetts: Harvard Business School P, 2005.

TC2 Turning Research into Realty. US National Apparel Technology Center. 2 Feb. 2005 <http://www.tc2.com>.

Trebay, Guy. "Stores of the Future Will Think For You." The New York Times 30 Dec. 2003, Late ed., sec. B. LexisNexis. 8 Apr. 2005

What is Social Phobia? 2004. Medic8 and Online Services Group. 8 Apr. 2005 <http://www.medic8.com>

APPENDIX A

3D BODY SCANNER SPECIFICATIONS (WWW.TC2.COM)

NX12

The [TC]² 3D Body Scanner scans the whole body in less than 6 seconds and rapidly produces a true-to-scale 3D body model. The uses of the 3D body model are unlimited, including:

- Custom fitting apparel
- Sizing surveys
- Apparel sizing standards development
- 3D product development, including apparel, automotive seating, and other equipment applications
- Body shape analysis
- Animation and graphics
- Health and fitness management
- Medical applications
- Computer gaming immersion

White light scanning process

APPENDIX B

FOCUS GROUP NOTES 2/24/2005

Emotions and Causes

- Stressful – lots of people, salespeople, wait times, cashier, getting help
- Depressing – dressing room, doesn't fit, price, not in your size
- Frustrating – brand differences in size
- Exciting – finding a deal, find the right item, find something unique, buying something, having options
- Pumped Up – for yourself
- Happy – thinking where you'll wear it
- Annoyed – no where to wear it, waiting in line, rude salespeople
- Guilty – spending parents money

Salesperson's Role

- Helpful in finding the right size, the right item and finding outfits (+)
- Too helpful (-)
- Giving more options (-)
- Greeting (-)
- Opinions, wait around dressing room (-)
- Work on commission (-)
- Informing of deals and cards (+)(-)
- Open fitting rooms (+)
- Act as cashier (+)
- Assist in returning items (+)
- Help present store image (+)

The Dressing Room

- Helps you know if you like it (+)
- Putting pants on clips (-)
- Ink tags (-)
- Removing clothes, especially in the winter (-)
- Takes time (-)
- Takes effort (-)
- Gives you static hair (-)
- Exciting when it fits (+)
- Fun for big items, like wedding dress (+)

How do you Choose a Store?

- Good prices
- Quality of clothes
- Certain fits (longs)
- Certain name brands
- Certain styles
- Cleanliness
- Based on past experiences
- Stores that are non-aggressive
- Have fitting rooms
- No locks on the fitting rooms (no waiting)
- Have mirrors in the fitting rooms
- Have a separate area, not in the middle of things for the fitting room
- Don't have pushy sales people

The Perfect Experience

- I can only see the options in my size and in my price range
- I can see everything
- There are no lines
- There are less people
- The store operates on different hours
- I get help only if I need it
- There are restrooms located in the store

The Perfect Online Experience

- The clothes are quality
- Size and fit is not an issue
- The clothes ship fast
- I am aware of the material of the clothes
- I can see exact colors
- There is less waiting
- There is more desire

How to Make it a Reality

- Have buzzers inside the fitting room
- Have more registers that are all open
- Employee efficient people

Informed Consent for Focus Group
Transcript Format for Concept Test

Research Project Title: The Retail Wave
Researcher: Sarah Clemens, under supervision of Jim Mattingly & Raj Rajendran, University of Northern Iowa Honors Program

This consent form will give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

I, _____, understand that Sarah Clemens, a UNI student, is conducting an evaluation of the consumer shopping process as explained to me by Sarah.

I understand that I will participate in a focus group not to last more than an hour and a half. I understand that with my permission the interview will be video recorded. I am aware that the video tape will only be used by the researcher and her supervisor. No other person will have access to it. The video tape will not have my name or any other identifying information. A research code number will be used instead. No information will be released or printed that would disclose any personal identity.

Any questions I have asked about the study have been answered to my satisfaction. I have been assured that no information will be released or printed that would disclose my personal identity and that my responses will be completely confidential. Any risks or benefits that might arise out of my participation have also been explained to my satisfaction.

During the focus group, all participants will be reminded tha the information shared during the session is confidential, and is not to be repeated to those outside the group. However, there is a limit to the researcher's ability to insure confidentiality for information shared during this session.

I understand that my participation is **completely voluntary** and that my decision either to participate or not to participate will be kept **completely confidential.** I further understand that I can withdraw from the study at any time without explanation

I hereby consent to participate in this study.

Date: _____

Participant: _____

APPENDIX C

Virtual Shopping

Concept Test A

What you would need to use this software:

1. 3D image of your body
2. Access to the software
3. Minimum computer knowledge

Scenario

Imagine…..

walking into your favorite store, but before you go back to the rack you first stop at an in-store computer. At the computer you insert your disk which holds your personal 3-D body image. There you "virtually" search your favorite store's clothing database. This is your opportunity to make inquiries about particular items you may be looking for and those that fit your body shape. For example, you want to buy a red collared shirt. You run the search and all red collared shirts that fit you are a click away. You find the one you want and using a locator map on the screen you easily find the item in the store. You decide to purchase it and the store inventory is updated simultaneously. You pop out your disk and move on to the next store.

Software Capabilities:

- Visually see the entire stores inventory ——————→
- Visually see the clothing items on a virtual image of your body
- Locate items in the store
- Hold items via your personal computer at home

- Query store inventory to fit your body size or anyone else's body image (query based on size, style, fit, price)
- Store queried items you are interested in
- Save items to your PDA or other software device
- Decrease dressing room time

Virtual Shopping

Concept Test B

What you would need to use this software:

1. 3D image of your body
2. Access to the software
3. Minimum computer knowledge

Scenario

Imagine.....

walking into your favorite store, but before you go back to the rack you first flip open your PDA. Once in the store, you become connected to the store's wireless network. All you would need to do is download a free read-only version of the software and download it onto your PDA. Now you can "virtually" search your favorite store's clothing database in the palm of your hand. This is your opportunity to make inquiries about particular items you may be looking for and those that fit your body shape. For example, you want to buy a red collared shirt. You run the search and all red collared shirts that fit you are a click away. You find the one you want and using a locator map on the screen you easily find the item in the store. You decide to purchase it and the store inventory is updated simultaneously. Any saved results can be accessed outside of the store to help you remember the items you were interested in, but did not buy.

Software Capabilities:

- Visually see the entire stores inventory
- Visually see the clothing items on a virtual image of your body
- Locate items in the store
- Hold items via your personal computer at home

- Query store inventory to fit your body size or anyone else's body image (query based on size, style, fit, price)
- Store queried items you are interested in
- Save items to your PDA or other software device
- Decrease dressing room time

Virtual Shopping

Concept Test C

What you would need to use this software:

1. 3D image of your body
2. Access to the software
3. Minimum computer knowledge

Scenario

Imagine…..

Shopping for a perfect fit at home. You upload a 3D image of your body and begin shopping with more efficiency. You can search and virtually dress your body image in the comfort of your own home *and* know that it will fit. This is your opportunity to make inquiries about particular items you may be looking for and those that fit your body shape. For example, you want to buy a red collared shirt. You run the search and all red collared shirts that fit you are a click away. You find the one you want and decide to purchase it. The store inventory is updated simultaneously. If the online store has a location near you, you may hold the item and pick it up at the store within the next few days. Online shopping is no longer guess work, but a fast effective way to get what you want when you feel like it.

Software Capabilities:

- Visually see the entire stores inventory
- Visually see the clothing items on a virtual image of your body
- Locate items in the store
- Hold items via your personal computer at home

- Query store inventory to fit your body size or anyone else's body image (query based on size, style, fit, price)
- Store queried items you are interested in
- Save items to your PDA or other software device
- Decrease dressing room time

Virtual Shopping

Which survey are you taking? (located underneath the title on the information sheet)

A B C

Please rate the following statements according to these classifications

Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
5	**4**	**3**	**2**	**1**

1. The concept is clear to me.

   5 4 3 2 1

2. I perceive a benefit from a virtual dressing room software.

   5 4 3 2 1

3. I would utilize this software if it was available to me.

   5 4 3 2 1

4. This new software would help me shop more effectively for other people.

   5 4 3 2 1

5. I would prefer a store that had this software.

   5 4 3 2 1

Finally, please provide the following information for classification purposes:

Age: _____ Sex: M F

Household Income: <$30,000 $30,000-$60,000 $60,000-$90,000 >$90,000

How would you rate your computer skills: High Medium Low None