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Object-Based Storytelling: A Novel Approach to
Satisfying Hedonic Motivations
オブジェクトベースのストーリーテリング：
ヘドニックへの動機を満たすための新しいア
プローチ



Keio University
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Abstract of Doctoral Dissertation of Academic Year 2019

Object-Based Storytelling: A Novel Approach to Satisfying
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Category: Design

Summary

This research tests the efficacy of object-based storytelling to satisfy hedonic consumer motivations in the retail setting by digitally attaching narrative stories to products. The design's focus is on the hedonically motivated shopper, specifically those who prefer adventure and gratification shopping. In this research project a fashion retail experience has been selected. The object-based storytelling experience centers around the typical behavior of putting together an outfit. The design makes use of narratives to enhance the user's connection to the test garment; adding context and value through fictional narratives rather than actual descriptions of garment features or details. Furthermore the design promotes tactile interaction between the user and the test object, something which is known to enhance the customer experience in the retail setting. The research will be evaluated through user testing in a simulated retail environment, and measures evidence of satisfying adventure and gratification hedonic motivations. The design will use object-based storytelling as a novel alternative to traditional retail atmospherics.

Keywords:

Retail, Object-based storytelling, Hedonic shopping motivations,

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Chapter 1

Introduction

The aim of this research is to determine the value of object-based storytelling as a novel alternative to traditional atmospherics in the fashion retail context. The research design proposes a unique and replicable approach to creating object-based storytelling for fashion retail merchandise and environments, building on consumer user behaviors and existing research. Validity is determined by the satisfaction of test users' hedonic shopping motivations, particularly adventure and gratification motivations.

There are many reasons why a consumer may shop. It may be for an extrinsic value; simply, that they have a need for some product and they are shopping to fill that need. This is known as utilitarian consumer motivation, as established by Babin, due to the fact that its nature is task or need oriented. In utilitarian consumption scenarios the "Perceived utilitarian shopping value might depend on whether the particular consumption need stimulating the shopping trip was accomplished. Often, this means a product is purchased in a deliberate and efficient manner." In research conducted by Babin, Darden and Griffin utilitarian consumers expressed satisfaction with a shopping experience by whether the item sought for purchase was found and the level of efficiency by which it could be purchased. (Babin, 646)

In the quotes below some of the research respondents describe situations in which they reach utilitarian satisfaction.

"To me, shopping is like a mission, and if I find what I'm looking for, I'm satisfied-mission accomplished!"

The users described situations in which they felt their consumption satisfaction was thwarted in terms of a lack of efficiency in the shopping process, either the desired item was not available for purchase or the shopper must go to more than one store to find it.

“ I like to get in and out with a minimum amount of time wasted . . . I get irritated when I can't find what is needed . . . and I have to go to another store to find it. ”

Conversely, hedonic motivation, the focus of this research, focuses on the emotional satisfaction which can be derived from shopping. The shopper's need may be intrinsic, a personal or emotional value. In early consumer research by Levy, “ People buy products not only for what they can do, but also for what they mean. ” Hirschman and Holbrook define hedonic motivation as follows, “ Hedonic consumption designates those facets of consumer behavior that relate to the multisensory, fantasy and emotive aspects of one's experience with products. ” For the hedonic consumer the experience of shopping is far closer to that of an entertainment rather than an act of purchase; in fact, a hedonic consumer may see the actual buying of a good as ancillary to the overall shopping experience. (Babin, 646) Unlike the Utilitarian consumer, the hedonic consumer is not put off by the idea that they may not purchase anything during a shopping trip. As one focus group respondent states they are a consumer of the experience, not necessarily a product.

“ I enjoy looking around and imagining what one day I would actually have money to buy. Shopping . . . is an adventure. When you can't or don't find [what you're after] it's o.k. because there are lots of other places to look. ”

This presents a unique challenge to retailers marketing to hedonic consumers who may value the experience over the purchase of a product. As Pine and Gilmore state the consumption landscape has evolved from products to services, and now to experiences. In order to adapt, “ businesses must deliberately design engaging experiences that command a fee. ” An evolution described as similar to the transition from a product-based to service-based economy - service was typically included for free with the purchase of a product, until manufacturer were forced to charge in order to meet the demands of consumers. One possible application of the research design is to view it's object-based content as an alternative source of cash flow from the hedonic consumer in addition to the actual purchase of goods. A unique business model for the traditional retailer.

Traditionally these utilitarian motivations are satisfied by atmospherics, originally defined by Kotler as, “ the effort to design buying environments to produce specific emotional effects in the buyer to enhance his purchase probability.” Atmospherics can be categorized as visual, aural, olfactory, and tactile; and can include elements of the retail design such as lighting, in-store music, a room fragrance, the texture of physical surfaces, and so on. We should that even though ‘ aural ’ atmospherics have been considered important from the beginning this often takes the form of in-store music. Surprisingly little work has been done on the use of narrative as an atmospheric, which is the concept of the research design. Kotler suggests specific criteria which must exist before a retailer should consider the implementation of atmospherics as a tactical component of a marketing strategy.

- The retailer must be able to influence or have design options within the place of purchase.

The nature of the research design digital content may provide a viable atmospheric alternative to retailers in situations where the physical design of the retail space can not be influenced or thus changed.

- The retailer must face competitors within the market. As the number of competitors increases so does the relevancy of atmospherics as a marketing tool.
- The importance of atmospherics would be greater in markets were differences in product and price among competing retailers is small.
- Atmospherics have greater efficacy in markets where specific segments or demographic lifestyles are targeted.

In summary, functional need fulfillment is known as Utilitarian motivation, while shopping for entertainment and emotional value is called Hedonic motivation. This is the basic division of consumer shopping motivations.

1.1. Object-based storytelling

The research attempts to prove the efficacy of object-based storytelling in fulfilling hedonic motivations with implications for consumer and retail applications - in

other words to validate their use as an alternative to the atmospherics mentioned above. Object-based storytelling has grown in popularity over the last decade, but little is known about the effects of these experiences on hedonic shopping motivations. Object-based storytelling is defined as, “a story designed so that physical artefacts play meaningful parts in the narrative expression.” Tanenbaum, Tanenbaum, and Antle highlight the potential of the physical object as a narrative tool by saying, “Stories told through objects have the potential to engage senses not ordinarily invoked in traditional storytelling experiences.” In their research, a wearable interface called The Reading Glove, they found users spent more time in physical interaction with objects when narrative content was attached. This is a notable finding for retailers, as touch has been proven to be a critical factor in the purchase decision process. In research conducted by Schifferstein cited in Workman, users who interacted with 45 different products expressed touch as being to most impactful sensory modality when evaluating fashion and personal care items - fashion being the retail product selected for the focus of this research. Touch was rated the second most impactful modality overall, behind vision.

Over the years this approach to attaching digital narrative content to physical objects has been applied to variety of scenarios, primarily with the objective of sharing factual information about the object itself. These systems have been placed in museums and within tourist sites for the purpose of deepening the user’s experience beyond that which can already be experienced there. In Europe, CHESS is an experimental framework for implementing adaptive, interactive digital content into historical sites and museums in a way that is both respectful of the historical significance of the objects and spaces on view as well as the experiences of other patrons. Pujol, et. al., the authors of research using the CHESS framework to enhance the visitor experience at the Acropolis Museum’s Archaic Gallery, in Greece describe their project in the quote below.

“CHESS is building a seamless intelligent environment where visitors are immersed in stories related to exhibits in the Acropolis Museum’s Archaic Gallery. These stories are tailored to their interests and adapt in real time to the changing parameters of the visit.”

In the TravelPlot Porto project, researchers used location-based storytelling to digitally attach digital content to specific locations for the purpose of enhancing

the tourist experience. Though the project uses multiple physical locations rather than physical objects it is easy to see how the underlying design structure is the same as the object-based storytelling approach. Both have a similar aim of using narrative or content to make distinctive contributions to the understanding and interpretation of the object or place. Ferreira, Alves, and Quico describe the project as follows:

“Travelplot Porto is set in Porto, a UNESCO world heritage site. It aims to be a fun and engaging aide to visiting Porto, enabling tourists to experience the beauty of the city through the process of locating a hidden treasure. This quest will take them to explore the history, the monuments and the historic characters of Porto. They will also experience the events, sights, wine and gastronomical delights of Porto through the project partners.”

The design of this research builds on these applications of the concept as well as recent examples of object-based stories for the purpose of creating enhanced retail experiences.

1.2. Hedonic consumer motivation

Within hedonic consumer motivation there are further divisions of consumer motivation into six shopper types: adventure, gratification, role, value, social, and idea shopping motivations. In adventure shopping consumers seek “stimulation, adventure, and the feeling of being in another world.” In gratification shopping consumers “shop for stress relief, to alleviate a negative mood, and as a special treat to oneself.” Role shoppers derive satisfaction from purchasing items for others, they describe “the excitement and intrinsic joy felt ... when finding the perfect gift for others.” For Value shoppers the consumer experience is centered around seeking out sales, discounts, and bargains. In Arnold’s research focus group “respondents talked about how they enjoyed hunting for bargains, looking for sales, and finding discounts or low prices, almost as if shopping is a challenge to be ‘conquered’ or a game to be ‘won.’” Social shoppers enjoy the experience of shopping with friends and family. The value of the social consumer experience

is socializing and bonding with others. Arnold states research “respondents mentioned quite frequently that shopping is a way to spend time with friends and/or family members. Some respondents stated that they just enjoy socializing with others while shopping and that shopping gives them a chance to bond with other shoppers.” Finally, Idea shopping is an experience which the consumer seeks to learn or research new product and fashion trends and uncover the latest innovations being introduced to the market. Arnold’s respondents “reported that they shop to keep up with the latest trends and fashions. Other informants describe shopping as a way to keep abreast with new products and innovations that are available.” (Arnold, 80)

Of the six hedonic factors mentioned adventure and gratification were deemed most likely to be influenced by the object-based storytelling approach of this research. This is based on preliminary testing in which users expressed that object-based stories enhanced their interaction with products by providing an expanded context to view them. Users stated that the narrative allowed them to view products in a way they would not have otherwise, similar to the idea of being in another world which corresponds to the above definition of adventure gratification from Arnold.

“You feel like you are in the middle of this novel.”

“The stories affected my image of the bag [...]. The stories I heard gave me other ideas about how I could use it.”

One user indicated she was pleased that the object-based story experience satisfied her hedonic motivation to “try on personas” for herself by browsing for clothing. This matches with interview comments made in consumer behavior studies of adventure hedonic motivations.

“With clothes, I visualize where I would wear things. I think about where I will wear things and imagine how everyone will think I am really pretty.” (Arnold, 91)

The rationale behind the use of object-based narratives to satisfy hedonic motivations is based on the existing research in both areas. Object-based storytelling uses the physical or tactile attributes of the object to give narrative richness and

depth to the story itself. It should be noted that consumer need for touch is a well documented component of the purchase consideration process. “ Workman, in an article on the gender-based differences in consumer need-for-touch (NFT) states.

“Consumers differ in their preference for sensory forms of information, for example, the preference for extracting and using information obtained through the haptic system (i.e., touch). In particular, when shopping for fashion products, being able to touch or feel the product is important. Consumers ’ need to touch products can be motivated by a need to solve a problem (utilitarian) and/or by a need for sensory stimulation (hedonic). ” (Workman, 126)

Additionally, Object-based storytelling can make use of narrative details and structure to create an enhanced image for the object in the mind of the user. The user may be able to visualize alternate context for the object, understand it ’ s history or ideal use, both factually or in fiction. In research of how narrative assisted museum audiences in interpreting physical artifacts on display, Chronis identified four key themes - completing, relating, recontextualizing, and imagining.

Completing involves the use of the object to resolve gaps in the audience ’ s knowledge. In research by Chronis, the ability of objects in a museum setting to fill in any narrative gaps in visitors ’ understanding of the Byzantine era were studied. “ The Byzantine period is not as well-known as some other parts of the Greek history, especially those of the classic period and the Golden Age of Athens. For this reason, historians have referred to this era as a “ dark period, ” a term that equally applies to the European Middle Ages in general. ” Research participants found that their interaction with the historical objects aided them in fleshing out their existing background knowledge of the period.

“ The Byzantine period, the impression rather that someone gets is that it is generally regarded a dark period of history. I think that it is not dark at all when someone sits to study... ”

The Relating process describes when users ’ experience with the physical object on display allow them to relate its historical context to their own lives. As can be seen in the user quotes below, the familiarity of the objects allowed the to

feel a cultural closeness to the inhabitants of the historical period. Users mention that they saw the objects as not being very different from those of used in the contemporary period, or that they felt tied to a cultural continuum spanning the historical period to their own.

“The difference between then and now is not big... the tools they were using then and those that they use now are the same. There are no big differences...”

“I am mostly impressed by the jewelry and various objects... because they look like ours.”

“There are some similarities with the current period and eventually it wouldn't be very different if we were living back then. There were many common things. Namely, in religion, in perceptions, we find many similarities to perceptions of the present. About the everyday life, the utensils, the shape of the houses, these were changing a little bit. But some perceptions are the perceptions of contemporary people.”

“These [things] constitute a continuation. Inside the present we see the past, because these are continuity in history. You see many things that they were valid back then, they are valid today too. Consequently, there is the continuity of this culture.”

Chronis defines Recontextualizing as users' shifting their understanding of the past based on their contemporary knowledge. Rather than connecting the object to the participant's personal life, as with Relating, Recontextualizing creates a connection to the past by leveraging contemporary knowledge to create a new context for the historical knowledge. One respondent described the historical exhibit in the context of contemporary building codes.

“For me it was very special that in the past they were careful about what they were doing and they were trying to protect the surroundings too; that in the neighborhood there were some laws, how the house would be built, so that the other houses would not be dark. Now

nobody cares. Yes. He builds what he wants. These simple laws that existed in the past do not exist anymore. “

It is clear that they were able to see the historical building practices from the point of view of contemporary housing issues.

When Imagining, the final theme Chronis mentions, users fantasize about the historical period the objects are from. This quite similar to world building in a fictional narrative. As one test user stated after viewing the Byzantine Market exhibition, “ I imagined a street, people walking, women walking up and down, their clothes, their practices.” There is a component of immersion as well, similar to live action role playing games. As one user states, “ We were looking at how they were living. There is something that passes to the objects let ’ s say. You enter a little bit in their everyday life.” Through the exhibition visitors were able to see and understand the historical objects as part of a narrative vignette or slice of life - “ an enlivening of the period. This is what I felt, that the period becomes alive very characteristically and very easily. ”

To satisfy hedonic motivations a the retail experience must transcend the base Utilitarian desire to fill an immediate need and instead satisfy one of the six identified hedonic shopping motivations - adventure, gratification, role, value, social, or idea. The design of this research focuses specifically on satisfying adventure and gratification motivations. Adventure satisfaction comes from the consumers sense of heightened stimulation from the shopping experience, that they are on their own grand adventure and the retail space is an environment for them to act out their own fantasies.

“The first category is labeled “ adventure shopping,” which refers to shopping for stimulation, adventure, and the feeling of being in another world. A significant number of respondents reported that they go shopping for the sheer excitement and adventure of the shopping trip. These informants often described the shopping experience in terms of adventure, thrills, stimulation, excitement, and entering a different universe of exciting sights, smells, and sounds.” (Arnold, 79)

Gratification motivation differs in that these consumers seek to lift their moods and relieve stress through the shopping experience. They see shopping as a special treat.

“ A third category is labeled “ gratification shopping, ” which involves shopping for stress relief, shopping to alleviate a negative mood, and shopping as a special treat to oneself. Several respondents admitted that they go shopping to relieve stress or to forget about their problems. Other informants view the shopping experience as a way to wind down, relax, improve a negative mood, or just treat themselves. (Arnold, 79)

Further corollary metrics have been used to further validate adventure experiences; for example, adventure consumers report that they experience time distortion when engaged in a satisfying shopping experience Bloch et. al. cited by Arnold describes time distortion as “ a psychological state where shoppers become relatively isolated from the cues regarding the passage of time.” (Arnold, 78) User studies found significant correlation between time distortion and Adventure motivations. (Arnold, 79)

“ The correlations between time distortion and adventure shopping ($r=.62$) and gratification shopping ($r=.59$) are both significantly higher ($p<.05$) than the correlations between time distortion and the remaining hedonic motivations. ”

Measurement for this supporting metric is included in the design research.

The existing research around which audiences most respond to hedonic motivation satisfaction leans demographically toward women from middle age to their twenties. “ In this (Arnold and Reynolds, 2003) study, females scored higher on the hedonic motivation subscales than do males. ” (Arnold, 79) Arnold and Reynolds divide the hedonic shopping types into five clusters based on their survey findings- Minimalists, Gatherers, Providers, Enthusiasts, and Traditionalists. Adventure and Gratification motivations we significantly more resonant with members of the Enthusiast cluster, which happens to be largely composed of younger female respondents.

“ Cluster 4, the ‘ Enthusiasts, ’ is composed overwhelmingly of younger females and scores highly on all hedonic motivations.” (Arnold, 79)

Based on this finding, this group also comprises the test audience for the research design.

The research proposes that object-based stories fulfill hedonic adventure and gratification motivations by allowing the users a form of escapism through the experience, as well as a pleasurable form of stress relief respectively. This is the framework for the underlying hypothesis of this research. Specifically hedonic adventure shoppers seek to escape from their daily life through shopping. They describe the experience as a grand adventure. They often report being so engrossed in the experience that they lose track of time. There is a growing body of academic and real-world evidence showing that narrative and physical objects can be combined to enhance the level of engagement experienced by users. The objects can provide and embodied experience to the narrative, (Tanenbaum, 137) and vice-versa the narrative can bring greater context to the users understanding of the object. (Chronis, 4)

For the gratification user the gratification shopper the experience is focused on relaxation and stress relief, they use shopping as a way to pamper themselves. Likewise, narrative content can also be used as a form of stress relief, the design uses content to augment and enhance the gratification experience.

1.3. Current approaches to satisfying hedonic consumer motivation (Atmospherics)

Atmospherics are the current methods used by retailers to satisfy hedonic consumption motives; they include fragrances, sounds or music, the interior design and layout of the retail space. Such physical elements of a retail store lend themselves more toward the satisfaction of hedonic motivation. We should think of the hedonic motivations of consumers being fulfilled by experiential aspects of the retail experience.

The retail environment is a hedonic environment. Retailers actively deploy atmospherics in their shops to satisfy customers' hedonic motivations. An advantage of existing atmospheric approaches is that they already have published research backing them up. They have been tested and put into practice within the actual retail environment. Conversely, the limitations associated with atmospherics is

the inflexible nature of their physical construction. The one-size-fits-all nature of retail music or fragrance means that all consumers have the same experience, whether it appeals to them or not. These elements are site specific and expensive to change and scale. Additionally, these experiences do not incorporate the actual product, and only stay within a retail space, not attached to the product - customers can not take the atmospheric home after purchase.

1.4. Advantages of object-based storytelling

Through the proposed method of applying object-based storytelling to the retail experience the research will target users hedonic desires. The research assesses the effectiveness of its design by measuring how well it can satisfy a user's adventure and gratification motivations when compared with the existing retail experience. Over time consumer shopping habits are increasingly shifting toward e-commerce channels. With compound annual growth rates in online retail expected to reach 18.5percent (Asia), 11 percent (Europe), 10percent (U.S.) in the next five years, traditional bricks-and-mortar retail stores are quickly being seen by customers as showrooming venues for online retail channels, a practice where customers use physical retail stores as a space to see, touch, and try on products, which they then purchase at a lower price online. As this trend continues retailers without established online channels will be left out. For example, distributors purchasing inventory wholesale, and then reselling direct to consumers, such as department stores are increasingly finding themselves on shaky ground.

Much thought has been given to the future of retail spaces. One theory is that consumers will demand increasing levels of engagement and satisfaction from spatial experiences. Brands will compete with each other to create places consumers want to spend their time, and if that can be achieved then consumers will want to spend money for these experiences as well. Marketing theorists, Joseph Pine and James Gilmore, describe this new paradigm of competition as the experience economy, and say “that companies should compete by providing experiences so engaging that customers can't help but pay attention and buy that offering. Marketing therefore needs to become placemaking.”

There has been much discussion of the future of retail as part of the experience

economy, and place making has become a key consideration in the practice of retail marketing. Creating places to adequately host tailored customer experiences is integral to satisfying ever more demanding consumers. Long term trends such as the integration of digital and physical spaces, the willingness of customers to pay for satisfying experiences in and of themselves and consumers desires for transformative experiences are all shaping the retail landscape which the design hopes to speak to.

The design offers a host of potential applications to the retail setting. Object-based narratives may offer a compelling alternative our accompaniment to known atmospherics. In fact, object-based storytelling may offer a cost advantage over these traditional approaches, in that it can be applied without any cost or time for construction. The fact that it can exist as a digital content gives retailers to make quick and low cost changes to the customer experience by switching the content, continually fine tuning their retail experience. It is also possible to cater to multiple market segments by offering different content experiences for the same products, just by incorporating the same products into multiple content experiences and letting customers choose their preference.

1.5. Test design

This research tests the efficacy of object-based storytelling to satisfy hedonic consumer motivations by digitally attaching narrative stories to a shop 's products. In this research project a fashion retail experience has been selected. The object-based storytelling experience centers around the typical behavior of putting together an outfit. The user experiences the media narrative as audio content initiated by scanning the paper tag of a specified garment in the shop with a smartphone. The story 's introduction is initiated by scanning the main garment, a shirt or blouse. Then the users is given a choice of secondary garment, trousers or skirt, each of which represents a distinctive change in the narrative. This is followed by another set of accessory story choices. After a complete outfit has been selected; top, bottom and accessory; the user has the option to go back through the story, making different narrative choices and revising the outfit they are creating at the same time. The research will be evaluated through user testing

in a retail or simulated retail environment. Testing was carried out as a split test between a control scenario where users asked to put together an outfit in a typical retail scenario and a group of test users who will put together their outfit using the object-based story design. The experience of the test users was measured with a questionnaire prior to the experience and an in-depth interview following. The research will measure evidence of satisfying adventure and gratification hedonic motivations.

The research design uses fictional narratives centered on the test garments to enhance these feelings of escape and fantasy. In an embodied narrative project by Ella Dagan, called the Cloakroom.

The test objects used in the research are all garments typical of those found in a womens fashion shop. The fashion shopping environment is currently a space where retail atmospherics play a large role in attempts to impact customers. The design explores how object-based storytelling can play a role in such a consumer experience. Building on the existing shopping experience, the design engages the user in assembling an outfit to their liking by browsing the test garments and experiencing each garments content module. Available test garments were selected to offer test users with at variety of items to construct and outfit, with multiple options for tops, bottoms, and accessories. Additionally, the normal fashion shopping experience is at its core a tactile one. Customers regularly touch and try on clothing in order to form their opinions of it. This existing shopping behavior seems ideal for adding a tangible component to the object-based narrative without any unnatural action on the part of the user.

The stories used in the design testing were developed through a great deal of preliminary testing. First examining the functionality of the design for delivering a compelling experience; such as the ideal length of story content, and the modality of delivery. Also factors such as linear versus non-linear narratives, user-generated and collaborative storytelling compared to passively receiving content, and a variety of guided user interactions were tested. Based on this testing a refined modular, object-based storytelling structure was developed to map over the users own natural shopping behaviors. The structure guides content creation and determines the form of narrative content that is associated with specific types of test garments to insure the user interaction will result in a satisfying narrative

experience. Ultimately, the story modules are assembled along with the overall outfit to complete the narrative. Though the ultimate story which is constructed along with the outfit follows a linear flow, the user will experience this narrative in whichever order they browse the test garments. One particularly unique and compelling aspect of the design is how much the construction of the story affects the construction of the outfit and vice versa. Will users make their selections based more on their preferred narrative or preferred fashion look? After the creation of this structure it was reviewed by a professional storyteller, who advised on how it could be revised to be more easily used by content creators.

1.6. Test users

As mentioned, the test users were selected based on their fit with the ideal target demographic for hedonic consumption. The test users were each English speaking women, with ages ranging from 20s to 40s to best match the test results with the ideal hedonic consumption user group. A hedonic profile was developed for each test user based on a screening questionnaire, prior to testing. Users were screened based on these results to insure that they identified as hedonically satisfied consumers prior to testing. Utilitarian consumers were not included in the test user group as their participation may bias the collected data.

1.7. Evaluation structure

The research uses established means of measuring adventure and gratification hedonic motivation. Using a scale of hedonic and utilitarian motivations; as well as measures of concentration which have been positively correlated to adventure motivation, and time distortion which has been shown to correlate to gratification motivation.

The research first screens potential users to determine their predisposition to hedonic or utilitarian consumption motivations. Users were screened based on their answers to standard questions used to determine preferences to hedonic motivation types or utilitarian motivations, as well as their current media consumption and shopping habits. Only test users who were identified as hedonic shoppers

participated in the design test, though not expressly adventure or gratification consumers. To avoid any inherent bias utilitarian consumers were not included in the testing.

Following the screening the users took part in a control test, exploring the test garments without any narrative content included. The control test was designed to establish a set of baseline measures to compare the results of the actual design test against. The control test measures the ability of the test objects on their own to trigger feelings of time distortion, as well as satisfy users adventure and gratifications. Users marked how strongly they agreed or disagreed with a set of key statements on a five point scale, creating a base measure for the comparison.

To ultimately record the user response to the design the test users again participated in the interactions with the garments but this time incorporating object-based narrative content into the experience. Following the user 's interactions they again participated in answering the same question set as they were given in the control testing. The results of this questionnaire, when compared to the base measurement from the control testing provides validation for the underlying thesis of the research - that object-based storytelling can effectively satisfy hedonic motivations in the fashion retail setting. Users also participated in a qualitative interview after the design test to provide further insight into their answers to the question set and to review any usability issues with the design. Such interviews can help to explain any unexpected results and uncovers opportunities for potential design revision, correction, or improvement. The interview can confirm the design test is working correctly, or if not explain why.

The final data gathered from the testing will prove the research hypothesis by comparing the user data from the control and design tests. The data comparison of responses will systematically validate whether the design experience was more effective at satisfying either users adventure and or gratification motivations. Concentration and time loss metrics will further validate any finding about adventure and gratification motivations as they have been found to be corollaries of these measures.

The implication of the findings of this research will be a better working understanding of how narrative affect specific adventure and gratification motivations, specifically in a retail setting. The research findings will offer a better question

set for future research. This may include topics related to how object-based storytelling may be applied outside of retail settings. How it may be applied in conjunction with other more traditional retail atmospherics. The effectiveness of different narrative genres and structures on different users. The implications of applying object-based narratives to customer relationship management systems.

Chapter 2

Related Works

This research is an object-based storytelling approach to satisfying consumers' hedonic shopping motivations, focusing on the use of object-based storytelling to specifically satisfy the unique requirements of the gratification and adventure motivations in a fashion retail setting.

This Literature Review will define object-based storytelling and describe examples of object-based storytelling in practice. Then background context will be given for hedonic consumer motivation and existing atmospheric approaches to satisfying hedonic consumer motivation will be offered, as well as the limitations of these methods. Finally, the Literature Review will explain how the design incorporates these effective capabilities of object-based storytelling to satisfy gratification and adventure motivations and the benefits of this approach over existing non-story methods to achieve novelty.

2.1. Object-based Storytelling

Object-based storytelling is defined by Holmquist as “a story designed so that physical artefacts play meaningful parts in the narrative expression.” In this case ‘narrative expression,’ (Holmquist, 1) or storytelling is applied to fashion retail shopping for the purpose of creating entertainment and emotional value for consumers, also called hedonic value.

Hirschman states, “Hedonic consumption designates those facets of consumer behavior that relate to the multisensory, fantasy and emotive aspects of one's experience with products.” Consumers who desire this value are said to be hedonically motivated. (Arnold, 78) This is in contrast with Utilitarian consumer motivations, which Babin defines as, the desire to fill an immediate or need for a product's utility. Hedonic motivation itself has been further divided into six

distinct factors: adventure, gratification, role, value, social, and idea shopping motivations. (Arnold, 80)

After decades of competition from e-commerce sites the competitive landscape for physical retail spaces has been dramatically altered. These businesses compete less and less on convenience and price, the values which most appeal to utilitarian consumers, and now must reconsider what new values they can offer their patrons. This new value is often focused on the careful crafting of compelling experiences. At the same time, big data analysis is also making inroads into the bricks-and-mortar retail experience through sophisticated customer relationship management (CRM) systems. Sophisticated customer profiles can be developed, and by incorporating new biometric technologies or even the consumer's own smart devices, retailers can be provided with information about who is in their stores and what products they have looked at. The boundaries between the customer's digital and physical lives are increasingly being blurred. These market disruptions and technical advancements in the area of retail are quite encouraging for those with an interest in new media, as one can more easily imagine the retail space as a multimedia and interactive content space.

2.1.1 Object-based storytelling examples

The following examples will further introduce object-based storytelling in practice.

Holmquist's original experiment, the Reading Glove allowed users to unlock a hidden narrative behind a collection of objects by holding or otherwise interacting with them while wearing a sensor augmented glove. The story The Reading Glove tells is created by the user's choices of which objects to touch and in which order they choose to touch them in. The audio story content can be accessed in a non-linear structure allowing users to touch the objects in any order they choose. Seemingly unrelated objects are then given meaning and context through the narrative. This is similar to the approach of the design where user retail browsing behavior gives context to more than one garment by assembling an outfit and an overall narrative.

The Reading Glove



Figure 2.1 The Reading Glove from, "The Reading Glove: designing interactions for object-based tangible storytelling"

Since then there have been other examples of object-based narratives, both in commercial application and in the realm of academic research. Coffee supplier J. Atkinson and Co, has incorporated projection mapping into its showroom to educate consumers on the brand's heritage, product quality and value chain.



Figure 2.2 J. Atkinson and Co. projection mapping and digital plinth from, "Collective spaces and collected action: towards reconnecting food, consumers and nature"

Similarly, the retailer Patagonia produced a series of documentaries which were shown in their stores, though topics were not fictional the content did inform customers' understanding of the garments durability and the brand's commitment to a sustainable supply chain. A pop-up, concept store in the United States has taken the concept of a magazine to heart and curates content around a monthly theme. The context for the selection of items is carefully explained throughout the store, and the space also hosts guest speakers to give talks related to the month's theme.



Figure 2.3 Story Pop-Up Shop from, "Story", <https://thisisstory.com/stories/>

The used goods select shop, Pass the Baton, in Japan elevates the value of used goods by including a note from the previous owner about what the item has meant to them. Notable celebrities are often asked to contribute goods. The British retailer TopShop offered customers to participate in constructing a real-world social media-like experience by taking polaroid photos of themselves with their purchases and pinning them to a wall for other patrons to see. These customers could write messages to each other on their picture and overtime a collection of content was generated within the retail space. A project called Cloakroom allowed users to experience content associated with garments hanging in a closet-style setting. This research was not centered on the retail experience or satisfying hedonic motivations, but does apply digital content to garments.



Figure 2.4 The Cloakroom from, "The Cloakroom: Documentary Narratives in Embodied Installation"

One of the most common uses of object-based storytelling takes place in museums and as a part of historical tourism. Projects like TravelPlot Porto and the Acropolis Museum's Archaic Gallery offer users a deeper historical context for historical objects and sites than can be experienced through standard observation alone.

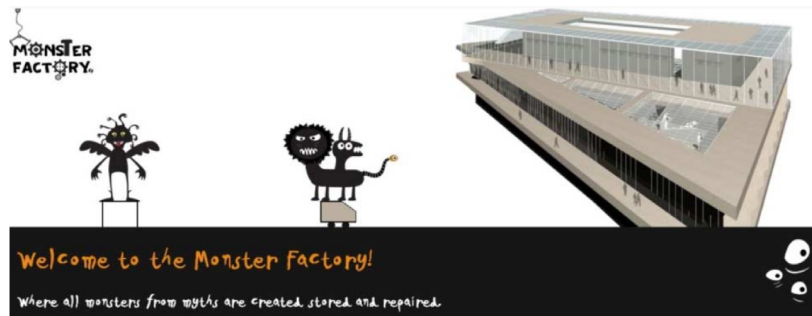


Figure 2.5 Acropolis Museum’s Archaic Gallery, Storytelling game from, ”From personalization to adaptivity-Creating immersive visits through interactive digital storytelling at the Acropolis Museum”

The first example, Family-Blocks, is a prototype of a children’s storytelling interface in which the user tells a story as they build an object from Lego blocks. Their story is recorded and the file is divided into pieces digitally attached to individual blocks. The audience user for their story is given the lego object and can hear the individual pieces of the story as they take it apart. The story can not be created without the physical interaction of assembling the individual Lego blocks, and can not be experienced by the audience without disassembling them.

CHESS is a digital platform using storytelling to create better understanding of museum contents by visitors. The platform has been tested in the Acropolis Museum’s Archaic Gallery. As the hedonic consumption ‘enthusiasts’ group surveyed by Arnold stated they valued shopping as a means of escape, the CHESS platform interweaves physical objects from the museum’s collection with audio storytelling content to transport the museum guests to the time and location the artifacts are from. Museum visitors can select from a variety of CHESS stories created by museum representatives. Each story is told by a different character persona with a unique point of view. The story serves as a guide through the museum’s collection as visitors encounter an object within the museum they experience a related piece of the story as told by the persona they have selected.

An example of a complete object-based experience space, which incorporates audience content is a design intervention staged in the event space of U.K. coffee producer J. Atkinson and Co. Using projection mapping content to augment the physical environment and onto historical coffee related objects made the narrative

a key way audiences were able to gain deeper understanding of the brand's history, manufacturing process, and relationships with local supplier communities. A participatory aspect was also achieved by allowing users' related tweets to be projected onto some of the spaces physical objects. The design gave voice to multiple communities the brand, suppliers, and customers. Unlike the design in this research project, the content experience in the J. Atkinson and Co. shop focused on relaying factual information from each of these stakeholders to the audience.

Narratives is a location-based cinema application for smartphone. Location-based cinema differs somewhat from the object-storytelling of this design in that the content is in a video form and instead of being attached to a particular object is it associated with a particular location. However the range of user interactions in the two designs is quite similar. In the case of Narratives the filmmaker creates modules of film content attached to specific locations, just as the research design uses distinct modules of audio content attached to physical garments. Users construct the film in the order of viewing the different locations, allowing each user to have a different experience of the film. Both the filmmaker and the audience have equal control over the final output of the story. Though the research design also empowers the user to craft the story through intentional choices and interactions it does so without the use of a non-linear narrative structure. The design empowers users with in a traditional structure which can be revised by users again and again through the process of browsing.

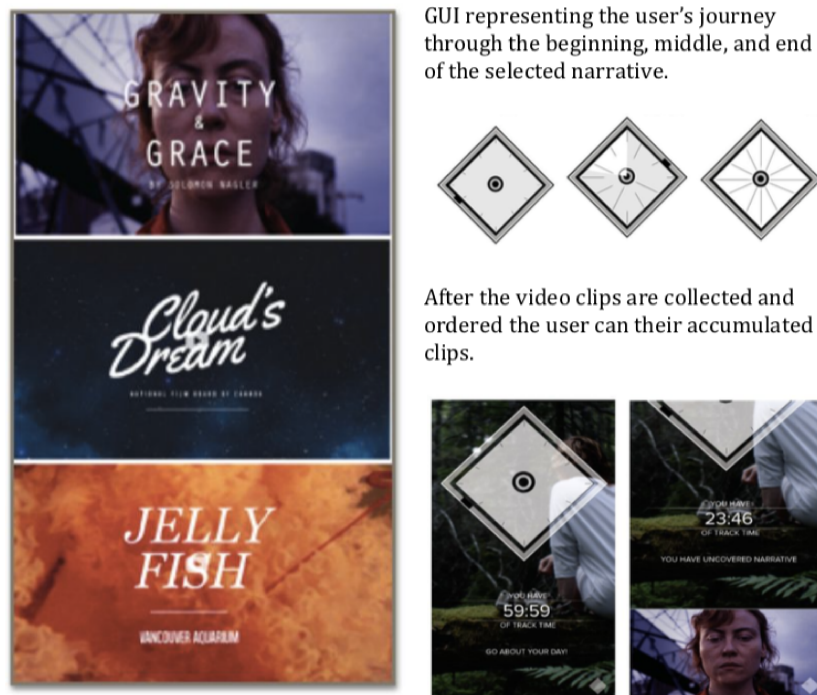


Figure 2.6 NARRATIVES from, “NARRATIVES: Geolocative Cinema Application”

Venturing more toward aspects of co-created stories the GEMS geolocated memory content game works as a location-based album of digital content, including images, text, video and audio. The game aims to use storytelling to help users preserve memories among family members and friends through the creation of a geolocative content ‘album.’ Users can record and save memory content in geolocated positions for themselves or future generations to explore. The creators of the design state, “We learned that location-based storytelling strategies often elicit a sense of discovery through exploration, sharing, and conscious reflection.” (Procyk, 1156) This element of discovery is also a key component of this research design as well, the users discover the narrative components of the design by searching for the content specified garments within the retail space. This exploration process creates deeper images and associations between users and the garments used in the story through the enhancement of the natural browsing behavior.

Additionally, A transmedia narrative called TravelPlot Porto, designed to enhance the tourist experience in the Portuguese city of Porto, offers a fictional

narrative spread out in ‘story pieces’ across sightseeing destinations in the city. Visiting these spots as well as various social media and online touch points allowed tourists to uncover clues to further the narrative. The design uniquely uses narrative to guide the tourists experience of the city, the design’s strategic aim is to aid tourists in exploring the history, monuments and historical characters of Porto. The story also makes room for the project’s commercial tourism partners by leading users to experience events, sightseeing venues, and the wine and food offerings of Porto. This commercial component of the design is handled in a more subtle way than traditional advertising and promotion, and is presented to users only as an uninterrupted and entertaining story. The research design similarly makes use of object-based narrative to guide the consumer’s retail experience without the intrusive approach of in-store advertising. Rather, both of the designs guide the user through a narrator within the content and users can affect the outcome of events in the narrative by choices they make in the physical world - in Travelplot this is done by the is the locations they visit, with the research design it is handled through the garments they choose for the final outfit.

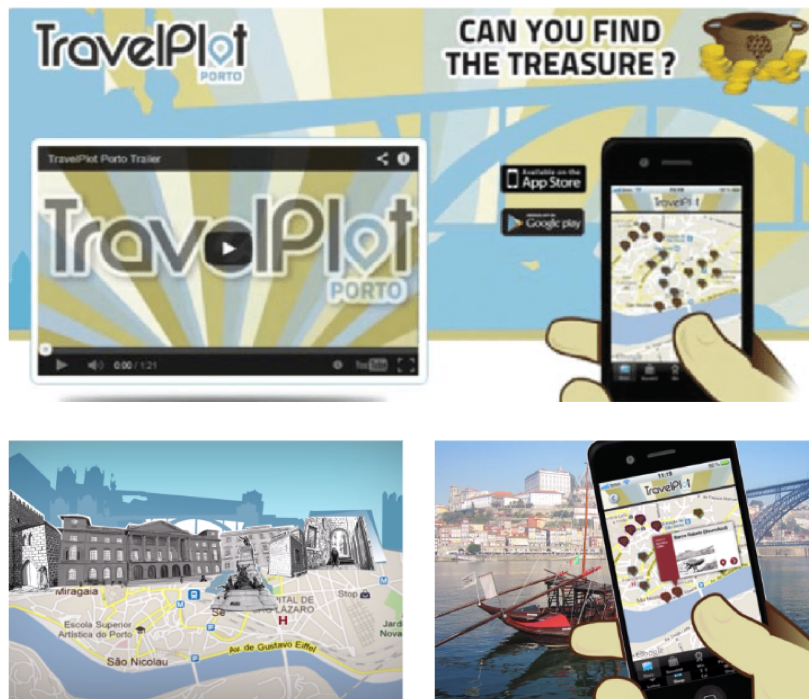


Figure 2.7 Travelplot Porto from, "Análise da dinâmica de criação em contexto de turismo e desenvolvimento regional"

Travelplot Porto GUI from, "Centro Histórico do Porto"
<https://www.portopatrimoniomundial.com/travelplot-navegar-pelo-porto.html>

The core advantage of using object-based storytelling is the flexibility. The nature of digital content allows for multiple experiences for one or each product. Object-based narratives incorporates the tactile qualities of the product and are scalable across multiple locations. Its integration of both "bricks and bytes" in the form of in store customer relationship management capabilities allows for synchronization between the store experience and e-commerce platforms.

The subsequent limitations linked to the adoption of a new approach to retail experience. Firstly, it requires a digital infrastructure and some investment to initially set up as there is currently no mass market platform to support such a retail experience. Relatively frequent content updates are required to satisfy customers. There may be some adoption concerns on the part of the users as a mobile or audio listening device is required, though users have indicated through

preliminary surveys that they are comfortable with the use of their existing mobile devices in the current shopping experience.

2.2. Hedonic motivations

To understanding the concept of hedonic motivation more deeply we must take a more nuanced view. Firstly, from a research point of view it can be difficult to think of gratification and adventure motivation existing in isolation within an individual consumer, in fact these as well as the other hedonic factors and utilitarian motivations can exist within the individual consumer they can even be held simultaneously. To make sense of how this plays out in a retail setting consumer behavior researchers study hedonic motivations by looking at consumers' behavior as clusters of resonant motivations.

The gratification motivation appeals most to consumers who shop for stress relief, to alleviate a negative mood, and as a special treat to themselves." (Arnold, 80) Consumer behavior studies have recorded the following motivation descriptions from gratification consumers.

"I like to go shopping when I'm stressed; to me it's a way to get my mind off of what happens to be stressing me out that day."

"I also go a lot when I am depressed. It makes me feel good about myself like I'm doing something for myself. I go shopping when I want to treat myself to something special. When I feel I have put so much time into working that I need a reward."

"I want to shop. It's like giving yourself a pat on the back and saying it was worth all the hard work to be able to shop."

The adventure motivation resonates most with consumers who use shopping to seek "stimulation, adventure, and the feeling of being in another world." (Arnold, 80) These Consumers from this group gave the following descriptions of why they shop in a qualitative interview.

"It gets me all excited! So it's kind of like exploring, only in a shopper's world? In a shopper's world. Right ... What's out there

since I ' d last been there? Okay. Well, that ' s a type of adventure. Mm hm. It ' s an adventure for me. ”

“ I enjoy shopping. It brings me great excitement and sometimes suspense as to what I am going to find. ”

“ When I go to a store or mall, I am kind of in my own little “ shopping ” world. I don ' t try to think of anything but what I like, what would I look good in, and what is eye catching enough for me to spend my money on. ”

Of the six hedonic factors mentioned, gratification and adventure are most likely to be influenced by an object-based storytelling according to research into the effects and uses of stories. In relation to gratification, storytelling content has been proven to relieve stress and lower blood pressure. It has been effectively used to lower stress levels of patients facing serious illness and surgery and has been integrated into some cancer treatment programs. In relation to the adventure motivation there is clear evidence supporting audio storytelling (the design uses an audio content format) as uniquely effective in creating deeper mental images for its audience. Audio storytelling strongly correlated to transportability, the idea that the audience is mentally transported to another place, either real or fictional. (Zheng, 36) The audio format has also been shown to produce greater recall and recognition after the story is over. Other studies have shown audio is better at engaging audience, and creating deeper mental images.

Satisfaction for Hedonic consumers exists when a shopper ' s experience goes deeper than fulfilling a specific need for an item of purchase, but satisfies more emotional or entertainment purposes, or offers a sense of accomplishment. Unlike the utilitarian consumer who seeks to fill a need for a specific product, a hedonic consumer may seek to satisfy the role of providing for their family. They may see it as an opportunity to engage in a social activity with others. They may use shopping as a form of research uncovering new ideas and information about the world. They may be a bargain hunter who wants to find the best deal. They may be seeking to pamper themselves or relieve stress, or they may be engaging in a type of fantasy escapism where they are trying on a different persona from their daily life. These later two examples are specific to the gratification and adventure

motivations, which are the focus of this research. Adventure shoppers report the feeling that they are engaged in adventure on a grand scale and that when shopping they feel they are in their own universe, separate from the rest of their life. For gratification shoppers the experience is a means of stress relief. They describe shopping as a way to lift their mood or as a treat to pamper themselves.

The consumer clusters most responsive to the gratification and adventure factors of hedonic motivation are called Enthusiasts and Traditionalists.

When retailers seek to create a hedonic retail experience they measure the responses of users who belong to these groups. “ If a retailer finds a large segment of Enthusiasts or Traditionalists among its regular customers, it could consider ways to facilitate the social experience its customers can have. We see evidence of these considerations in today’s marketplace, particularly with the bookstore–café concept that has become so popular (e.g., Barnes and Noble). “ (Arnold, 90) Enthusiasts are the group most likely to be influenced by the object-based storytelling approach of the design. They score highly on all hedonic motivation factors and are largely young and female. (Arnold, 90) They are individuals who engage in high levels of purchasing, and notably the consumption of experience, such as browsing and social experiences in the retail space. This group spends more time shopping and shops more often than other clusters. For Enthusiasts the act of shopping largely serves the purpose of satisfying hedonic fulfillment rather than any utilitarian need. (Babin, 647) When surveyed about why they enjoyed the shopping experience Enthusiasts in a shopping mall stated that shopping provided an escape from boredom and that they were eager to participate in additional activities offered by the mall.

Traditionalists also score highly in terms of hedonic motivation. This group is largely composed of slightly more women than men and are young to middle aged. (Arnold, 90) They mainly go shopping to make purchases or use retail services. They also to take part in additional activities in the retail space, such as walking in a mall for exercise or for special events. However, unlike Enthusiasts they are less likely to engage in browsing behavior, or shopping just to look. (Bloch, 33)

These groups in particular are hedonically motivated. Arnold has further broken down the typology of six hedonic consumption types; adventure and gratification the two types focused on in this research, as well as role, social, idea, and

value shoppers. Consumer behavior researchers have established a set of survey questions useful for identifying hedonic and utilitarian shoppers, as well as further separating hedonic shoppers into each of the six shopper types. Additional corollary metrics have been identified which also evidence the existence of hedonic adventure and gratification motivation. The reporting of time distortion is indicative of consumers' adventure satisfaction, being that they report losing track of time during the experience. Consumers who have a satisfying gratification shopping experience report experiencing time distortion where they feel so focused on the task of shopping that they seem to be removed from the world around them. The research uses both of these additional measures to substantiate test users' adventure and gratification satisfaction.

2.2.1 Atmospheric

Existing research into hedonic motivations in retail examines traditional environmental cues, or atmospheric, such as; music, scent, interior and layout, lighting, color, even the proximity to other customers. Retailtainment and "Branded" spaces have borrowed heavily from the world of theme parks to create unique retail experiences that appeal to consumers' hedonic motivations. This literature notes that such physical elements of a retail store lend themselves more toward the satisfaction of hedonic motivation. We should think of the hedonic motivations of consumers being fulfilled by experiential aspects of the retail experience. It should be noted that when surveyed Enthusiasts did not attach any direct appeal to interior aesthetics, but this may only be negatively present in a retail space which lacks aesthetic appeal. (Bloch, 37)

The current retail environment is already a hedonic environment, as retailers are actively deploying atmospheric in their shops to appeal to and satisfy customers' hedonic motivations. These approaches are also being applied to e-commerce experiences, though in a far more limited degree. Part of the advantages these existing atmospheric approaches offer is that there is already a good deal of research backing them up. They have been tested and put into practice within the actual retail environment, with established implementation processes and research to support their effectiveness. Conversely, some of the limitations associated with atmospheric are the inflexible nature of their composition; for example, the

physical construction of the retail store layout and interior can not be modified without great expense to the retailer. The homogenous nature of retail music or fragrance means that all consumers have the same experience, whether it appeals to them or no. These elements are site specific and expensive to change and scale. Additionally, these experiences do not incorporate the actual product, and only stay within a retail space, not attached to the product - customers can not take the atmospheric home after purchase.

2.2.2 Satisfying hedonic motivations

The following section will explain how the values and traits of object-based storytelling can be used to satisfy hedonic motivations.

In summation, the unique values of object-based storytelling are its ability to heightened concentration through the combination of narrative engagement and physical interaction. Its capacity for world building, which can facilitate the escape appreciated by Enthusiasts, and its empowering of users to curate both narrative content and physical objects at the same time.

Narrative storytelling has a unique power to impact the customer 's image of a product. Allowing them to fantasize about using the item themselves or to picture a persona around it. They can also highlight differentiating details about the product or how it was made. This process was evidenced in the preliminary testing of this research, in which users stated that the content both enhanced their image and understanding of the test object but also drew attention to specific details of the object such as a decorative design element. The designs use of the modality of audio frees user 's hands and eyes for the most part to take in the product other existing retail atmospherics. This might lead to future application of retail object-based storytelling in conjunction with other atmospherics. Touch itself is an important substantiated aspect of the current retails experience. As a known part of the purchase decision making process, supporting touch behavior is how retailers currently design their shops to promote sales. Augmenting this naturalistic shopping behavior ithrough narrative storytelling is another part of the design 's novel approach to satisfying consumer hedonic motivations.

2.3. Novelty

Storytelling persuades through mentally transporting the audience this transportation can affect beliefs. The design uses storytelling to craft a ‘ world ’ around the selected products, this is a very different from previous approaches to satisfying hedonic motivations in retail, the design uses fictional story content to appeal to a sense of escape, fantasy and adventure, to transport the user and create deep imagery around the products.(Zheng, 36) Customers can choose from a variety of such story experiences and new story content can be added continuously.

2.3.1 Interactive narratives

This value of user interaction is most literally expressed as interaction with the retail product, in this case apparel garments, in the form of physical touch. The design takes advantage of the retail environment as an ideal space for physical and narrative interaction. Due to the abundant range of ever-changing products and the physical space to explore them the retail shop serves as a stage and garments as props for the designed story. The shop is where the narrative and garments work together to enhance the user ’ s imagined understanding of the story. The garments become elements of the story users can touch and wear. This creates a very powerful and meaningful interaction and therefore deep bond between customers and the garments they buy and wear.

The design ’ s engagement value is achieved by tying the storytelling experience to interaction with the physical product in a natural browsing behavior, which Enthusiasts are known to enjoy. The design uses the story to complement users putting together an outfit. The clothing pieces can be assembled to form a complete “ look ” and the story likewise is assembled from separate narrative pieces at the same time. Playing with such existing behavioral norms is expected to aid acceptance of the design in the retail environment. Adding the entertainment value of story contents as a new dimension to the browsing behavior, which Enthusiasts already enjoy, could further enhance their satisfaction with the retail experience. This would yield a strong competitive advantage to any shop which incorporates the design into its experience.

The interactions built into the story experience give users control over the nar-

rative construction. Users can make choices which affect the story's direction and can also go back and revise the story. This places users in a curator or editor role by giving them control over the completed story.

In contrast to the traditional atmospheric approaches to satisfying hedonic motivations, which attempt to create a 'brand' world for the consumer within the physical space of the shop, rather than entirely within the consumer's imagination. This method is often costly and relies on a one-size-fits-all means of appealing to customers, whereas storytelling engages users in crafting their own imagined visuals and meanings in relation to the retail experience. Furthermore, the object-based approach directly connects the user's imagined images and context with specific retail products, creating more powerful customer to product bonds. The approach also offers advantages in that the content can be customized, both by users through the selection of their preferred content and by retailers in the variety of content offered.

An initial limitation presenting a barrier to the initial mass adoption of object-based content in retail spaces is that no mass market platform for this type of user experience currently exists. This leaves the burden of creating and object-based storytelling platform on either in the hands of retailers as a cost of early adoption, or as an opportunity in the market for an entrepreneur to capitalize on untapped potential. In terms of the physical interaction of the experience the users are required to perform some actions by hand using their mobile devices to trigger the content; however, initial survey results conducted in this research indicated that target users are already comfortable using mobile devices as part of their current shopping behavior.

2.3.2 Novelty framework

This design is a new approach to satisfying hedonic motivation through the application of object-based stories to the retail experience. This value is particularly expressed on areas of user interaction and engagement. The chart below will highlight how hedonic value can be achieved through object-based storytelling in a novel way.

Features	Research Design	Existing Object-based Stories	Existing Hedonic Retail Approaches
Interaction			
Product Interaction (touch)	0	X	X
Narrative Construction	0	0	X
Engagement			
Enhance Natural Behavior (browsing)	0	X	0
Add Product Context	0	0	X

Figure 2.8 Novelty Framework

Chapter 3

Design

3.1. Design hypothesis

The objective of this research is to design a rigorous, research driven approach to creating object-based stories for the fashion retail environment, which will serve as a novel approach to satisfying users' hedonic motivations. The design's focus is on the hedonically motivated shopper, specifically those who prefer adventure and gratification shopping. The design makes use of narratives to enhance the user's connection to the test garment; adding context and value through fictional narratives rather than actual descriptions of garment features or details. Furthermore the design promotes tactile interaction between the user and the test object, something which is known to enhance the customer experience in the retail setting. The design will use object-based storytelling as a novel alternative to traditional retail atmospherics.

3.1.1 Design approach to object-based storytelling

The research borrows Holmquist's definition of object-based storytelling as "a story designed so that physical artefacts play meaningful parts in the narrative expression." This research proposes using object-based storytelling to enhance the consumer shopping experience by digitally attaching narrative stories to a shop's products. In this research project a fashion retail experience has been selected. The story experience centers around the natural shopping behavior of putting together an outfit. The user experiences the story as audio content initiated by scanning the paper tag of a specified garment in the shop with a smartphone. The story's introduction is initiated by scanning the main garment, a shirt or blouse. Then the user is given a choice of secondary garment, trousers or skirt,

each of which represents a distinctive change in the narrative. This is followed by another set of accessory story choices. After a complete outfit has been selected; top, bottom and accessory; the user has the option to go back through the story, making different narrative choices and revising the outfit they are creating at the same time. The research will be evaluated through user testing in a retail or simulated retail environment. Testing will be conducted as a split test between a control test where users will be asked to put together an outfit in a typical retail scenario and a group of test users who will put together their outfit using the object-based story design. The experience of the users will be compared with a questionnaire prior to the experience and an in-depth interview following. The research will measure evidence of satisfying adventure and gratification hedonic motivations between the traditional retail experience and the design 's object-based storytelling approach.

3.1.2 Hedonic Consumer Motivation

The research uses object-based storytelling to satisfy users' need for shopping as an entertainment and emotional value, which is called hedonic motivation. Specifically, within this category of hedonic motivation the design targets adventure and gratification motivations.

In adventure shopping consumers seek "stimulation, adventure, and the feeling of being in another world." (Arnold, 80) In gratification shopping consumers "shop for stress relief, to alleviate a negative mood, and as a special treat to oneself." (Arnold, 80) Of the six hedonic factors mentioned these two were deemed most likely to be influenced by the object-based storytelling approach of this research. This is based on preliminary testing in which users expressed that object-based stories enhanced their interaction with products by providing an expanded context to view them. Users stated that the narrative allowed them to view products in a way they would not have otherwise, similar to the idea of being in another world.

" You feel like you are in the middle of this novel. "

"The stories affected my image of the bag [...]. The stories I heard gave me other ideas about how I could use it. "

One user indicated she was pleased that the object-based story experience satisfied her hedonic motivation to “try on personas” for herself by browsing for clothing. This matches with interview comments made in consumer behavior studies of adventure hedonic motivations.

“With clothes, I visualize where I would wear things. I think about where I will wear things and imagine how everyone will think I am really pretty.” (Arnold, 91)

The research will use established means of measuring adventure and gratification hedonic motivation. Using a scale of hedonic and utilitarian motivations; as well as measures of concentration, which have been positively correlated to adventure motivation, and time distortion which has been shown to correlate to gratification motivation.

3.1.3 Atmospherics

Existing retail approaches to satisfying hedonic motivations focus on traditional environmental cues, or atmospherics, such as; music, scent, interior and layout, lighting, color, even the proximity to other customers. Retailtainment and “Branded” spaces have borrowed heavily from the world of theme parks to create unique retail experiences that appeal to consumers hedonic motivations. This literature notes that such physical elements of a retail store lend themselves more toward the satisfaction of hedonic motivation. We should think of the hedonic motivations of consumers being fulfilled by experiential aspects of the retail experience.

The current retail environment is already a hedonic environment, as retailers are actively deploying atmospherics in their shops to appeal to and satisfy customers’ hedonic motivations. Part of the advantages these existing atmospheric approaches offer is that there is already a good deal of research backing them up. They have been tested and put into practice within the actual retail environment, with established implementation processes and research to support their effectiveness. Conversely, some of the limitation associated with atmospherics are the inflexible nature of their composition; for example, the physical construction of the retail store layout and interior can not be modified without great expense

to the retailer. The homogenous nature of retail music or fragrance means that all consumers have the same experience, whether it appeals to them or not. These elements are site specific and expensive to change and scale. Additionally, these experiences do not incorporate the actual product, and only stay within a retail space, not attached to the product - customers can not take the atmospheric home after purchase.

3.1.4 Proposed advantages of object-based storytelling over traditional atmospherics

Now building on the described limitations of traditional atmospherics as opportunity for a new mode of satisfying hedonic motivation let us explore the key advantages of object-based storytelling in this area. As mentioned, this is based on preliminary testing in which users expressed that object-based stories enhanced their interaction with products by providing an expanded context to view them. Users stated that the narrative allowed them to view products in a way they would not have otherwise, similar to the idea of being in another world.

“ You feel like you are in the middle of this novel. ”

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One user indicated she was pleased that the object-based story experience satisfied her hedonic motivation to “ try on personas ” for herself by browsing for clothing. This matches with interview comments made in consumer behavior studies of adventure hedonic motivations.

“ With clothes, I visualize where I would wear things. I think about where I will wear things and imagine how everyone will think I am really pretty. ” (Arnold, 91)

The rationale behind the use of object-based narratives to satisfy hedonic motivations is based on the existing research in both areas. Object-based storytelling uses the physical or tactile attributes of the object to give narrative richness and depth to the story itself. It should be noted that consumer need for touch is a

well documented component of the purchase consideration process. “ Workman, in an article on the gender-based differences in consumer need-for-touch (NFT) states.

“Consumers differ in their preference for sensory forms of information, for example, the preference for extracting and using information obtained through the haptic system (i.e., touch). In particular, when shopping for fashion products, being able to touch or feel the product is important. Consumers ’ need to touch products can be motivated by a need to solve a problem (utilitarian) and/or by a need for sensory stimulation (hedonic). ” (Workman, 126)

Additionally, Object-based storytelling can make use of narrative details and structure to create an enhanced image for the object in the mind of the user. The user may be able to visualize alternate context for the object, understand it ’ s history or ideal use, both factually or in fiction. In research of how narrative assisted museum audiences in interpreting physical artifacts on display, Chronis identified four key themes - completing, relating, recontextualizing, and imagining.

Completing involves the use of the object to resolve gaps in the audience ’ s knowledge. In research by Chronis, the ability of objects in a museum setting to fill in any narrative gaps in visitors ’ understanding of the Byzantine era were studied. “ The Byzantine period is not as well-known as some other parts of the Greek history, especially those of the classic period and the Golden Age of Athens. For this reason, historians have referred to this era as a “ dark period, ” a term that equally applies to the European Middle Ages in general. ” Research participants found that their interaction with the historical objects aided them in fleshing out their existing background knowledge of the period.

“ The Byzantine period, the impression rather that someone gets is that it is generally regarded a dark period of history. I think that it is not dark at all when someone sits to study... ”

The Relating process describes when users ’ experience with the physical object on display allow them to relate its historical context to their own lives. As can be seen in the user quotes below, the familiarity of the objects allowed the to feel a cultural closeness to the inhabitants of the historical period. Users mention

that they saw the objects as not being very different from those of used in the contemporary period, or that they felt tied to a cultural continuum spanning the historical period to their own.

“The difference between then and now is not big... the tools they were using then and those that they use now are the same. There are no big differences...”

“I am mostly impressed by the jewelry and various objects... because they look like ours.”

“There are some similarities with the current period and eventually it wouldn't be very different if we were living back then. There were many common things. Namely, in religion, in perceptions, we find many similarities to perceptions of the present. About the everyday life, the utensils, the shape of the houses, these were changing a little bit. But some perceptions are the perceptions of contemporary people.”

“These [things] constitute a continuation. Inside the present we see the past, because these are continuity in history. You see many things that they were valid back then, they are valid today too. Consequently, there is the continuity of this culture.”

Chronis defines Recontextualizing as users' shifting their understanding of the past based on their contemporary knowledge. Rather than connecting the object to the participant's personal life, as with Relating, Recontextualizing creates a connection to the past by leveraging contemporary knowledge to create a new context for the historical knowledge. One respondent described the historical exhibit in the context of contemporary building codes.

“For me it was very special that in the past they were careful about what they were doing and they were trying to protect the surroundings too; that in the neighborhood there were some laws, how the house would be built, so that the other houses would not be dark. Now nobody cares. Yes. He builds what he wants. These simple laws that existed in the past do not exist anymore.”

It is clear that they were able to see the historical building practices from the point of view of contemporary housing issues.

When Imagining, the final theme Chronis mentions, users fantasize about the historical period the objects are from. This quite similar to world building in a fictional narrative. As one test user stated after viewing the Byzantine Market exhibition, “I imagined a street, people walking, women walking up and down, their clothes, their practices.” There is a component of immersion as well, similar to live action role playing games. As one user states, “We were looking at how they were living. There is something that passes to the objects let’s say. You enter a little bit in their everyday life.” Through the exhibition visitors were able to see and understand the historical objects as part of a narrative vignette or slice of life - “an enlivening of the period. This is what I felt, that the period becomes alive very characteristically and very easily.”

To satisfy hedonic motivations a the retail experience must transcend the base Utilitarian desire to fill an immediate need and instead satisfy one of the six identified hedonic shopping motivations - adventure, gratification, role, value, social, or idea. The design of this research focuses specifically on satisfying adventure and gratification motivations. Adventure satisfaction comes from the consumers sense of heightened stimulation from the shopping experience, that they are on their own grand adventure and the retail space is an environment for them to act out their own fantasies.

“The first category is labeled “adventure shopping,” which refers to shopping for stimulation, adventure, and the feeling of being in another world. A significant number of respondents reported that they go shopping for the sheer excitement and adventure of the shopping trip. These informants often described the shopping experience in terms of adventure, thrills, stimulation, excitement, and entering a different universe of exciting sights, smells, and sounds.” (Arnold, 79)

Gratification motivation differs in that these consumers seek to lift their moods and relieve stress through the shopping experience. They see shopping as a special treat.

“A third category is labeled “gratification shopping,” which involves shopping for stress relief, shopping to alleviate a negative mood,

and shopping as a special treat to oneself. Several respondents admitted that they go shopping to relieve stress or to forget about their problems. Other informants view the shopping experience as a way to wind down, relax, improve a negative mood, or just treat themselves. (Arnold, 79)

Corollary metrics have been used to further validate these experiences; for example, adventure consumers report that they experience time distortion when engaged in a satisfying shopping experience. User studies found significant correlation between time distortion and Adventure and Gratification motivations. (Arnold, 79)

“The correlations between time distortion and adventure shopping ($r=.62$) and gratification shopping ($r=.59$) are both significantly higher ($p<.05$) than the correlations between time distortion and the remaining hedonic motivations.”

Measurements for this supporting metric is included in the design research.

The research proposes that object-based stories fulfill hedonic adventure and gratification motivations by allowing the users a form of escapism through the experience, as well as a pleasurable form of stress relief respectively. This is the framework for the underlying hypothesis of this research. Specifically hedonic adventure shoppers seek to escape from their daily life through shopping. They describe the experience as a grand adventure. They often report being so engrossed in the experience that they lose track of time. There is a growing body of academic and real-world evidence showing that narrative and physical objects can be combined to enhance the level of engagement experienced by users. The objects can provide and embodied experience to the narrative, (Tanenbaum, 137) and vice-versa the narrative can bring greater context to the users understanding of the object. (Chronis, 4)

3.1.5 Test users

The existing research around which audiences most respond to hedonic motivation satisfaction leans demographically toward women from middle age to their twenties. “In this (Arnold and Reynolds, 2003) study, females scored higher on the

hedonic motivation subscales than do males.” (Arnold, 79) Arnold and Reynolds divide the hedonic shopping types into five clusters based on their survey findings- Minimalists, Gatherers, Providers, Enthusiasts, and Traditionalists. Adventure and Gratification motivations we significantly more resonant with members of the Enthusiast cluster, which happens to be largely composed of younger female respondents.

“ Cluster 4, the ‘ Enthusiasts, ’ is composed overwhelmingly of younger females and scores highly on all hedonic motivations.” (Arnold, 79)

Based on this finding, this group also comprises the test audience for the research design.

Test user ages ranged from 20 to 40. All test users were female, corresponding to the desired target profile of a hedonic shopper established by prior research. The test users indicated that they are already comfortable using smartphones during their shopping process, and predominantly use them to research information about the products they are shopping for. They engage in looking for ingredients for a recipe when shopping for food, or comparing prices with online retailers. They enjoy audiobooks, podcasts, music, mobile games, video, and e-books on their mobile devices. Screening results indicated that adventure and gratification shopping were among the highest hedonic motivations. The aggregate average score for utilitarian motivation was among the lowest indicating that the test users are strongly motivated to satisfy hedonic needs.

3.1.6 Evaluative approach

The research will use established means of measuring Adventure and Gratification hedonic motivation. Using a scale of hedonic and utilitarian motivations; as well as measures of concentration which have been positively correlated to Adventure motivation, and time distortion which has been shown to correlate to Gratification motivation.

The design ’ s evaluation utilizes Babin ’ s scale for measuring hedonic or utilitarian consumer motivations to identify test users who are predisposed toward

utilitarian motivations. (Babin, 652) Further survey questions are used following Arnold 's approach to more specifically examining the six factors of hedonic motivation, including adventure and gratification motivations. Using both quantitative surveys and qualitative user interviews. (Arnold, 79) Concentration will be measured by qualitative means, interviewing users in the post-testing phase to recount the details of both the narrative and the garments. As with adventure, gratification motivation will also be confirmed using Arnold 's hedonic survey and interview questions. Gratification motivation has also been connected with time distortion in prior research, therefore the evaluation survey will measure time distortion experienced by users during testing. (Bloch, 34) As with hedonic consumer motivation research done by Ballentine, Arnold 's survey will be used as a pre-screening questionnaire to identify the hedonic predispositions of test users toward adventure, gratification or utilitarian motivations. (Ballentine, 644)

3.1.7 Test structure

Testing was conducted with target test users in a retail-like setting. Prior to testing all test users completed a Hedonic vs Utilitarian Motivation Profile Questionnaire (Ballentine, 644). This will determine the user 's predisposition toward specific hedonic or utilitarian motivations, including Adventure and Gratification motivations. Testing with only users who are already predisposed to Adventure and Gratification motivation may invalidate the test 's integrity. The test will strive to select users from a variety of motivations including utilitarian.

The research measured evidence of satisfying adventure and gratification hedonic motivations between the traditional retail experience and the design 's object-based storytelling approach.

First the test users will be asked to browse and put together an outfit normally they will take a standardized survey rating adventure, concentration, gratification and time distortion this is a baseline measurement of the user 's normal shopping experience.

Adventure was measured by asking three qualitative questions regarding stimulation, immersion and experience, gratification questions will focus on the effect of the experience on mood (Arnold, 93). User concentration was also examined to do this users will be asked to list which garments selected for their look and give

details of both the garments and the narrative story. The level of concentration will be assessed by the number of details offered. Time distortion questions will be asked, as this is correlated with gratification motivation (Bloch, 35).

Following the control testing, users were asked to browse and create an outfit now using the design 's object-based story system. Users must use the design to the point of completing story revision activities and satisfaction with the created outfit. After which point the users will re-take the survey the completed following the control test. The user 's experience of the two user tests will also be compared with an in-depth qualitative interview following the later user testing of the design. The before and after comparison of the control and design user testing survey and qualitative interview responses will be used to measure the anticipated increase in hedonic consumer motivation.

3.1.8 Design for testing

The design presents a new value to consumers, since the object-based story garments are imbued with an additional narrative context and meaning before purchase. Conversely, the physical nature of the object-based story also enhances the imagined world of the narrative itself. Interacting with the story through products lends an added physical dimension to the narrative as users can touch and try on the related garments. This is a unique value of placing object-based stories in the retail setting.

In this research project a fashion retail experience has been selected. The story experience centers around the natural shopping behavior of putting together an outfit, specifically selecting a top, bottom and accessory garment. The user experiences the story as audio content initiated by scanning the paper tag of a specified garment in the shop with a smartphone. The story 's introduction is initiated by scanning the main garment, a shirt or blouse. Then the user is asked to choose between two secondary garments, trousers or skirt, each of which represents a distinctive change in the narrative direction. This is followed by another set of accessory story choices. After a complete outfit has been selected; top, bottom and accessory, the user has the option to go back through the story making different narrative choices and revising the outfit they have created at the same time. The figure below illustrates the narrative structure..



Figure 3.1 Story architecture


The final phase of testing focused on testing the validity of the research thesis concept, that object-based storytelling can effectively satisfy users' hedonic adventure and gratification motivations. As has been described existing research indicated that women ages 20 to 40 may be the ideal adventure and gratification shoppers, that test users were selected from these groups. The design made use of six women's test garments - Two tops, one coat, one trouser, and two accessories. The content and interaction of the design test centered on the user's exploration of the narrative content while creating an outfit. The overall grouping of garments covers everything necessary for the user to complete a full outfit. The premise of the design's experience is that users are browsing the garments with the aim of creating a complete outfit. The design offers the user different choices for a top, bottom or coat, and accessories. The object-based story content plays a key part

in the user's consideration and consideration process as it informs the user's contextual image for each garment. This augments and enhances the typical outfit creation process by adding elements of story creation; each garment's associated content module serves as a distinctive part of the narrative structure, the users are not assembling and curating an outfit alone but also a narrative.

The research has been evaluated through user testing in a retail or simulated retail environment. User testing was conducted as a split test, comparing user outfit Prior to testing, story content will be specifically written for each test garment. Note that based on users feedback in test three about the amount of time required to complete the story the format of the modular structure has been altered slightly from seven garments to six, leaving only one pant as the option for narrative conclusion, but leaving two accessory garments available to further or manipulate the narrative.


6 Test Garments:

Main Garments:




1 women's coats, or jackets

Secondary Garments:



2 women's tops blouse, sweater or t-shirt.

Accessory Garments:



3 women's skirts, trousers, shorts, bags, hats, scarves, watches, gloves, shoes, or jewelry

Figure 3.2 Test garments

The images above show the actual test garment selection used in the design test. By following the methods and approach explained in the how-to guide for object-based storytelling the following narrative was created for the selected garments.

	<p>Jacket Intro: I'm looking for a few nice things to wear around the city this Fall.</p>
	<p>Top 1 Conflict: I had this great striped top last year that I loved, but I spilled coffee all over it. Whoops...</p>
	<p>Top 2 Conflict: There is a great concert happening down at the theater. I already have my tickets. An outfit to wear to that would be fun.</p>
	<p>Pants Conclusion: Oh, this really coming together. I think this is something I'm going to have a lot of fun in.</p>
	<p>Shoes These are great for that time between late Summer and Fall before it gets too cold to wear open-toed shoes.</p>
	<p>Sunglasses I just got back from vacation, and left my sunglasses on the beach. These are good, since I can find them easily just feeling around in my purse while i'm walking.</p>

Figure 3.3 Test story content

3.1.9 Research testing

The iterative development of the design was structured in three unique exploratory tests. Each test was designed to answer key questions and uncover deep insights used in refining the proposed approach to creating the proposed object-based

stories. It is the hope of this research that this approach can be implemented by actual retailers through the reading of this paper. This design concept section will describe in detail the refined story structure created through the fore mentioned testing. Please note a separate object-based storytelling guide has been created and is included in the appendices of this dissertation. Advisement on selecting the ideal garment for object-based storytelling in the fashion retail environment; how to structure the users' interactions when experiencing the object-based story, and discussion of the best media format for delivering object-based stories are also covered. The final design's proposed value and how it was tested are described as a conclusion to the design concept.

3.2. Testing phase one

The research and testing of the design took place in four distinct phases. Phase one of the testing sought to verify the usability of the design functions and eliminate any issues in conducting future testing and to gain an understanding of how object-based storytelling might impact the users shopping preferences and perceptions. The first test was conducted with 11 individual users from a cross section of 10 nationalities, ages ranging from 20 to 45, and the test group consisted of both male and female users. See Appendix A.3 for the complete breakdown of user traits.

3.2.1 Test Objectives:

The overall objective of the initial test was to verify the general value of an object-based story; not only the functionality of the prototype but also the user's satisfaction with the experience and story content. User preference for creating story content themselves over passively experiencing creator-provided content, as well as measuring any potential change to brand value for retailers due to the experience were also objectives.

Objectives:

- Evaluating prototype functionality
- Measuring User satisfaction

- User satisfaction with the experience
- User satisfaction with the story content
- Measuring User preference for story creation or passive listening
- Measuring change in brand perception
- Measuring change in garment perception
- Measuring change in willingness to purchase

3.2.2 Test Structure

The test was structured as follows, the test facilitator organized the mock retail setting, refolding and arranging the test garments in between users. The facilitator first asked the user to participate in the pre-test component of the survey - gathering user profile information and initial impressions of the test garments. The facilitator then introduced the user to the Aurasma AR app and demonstrated how they should proceed with the experience the user then proceeded to browse the mock retail environment engaging with the test garments and object-based storytelling content. The user was then asked to complete the first post-test survey. Following this the facilitator introduced the second object based storytelling experience, in which the users were asked to create some of their own original content. The user then completed the final component of the survey and participated in a user interview with the facilitator. See Appendix A.1 for a detailed outline of the test structure.

The quality of the object-based storytelling experience was measured with post-test survey questions judging story satisfaction, user ' desire to repeat the experience, and asking about the role the user wished to play in the experience. The impact of the object-based story experience on the users ' affinity for and perception of the test garments were gathered by surveying users on their opinions of the test garments both before and after experiencing the object-based story content. Users were asked about their level of sentiment towards the garments, the consumer brand fit of the garments for the user ' s shopping preferences their perception of the brand which might sell the garments, and the likelihood of a user

purchasing the garment. See Appendix A.2 for the complete list of actual survey questions. Functional use of the design was evaluated by facilitator observation during testing.

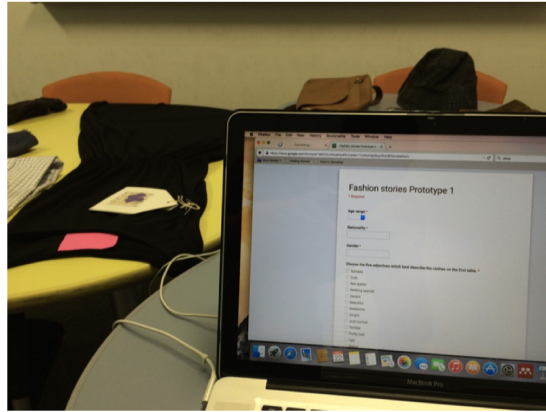


Figure 3.4 Testing phase one: user survey

Testing was conducted in a simulated retail environment, with test garments, merchandised in a way that resembled a typical retail display table.



Figure 3.5 Testing phase one: mock retail setting

The test consisted of users activation audio content by scanning AR tags attached to the test garments. Both audio and text-based modes of content were tested.



Figure 3.6 Testing phase one: garment with scannable AR code

The following measures were implemented to uncover determinate information for the stated test objectives.

Objective 1

Evaluating prototype functionality

Test method

Facilitator observation

Objective 2

Measuring User satisfaction

1. User satisfaction with the experience

Test methods: Survey questions

User satisfaction with the experience

User willingness to try the experience again

2. User satisfaction with the story content

Test methods: Survey questions

User satisfaction with the story content

Objective 3

Measuring User preference for story creation or passive listening

Test methods: Survey questions

User preference for creating Object-based storytelling content, consuming content, both equally, or neither.

Objective 4

Measuring change in brand perception

Test methods: Survey questions: before / after

User description of retailer image.

Objective 5

Measuring change in garment perception

Test methods: Survey questions: before / after

User relatability to garments

User sentiment toward garments

Objective 6

Measuring change in willingness to purchase

Test methods: Survey questions: before / after

Likelihood of user purchase

3.2.3 Results and Further Questions

Results of the survey analysis indicated that the users were largely satisfied with the story experience. More than 60 percent of the test users stated that they were satisfied with the overall experience.

Please rate your satisfaction with the overall fashion-based storytelling experience.

11 responses

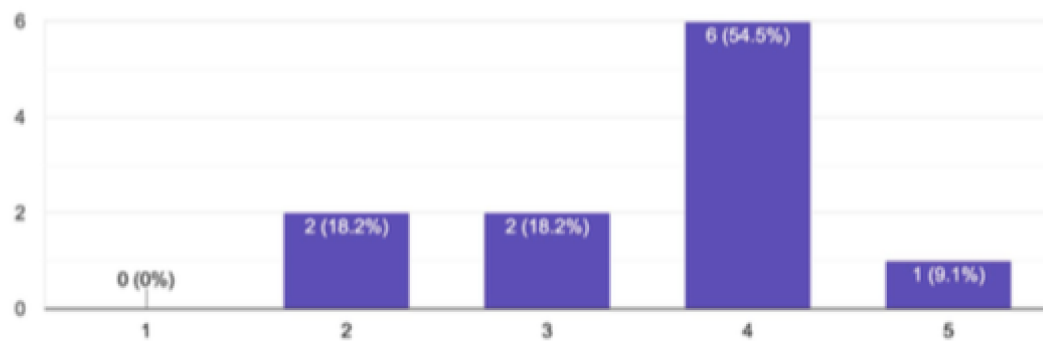


Figure 3.7 User satisfaction with experience

Over 50 percent of the surveyed users indicated they would like to try the object based storytelling experience again in the future.

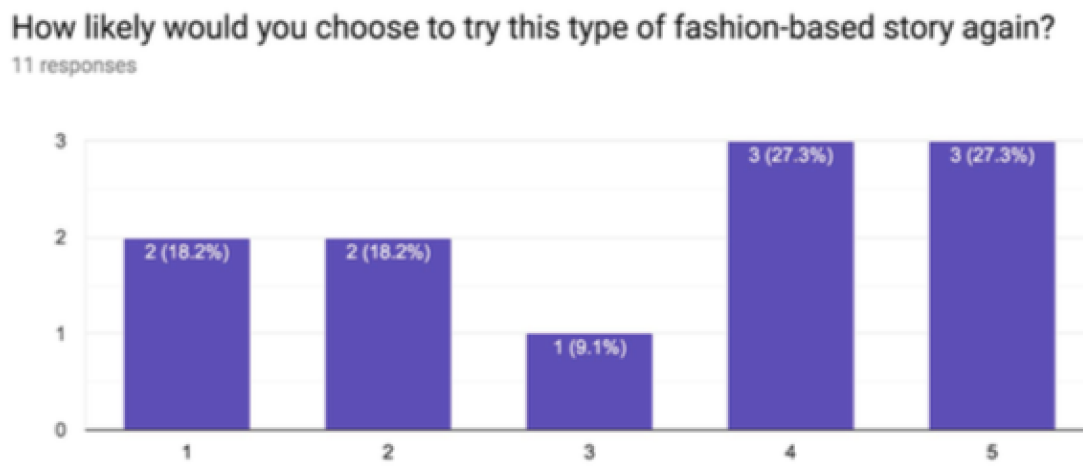


Figure 3.8 User likelihood of trying the experience again

Fewer of the users indicated they were satisfied by the test story content itself. Only 36 percent of users indicated they were satisfied with the story content and most users indicated that they felt indifferent toward the test story. This satisfaction gap users experienced between the overall experience and the story content indicated a need for more compelling story content to be developed in the following phase two testing.

Please rate your satisfaction level with this story.

1 = Least satisfied

5 = Most satisfied

11 responses

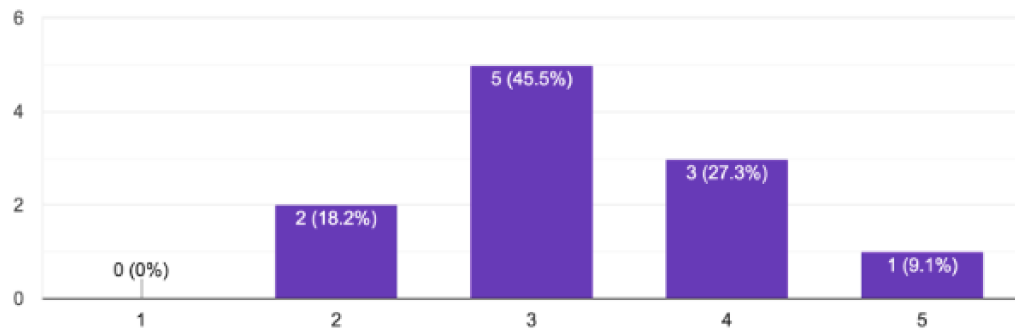


Figure 3.9 Satisfaction with story

After the listening to the object-based storytelling content, the percentage of users describing their perception of the mock retailer as “Casual” increased from 9 percent to 27 percent, while the number of users describing the retailer as “mass market” or “Luxury” decreased. This would indicate that brand perception can be influenced by the narrative tone and theme of the story content, since the characters and story scenario were in keeping with a casual market fashion retailer. One may also perceive the increase of users indicating a perception of casual over mass market as a positive since there are some negative associations with the latter as offering discount pricing.

Brand perception
Before

After



Figure 3.10 Brand perception

It is clear from the user survey that more users saw the test garments as being from a store they would shop in after experiencing the object-based storytelling content. Indicating that the experience helped the users to more easily relate to the garments that their initial impressions would allow.

Brand fit
Before

After

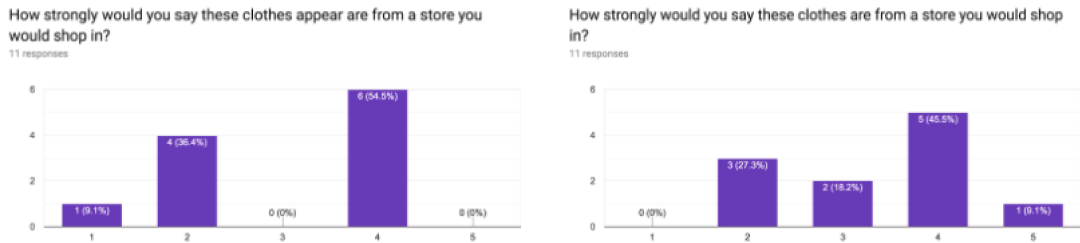


Figure 3.11 Brand fit

User sentiment remained largely unchanged after experiencing the object-base story with somewhat more users describing the test garments as “Stylish ” and “cute ”, as well as “Nothing special”. Fewer users chose the terms “Not stylish,” “Just normal,” and “OK. ”

User sentiment

Before

After

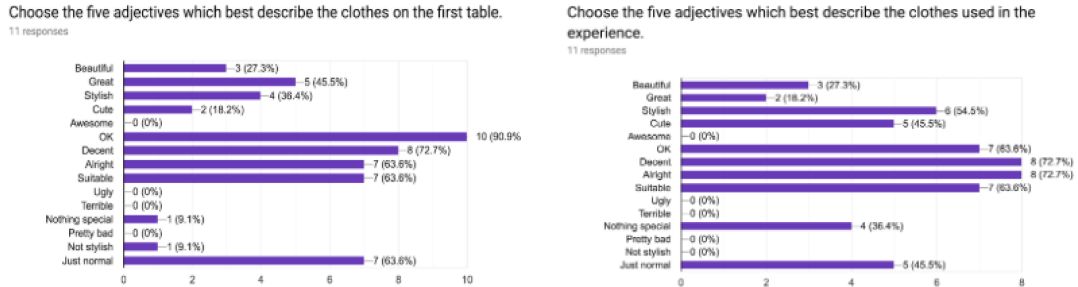


Figure 3.12 User sentiment

Similarly, there was only a modest change in the number of users indicating that they would be more likely to purchase the garment after the story experience.

Likelihood of purchase

Before

After

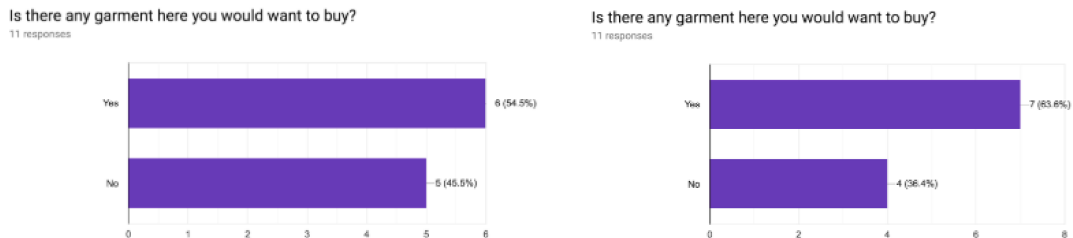


Figure 3.13 Likelihood of purchase

Once the users had experienced creating their own object-based story content they were asked whether they preferred to participate in the experience either by listening to content, creating content themselves, or doing both. Users were almost equally split between the three options, indicating the potential for adding a user-generated content component to the design.

Which activity appeals more to you?

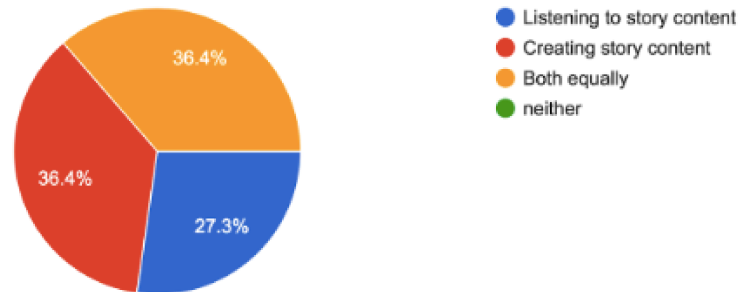


Figure 3.14 Passive versus active audience participation

After the completion of the survey, users participated in one-on-one, interviews regarding the experience. Responses indicated that the phase one design was successfully able to provide context to the test garments, with users stating that they were able to make connections between separate garments, which they would have not typically pair together on their own.

“I didn ’ t see the connection of the items before I heard the story, but after I could see where these items are going together. ”

“I wouldn ’ t necessarily think these garments would be worn together, but definitely the narrative helps to enforce that... ”

“I was starting to see how the garments were tied together. You feel like you are in the middle of this novel... ”

3.2.4 Summary

The following table summarized the test results as well as any notes related to future testing.

Objective 1

Evaluating prototype functionality

Test method

Facilitator observation

Result:

While no difficulties in executing the experience were observed during the testing it should be noted that the facilitator demonstrated test process and technology for each user at the start of the test.

Notes:

In future tests users will be required to understand user of the design from a written prompt and intuitive practice, and asked about the usability of the design in the post-test interview.

Objective 2

Measuring User satisfaction

1. User satisfaction with the experience

Test methods: Survey questions

User satisfaction with the experience

Result:

More than 60 percent of the test users stated that they were satisfied with the overall experience.

User willingness to try the experience again

Result:

Over 50 percent of the surveyed users indicated they would like to try the object based storytelling experience again in the future.

Notes:

These positive satisfaction results indicate the overall potential for object-based

storytelling to bring value to the retail experience, and are encouraging enough to continue the research.

2. User satisfaction with the story content

Test methods: Survey questions

User satisfaction with the story content

Result:

Only 36 percent of users indicated they were satisfied with the story content and most users indicated that they felt indifferent toward the test story.

Notes:

The lower satisfaction scores for the story content as opposed to the general experience, indicate an opportunity for raising the overall evaluation of the user experience by focusing on the story content itself in future research. Vectors such as story, structure, module length, and depth of focus on objects are all to be measured.

Objective 3

Measuring User preference for story creation or passive listening

Test methods: Survey questions

User preference for creating Object-based storytelling content, consuming content, both equally, or neither.

Result:

Users were almost equally split between creating object-based storytelling content, consuming content, and both equally. No users selected the neither option, further indicating satisfaction with the experience.

Notes:

The fact that a sizable portion of users indicated that they preferred participating in content creation or both content creation and consumption implies that there

is a strong potential to enhance the experience by incorporating content creation interactions. Future testing will measure the ease with which users are able to do this.

Objective 4

Measuring change in brand perception

Test methods: Survey questions: before / after

User description of retailer image.

Result:

After the listening to the object-based storytelling content, the percentage of users describing their perception of the mock retailer as “Casual” increased from 9percent to 27percent, while the number of users describing the retailer as “ mass market ” or “ Luxury ” decreased.

Notes:

This indicates that brand perception can be influenced by the narrative tone and theme of the story content, since the characters and story scenario were in keeping with a casual market fashion retailer. One may also perceive the increase of users indicating a perception of casual over mass market as a positive since there are some negative associations with the latter as offering discount pricing. Future testing may explore how various narrative themes affect user perception.

Objective 5

Measuring change in garment perception

Test methods: Survey questions: before / after

User relatability to garments

Result:

More users saw the test garments as being from a store they would shop in after experiencing the object-based storytelling content, indicating the content aided

users in relating to the objects.

Notes:

As explained in research by Chronis, object-based storytelling allows users to make connections to objects with their own lives, in a process called “relating.” These results indicate that this process also takes place in the retail setting. Future research will explore the extent to which users are able to relate various garments to their own lives as well as the other narrative comprehension processes Chronis observed - completing, recontextualizing, and imagining.

User sentiment toward garments

Result:

User sentiment remained largely unchanged after experiencing the object-base story with somewhat more users describing the test garments as “Stylish” and “cute”, as well as “Nothing special”. Fewer users chose the terms “Not stylish,” “Just normal,” and “OK.”

Notes:

It is difficult to determine the impact or non-impact of the experience on the user’s sentiment toward the garments; while it is possible that the design had no measurable effect on sentiment, it is also possible that the narrative content reinforced the user’s existing sentiment toward the garments.

Objective 6

Measuring change in willingness to purchase

Test methods: Survey questions: before / after

Likelihood of user purchase

Result:

There was only a modest change in the number of users indicating that they would be more likely to purchase the garment after the story experience. 55 percent to 64 percent.

Notes:

As with user sentiment, it is difficult to determine a precise factor which would prevent or encourage purchase. As described in research by Arnold hedonic shoppers often visit and revisit a retailer multiple times before making a purchase decision, the users indication of satisfaction with the experience supports the idea that the design can be a success without immediate consumer purchase.

3.3. Testing phase two

3.3.1 Test Objectives

The second phase of the testing focused on deeper exploration of the creation of satisfying story content. Users were asked to create their own stories both collaboratively and individually. User willingness to engage collaboratively with other users and openness to having their created content manipulated by other users were explored in depth. Different modalities of content were also tested - text versus audio. As well as the ideal length for story content in the modular structure. The second round of testing also looks at the impact of content creation on the user's perception of test garments and idea of user intent in content creation and brand perception.

Objectives:

- Measuring user engagement with story content
- Exploring content modalities
- Text content preference
- Audio Content preference
- Determining length of time for content creation
- Measuring User satisfaction with content creation
- Exploring approaches to user created content

- Collaborative approach
- Independent approach
- Exploring user intent in content creation
- Measuring impact of content creation on garment perception
- Exploring user-owned brand perception

3.3.2 Test Structure

The second phase testing was conducted in a similar mock retail space as the phase one testing. Testing was conducted individually with eight different users, of a similar age and range of nationalities to the prior testing. The test began with the user being asked to read a prompt outlining the concept for the mock retail store and outlining their role as customers in the testing interaction.

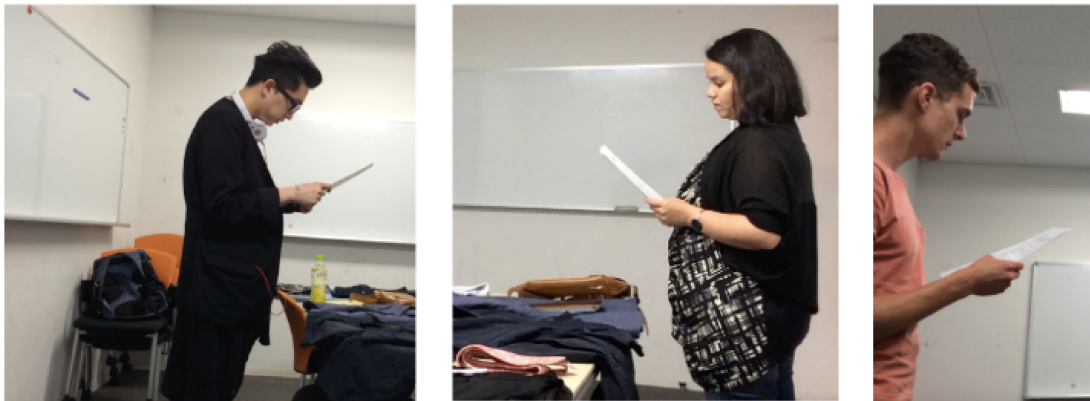


Figure 3.15 Preliminary testing phase two: testing prompt

Users then began their interactions with the test garments by triggering a story which had been created by multiple users.



Figure 3.16 Preliminary testing phase two: user interaction with content

The user was then asked a series of interview questions about their experience then the user was asked to replace segments of the story with their own recorded content. They were given a choice of doing this both by text and audio modalities.

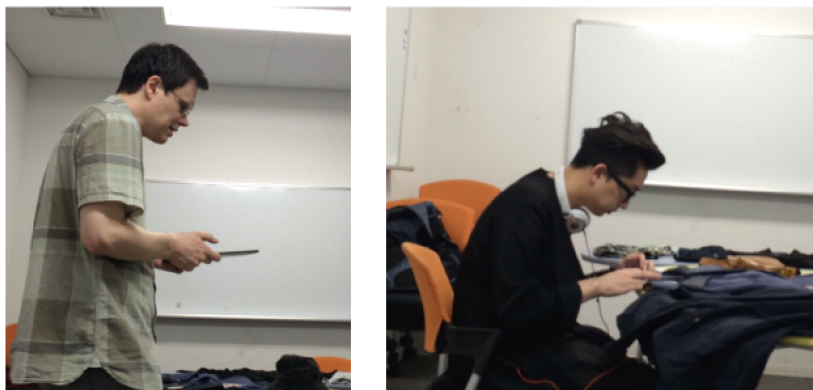


Figure 3.17 Preliminary testing phase two: users creating content - audio and text

The users were also asked to create their own complete story. Assembling a complete outfit in the process.

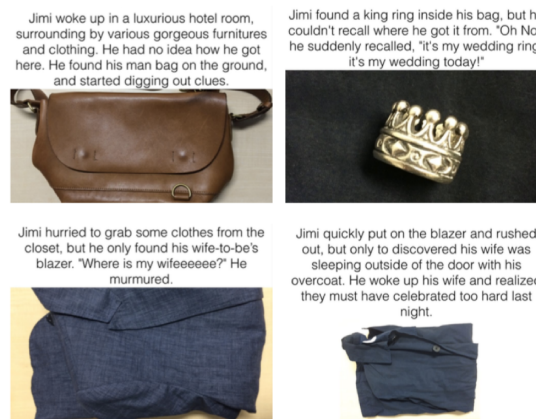


Figure 3.18 Preliminary testing phase two: complete story created by a user 1



Figure 3.19 Preliminary testing phase two: complete story created by a user 2

The test concluded with a set of recorded interview questions about the users impressions of collaborative content versus content created by one person and their own experience creating collaborative content versus creating a stand alone work, and their preferences for creating content as opposed to being an audience member.

Specific details of each test method applied in the second test are organized the table below.

Objective 1:

Measuring user engagement with story content

Test method: Qualitative interviews

User ' s level of recall of story details

User ' s ease in story comprehension

Effect of negative story content on user engagement

User ' s feedback for story creator

Objective 2:

Exploring content modalities

Text / Audio modality preference

Test method: Qualitative interviews

Users were offered a choice of modality in their own content creation and asked to explain their choice afterward.

Objective 3:

Determining length of time for content creation

Test method: Qualitative interviews

User ' s description of experience length

Objective 4:

Measuring User satisfaction with content creation

Test method: Qualitative interviews

User ' s comfort level with content creation

Elements users enjoyed about content creation

Elements users found difficult about content creation

User ' s willingness to try the experience again

Objective 5:

Exploring approaches to user created content

Test method: Qualitative interviews

User preference for collaborative or independent content creation

User comparison of collaborative or independent content creation

User openness to manipulation of their created content by other users

User ' s considered factors in garment selection for created content

Objective 6:

Exploring user intent in content creation

Test method: Qualitative interviews

User ' s desired audience impression based on their created content

User ' s desired audience feedback type

Objective 7:

Measuring impact of content creation on garment perception

Test method: Qualitative interviews

User ' s impression of test garments after content creation

Objective 8:

Exploring user-owned brand perception

Test method: Qualitative interviews

Users desired presentation of retail experience to audiences

3.3.3 Results and Further Questions

Users indicated that they had no distinct preference for creating content versus playing an audience role.

“I enjoyed both creating and listening to the story but in different ways. First listening to the stories gave me an idea of the format of the stories, and I enjoyed to ability to inject a little bit of my own personality in to it. ”

“ In terms of creating content I liked the provided three stories, but I knew I had a better idea who the person that would have this bag was. ”

Users did express that they found it easier to create their own stories individually rather than collaboratively, as they found it easier to conceive of one story per garment rather than trying to structure a modular narrative.

“ I would definitely prefer to create content for this story rather than the small pieces of story. ”

“ I chose to add to the single story, bag, because it just seemed easier. It gave more insight into my point of view of that type of bag and the type of person that would carry it. ”

“ I created content because I didn ’ t feel the stories provided fit the garment. The Rocker persona, I saw it as a travel item. ”

3.3.4 Summary

The following summarizes the test results as well as any notes related to future testing.

Objective 1:

Measuring user engagement with story content

Test method: Qualitative interviews

User ’ s level of recall of story details

Results:

Users had a fairly good general recall of they story content. Though no user could recall the story completely, all were able to remember at least several details.

Umm, It’s about three people two guys, who without realizing the third person, a girl, is there they dare to talked about the other one they aren ’ t very keen on. But she ’ s there and annoyed, and it gets a bit physical with the gloves. And she doesn’t have a good time.

User ' s ease in story comprehension

Results:

Users indicated that they encountered no serious issues in understanding the test content.

The more you see the more you understand. But if I had just seen the watch I probably would have been more confused. For the watch in the beginning I perceived the anger but I couldn't really see the context. Once I saw the gloves I could get more of the context. And that had me able to completely imagine the setting, yes. And I understood.

Notes:

Story recall and ease of comprehension indicate that users had a generally high level of engagement with the story content.

Effect of negative story content on user engagement

Results:

Users indicated that they were aware of negative content within the test story, but said that they did not find that it influenced their experience.

I like the thing with the hat, and I liked and I like to play with the time because I felt the anger. I felt the anger, yes. I felt a lot of anger with that one, but then I felt like play like really not minding. That's what I perceived with the hat. The hat In the watch were emotionally perceived. Yes.

Notes:

The result that users registered that they understood negative content was present, but that it had no effect on their experience, suggest that users have a high tolerance for different types of stories and the design need not only contain content with positive themes.

User ' s feedback for story creator

Results:

Users were positive in their feedback about the modular storytelling example. Some users expressed some surprise about the context given to some of the garments in the stories, stating they couldn't imagine that garment being worn in that context.

Notes:

Users comments related to the acceptance of the context for text garments implies that there is a limit to the user's ability to relate or contextualize storytelling objects despite the content creator's intentions. The determinantes for how users accept or reject object contexts should be explored in future testing.

Objective 2:

Exploring content modalities

Text / Audio modality preference

Test method: Qualitative interviews

Users were offered a choice of modality in their own content creation and asked to explain their choice afterward.

Results:

While users were mixed in their choices, some user who preferred text stated that they felt that modality allowed them to express their thoughts more freely. "I felt like I could think more about it while I wrote it than... yeah, maybe I wouldn't feel so stressed to come out with something." In cases of collaborative content creation users preferred to keep the choice of modality consistent.

Notes:

The results indicate that there is no clear preference for individual or collaborative content creation, and that this may be personal to the desired experience of the content creator. So called, 'visionary' storytellers may prefer a solitary experience to freely express their ideas, while other creators may enjoy a social

interaction. Future testing should dive deeper into types of story creators and while produce the most effective stories.

Objective 3:

Determining length of time for content creation

Test method: Qualitative interviews

User ' s description of experience length

Results:

Users did not find the process of content creation overly long, though they indicated more time was required to create audio versus text content.

Notes:

A practical advantage of the audio content modality may be the shorter time required for content creation.

Objective 4:

Measuring User satisfaction with content creation

Test method: Qualitative interviews

User ' s comfort level with content creation

Results:

Users expressed that they were comfortable with content creation generally and found it to be an enjoyable activity.

Notes:

This is a positive indication that content creation itself may be incorporated into the design.

Elements users enjoyed about content creation

Results:

Users indicated that they had no distinct preference for creating content versus playing an audience role overall. Some users who felt they had a clear idea to express stated that they preferred content creation, but also enjoyed listening to high quality content.

Elements users found difficult about content creation

Results:

Users indicated that overall they felt the storytelling process went smoothly. They did have varying preferences for the individual or collaborative content creation approaches, and expressed difficulty with the counter approach to their preference.

User ' s willingness to try the experience again

Results:

Users were overwhelmingly interested in engaging in the process again.

Yeah definitely it was really fun.

Notes:

As mentioned user ' s reactions toward content creation were positive, though there appears to be a divide in the user preference for individual or collaborative content creation.

Objective 5:

Exploring approaches to user created content

Test method: Qualitative interviews

User preference for collaborative or independent content creation

Results:

Users expressed that they found it easier to create their own stories individually rather than collaboratively, as they found it easier to conceive of one story per

garment rather than trying to structure a complete modular narrative on their own.

It was more challenging because you have to create your own scenes for each of the garments, but it was also more entertaining to me. It was like, oh I'm actually being involved in this type of project and stuff. So I think that was a plus. The minus was that for people who don't really like to create their own stories they might be less aggressive towards the stuff. So maybe the adding to existing stories would work better for them but to me this is more interesting.

User comparison of collaborative or independent content creation

Results:

Users with a 'vision' for the content they wished to create stated it was easier for them to create all of the content for the four-part structure rather than incorporate their idea into an existing story. Alternately, other users found the individual content creation approach to be daunting, they felt it placed more responsibility on the storyteller to build a complete world.

Notes:

This result indicates additional development on the explanation guide for the narrative structure may be needed to support users with modular story creation. Future tests should explore an education component for modular storytelling and the narrative structure.

User openness to manipulation of their created content by other users

Results:

Users indicated that they were open to having their content altered by others, and expressed interest in seeing how the content might be changed.

This is more interesting, because I get to see what other people feel about the garments too. And I get to participate in the stories they are creating. That was pretty fun. And somehow quite inspiring

about how people brought everything together. So that was pretty amazing.

Notes:

The result indicates content creators have an openness and curiosity toward collaborative creation even in instances where the creator selected the individual approach to story creation. This implies a sense that the story is not necessarily owned by the creator, but may be altered, even as part of the audiences shopping process.

User ' s considered factors in garment selection for created content

Results:

Users stated that they began by first selecting the garments they wished to use and being inspired by the garment as to the content it would support.

I kind of picked the garments first, because I had a strong impression of them that first . And then I kind of develop the story from there. I developed on an existing plot but then with a few tweaks see if it could go on other grounds.

Notes:

In future testing the outlined approach to content creation may start with the garment selection process as indicated by the process described in the user interview comments.

Objective 6:

Exploring user intent in content creation

Test method: Qualitative interviews

User ' s desired audience impression based on their created content

Results:

Users mentioned they would like their content to be perceived as entertaining.

They hoped audiences would relate the test garments they selected to specific scenarios in the narrative. "To be able to visualize my story when they saw the garment, so they would see someone with that tie and associate it with the story." They saw their content as a type of fictional audio photoshoot guiding the audience in how the garment could be worn.

Notes:

The motivating factor for content creators was to create entertaining experiences the fully integrate test garments and narrative into a complete experience. Content creators described their role as not unlike a stylist or fashion editor presenting the garments in a context for the audience which they found exciting. Guidance for content creators may be written from this point of view for future testing.

User ' s desired audience feedback type

Results:

The users were eager to receive feedback about their content and hoped to hear how well their stories facilitated engagement between audiences, content, and garments.

Like what do they think about the story itself and what do they think about the garments too. Was there a strong engagement between the garments and the story or not.

Notes:

Integrating a feedback loop or opportunities for audience and content creator interaction may be beneficial to improving the quality of content creation and should be incorporated into future design tests.

Objective 7:

Measuring impact of content creation on garment perception

Test method: Qualitative interviews

User ' s impression of test garments after content creation

Results:

Users reported that their impressions of the garments changed very little after the content creation process, stating that from the content creators' point of view they already had a strong image for the garment which they hoped to communicate to the audience.

Notes:

This response indicate the content creators feel a sense of ownership of the test garment is perceived by audiences. These role should be more deeply related in the user guidance for content creation.

Objective 8:

Exploring user-owned brand perception

Test method: Qualitative interviews

Users desired presentation of retail experience to audiences

Results:

Users presented the retail brand as a 'story told through fashion.' They described the retail space as a place to experience the story and be inspired by the garments.

I would describe it as having some personality for the clothes. A shop that describes its pieces as people. With a personality, with a life. With something to do. With somewhere to go. With problems. The clothes have a persona attached to them.

I want them to feel entertained. Like they can relate to the story, or think, oh I can wear this in certain circumstances. Like, oh I didn't know this was a men's bag, or oh I had this experience too.

Notes:

The results indicate users image for the brand treats narrative content as an integral and valuable part of the shopping experience, implying it could take on a differentiating role beyond that of traditional atmospherics.

3.4. Testing phase three

3.4.1 Test Objectives

Phase three of the testing focused on observed behavior of the users both in audience and creator participation. To better understand the willingness of a user to relate the test garment to their own lives or accept the context given by the content creator users experienced single garments with multiple stories attached and therefore different contexts attached to them. New approaches to both the individual content creation and collaborative creation were tested based on the results of the phase two test: users were instructed to create one complete story per garment for the individual process and were given the option of replacing an existing content module for the four-part structure of the collaborative approach. The order of content modules were tested in the audience experience to determine the users reaction to non-linear storytelling versus a strict Aristotelian narrative structure.

Objectives:

- Exploring the user behavior around audience and creator experience
- Measuring user engagement with story content
- Measuring User satisfaction with content creation
- Exploring approaches to user created content
- Collaborative approach
- Independent approach
- Exploring user intent in content creation
- Measuring impact of content creation on garment perception

3.4.2 Test Structure

The test was conducted in a simulated retail environment as with the previous tests. Seven test users participated in the individual user tests; test users were of a similar age range and mix of nationalities as the previous two tests.

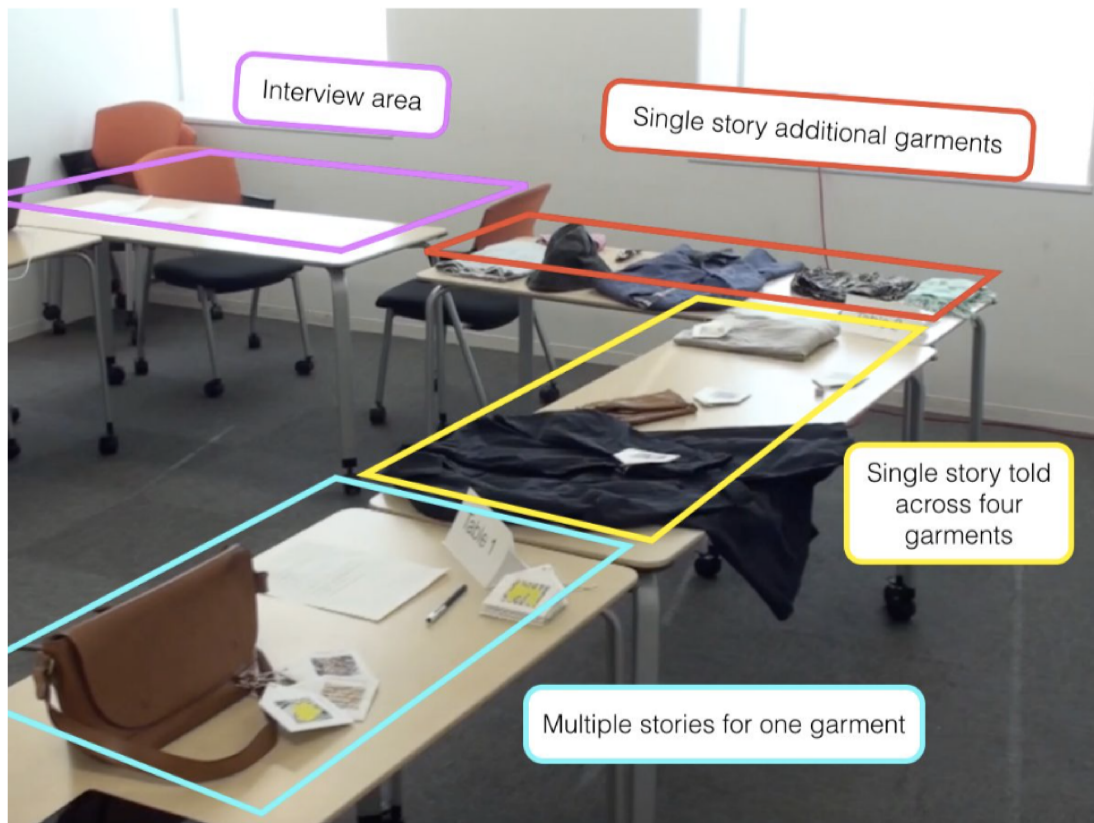


Figure 3.20 Preliminary testing phase three: mock retail setting

In the third test users experience a modular storytelling format, in which they can experience the narrative out of sequence as they naturally select garments from the table which appeal to them, mimicking their natural shopping behavior. After experiencing the test content the users were asked a series of interview questions.

Objective:

Exploring the user behavior around audience and creator experience

Test method: Observed user behavior and qualitative interviews

User's rationale / explanation of facilitator-observed behaviors

Objective:

Measuring user engagement with story content

Test method: Qualitative interviews

User ' s level of recall of story details

Objective:

Measuring User satisfaction with content creation

Test method: Qualitative interviews

User ' s comfort level with content creation

Objective:

Exploring approaches to user created content

Test method: Qualitative interviews

User preference for collaborative or independent content creation

Objective:

Exploring user intent in content creation

Test method: Qualitative interviews

User ' s desired audience impression based on their created content

Objective:

Measuring impact of content creation on garment perception

Test method: Qualitative interviews

User ' s impression of test garments after content creation

3.4.3 Results and Further Questions

Users responded positively to the non-linear narrative structure of the test, describing the experience as immersive, interactive, and engaging.

“ I was starting to see how the garments were tied together. You

feel like you are in the middle of this novel. ”

“ You have to walk around and see different garments to get the full story, rather than getting the full story at one garment. ” feel like you are in the middle of this novel. ”

An additional suggestion was that content modules be limited to one per garment, so as to not contradict the impression the users formed for any particular garment.

“ I liked the one that just had one story. In the case of the bag with multiple stories it kind of lost its appeal, because if it can be any of them then I guess none of them are real. ” feel like you are in the middle of this novel. ”

The users indicated that the narrative provided a strong context for the clothes outside of the retail setting and allowed them to fantasize about the type of person who might ideally wear the garments.

“ It ’ s a good way to paint a picture of a future life through the clothes. ” feel like you are in the middle of this novel. ”

“ I can imagine that the stories would help people relate to the bag, but I don ’ t have people like that in my life so for me I had a stronger image of how the garment would be worn. “ feel like you are in the middle of this novel. ”

“ It gave more insight into my point of view of that type of bag and the type of person that would carry it. ” feel like you are in the middle of this novel. ”

The users also suggested that the narrative content reference specific details or aspects of the individual test garment so as to further drawn the user in to contact with the garment.

“ It made me think of how this might call attention to a specific detail of the garment, a stitch or pleat for example. ” feel like you are in the middle of this novel. ”

“ I would like the bag to have one attachment that went with the story, so if I choose The Aviator story maybe there is a small button of a plane that goes with it. so you ’ d have one bag with three stories and a small customization that goes with them. ” feel like you are in the middle of this novel. ”

Users who expressed dissatisfaction with the narrative reported that they did not experience relating the garments to themselves or see a connection between the garments as an outfit.

“ Nothing really connected with me. With the last one maybe the storyline wasn ’ t for me. I realized I wasn ’ t the target audience. It ’ s Summer and it ’ s pretty warm now. I didn ’ t really have a desire or an attraction to any of the objects either. For whatever reason I didn ’ t see them as connected. ”

While some users mentioned that they found creating one story per garment simpler than the modular narrative style, others mentioned that in prior test with different narrators for each module they felt more comfortable adding to an existing collective approach rather than being the first to contribute additions.

“ It seemed like last time there were multiple peoples ’ voices in the content, so adding my own content seemed more normal. This time the story seemed more packaged and didn ’ t feel like it needed to be edited. The last time was more like patchwork and I could add my own patch. I think that maybe because it felt that other people had also done it last time, so I felt more appeal to add my own voice. While this one felt like someone had decided to tell the story. I would feel like I ’ m saying he did a bad job almost. ”

Users discouraged the addition of a content creation component to the shopping experience, stating that they preferred to experience the story as a customer and felt they wouldn ’ t have time to engage in content creation.

“ I put myself more into the shopper experience I am probably less likely to create a story if I am just here to shop. Maybe that was my mentality for today. ”

Since the user is relatively passive once the content begins to play, users suggested that the length of individual content modules be limited in order to allow the user more opportunity to move around the retail space.

“The length of the audio is too long, even 30 seconds or 1 minute
It ’ s too long to stand in one place. ”

Users made suggestions for improving the functionality of the experience such as adding a number of listens feature to show how popular each story was, and using designs on the AR tags which coincide with the narrative theme of the story.

“It would be interesting to know which story had been heard the most. Like a rating or like a Youtube view count. I tend to check YouTube and if only 100 people have watched then it ’ s probably a bad one. ”

“I think that I haven ’ t been able to connect the imagery on the paper AR tags to the story. Even if I was attracted to the garment I ’ m not attracted to the styling of the tag, so I might not want to be a part of that story. ”

3.4.4 Summary

Objective:

Exploring the user behavior around audience and creator experience

Test method: Observed user behavior and qualitative interviews

User ’ s rationale / explanation of facilitator-observed behaviors

Results:

Several users chose not to participate in content creation practices, stating that they preferred to experience the story as a customer and felt they would not have time to engage in content creation. Users made suggestions for improving the functionality of the experience such as adding a number of listens feature to show how popular each story was, and using designs on the AR tags which coincide with the narrative theme of the story.

...maybe this time around I put myself more into the shopper experience I am probably less likely to create a story if I am just here to shop. Maybe that was my mentality for today.

Notes:

It should be noted that the application of the design will not include content creation on the part of the audience/shopper. Functional suggestions will be incorporated into application of the design.

Objective:

Measuring user engagement with story content

Test method: Qualitative interviews

User 's level of recall of story details

Results:

Test users ' recall of narrative details were consistent with prior testing.

Notes:

As some of the users have participated in all three phases of testing the result appears to indicate that user engagement can be sustained over time.

Objective:

Measuring User satisfaction with content creation

Test method: Qualitative interviews

User 's comfort level with content creation

Results:

Users expressed that they were comfortable with the content creation process. Users who created modular story content indicated that the replacing nature of this test gave them a template to follow for how their story could fit into the overall narrative. And chose to alter details about the story they did not like.

Notes:

The idea of altering or replacing details of the narrative can be incorporated into the shopping experience as well by allowing the customer to switch garments in the outfit as a way to alter or adjust the narrative flow.

Objective:

Exploring approaches to user created content

Test method: Qualitative interviews

User preference for collaborative or independent content creation

Results:

While some users mentioned that they found creating one story per garment simpler than the modular narrative style, others mentioned that in prior test with different narrators for each module they felt more comfortable adding to an existing collective approach rather than being the first to contribute additions.

It seemed like last time there were multiple peoples' voices in the content, so adding my own content seemed more normal. This time the story seemed more packaged and didn't feel like it needed to be edited. The last time was more like patchwork and I could add my own patch. This time felt more like I would have to start from scratch, although I had to do that last time it felt less easy to do for some reason.

Notes:

User responses highlight the difficulty in introducing modular content creation over traditional linear narratives. Following this test a 'how-to' guide will be created to lower barriers for new object-based storytellers.

Objective:

Exploring user intent in content creation

Test method: Qualitative interviews

User's desired audience impression based on their created content

Results:

Users mentioned that they hoped to convey meaning or context to a particular garment for the audience. Several stated that they wanted the audience to envision a new place the garment could be worn or an unexpected pairing of garments together. Some stated that they wanted to use the garments to tell an epic story.

Notes:

It is clear that content creators see a role for themselves in guiding the audience/customer through their shopping experience through the narrative. The 'How-to' guide will further establish and define this role in the context of a retail brand.

Objective:

Measuring impact of content creation on garment perception

Test method: Qualitative interviews

User's impression of test garments after content creation

Results:

Users comments varied with some indicating that the story content allowed them to see the garment in a new context. Others stated that the garment and narrative content were from a different season and therefore it was difficult to picture themselves wearing the garments.

... it's Summer and it's pretty warm now. I didn't really have a desire or an attraction to any of the objects either.

Notes:

The application of object-based stories in a fashion retail setting should use narrative content that focuses on the season which the garments used are from to aid audience relating behavior.

3.5. Content Creation Guidance

Based on the findings of the first three phases of testing the following guidance was created and used to craft the object-based storytelling experience used in the final design test. The guidance has also been converted into a “How-to” document for novice object-based storytellers, which was reviewed by a veteran storyteller, as described below. The how-to guide explains the fundamentals of object-based storytelling, how to select appropriate garments for an object-based story, the modular structure approach and provides a storytelling worksheet to assist in easily create object-based stories. The content creation guidance contained in this section of the dissertation further covers the audio recording modality of producing content as well as the user’s interactions during the experience. These last two subsections may be of more relevance to the experience producer than the storyteller.

3.5.1 Storytelling Workshop

The content of the how-to guide was introduced to a professional, independent storyteller as a means of not only confirming the effectiveness and usefulness of the content, but ultimately confirm that the process of creating successful object-based stories for the fashion-retail setting the guide describes can be replicated by others. To verify the approach of the how-to guide both an independent theater director and users from the preliminary testing were recruited to be involved in a storytelling workshop. The workshop was conducted by Skype, between Tokyo Japan and Dublin, Ireland.

Conor Hanratty is a theatre and opera director based in Dublin, Ireland. He studied at Trinity College, Dublin, at Royal Holloway in London, and at the School of Theatre, Film and Television at UCLA. He also spent a year studying with acclaimed Japanese theater director Yukio Ninagawa through Waseda University. Mr. Hanratty regularly produces new work performed across Ireland, the United Kingdom and in the United States. In addition to Mr. Hanratty’s participation in the storytelling workshop; the how-to guide evaluation was supported by the participation of some of the test users from the preliminary test. Three test users, two male and one female, from three countries, ranging in age from 20s to 30s

supported the evaluation by providing feedback.

Workshop Process: Step One

The initial step of the workshop was to give the user a role as a retail storyteller to set the context for why they are creating an object-based story for the fashion retail setting. In this case, the storyteller was addressed as if they were being assigned the role by the retailer, which was seeking their assistance and talent in creating these stories.

“Congratulations! You have been selected to become an official storyteller for the Story Store.

The Story Store believes customers deserve a retail experience that helps them envision how clothes might fit into a world outside the store. We think the best way to do this is through the power of stories. That’s where you come in. We’ve been looking for people we can trust to help create these ‘storyworlds’ and we think you are perfect for the challenge.”

Workshop Process: Step Two

The second step in the workshop was to introduce the storyteller to basic concept of modular object-based storytelling in the form of some fundamental principles for this type of story.

- Story must be in pieces
- Each piece must correspond to an garment
- Garments need to come together as an outfit
- Stories can start from any type of garment
- Can have as many pieces as you want

Workshop Process: Step Three

The storyteller is then introduced to the story structure used in the design, with particular types of narrative content being attached to types of garments. The

storyteller was informed that their story will be experienced through the process of the audience browsing and assembling an outfit, and may not be experienced in a linear sequence. The storyteller comes to learn that the audience will have more control over structuring their final narrative through their garment choices and that they will have the option to restructure the narrative until they were satisfied with it. This explanation was given as text and using the sample structure illustration below.

“Our stories are told through outfits, as customers choose different garments for an outfit they hear a different part of your story. The audience creates the version of your story they want to hear at the same time that they create the outfit they want to wear. They can then change the direction of your story and change their outfit at the same time.”



Figure 3.21 Story structure

Workshop Process: Step Four

In step four of the workshop the storyteller was shown the test garments which they can use in their story and were allowed time to explore them without intervention from the facilitator.

Workshop Process: Step Five In this stage the storyteller is shown the storytelling worksheet shown below and instructed how to complete the appropriate content for each space on the worksheet. They were instructed to first select the main garment and create an intro to the story to corresponded to it. Following this the storyteller was asked to select two secondary garments and to make content for them that would both develop the character's personality traits and create two distinct narrative branches of the story based on presenting a unique

conflict or challenge for the character. The storyteller then selects four accessory garments. The content they create for these garments will offer a conclusion the 2.a and 2.b garments and two must correspond to each of those secondary garment stories. The accessory garment stories will again present splits in the narrative direction offering more options in outcome to the story 's audience. Finally, the storyteller was asked to carefully craft a title for their story which would both attract the audience to the story and offer some clue to the theme of the content.

“To create this type of story you can use the storytelling worksheet provided.

Title	When, Who Where	Context, conflict, Proposed resolution, complicatio	Actual resolution, MIP-Most important point	
	1 Garment			
		2.a Garment		3.a Garment
				3.b Garment
		2.b Garment		3.c Garment
				3.d Garment

Figure 3.22 Storytelling worksheet

1. Choose a main garment from the provided story garments. A main garment can be either a shirt, blouse, sweater or t-shirt. After choosing a main garment for your story, in the “1. Garment” box of the storytelling worksheet write the short intro to your story. This part of your story needs to inform your audience about the when, who and where of your story. Either keywords or full sentences are OK, keep in mind that you will be recording your story in audio form after you complete the worksheet. Each separate piece of your story is

limited to 30 seconds of audio or less. See the sample worksheet for an example.

Sample “1. Garment” Text: “Hey, My name is Max. Can I ask you a question? I’m going apply to work here. I want to buy an outfit from the shop to wear to the interview.”

2. Next you will need to choose two secondary garments (trousers, shorts, track pants, or skirts) to coordinate with your main garment. One of these will be your “2.a Garment” and the other the “2.b Garment” on the storytelling worksheet. This part of your story represents different personality traits of the narrator from “1. Garment,” such as bold and shy, You may may also want to visually represent this with the look of the garment you choose. Now go to the “2.a Garment” and “2.b Garment” boxes on your storytelling worksheet. Here, as before write the next piece of your story. This needs to convey the narrator’s context, conflict, Proposed resolution or complication. Remember the narrator needs to explain this with the different personality traits you decided for each of the garments. The story content should be different for “2.a Garment” and “2.b Garment”, so the audience has a clear choice to make.

Sample “2.a Garment” Text: “Ok, this matches what the current staff are wearing pretty well. I think it fits my personality too. I’m looking for a place I can really fit in, a place I belong.”

3. Now, select four accessory garments (bags, hats, watches, gloves, neckties, shoes or jewelry), two of these garments will follow “2.a Garment” and will be “3.a Garment” and “3.b Garment” on the worksheet. The other two garments will follow “2.b Garment” in the story and will be “3.c Garment” and “3.d Garment.” Remember that the 2.a and 2.b garments set differing personality traits for the narrator, the 3.a, 3.b, 3.c, and 3.d garments describe specific actions

and results that those personality types would take. After selecting your four accessory garments write the corresponding endings to your story in the 3.a, 3.b, 3.c, and 3.d garment boxes in the worksheet. The part of the story needs to offer an actual resolution and the MIP - most important point.

Sample “3.a Garment” Text: “ Well, I was a little nervous at the interview, when they said, they had never seen anyone like me. But, I got the job in the end! I guess I learned it’s ok to just be myself. ”

4. Once you have filled in all the garment boxes on the storytelling worksheet, give your story a title and write it in the title box. You are now ready to record the audio version of your story.

Sample Title: The Greatest Job Interview ”

3.5.2 Storyteller Feedback

Feedback from the storyteller was recorded in longhand notes from the facilitator and can be read in bulletpoint form with commentary below.

- **Role:** The storyteller appreciated the role setting description at the start of the guide, explaining that because they have never been involved in an object-based storytelling project before this provided a useful context for how they were participate and what their objective was.
- **Demo:** The storyteller suggested that it would be useful to see a demonstration, either live or by video to have a better understanding of the final user experience.
- **Storytelling Worksheet:** The storyteller suggested that the storytelling worksheet should be introduced sooner around step two or step three as a the clean, one-page layout made it easier to understand the narrative and garment structure more than the text explanation of step three alone.

- **Interactive Storytelling:** The storyteller mentioned that the interactive, user-driven exploration of the story was similar to a popular series of children's books originally published in the 1980s, and that mentioning this reference material would be an easy way for storytellers to quickly understand the general concept.
- **Story Creation:** The storyteller asked how flexible the story structure was; for example, could the garment selection and story telling worksheet be completed in any order or must it start with the main garment; Is there a limit to the number of narrative branches that can be added to the story or can the audience be given limitless possible narrative choices?
- **Garment Selection:** The storyteller recommended that some prescreening of the possible story garments be done in advance, stating that his background is not in fashion and that he was not sure which garments would work best together from a fashion point of view. He recommends that the garments come from the same shop or collection.

3.5.3 User feedback

The text from the story was recorded as audio content and applied to the test garments prior to the user experience. After experiencing the storytellers content the users were asked for their opinions of the content. The user / audience reaction to the storyteller's content was very positive. Users who had already participated in the design tests reacted to the storyteller's content by saying that it felt more polished and professional than the prior content, implying that the storyteller was able to apply their existing skills and background to the object-based story.

“ This time the story seemed more packaged and didn't feel like it needed to be edited. The last time was more like patchwork. ”

Another user expressed that they had an easier time combining the garments for their outfit with the storyteller's content, saying the narrative connection between the garments was clearer

“ Going through the garments is easier. I liked going through the garments this time, I can see a connection between the garments. ”

This could be due to the concise use of language by the storyteller, who said, “I think three sentences is a good amount per module, I think people can do it in one, but three is a good amount.” A user who had not tried the prior testing also had a positive opinion of the storyteller’s content describing it as a positive introduction to the design concept.

“I like the idea a lot. It’s interesting that you can interact with the clothes. You are not ever told the story behind them. It felt like a deeper experience. You could spend more time in the store.”

3.5.4 Audio Photoshoot and Fashion Stylist, A New Role

Upon hearing the feedback from the users it was clear those who most enjoyed the storytelling experience saw their role as separate from the content audience. Seeing themselves as sharing a creative vision for the garments, not unlike that of a stylist or fashion photographer.

“I guess that’s an audience you kind of have impressions of the garments, but as the creator of the story you want them to be more like your vision.”

With similar desired outcomes to these traditional roles, it is curious to ponder whether this may be an emergent position in the fashion retail industry - that of storyteller as stylist. The users’ stated goals of creating a context for the garment, to entertain and inspire, to create engagement between the user and the garments, or to have users visualize the garment in the way described in their stories would seem to support this idea. One user even went so far as to say they wanted to create scenes like a mental movie.

“I want them to feel entertained. Like they can relate to the story, or think, oh I can wear this in certain circumstances. Like, oh I didn’t know this was a men’s bag, or oh I had this experience too.”

“I would like to affect what they think about the story itself and what they think about the garments too. Was there a strong engagement between the garments and the story?.”

“ I want them to be able to visualize my story when they saw the garment, so they would see someone with that tie and associate it with the story. ”

“ Yes, it’s more engaging to kind of see the scenes in your mind. It ’ s like playing a movie. ”

“ I want to create a shop that tells fashion with story, so it’s kind of like a place where you listen to the story and get inspired by the garments. ”

Keeping these desired outcomes at its heart the how-to guide attempts to make them achievable by explaining the fundamentals of object-based storytelling.

3.5.5 Introduction to the fundamentals

The guide for first-time object-based storytellers begins by introducing the concept of an object-based story in the fashion retail context. The guide assigns the create a role within the brand, and explains that their obligation is to create a customer experience that helps them envision how clothes might fit into a world outside the store through the creation of effective stories. The creator ’ s role is described as a builder of storyworlds in which the garments and customers both exist.

Then the creator is introduced to some of the fundamental rules and peculiarities of object-based stories which they may be unfamiliar with. They are told that stories must be created in pieces or modules, and that unlike linear storytelling there is no guarantee where their audience will begin the story. As the story and garments are meant to interact to create strong contextual impressions in the minds of the audience creators learn that each story module must relate to its corresponding garment. When selecting garments creators must pull together enough garments to create a complete outfit, once this is accomplished creators can add as many additional garments as they choose. After audiences complete a story-outfit they can drop and replace a garment for an alternate narrative - the permutations of such a story are shown below.



Figure 3.23 Story structure

3.5.6 Garment Selection

The first step in the object-based story creation process is garment selection. Correct garment choice for each object-based story is critical for the design's success. The following garment selection framework provides necessary guidance for choosing optimal object-based story garments.

The first criteria, narrative consistency, refers to how well the individual garments match the image and narrative function conveyed in corresponding story modules. As mentioned, there are three categories of garments included in the design - the main, secondary and accessory garments. The main garment, the upper half of the outfit, corresponds to the story's setup. This garment must be compatible with the story's conflict as introduced by the narrator. For ex-

ample, if the narrator states that he is buying the garment as a gift for his wife then the garment should be a women's garment; if the narrator is buying an outfit for a vacation to a warm place then the garment should not be for the winter season. The two secondary garment options, the lower half of the outfit, must clearly differentiate between the distinct character personality descriptions offered by the narrator. The narrator may state that one secondary garment is more casual and fun loving, while the other is more professional. This may be a somewhat subjective selection, but it is crucial that the user can distinguish between the two garments' narrative roles easily. Equally, the two accessory garments must comply with the narrative direction that has already been decided by the user. If the user selects a secondary garment with a professional image then the subordinate accessory garments must also present a consistent professional image. Additionally, these accessory garments must be appropriate for any action described in the story's content module; for example, if the narrator says "these gloves would be great for a ski trip," a lightweight glove would be inappropriate.

The second criteria for garment selection is brand appropriateness - garments included in the same story must be consistent with one brand image. To make such a judgement more clear the story garments must fit within the following parameters.

Garments must be from the same store, or department store. Garments must appeal to the same customer demographic. For example, women ages 20 to 40. Garments must be from the same line within a brand's products. Garments must be from the same season within the brand's products. Garments from the same limited edition or newly released product group must not be mixed with other products in the store.

Finally, the criteria of styling must be considered. While it is likely that the brand will wish to approve the coordination of the story garments used in each outfit, it is important to consider the aesthetic appeal of the overall outfit combinations. Regardless of how well an individual garment may serve the narrative's purpose, the outfit itself must be desirable to consumers. The main, secondary and accessory garments must look like an authentically styled and coordinated outfit which can be worn in real life.

3.5.7 Story structure

Creators are introduced to the modular storytelling structure by being told that stories are told through outfits, as customers choose different garments for an outfit they hear a different part of the story. The audience creates the version of the story they want to hear at the same time that they create the outfit they want to wear. They can then change the direction of the story and change their outfit at the same time. The architecture of which is shown in the illustration below.

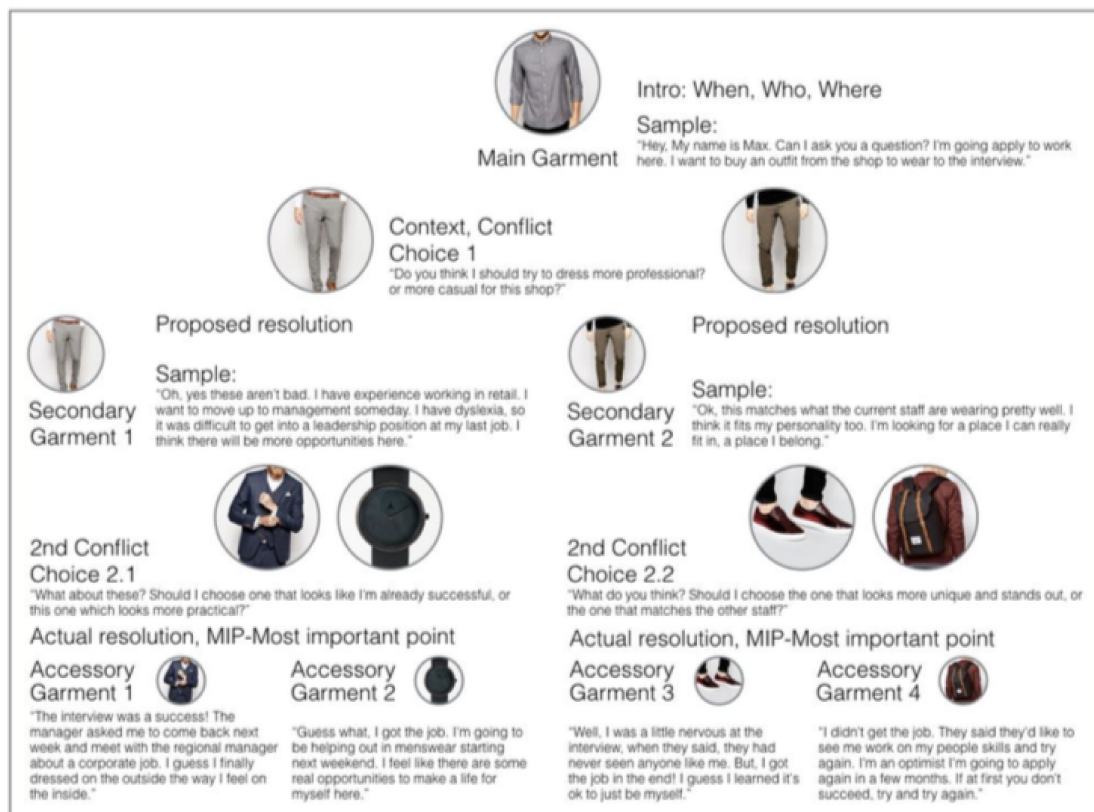


Figure 3.24 Story structure

Stories will be written according to the specifications of the object-based storytelling structure as shown below.

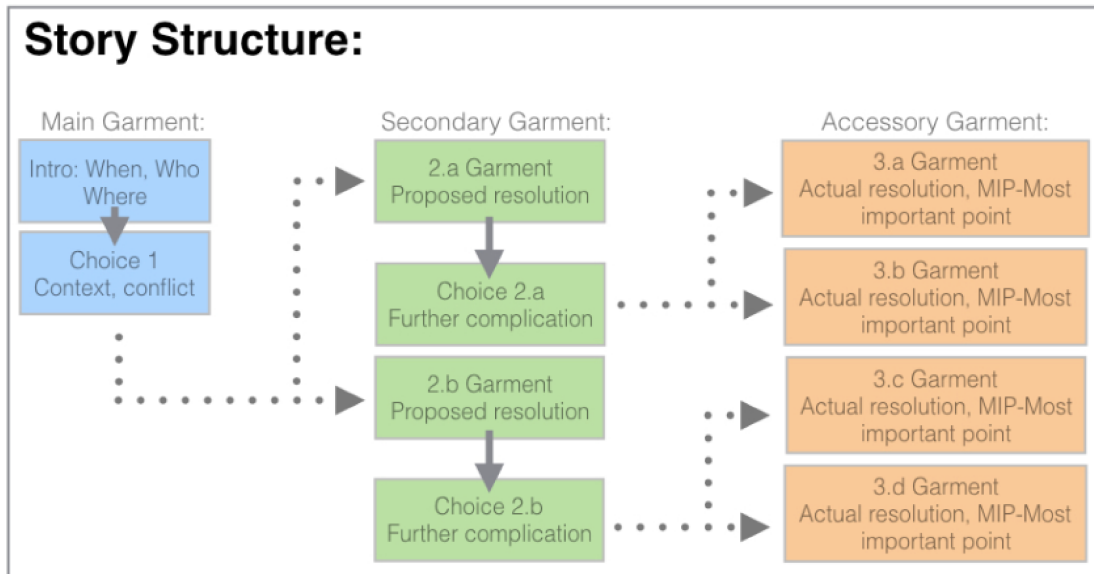


Figure 3.25 Story structure process

Stories are created following the design's unique object-based storytelling framework. The framework makes use of a narrator who takes the role of a fellow shopper and asks the user for help within the store. Narrators may ask for advice in shopping for a gift, dressing for a job interview, or preparing for a vacation. The framework is derived from established narrative structures - the classic Aristotelian three part structure. A beginning, middle and end - setup, confrontation and resolution. The design applies this narrative structure to a traditional shopper browsing behavior. The three part narrative structure corresponds directly to the three piece outfit - main, secondary and accessory garments - described in the previous paragraph. Additionally, user interaction has been added in the form of narrative and browsing choices integrated within the story itself.

There is no content module beyond the accessory garment module; however, the user's experience with the story is far from finished. Users continue the story experience through a narrative revision process. User satisfaction with experience paramount to achieving hedonic satisfaction described in Section 2.1. This is enriched by the combination of garment satisfaction and narrative satisfaction. As with shoppers' browsing behavior the user has a chance to review narrative

choices and revise the story and outfit multiple times. Ultimately, this casts the customer in a new role as both the author and stylist

The specific composition of the story structure goes as follows. The main garment content consists of an intro module, which offers the who, when and where of the story.

Example: “ Hey, My name is Max. Can I ask you a question? I’m going apply to work here. I want to buy an outfit from the shop to wear to the interview. ”

This is followed by the first user choice module, a part of the story which establishes overall context and conflict. In this module users are presented with a selection of two secondary garments, each leading to a distinctly different outcome for the narrator.

Example: “ Do you think I should try to dress more professional? or more casual for this shop? ”

The secondary garment module corresponds to the garment selected in the first user choice module. This module serves to shape the personality of the narrator ’ s character and offers a proposed resolution to the narrator ’ s conflict described in user choice one.

Example: “ Ok, this matches what the current staff are wearing pretty well. I think it fits my personality too. I’m looking for a place I can really fit in, a place I belong. ”

This is followed by the second user choice content module, which offers a further development in the conflict. The choice is of two accessory garments and offers more precise focus to the narrator ’ s approach to their conflict.

Example: “ What do you think? Should I choose the one that looks more unique and stands out, or the one that matches the other staff? ”

The accessory garment ’ s content module is attached to the garment selected from second user choice. This module provides the actual resolution to the story, or the most important point.

Example: “ Well, I was a little nervous at the interview, when they said, they had never seen anyone like me. But, I got the job in the end! I guess I learned it’s ok to just be myself. ”

3.5.8 Object-based Storytelling worksheet

Simplifying the functional way this structure can be applied, the how to guide walks the first time creator through a useful storytelling worksheet step-by-step. To create this type of story creators use the storytelling worksheet.

Title	When, Who Where	Context, conflict, Proposed resolution, complicatio	Actual resolution, MIP-Most important point
	1 Garment	2.a Garment	
			3.a Garment
			3.b Garment
		2.b Garment	
		3.c Garment	
		3.d Garment	

Figure 3.26 Storytelling worksheet

Choose a main garment from the provided story garments. A main garment can be either a shirt, blouse, sweater or t-shirt. After choosing a main garment for your story, in the “ 1. Garment ” box of the storytelling worksheet write the short intro to your story. This part of your story needs to inform your audience about the when, who and where of your story. Either keywords or full sentences are OK, keep in mind that you will be recording your story in audio form after you complete the worksheet. Each separate piece of your story is limited to 30 seconds of audio or less. See the sample worksheet for an example.

Sample “1. Garment” Text: “ Hey, My name is Max. Can I ask you a question? I’m going apply to work here. I want to buy an outfit from the shop to wear to the interview. ”

Next you will need to choose two secondary garments (trousers, shorts, track pants, or skirts) to coordinate with your main garment. One of these will be your “2.a Garment” and the other the “2.b Garment” on the storytelling worksheet. This part of your story represents different personality traits of the narrator from “1. Garment,” such as bold and shy, You may may also want to visually represent this with the look of the garment you choose. Now go to the “2.a Garment” and “2.b Garment” boxes on your storytelling worksheet. Here, as before write the next piece of your story. This needs to convey the narrator ’ s context, conflict, Proposed resolution or complication. Remember the narrator needs to explain this with the different personality traits you decided for each of the garments. The story content should be different for “2.a Garment” and “2.b Garment” , so the audience has a clear choice to make.

Sample “2.a Garment” Text: “ Ok, this matches what the current staff are wearing pretty well. I think it fits my personality too. I’m looking for a place I can really fit in, a place I belong. ”

Now, select four accessory garments (bags, hats, watches, gloves, neckties, shoes or jewelry), two of these garments will follow “2.a Garment” and will be “3.a Garment” and “3.b Garment” on the worksheet. The other two garments will follow “2.b Garment” in the story and will be “3.c Garment” and “3.d Garment.” Remember that the 2.a and 2.b garments set differing personality traits for the narrator, the 3.a, 3.b, 3.c, and 3.d garments describe specific actions and results that those personality types would take. After selecting your four accessory garments write the corresponding endings to your story in the 3.a, 3.b, 3.c, and 3.d garment boxes in the worksheet. The part of the story needs to offer an actual resolution and the MIP - most important point.

Sample “3.a Garment” Text: “ Well, I was a little nervous at the interview, when they said, they had never seen anyone like me. But, I got the job in the end! I guess I learned it’s ok to just be myself. ”

Once the creator has created their story, having filled in all the garment boxes on the storytelling worksheet, they must give their story a title which will attract the desired audience to their object-based story.

3.5.9 Audio Content Format

Audio content formatting was selected for the design over video or text content formatting because of a number of practical advantages it provided. It the user to apply their sense of sight during the design experience, which is necessary to search for object-based story garments in the retail space and to fully explore each garment. The audio content format is also ideal for its ability to allow users to maintain use of their hands, sense of touch and mobility - think how many people listen to audio content while cooking, cleaning or working generally. Apt for multitasking, the audio format lets users manipulate the object while listening to the story content. This allows for a powerful tactile component to the design and creates a deeper multi sensory impression for users among the narrative and physical object.

As noted in section 2, the audio content format more effectively targets the adventure and and gratification hedonic consumption motivations. The design 's audio storytelling content relies on the user 's imagination to create mental images to accompany the narrative. (Rodero, 1) By not inserting a visual for the user to picture the garments in the story or a visual of the narrator users may better visualize themselves using the garments or in the narrator 's role or situation. (Zheng, 36) This opens an opportunity for deeper image making and stronger user bonding to product. (Chronis, 5)

3.5.10 User Interaction

User interaction is enriched by the combination of garment satisfaction and narrative satisfaction. As with shoppers ' browsing behavior the user has a chance to review narrative choices and revise the story and outfit multiple times. Ultimately, this casts the customer in a new role as both the author and stylist.

The design builds on the natural behavior of browsing, where users search through garments in a retail space to create an outfit. Playing with this idea

of browsing by story, users combine the narrative pieces attached to each garment through the shopping process. As users assemble the outfit they assemble the story. This approach gives users control over how the story takes shape with a very natural retail behavior. By pairing different garment choices together users are also experimenting with different narrative directions. Essentially, they are trying on parts of the story to see what they like best.

This presents a shift in the natural behavior of browsing in that the selection must be made with concern for both the tradition value of the garment and the new added value of the story in mind. The completion of one outfit is also the completion of one story. The users have chances to go back and use different garments to reach a kind of optimization of both the narrative and the selected outfit.

The design features several distinct user interaction which resolve the issues of in- store garment location and content activation. The specific garments incorporated into the object-based story must be easily found by the users themselves within a normal retail setting. To find the story 's garments users are given a visual of the garment choices described in section 3.2, user choices one, two and the narrative revision choices. The design intentionally incorporates the user 's own process of discovery to locate story garments. After listening to the user choice content modules, and viewing visual images of both of the garment options users make a selection by searching the store for the garment which they want to use in their story outfit. This approach uses natural browsing behavior as the method of user interaction (garment and narrative selection). Additionally, this method allows for the user 's discovery of non-story products as well, since they will search through these other products to find their desired object-based story garment. Such search and discovery behavior has been shown to satisfy hedonic consumer motivation. (Bloch, 25) Of course, in large retail spaces a user-led search for the object-based story garments may be unmanageable. In these situations the search process can be simplified by limiting the story to a limited section of the shop, such as a front table of new, seasonal of featured products.

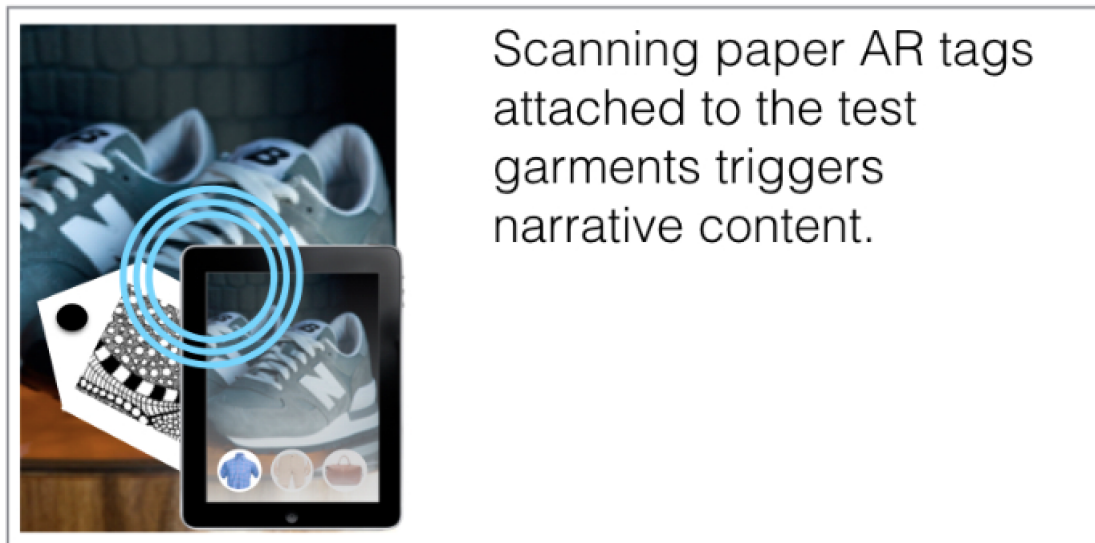


Figure 3.27 AR content tag

The second issue to be addressed by the design is the user's activation of story content after the selected garment has been located in the retail space. Users do this by scanning the AR tag attached to the object-based story garment they select for their output. This way users can only access audio story content with garment in hand, ensuring users are physically interacting with garment at the time of listening to the story module. This close connection between the narrative content and the physical, tactile interaction with the product serves to create a stronger bond between the user and the garment. (Chronis, 3)

The design requires no proprietary technology to operate, but does make use of an existing augmented reality application to support the testing. The smartphone and tablet application used in the above testing is the aurasma app, used alternately on an Apple iPhone and iPad. After recording audio files the Aurasma app was used to digitally attach the content to specific, scannable images. The images were printed on paper tags which were attached to a corresponding test garment. To initiate the audio content the user scanned the paper tag using the app on a mobile device, Aurasma then plays the corresponding content automatically. It was an aim of the design to incorporate the necessary technology in to a natural retail scenario and typical shopping behavior as seamlessly as possible. It was de-

terminated that audio would be the best modality to experience the content as the user would still be able to visually and physically engage with the test garment while receiving the narrative at the same time. By attaching the content to the test garments with scannable paper tags the content experience can be further blended into the existing shopping experience. In the same way that a shopper might check the price or material of a test garment by checking its paper hang tag, the test user can explore the garments narrative content by checking its paper AR tag.

Chapter 4

Evaluation Method

The research hopes to measure significant evidence of the design 's impact on adventure and gratification motivations when compared to the existing retail experience. This would prove a unique value can be provided to consumers through incorporating object-based stories in the retail experience and promote further research into this area.

4.1. Evaluative Theory

The research will use established means of measuring adventure and gratification hedonic motivation. Using a scale of hedonic and utilitarian motivations; as well as measures of concentration which has been positively correlated to adventure motivation, and time distortion which has been shown to correlate to gratification motivation.

The design 's evaluation utilizes Babin 's scale for measuring hedonic or utilitarian consumer motivations to identify test users who are predisposed toward utilitarian motivations. (Babin, 652) Further survey questions are used following Arnold 's approach to more specifically examining the six factors of hedonic motivation, including adventure and gratification motivations. Using both quantitative surveys and qualitative user interviews. (Arnold, 79) Users will also engage in qualitative questioning around their level of concentration after the user testing. (Lowry, 625) Concentration will be measured by qualitative means, interviewing users in the post-testing phase to recount the details of both the narrative and the garments. As with adventure, gratification motivation will also be confirmed using Arnold 's hedonic survey and interview questions. Gratification motivation has also been connected with time distortion in prior research, therefore the evaluation survey will measure time distortion experienced by users during testing.

(Bloch, 34) As with hedonic consumer motivation research done by Ballentine, Arnold 's survey will be used as a pre-screening questionnaire to identify the hedonic predispositions of test users toward adventure, gratification or utilitarian motivations. (Ballentine, 644)

Frederick Langrehr describes the hedonic shopping experience as follows, "The purchase of goods may be incidental to the experience of shopping. People buy so they can shop, NOT shop so they can buy. Thus consumers shop not only for goods and services or specific information but for experiential and emotional reasons." To accurately identify the user who fits this experiential shopper profile the Babin scale was developed, a standardized survey question set which is designed to separate hedonic shoppers from those with utilitarian motivations. This work was continued by Mark Arnold, who further refined the screening methodology to include question sets for hedonic users based on shopper type - adventure, gratification, role, social, and idea motivations. Supporting corollary measurements have also been identified, with their own unique means of measurement; for example, Time distortion has become associated with gratification shopping experiences.

In addition to the measuring hedonic motivation through the traditional consumer behavior survey questions the design research makes use of qualitative interview methods. These user interviews aid in providing a deeper examination of outlier results, a validation of the testing process, and insights for design improvement. The interviews are based on the individual test user 's responses to the questionnaire given after the design test, but follow a set of scripted questions created with the aim of testing the user 's recall of the design experience, as well as the usability of the design and user sentiment about the content. Please see Appendix C for the complete set of interview questions.

4.2. Evaluative Method

Testing will be conducted with a minimum of five test users in a retail or retail-like test setting. Prior to testing all test users will complete a Hedonic vs Utilitarian Motivation Profile Questionnaire (Ballentine, 644). This will determine the user 's predisposition toward specific hedonic or utilitarian motivations, including ad-

venture and gratification motivations. Testing with only users who are already predisposed to adventure and gratification motivation may invalidate the test's integrity. The test will strive to select users from a variety of motivations including utilitarian.

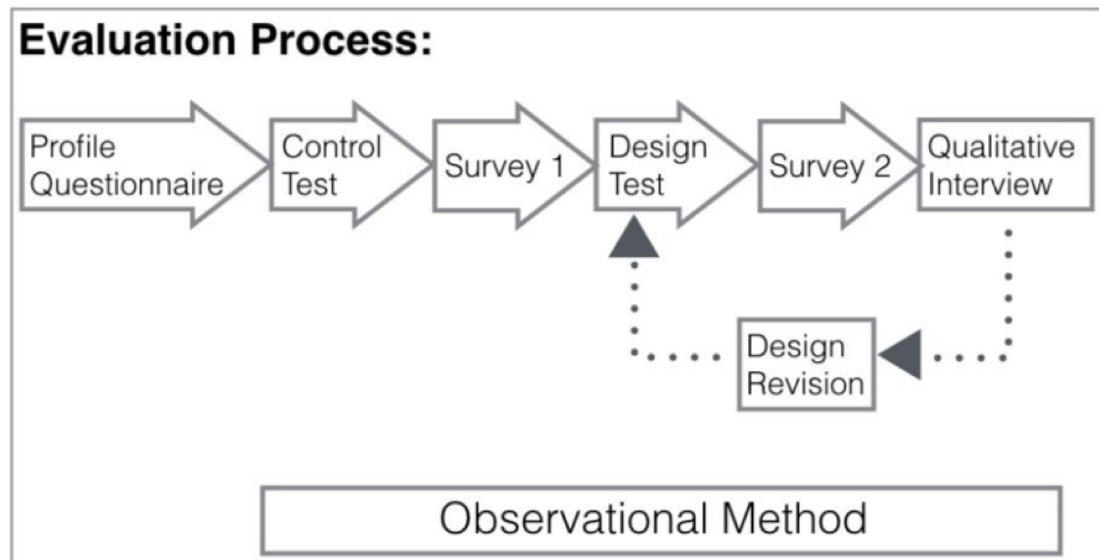


Figure 4.1 Evaluation process

4.2.1 Preliminary Screening

The preliminary screening will serve to determine the test users' predisposition to hedonic consumer motivations. Something which is unknown is whether consumers are uniformly motivated by hedonic or utilitarian motivations across all of their consumption habits, or whether a consumer can alternate between both depending on the situation. Likewise, it is unclear how consumer motivations may change over time; for example, whether someone may be extremely satisfied by hedonic consumption experiences in their twenties but less so in their fifties. Test users were given the preliminary screening survey to determine that they at least have some level of openness to hedonic consumption motivations prior to participation in the design test.

In addition to questions about their age, gender, and nationality, users were

asked about their media consumption habits, whether they use their smartphone or mobile devices as part of their current shopping behavior, and their general sentiment towards shopping, either positive or negative on a five point scale. Users were then asked to complete specific sets of questions ranking their agreement or disagreement on a scale from one to five to test statements indicating preference for adventure, gratification, role, value, social, idea, and utilitarian shopping motivations. Please see Appendix A of this dissertation for a complete list of screening questions.

4.2.2 Control test

The research will measure evidence of satisfying adventure and gratification hedonic motivations between the traditional retail experience and the design's object-based storytelling approach. First the test users will be asked to browse and put together an outfit normally they will take a standardized survey rating adventure, concentration, gratification and time distortion this is a baseline measurement of the user's normal shopping experience. These results establish a bar for comparison with the design test data, which will ultimately serve to validate the research thesis.

Adventure will be measured by asking three qualitative questions regarding stimulation, immersion and experience, gratification questions will focus on the experiences' effect on mood (Arnold, 93). User concentration will also be examined. (Lowry, 623) to do this users will be asked to list which garments selected for their look and give details of both the garments and the narrative story. The level of concentration will be assessed by the number of details offered. Time distortion questions will be asked, as this is correlated with gratification motivation (Bloch, 35). For the full question set for adventure, gratification, and time distortion.

4.2.3 Design test

Following the control testing, users were asked to browse and create an outfit now using the design's object-based story system. Users must use the design to the point of completing story revision activities and satisfaction with the created outfit. After which point the users will retake the survey the completed following

the control test. The users' experience of the two tests will also be compared with an in-depth qualitative interview following the later testing of the design. The before and after comparison of the control and design user testing survey and qualitative interview responses will be used to measure the anticipated increase in hedonic consumer motivation. The results of the design test, in comparison with those of the control test have been used to measure the efficacy of design at validating the research hypothesis - proving the design is effective at satisfying adventure and gratification motivations among the profile user. In order to confirm the design is functioning properly from a test validity point of view, as well as gain understanding of any quantitative test outliers, a qualitative user interview was conducted following the design questionnaire. For the complete design questions along with questions for the qualitative interview please see Appendix.

4.3. Results

The results of the preliminary user screening revealed distinct profiles for each test user. Nationalities included Canada, Taiwan, and Mexico. Test user ages ranged from 20 to 40. All test users were female, corresponding to the desired target profile of a hedonic shopper established by prior research. The test users indicated that they are already comfortable using smartphones during their shopping process, and predominantly use them to research information about the products they are shopping for. They engage in looking for ingredients for a recipe when shopping for food, or comparing prices with online retailers. They enjoy audio-books, podcasts, music, mobile games, video, and e-books on their mobile devices. Screening results indicated that adventure and gratification shopping were among the highest hedonic motivations. The aggregate average score for utilitarian motivation was among the lowest indicating that the test users are strongly motivated to satisfy hedonic needs.

Preliminary Screening	Aggregate Avg. results out of possible 5
Adventure question set	3.75
Gratification question set	4.33
Idea question set	3.92
Value question set	2.42
Social question set	2.92
Role question set	4.17
Utilitarian question set	2.44

Figure 4.2 Preliminary Screening

Control testing establishes a baseline measurement for the test user's experience with the test garments without the design's narrative content. Based on the findings shown below the test users indicated that they experienced satisfaction of hedonic adventure and gratification motivation from the typical browsing activity without the narrative content.

Control testing	Aggregate Avg. results out of possible 5
Adventure shopping satisfaction	4.11
Time distortion	4
Gratification shopping satisfaction	4.33

Figure 4.3 Control testing

Design testing measures the user's experience with the narrative content for comparison to the baseline measure. The result of the initial design testing showed a small decrease in the users adventure satisfaction levels over the control test, from 4.11 to 4. The supporting time distortion metric also showed a decrease from

4 to 3.5. Gratification satisfaction levels dropped significantly over the control result of 4.33 to 3.11. Upon deeper review of the individual user responses it was determined that a single user 's responses were substantially counter to that of the other users resulting in a skewed distribution; for example the user 's level of adventure satisfaction was 2 compared to the other users average score of 5 and a time distortion score of 1 compared to 4.75. The user 's gratification score was also the lowest possible scoring of 1 compared to a 4.17 from the other users. The user was asked about the specifics of their experience with the design in the qualitative interview.

Design testing	Aggregate Avg. results out of possible 5
Adventure shopping satisfaction	4
Time distortion	3.5
Gratification shopping satisfaction	3.11

Figure 4.4 Design testing

The additional qualitative questioning assisted in offering a deeper understanding of the issue by providing additional insights into the user experience. As shown in the quantitative data, one user responses varied greatly from those of the other test users in the control and design test comparison. In the qualitative interview this user expressed confusion about the expectations of the design test. The user felt confused when the story content didn 't connect with the garments or in-store experience. To be effective the story content must reference the test garments or connect closely to the context of the store. Based on this insight the design was revised and re-tested with the new results shown below.

After the revised design testing the new user responses were calculated, indicating an increase in the users adventure control test satisfaction score from 4.11 to 4.34, the supporting time distortion metric also increased from 4 to 4.5. The gratification satisfaction score showed a decrease from 4.33 to 3.44.

Design testing (revised)	Aggregate Avg. results out of possible 5
Adventure shopping satisfaction	4.34
Time distortion	4.5
Gratification shopping satisfaction	3.44

Figure 4.5 Design testing (revised)

The research can draw a conclusion that while the design test was unable to find a significant effect on gratification motivation, there is evidence that users found the design to have a positive effect on adventure motivation. This offers some exciting implications that there is potential for more research should be done, specifically related to the adventure motivation consumer. Key questions for future researchers are as follows. What sort of brand appeals to this type of consumer? What modifications can be made in terms of content type to further boost satisfaction of the adventure motivation. Are there “adventure” narratives that heighten the experience for these users? And can narrative and atmospherics be combined to enhance the experience?

4.3.1 Evaluative Limitations

It should be noted that there is a small limitation involved in the evaluation method described in section 4.3. The typical quantitative survey technique requires larger scale user tests than this research is capable of conducting, usually over one hundred users. This design’s evaluation approach uses these same verified and established methods of measuring hedonic consumer motivation as prior work in this field. This is the most valid means of measuring and determining and increase in hedonic motivations. However, if such a positive increase is evidenced in this smaller sample size that should serve to encourage further design experimentation with object-based storytelling in the retail experience which can be evaluated through larger-scale testing.

Chapter 5

Conclusion

5.1. Research Summary

The aim of this research has been to determine the value of object-based storytelling as a novel alternative to traditional atmospherics in the fashion retail context. The research design proposes a unique and replicable approach to creating object-based storytelling for fashion retail merchandise and environments, building on consumer user behaviors and existing research. Validity has been determined by the satisfaction of test users' hedonic motivations, particularly adventure and gratification motivations.

This research tests the efficacy of object-based storytelling to satisfy hedonic consumer motivations by digitally attaching narrative stories to a shop's products. In this research project a fashion retail experience has been selected. The object-based storytelling experience centers around the typical behavior of putting together an outfit. The user experiences the media narrative as audio content initiated by scanning the paper tag of a specified garment in the shop with a smartphone. The story's introduction is initiated by scanning the main garment, a shirt or blouse. Then the user is given a choice of secondary garment, trousers or skirt, each of which represents a distinctive change in the narrative. This is followed by another set of accessory story choices. After a complete outfit has been selected; top, bottom and accessory; the user has the option to go back through the story, making different narrative choices and revising the outfit they are creating at the same time. The research was evaluated through user testing in a simulated retail environment. Testing was carried out as a split test between a control scenario where users asked to put together an outfit in a typical retail scenario and a group of test users who put together their outfit using the object-based story design. The experience of the test users was measured with a questionnaire prior

to the experience and an in-depth interview following. The research measured evidence of satisfying adventure and gratification hedonic motivations.

The design offers unique advantages for retailers who are finding themselves disadvantaged in the current and near future competitive retail market. The convergence of ubiquitous computing and online shopping has led to a prevalent culture of ‘showrooming,’ consumers using physical retail spaces to browse and evaluate goods, while later purchasing those goods from cheaper online competitors.

Atmospherics are the current methods used by these retailers to satisfy hedonic consumption motives; they include fragrances, sounds or music, the interior design and layout of the retail space. Such physical elements of a retail store lend themselves more toward the satisfaction of hedonic motivation. We should think of the hedonic motivations of consumers being fulfilled by experiential aspects of the retail experience. The expense of such consumer experience efforts make such a strategy poses a challenge for many retailers.

The limitation associated with atmospherics is the inflexible nature of their physical construction or homogeneity. The one-size-fits-all nature of retail music or fragrance means that all consumers have the same experience, whether it appeals to them or not. These elements are site specific and expensive to change and scale. Additionally, these experiences do not incorporate the actual product, and only stay within a retail space, not attached to the product - customers can not take the atmospheric home after purchase.

The design offers a host of potential alternative benefits to the retail setting. Object-based narratives may offer a compelling alternative our accompaniment to known atmospherics. In fact, object-based storytelling may offer a cost advantage over these traditional approaches, in that it can be applied without any cost or time for construction. The fact that it can exist as a digital content gives retailers to make quick and low cost changes to the customer experience by switching the content, continually fine tuning their retail experience. It is also possible to cater to multiple market segments by offering different content experiences for the same products, just by incorporating the same products into multiple content experiences and letting customers choose their preference.

The research used established means of measuring adventure and gratification

hedonic motivation. Using a scale of hedonic and utilitarian motivations; as well as measures of concentration which have been positively correlated to adventure motivation, and time distortion which has been shown to correlate to gratification motivation.

Design testing measured the user ' s experience with the narrative content to comparison to the control test baseline measure. The result of the design testing showed an increase in the users adventure control test satisfaction score from 4.11 to 4.34, the supporting time distortion metric also increased from 4 to 4.5. The gratification satisfaction score showed a decrease from 4.33 to 3.44. The research can draw a conclusion that there is evidence that users found the design to have a positive effect on adventure motivation. This offers some exciting implications that there is potential for expanding the use of object-based stories to appeal to the adventure motivated consumer.

5.2. Research Contribution

The key contribution of this research lies in the conversion of qualitative feedback, gathered during user testing, into a how-to, instructional document for novice object-based storytellers. Making the vetted approach to retail object-based storytelling easily replicable by retailers and others who choose to do so. It should be noted that not only was the guide constructed from the test feedback of users by the how-to document itself was prepared through careful workshopping and review with a professional veteran storyteller.

Upon hearing the feedback from the users it was clear those who most enjoyed the storytelling experience saw their role as separate from the content audience. Seeing themselves as sharing a creative vision for the garments, not unlike that of a stylist or fashion photographer.

“ I guess that’s an audience you kind of have impressions of the garments, but as the creator of the story you want them to be more like your vision. ”

With similar desired outcomes to these traditional roles, it is curious to ponder whether this may be an emergent position in the fashion retail industry - that

of storyteller as stylist. The users' stated goals of creating a context for the garment, to entertain and inspire, to create engagement between the user and the garments, or to have users visualize the garment in the way described in their stories would seem to support this idea. One user even went so far as to say they wanted to create scenes like a mental movie.

“I want them to feel entertained. Like they can relate to the story, or think, oh I can wear this in certain circumstances. Like, oh I didn't know this was a men's bag, or oh I had this experience too.”

“I would like to affect what they think about the story itself and what they think about the garments too. Was there a strong engagement between the garments and the story?.”

“I want them to be able to visualize my story when they saw the garment, so they would see someone with that tie and associate it with the story.”

“Yes, it's more engaging to kind of see the scenes in your mind. It's like playing a movie.”

“I want to create a shop that tells fashion with story, so it's kind of like a place where you listen to the story and get inspired by the garments.”

Keeping these desired outcomes at its heart the how-to guide attempts to make them achievable by explaining the fundamentals of object-based storytelling, how to select appropriate garments for an object-based story, the modular structure approach and provides a storytelling worksheet to assist in easily creating object-based stories. The guide is written for first-time object-based storytellers, and begins by introducing the concept of an object-based story in the fashion retail context. The guide assigns the reader a creator role within the brand, and explains that their obligation is to create a customer experience that helps customers envision how clothes might fit into a world outside the store through the creation of effective stories. The creator's role is described as a builder of storyworlds in which the garments and customers both exist. Then the creator is introduced

to some of the fundamental rules and peculiarities of object-based stories which they may be unfamiliar with. They are told that stories must be created in pieces or modules, and that unlike linear storytelling there is no guarantee where their audience will begin the story. As the story and garments are meant to interact to create strong contextual impressions in the minds of the audience creators learn that each story module must relate to its corresponding garment. When selecting garments creators must pull together enough garments to create a complete outfit, once this is accomplished creators can add as many additional garments as they choose. After audiences complete a story-outfit they can drop and replace a garment for an alternate narrative. It should be reiterated that the content in the how-to guide is derived from the user testing and the workshop with a professional storyteller.

After asking users to create their own stories it became clear from user feedback that a key step would be guidance on the selection of the garments to be used in the stories.

“ In the beginning I didn’t know what I wanted when I chose the garment. There was a hesitation. But once I decided where I wanted to go it was fine. I envisioned kind of a hipster kind of person. The person dresses in a unique way but looks okay - who looks good but not traditional. ”

The first step in the object-based story creation process is garment selection. Correct garment choice for each object-based story is critical for the design ’ s success.

“ I kind of picked the garments first, because I had a strong impression of them that first . And then I kind of develop the story from there. I developed on an existing plot but then with a few tweaks see if it could go on other grounds. ”

“ I guess for most of the storytellers, they pick the items that can be fit into the story rather than describing the the item itself. It’s more like we’re utilizing the items in the stories, so it’s more like making a strong impression rather than re-identifying the items. ”

The how-to guide's garment selection framework provides necessary guidance for choosing optimal object-based story garments.

- Garments must be from the same store, or department store.
- Garments must appeal to the same customer demographic. For example, women ages 20 to 40.
- Garments must be from the same line within a brand's products.
- Garments must be from the same season within the brand's products.
- Garments from the same limited edition or newly released product group must not be mixed with other products in the store.

The second criteria for garment selection is brand appropriateness - garments included in the same story must be consistent with one brand image. Users indicated the importance of developing a persona to envision a character wearing the clothes - where would they go; what would they do?

“I needed to envision the character wearing it and without knowing this person I had to recognize the person. Because of that very specific tie. And then I could imagine what this person would be wearing, and yes, that's what I thought. “

“I would describe it as having some personality for the clothes. A shop that describes its pieces as people. With a personality, with a life. With something to do. With somewhere to go. With problems. The clothes have a persona attached to them.”

Finally, the criteria of styling must be considered. While it is likely that the brand will wish to approve the coordination of the story garments used in each outfit, it is important to consider the aesthetic appeal of the overall outfit combinations. Users had strong opinions when they logically couldn't picture the selected garments in the outfit being worn out of context with the narrative or character, implying there is a limit to the suspended disbelief that can be applied to the objects used in these stories.

“ Yeah I think it was quite surprising about how the first person started the story because I couldn’t really link a hat with a bar type scene together. It’s quite interesting how it got that far. ”

“ I think it’s still pretty strange. If I see someone in a bar wearing that hat I’d probably be like, oh he’s definitely a weirdo. ”

Alternately, when users experienced stories that paired garments together in an unexpected, but pleasing way they expressed delight.

“ That was pretty fun. And somehow quite inspiring about how people brought everything together. So that was pretty amazing. ”

Creators are introduced to the modular storytelling structure by being told that stories are told through outfits, as customers choose different garments for an outfit they hear a different part of the story. The audience creates the version of the story they want to hear at the same time that they create the outfit they want to wear. They can then change the direction of the story and change their outfit at the same time. Users found this initially a bit daunting but ultimately it was seen as a positive for the story creator.

“ It was more challenging because you have to create your own scenes for each of the garments, but it was also more entertaining to me. It was like, oh I’m actually being involved in this type of project and stuff. So I think that was a plus. ”

“ You put the parts of the stories in order, even if you don ’ t go through them in that order you still know how they fit together. ”

Through the story structure and simplifying the functional way this modular structure can be applied, the how to guide walks the first time creator through a useful storytelling worksheet step-by-step. To create this type of story creators use the storytelling worksheet.

Audio content formatting was selected for the design over video or text content formatting because of a number of practical advantages it provided. It empowers the user to apply their sense of sight during the design experience, which is

necessary to search for object-based story garments in the retail space and to fully explore each garment. The audio content format is also ideal for its ability to empower users to maintain use of their hands, sense of touch and mobility - think how many people listen to audio content while cooking, cleaning or working generally. Apt for multitasking, the audio format lets users manipulate the object while listening to the story content. This provides a powerful tactile component to the design and creates a deeper multisensory impression for users among the narrative and physical object.

A concern for users during testing was the length of the audio per module, as users wanted to move quickly from garment to garment. Seven to ten seconds was deemed ideal to users.

“ I think some parts of the story felt a little bit too long. Some were okay but some were too long, yes. This is the end was only three sentences and that was great. ”

During design testing only audio and text content modalities were tested. Future research may explore other modalities such as video or photos. As one user suggested,

“ I just kept them looking at the device screen. It doesn ’ t really offer any additional information than the actual object does. So it just becomes like only audio. Maybe watching video would be easier, maybe I ’ m just lazy. I ’ m not sure that ’ s a fair excuse, but maybe it takes a bit more time to concentrate on audio versus video, or maybe even an image. If it was a photo of the scene which is being described in the audio. Just to get, like key pieces and see which ones I am interested in. ”

The design builds on the natural behavior of browsing, where users search through garments in a retail space to create an outfit. Playing with this idea of browsing by story, users combine the narrative pieces attached to each garment through the shopping process. As users assemble the outfit they assemble the story. This approach gives users control over how the story takes shape with a very natural retail behavior. By pairing different garment choices together users are also experimenting with different narrative directions. Essentially, they are

trying on parts of the story to see what they like best. Users found this a novel improvement over the traditional browsing experience, since the garments are provided with a unique context.

“It ’ s interesting that you can interact with the clothes. You are not ever told the story behind them. It felt like a deeper experience. You could spend more time in the store.”

5.3. Future Research and Retail Implications

The research uncovered a number of interesting user suggestions that, though they could not be integrated into the final test, did offer viable directions for future exploration. One user suggested the inclusion of a count of the number of listens for each module as way to determine which garment to potentially incorporate into the outfit - similar to a YouTube view count.

“Hmm, it would be interesting to know which story had been heard the most. Like a rating or like a YouTube view count. I tend to check YouTube and if only 100 people have watched then it ’ s probably a bad one.”

Another user suggested that more exploration be done related to the design of the AR codes on the garment tags mentioning that the current design of the codes do not feel consistent with the style of clothing to which they are attached. The user suggests that the design be made to appear more neutral, Alternately, these designs could be made to be visually consistent with the theme of the corresponding content module.

“I think that I haven ’ t been able to connect the imagery on the paper AR tags to the story. They seem pretty artistic and abstract. I don ’ t find them too attractive I guess is what I am trying to say. Maybe if it just said point camera here I ’ d feel less opinionated about them. They wouldn ’ t distract from the clothing. Even if I was attracted to the garment I ’ m not attracted to the styling of the tag, so I might not want to be a part of that story.”

The results of qualitative user interviews also indicated that there is a fairly clear distinction of content creator types. So called, ‘visionary’ storytellers seemed to be the most engaged in the storytelling process and preferred a solitary experience to freely express their ideas. Other creators, though less excited by storytelling, enjoyed the social interaction of collaborative storytelling this may be personal to the desired experience of the content creator. Future testing should dive deeper into types of story creators and ways to produce the most effective stories, perhaps even looking into the idea of user-generated content.

As the resulting data from the final test indicated that the design was most effective at satisfying Adventure motivations more research should be done related to the adventure motivation consumer. Key remaining questions for future researchers include; What sort of brand appeals to this type of consumer? What modifications can be made in terms of content type to further boost satisfaction of the adventure motivation. Are there “adventure” narratives that heighten the experience for these users? And can narrative and atmospherics be combined to enhance the experience? A thorough examination of multiple story genres would be worthwhile.

Additional key values of the research’s fashion-retail object-based story design listed below should be of interest to both researchers and bricks-and-mortar retailers, and merit further exploration in future research and application.

- Object-based content can support a custom experience without alienating traditionalist consumers by making changes to the physical retail environment or service practices.
- The storytelling content can be updated and replaced rapidly and continuously at minimal costs, allowing retailers to quickly remove or replace underperforming content.
- The addition of object-based storytelling to the shop space offers new retail business models in the form of a content experience platform, offering a new potential revenue stream from content as well as product sales, or as a user-generated content platform.

To further expand on these potential values, there has been much discussion of the future of retail as part of the experience economy, and placemaking has

become a key consideration in the practice of retail marketing. Creating places to adequately host tailored customer experiences is integral to satisfying ever more demanding consumers. Long term trends such as the integration of digital and physical spaces, the willingness of customers to pay for satisfying experiences in and of themselves and consumers desires for transformative experiences are all shaping the retail landscape which the design hopes to speak to.

The design offers a host of potential applications to the retail setting. Object-based narratives may offer a compelling alternative our accompaniment to known atmospherics. In fact, object-based storytelling may offer a cost advantage over these traditional approaches, in that it can be applied without any cost or time for construction. The fact that it can exist as a digital content gives retailers to make quick and low cost changes to the customer experience by switching the content, continually fine tuning their retail experience. It is also possible to cater to multiple market segments by offering different content experiences for the same products, just by incorporating the same products into multiple content experiences and letting customers choose their preference.

One could conceive of a future disruptive business model for retail spaces as real-world platforms for user-generated object-based content, with a hybrid monetization strategy coming from both the sale of content and merchandise. The addition of object-based storytelling to the shop space re-thinks retail business models as that of a content experience platform. By attaching the narrative content so closely to the store 's merchandise, the story adds exclusive value which can only be experienced in the retail store. This is a value which department stores can add to any of the brands they carry. Furthermore, the designs object-based storytelling approach connects and bundles products produced by multiple brands in the mind of the consumer. The design 's stories offer a cheaper option than the approach of expanding the physical retail space. Plus the value of being agile and adaptable to consumers preferences. With the capacity for the ongoing addition of more object-based storytelling content the design can provide distinct experiences tailored to the preferences of many niche market segments at the same time with the same product inventory. The storytelling content can be updated and replaced rapidly and continuously. Less popular stories can be easily replaced, in fact such optimizations can even be automated without burdening

the shop's staff. More than an alternative to existing approaches the design's integration of digital interaction through the consumer's own smartphone allows for some unique opportunities for retail consumer relationship management; such as the understanding of user's in-store browsing history and both product and content preferences.

Another area where the use of object-based stories can be examined further is their use in combination with existing consumer relationship management functions. Functions such as the tracking of consumers' narrative preferences over time could reveal much more about how to craft effective object-based narratives. Marking items consumers experienced the content for, but did not purchase versus purchased items to compare one story over another for the same product to evaluate the most effective storytelling techniques. Such an approach would require an effective system of criteria for tagging content modules so that researchers can label and identify different narrative types. This would facilitate an understanding of what consumers looked at in the store with or without purchase.

Little research has been done to effectively look at hedonic consumer motivations as a market segment. Many questions about these consumers remain unanswered; such as, how does someone become an adventure consumer, are they born that way or do they grow into it over time, and can someone be an adventure consumer for one type of product but not others? These questions need to be answered in order for retailers to serve this group of consumers and determine which brands would most benefit from the object-based storytelling strategy of the design.

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Appendices

A. Testing phase one

A.1 Testing phase one - process

1. **Facilitator** places price post-its
2. **Facilitator** explains concept
3. **User** enters
4. **User** prices everything
5. **User** takes survey 1 / **Facilitator** replaces post-it with blanks
6. **Facilitator** shows how to use AR scanning app
7. **User** views content / **Facilitator** videos
8. **User** prices everything
9. **User** takes survey 2 / **Facilitator** replaces post-it with blanks / **Facilitator** folds clothes
10. **Facilitator** Instructs user to replace or record new content / **Facilitator** sets camera
11. **User** records content / **Facilitator** enters post-it data
12. **User** prices everything
13. **User** takes survey 3 / **Facilitator** replaces pricing post-its / **Facilitator** folds clothes

14. **Facilitator** starts next user
15. **Facilitator** deep interviews previous user

A.2 Testing phase one - user profile questionnaire

1. Age range
 - (a) 10-15
 - (b) 15-20
 - (c) 20-25
 - (d) 25-30
 - (e) 30-35
 - (f) 35-40
 - (g) 40-45
 - (h) 45-50
 - (i) 50-55
 - (j) 60-65
 - (k) 70-75
2. Nationality
3. Gender
4. Choose the five adjectives which best describe the clothes on the first table.
(Select at least five)
 - (a) Beautiful
 - (b) Great
 - (c) Stylish
 - (d) Cute
 - (e) Awesome
 - (f) OK
 - (g) Decent
 - (h) Alright

- (i) Suitable
 - (j) Ugly
 - (k) Terrible
 - (l) Nothing special
 - (m) Pretty bad
 - (n) Not stylish
 - (o) Just normal
5. How strongly would you say these clothes appear are from a store you would shop in?
- 1=Least like a store I would shop in
5=Most like a store I would shop in
- 1 2 3 4 5
6. Based on the clothes how would you describe this (imagined) store?
- (a) Discount
 - (b) Mass market
 - (c) Luxury
 - (d) Sporty
 - (e) Casual
 - (f) I ' m not sure
7. Is there any garment here you would want to buy? (If yes please write the item in the next question)
- Yes
No
- If you answered No to the previous question please skip this question. If yes, please write which garment.
8. Based on the clothes how would you describe this (imagined) store's target customer?

- (a) Discount
- (b) Mass market
- (c) Luxury
- (d) Sporty
- (e) Casual
- (f) I ' m not sure

Please stop and ask the facilitator to start the demo before answering this question. (Following demo)

9. Please rate your satisfaction level with this story.
1 = Least satisfied
5 = Most satisfied
1 2 3 4 5
10. How likely would you choose to try this type of fashion-based story again?
1 = Least likely
5 = Most likely
1 2 3 4 5
11. Please rate your satisfaction with the overall fashion-based storytelling experience.
1 = Least satisfied
5 = Most satisfied
1 2 3 4 5

**Please ask the facilitator to demo the next part of the prototype before continuing.
(Following demo)**

12. Which activity appeals more to you?
 - (a) Listening to story content
 - (b) Creating story content

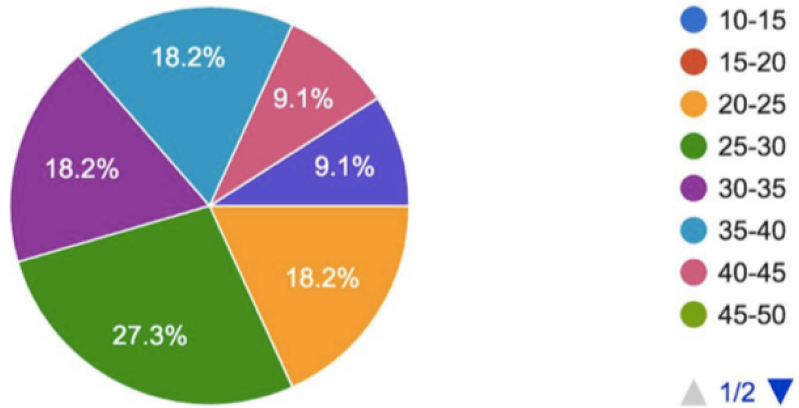
- (c) Both equally
 - (d) neither
13. Choose the five adjectives which best describe the clothes used in the experience. (Select at least five)
- (a) Beautiful
 - (b) Great
 - (c) Stylish
 - (d) Cute
 - (e) Awesome
 - (f) OK
 - (g) Decent
 - (h) Alright
 - (i) Suitable
 - (j) Ugly
 - (k) Terrible
 - (l) Nothing special
 - (m) Pretty bad
 - (n) Not stylish
 - (o) Just normal
14. How strongly would you say these clothes appear are from a store you would shop in?
- 1 = Least like a store I would shop in
5 = Most like a store I would shop in
- 1 2 3 4 5
15. Based on the clothes how would you describe this (imagined) store?
- (a) Discount

- (b) Mass market
 - (c) Luxury
 - (d) Sporty
 - (e) Casual
 - (f) I ' m not sure
16. Is there any garment here you would want to buy? (If yes please write the item in the next question)
- Yes
- No
17. If you answered No to the previous question please skip this question. If yes, please write which garment.
18. Based on the clothes how would you describe this (imagined) store's target customer?
- (a) Discount
 - (b) Mass market
 - (c) Luxury
 - (d) Sporty
 - (e) Casual
 - (f) I ' m not sure

A.3 Testing phase one - user profile questionnaire summary

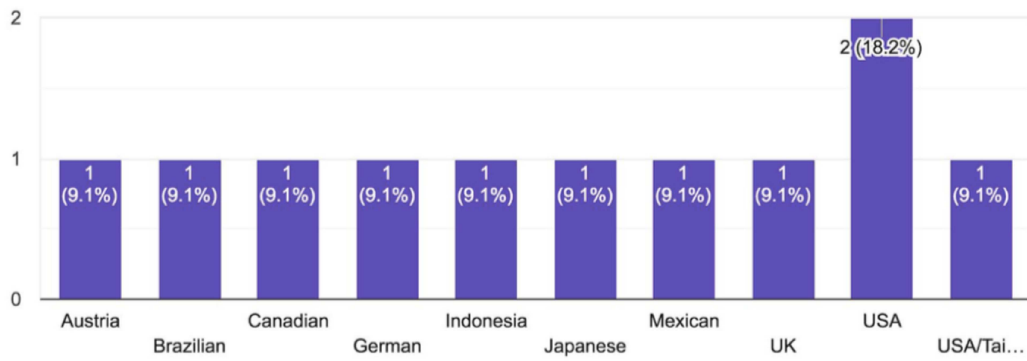
Age range

11 responses



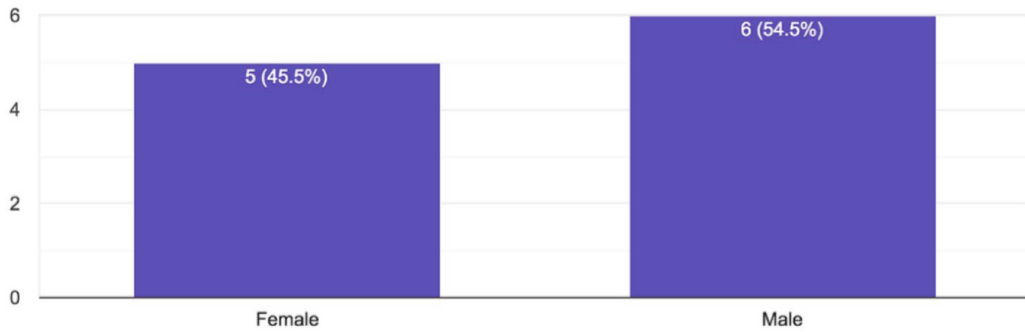
Nationality

11 responses



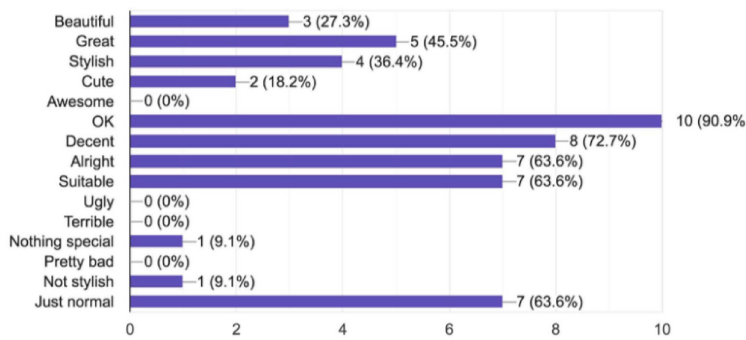
Gender

11 responses



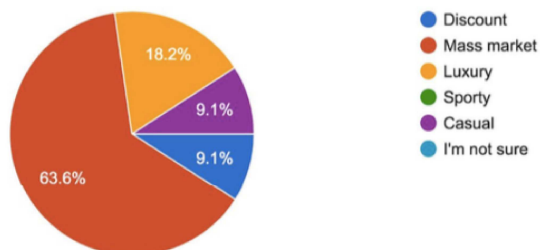
Choose the five adjectives which best describe the clothes on the first table.

11 responses



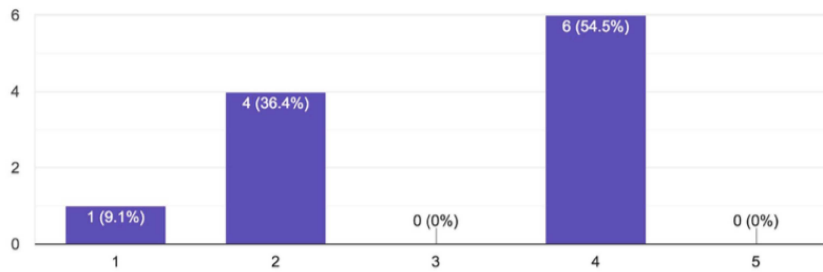
Based on the clothes how would you describe this (imagined) store?

11 responses



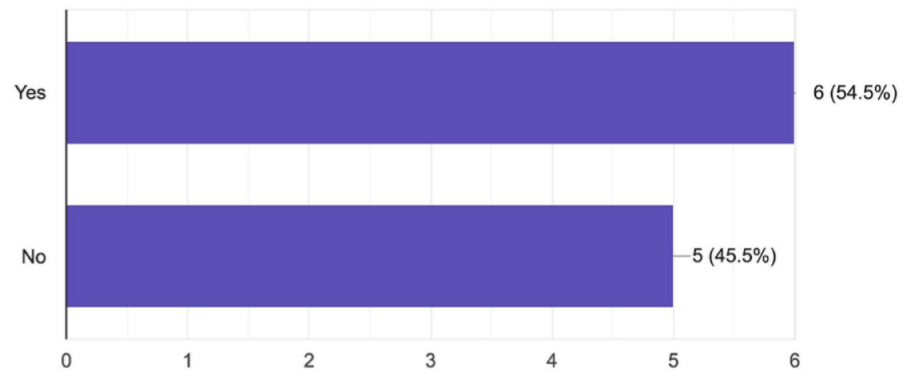
How strongly would you say these clothes appear are from a store you would shop in?

11 responses



Is there any garment here you would want to buy?

11 responses



If you answered No to the previous question please skip this question. If yes, please write which garment. (Six responses)

Short sleeve button down

Ring

Dark blue blazer

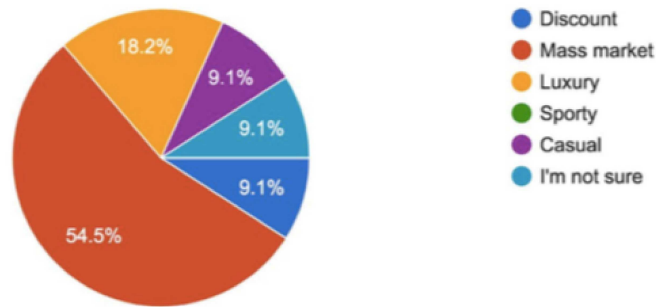
Linen jacket

The light jacket with dotted cuffs

Gloves or accessories

Based on the clothes how would you describe this (imagined) store's target customer?

11 responses

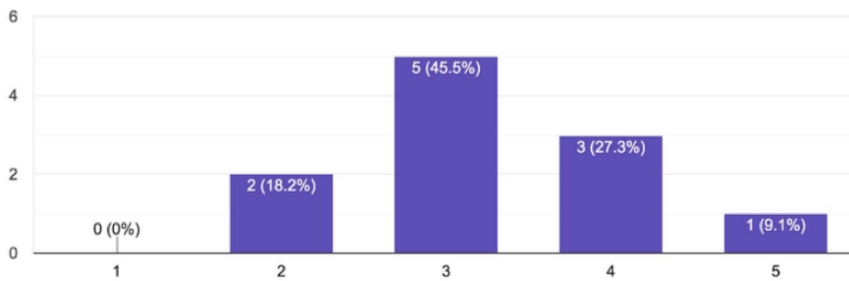


Please rate your satisfaction level with this story.

1 = Least satisfied

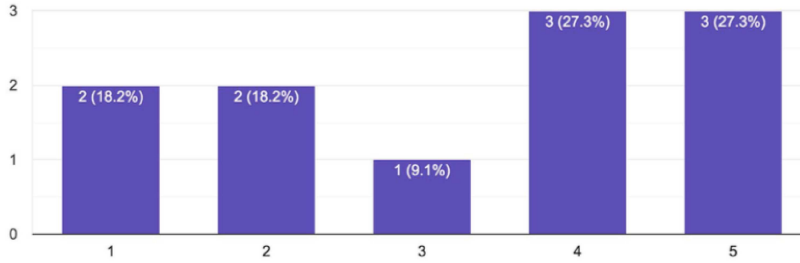
5 = Most satisfied

11 responses



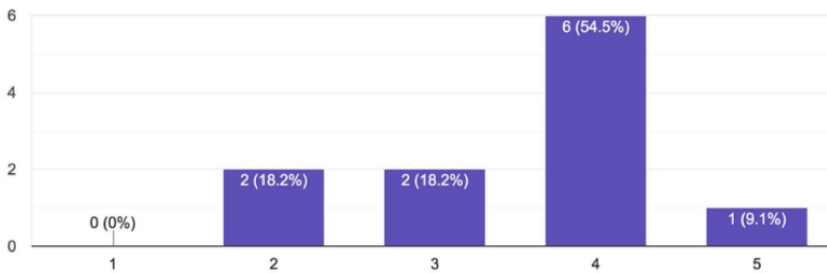
How likely would you choose to try this type of fashion-based story again?

11 responses

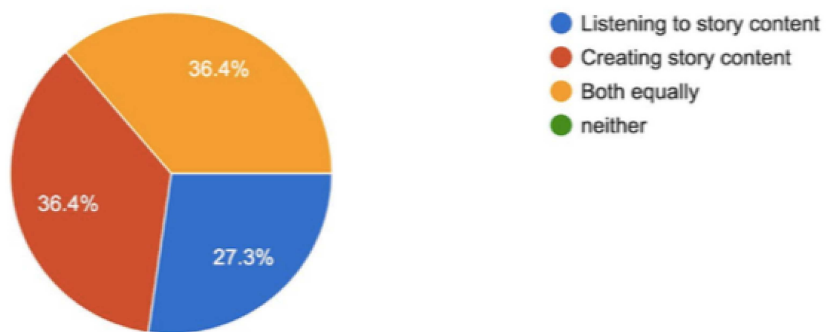


Please rate your satisfaction with the overall fashion-based storytelling experience.

11 responses

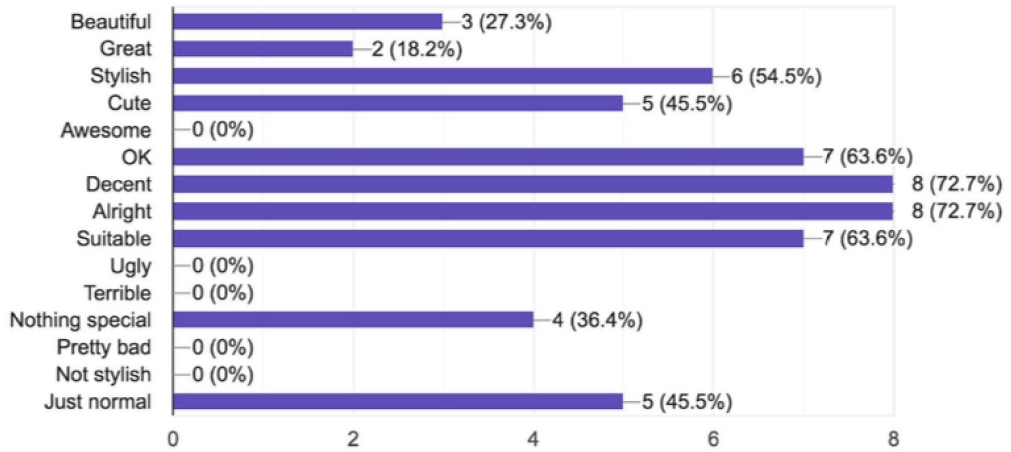


Which activity appeals more to you?



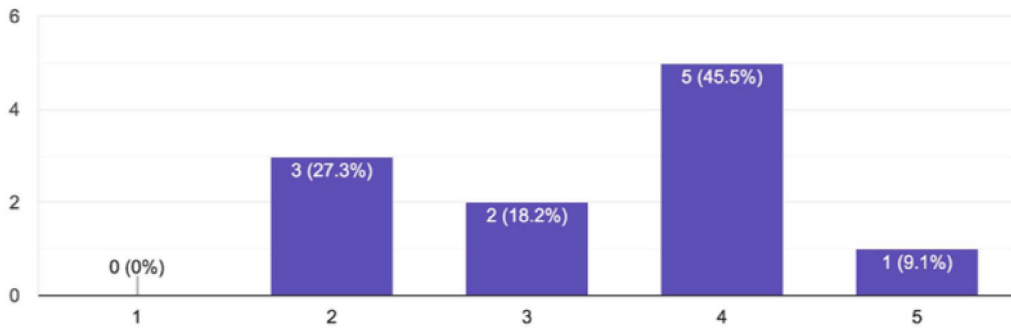
Choose the five adjectives which best describe the clothes used in the experience.

11 responses



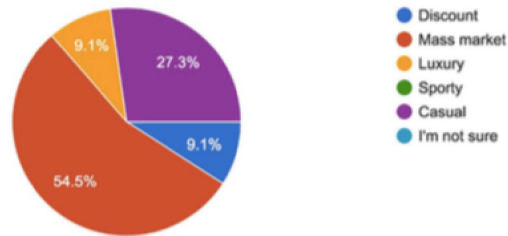
How strongly would you say these clothes are from a store you would shop in?

11 responses



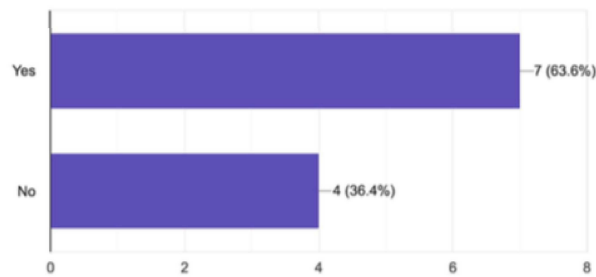
Based on the clothes how would you describe this (imagined) store?

11 responses



Is there any garment here you would want to buy?

11 responses



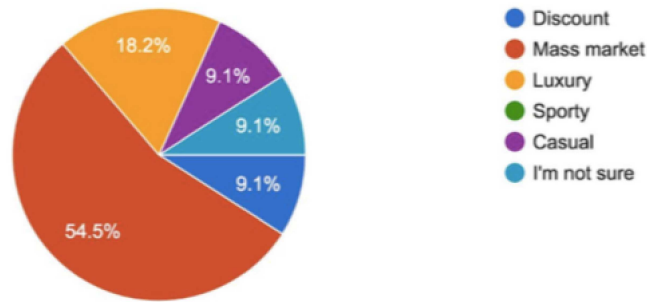
If you answered No to the previous question please skip this question. If yes, please write which garment.

7 responses

- Pants
- Sport Jacket
- Ring
- Black vest
- Scarf
- The dress and watch
- Undershirt

Based on the clothes how would you describe this (imagined) store's target customer?

11 responses



A.4 Testing phase one - interview questions

1. Please summarize the details you remember from the story.
2. Did you experience any problems or have any difficulty understanding the test?
3. How would you describe this experience to someone else?
4. Did your impressions of any of the garments change during the experience?
5. Were you able to relate to the garments through the story?
6. Did you have a negative impression of any of the garments?
7. How does this experience compare with your usual fashion shopping experience?
8. Were you comfortable creating content?
9. How did you feel about reading the content and typing?
10. What kind of shops do you usually go to, and why?
11. Do you create any content currently, blog, twitter, Instagram etc?
12. What user generated content do you enjoy currently?

B. Testing phase two

B.1 Testing phase two user prompt 1 - audience

Welcome to the Story Store!

The Story Store believes customers deserve a retail experience that helps them envision how clothes might fit into the world outside the store. We think the best way to do this is through the power of stories. We hope the new worlds you encounter in this shop will entertain you and change the way you shop for clothes.

Experiments:

We'd like you to experience two stories.

Story one

1. Describe each of the garments you see on the table.
2. Use the tablet to experience the story garment by garment.
3. Participate in a short interview.

Story two

1. Read through the descriptions and select the story you would like to experience today.
2. Use the tablet to experience the story garment by garment as you did with story one.
3. Now you can choose to tell your own four part story or add to this one.
 - You will have a choice of telling your story by text or video
 - Each part of the story you create will be limited by time (1 min/video) or length (three sentences).

If you tell your own story

Stories have four parts; an intro, an event, a climax, and a resolution.

An Intro - introduces the characters and sets up the situation

An event - something happens which moves the characters in a new direction

A climax - tension or excitement peaks

A resolution - challenges are overcome, tension is released, problems are resolved

If you add to a story

You can: Add an Intro to a Resolution using the same characters
Add a new Event to an Intro or another Event
Add a new Climax to an Event
Add a new Resolution to a Climax

4. Next choose the garments you want for your part of the story.
5. Record your part of the story through video or typed text.
6. Confirm your part of the story is just how you would like other customers to see it.
7. Write a one sentence description of your story for other customers.
8. Take a promo picture to accompany your description sentence.
7. Participate in a short interview.

B.2 Testing phase two interview questions 1 - audience

Story one

1. Can you summarize the details of the story?
2. What kind of feedback would you give these storytellers?
3. Was any part of the story difficult to understand?
4. Did any part of the story give you a negative impression?
5. Please describe your current impression of each garment?

Story Two

1. Were you comfortable creating content?
2. How was making a story using the four part structure?
3. Why did you chose typing or video?
4. Which did you prefer telling your own story or contributing to a collective story?
5. What would you like the customers to take away from experiencing your story?
6. What kind of feedback would you like to hear from them?
7. Do you mind if others alter your story or add to it?
8. What did you consider when choosing a garment for your story?
9. Did your impressions of any of the garments change during the storytelling process?
10. When writing your story description and photo what kind of impression did you want to create for customers?
11. How would you describe this shop concept and your experience to someone else?

12. What was the most difficult part of this experience?
13. Do you think the storytelling process was too slow or took too long?
14. What changes did you notice between this experience and the test last week?
15. How easy or difficult was it to tell the stories today?
16. What did you enjoy most about the experience?
17. Is this something you think you would like to try again?

B.3 testing phase two user prompt 2 - story creation

Congratulations! You have been selected to become an official storyteller for the Story Store.

The Story Store believes customers deserve a retail experience that helps them envision how clothes might fit into a world outside the store. We think the best way to do this is through the power of stories. That's where you come in. We've been looking for people we can trust to help create these storyworlds and we think you are perfect for the challenge.

First some ground rules:

1. Our stories have four parts; an intro, an event, a climax, and a resolution.
 - An Intro - introduces the characters and sets up the situation
 - An event - something happens which moves the characters in a new direction
 - A climax - tension or excitement peaks
 - A resolution - challenges are overcome, tension is released, problems are resolved
2. You will have a choice of telling your story by text or video
3. Each part of your story will be limited by time (1 min/video) or length (three sentences).

Experiments:

We'd like you to participate in telling two stories.

Story one - You'll tell one part of the story on a first come, first served basis.

1. You'll listen to the parts of the story already created by previous storytellers. If you are the first storyteller then you will create the intro.
 2. You'll choose the garment you want for your part of the story.
 3. You'll record your part of the story through video or typed text.
 4. Confirmed your part of the story is just how you would like the customers to see it.

Story two - You create all four parts of your own story.

1. You will be shown the four garments you can use for your story.
 2. You'll record each part of your story through video or typed text.
 3. After you've confirmed each part of your story is just how you like it
 4. You'll write a one sentence description to attract customers to experience your story.

5. You'll take a promo picture to accompany your description sentence.
6. You'll participate in a final short interview.

B.4 Testing phase two interview questions 2 - story creation

1. How would you compare the first storytelling experience with the second?
2. Were you comfortable creating content?
3. How was using the four part story structure?
4. Why did you chose typing or video?
5. Which did you prefer telling your own story or contributing to a collective story?
6. What would you like the customers to take away from experiencing your story?
7. What kind of feedback would you like to hear from them?
8. Do you mind if others alter your story or add to it?
9. What did you consider when choosing a garment for your story?
10. Did your impressions of any of the garments change during the storytelling process?
11. When writing your story description and photo what kind of impression did you want to create for customers?
12. How would you describe this shop concept and your experience to someone else?
13. Did you experience any problems or have any difficulty understanding the test?
14. What was the most difficult part of this experience?
15. Do you think the storytelling process was too slow or took too long?
16. What did you enjoy most about the experience?
17. Is this something you think you would like to try again?

B.5 Testing phase two - interview transcript 1

Test Phase 2

5/26/15

Transcript

Gary

Interview 1:

Facilitator: How would you compare the first storytelling experience you created last week with the one this week?

User: This is more interesting, because I get to see what other people feel about the garments too. And I get to participate in the stories they are creating. That was pretty fun. And somehow quite inspiring about how people brought everything together. So that was pretty amazing.

Facilitator: And was there anything surprising about what the other people had done?

User: Yeah I think it was quite surprising about how the first person started the story because I couldn't really link a hat with a bar type scene together. It's quite interesting how it got that far.

Facilitator: Did it make you rethink any of the clothing?

User: I guess for most of the storytellers, they pick the items that can be fit into the story rather than describing the the item itself. It's more like we're utilizing the items in the stories, so it's more like making a strong impression rather than re-identifying the items.

Facilitator: You mentioned that you really didn't think of the hat in a bar setting so I wondered if it made you reimagine where to wear the hat.

User: I think it's still pretty strange. If I see someone in a bar wearing that hat I'd probably be like, oh he's definitely a weirdo.

Facilitator: Was there any part of the story which you felt was negative?

User: I guess that bad breath part. It's kind of mean, but it's really funny, like how everyone kind of linked this back to it.

Facilitator: So you didn't really feel offended by it.

User: No not really it was a pretty relaxing story.

Interview 2:

Facilitator: So how did making the whole story compared to just adding to

someone else's story?

User: It was more challenging because you have to create your own scenes for each of the garments, but it was also more entertaining to me. It was like, oh I'm actually being involved in this type of project and stuff. So I think that was a plus. The minus was that for people who don't really like to create their own stories they might be less aggressive towards the stuff. So maybe the adding to existing stories would work better for them but to me this is more interesting.

Like I can kind of create my own world and stuff.

Facilitator: Would you mind if someone else came and changed part of your story?

User: Oh definitely not. That would definitely be more interesting, I would really want to see how people think about the garments.

Facilitator: How's the four-part structure?

User: Oh it's definitely clearer than the original. You have to do a set of steps.

Facilitator: how about is an audience member?

User: Yes, it's more engaging you can kind of see the scenes in your mind. It's like playing a movie.

Facilitator: How was typing versus video?

User: I think for any other story the video would be more engaging because everyone is doing that and I kind of feel the need to do that too, but you create my own Story I tend to rely on the texting. I think words can express more.

Facilitator: What about the time to do it?

User: It's more time-consuming but also you get to figure out your mind and type whatever you want.

Facilitator: So you would still choose typing in the future.

User: Yes.

Facilitator: What would you like to customers who listen to your story to take away from it?

User: I want them to feel entertained. Like they can relate to the story, or think, oh I can wear this in certain circumstances. Like, oh I didn't know this was a men's bag, or oh I had this experience too.

Facilitator: Would you like to get feedback from them?

User: Yeah definitely.

Facilitator: What kind?

User: Like what do they think about the story itself and what do they think about the garments too. Was there a strong engagement between the garments and the story or not.

Facilitator: How did you think about the garments when you were making the story?

User: I kind of picked the garments first, because I had a strong impression of them that first . And then I kind of develop the story from there. I developed on an existing plot but then with a few tweaks see if it could go on other grounds.

Facilitator: Did your impressions of the garments change while making the story?

User: Mmm, not really. Because I guess when you are making the story you kind of want the garments to fit in rather than re-identify themselves. I guess that's an audience you kind of have impressions of the garments, but as the creator of the story you want them to be more like your vision.

Facilitator: When you were writing the description sentence or making the cover photo how was that experience?

User: I think the picture is important, you definitely want to grab people's attention. And then people will definitely be curious about what the story is about. I think that's a good strategy to bring the customer inside.

Facilitator: How would you describe the store 's concept to someone who has never heard of it?

User: Probably a story that tells fashion with story, so it's kind of like a place where you listen to the story and get inspired by the garments.

Facilitator: Did you experience any difficulty?

User: Not really, I think it was kind of a smooth process of creating a story.

Facilitator: Okay what was smoother about it this time than the last time?

User: Probably because I get to build a story from scratch. I get to put ideas into a story rather than fit into another story.

Facilitator: Do you think the storytelling process is too slow?

User: I think it was okay and it was really funny.

Facilitator: And what did you enjoy most?

User: The most would be creating my own story and second would be listening to other stories.

Facilitator: So you prefer that to listening to stories?

User: Yes I guess. After all I'd prefer writing the stories more but there's were really funny.

Facilitator: Is this something you think you would like to try again?

User: Yeah definitely it was really fun.

B.6 Testing phase two - interview transcript 2

Prototest 2

5/26/15

Transcript

Susana

Pre-test Impressions:

Facilitator: Looking at these four garments could you go garment by garment and just tell me your impression of what kind of shop or what kind of person would wear buy them?

User: Well that shirts would be for someone who's well-dressed. Not to elegant but you can get away with it and just be fine. Versatile. I think that's an everyday watch. It's nice looking. You can wear it with anything, yes. These gloves are dressy. They look nice they're very warm. Yes for winter, dressing up a little bit more. The hat is for a day out fishing, just functional. Just plain, not so stylish.

Interview 1:

Facilitator: So could you please repeat the details of the story?

User: Umm, It's about three people two guys, who without realizing the third person, a girl, is there they dare to talked about the other one they aren't very keen on. But she's there and annoyed, and it gets a bit physical with the gloves. And she doesn't have a good time.

Facilitator: You chose to go through the story in a mixed order, did that affect your understanding of the story?

User: No, no I don't think so.

Facilitator: And what feedback would you give these storytellers?

User: I like the thing with the hat, and I liked and I like to play with the time because I felt the anger. I felt the anger, yes. I felt a lot of anger with that one, but then I felt like play like really not minding. That's what I perceived with the hat. The hat In the watch were emotionally perceived. Yes,

Facilitator: Was any part of the story difficult to understand?

User: Umm, no. I think. I think maybe the first part of it because you kind of think, where am I, but then the other parts all start to fit together. The more you see the more you understand. But if I had just seen the watch I probably would have been more confused. For the watch in the beginning I perceived the anger

but I couldn't really see the context. Once I saw the gloves I could get more of the context. And that had me able to completely imagine the setting, yes. And I understood.

Facilitator: Did any part of the story give you a negative impression?

User: I really felt the anger. I think that's the one that struck me the most. It was the watch. I don't know why, maybe it was more personal. It gave me the feeling that I didn't feel comfortable but it was how it was told. Not the story itself but the voice.

Facilitator: Could you one more time describe your impression of each garment?

User: Umm, I think they're pretty much the same. Yes, I see the watch is something for every day, the tie is something more functional. The gloves seem like something more dressy, the hat just, yes, I don't care. Yes, really like, I want to make a statement that I don't care. In the shirt yes could go either way. I still see that it's the same.

Interview 2:

Facilitator: So how comfortable were you creating your own content?

User: In the beginning I didn't know what I wanted when I chose the garment. There was a hesitation. But once I decided where I wanted to go it was fine.

Facilitator: I noticed you decided to create your content is text, was there any reason for that?

User: I felt like I could think more about it while I wrote it than... yeah, maybe I wouldn't feel so stressed to come out with something.

Facilitator: I was making the story is part of a four-part structure?

User: I think I liked more than making my own that I had an idea. That I would have a problem. What I decided to do was stand on that problem. And maybe keep on pushing it. And give a hint about the future. My part connects to the very end.

Facilitator: What would you like the audience to take away from your part of the story?

User: To be able to visualize my story when they saw the garment, so they would see someone with that tie and associate it with the story.

Facilitator: What kind of person would you hope they would see?

User: I envisioned kind of a hipster kind of person. The dresses in a unique way but looks okay - who looks good but not traditional.

Facilitator: Would you mind if someone else altered or added on to your story?

User: No.

Facilitator: What did you consider when you were choosing the tie? how did you make your decision?

User: I think because of its color, the rest are very neutral. I think that's what drew me to it.

Facilitator: Did your impression of the tie change after telling the story, or did your impression of the other garments change?

User: The tie maybe. I needed to envision the character wearing it and without knowing this person I had to recognize the person. Because of that very specific tie. And then I could imagine what this person would be wearing, and yes, that's what I thought.

Facilitator: How would you describe this shop's concept to someone who hasn't heard of it or experienced it?

User: I would describe it as having some personality for the clothes. A shop that describes its pieces as people. With a personality, with a life. With something to do. With somewhere to go. With problems. The clothes have a persona attached to them.

Facilitator: What was the most difficult part of this experience?

User: I think some parts of the story felt a little bit too long. Some were okay but some were too long, yes. This is the end was only three sentences and that was great.

Facilitator: How did you feel about the time involved with the story creation process?

User: No, that was perfect. It's a short idea. It doesn't really take much of your time.

Facilitator: Do you think three sentences is a correct amount?

User: I think three sentences is a good amount, I think people can do it in one, but three is a good amount.

Facilitator: What's different about this test than the first test?

User: Going through the garments is easier. I liked going through the garments

this time. I don't know if it's the labels, or numbers that helped me form an idea. Yes, I think the difference is having the numbers on the garment tags, I can visually see a connection between the garments.

Facilitator: Did that improve the quality of the story?

User: I think so, yeah. Or just made it easier to understand.

Facilitator: Because it puts the parts of the stories in order, even if you don't go through them in that order you still know how they fit together?

User: Exactly.

Facilitator: What did you like most about the experience?

User: I think at the end I really liked writing my own content. It was a nice addition to the story.

Facilitator: Would you want to share your story publically?

User: Yes, I would like to share it publicly.

Facilitator: Is this something you would like to try again in a shop?

User: I like the idea a lot. I could see trying it with two or three garments. It's interesting that you can interact with the clothes. You are not ever told the story behind them. It felt like a deeper experience. You could spend more time in the store.

C. Testing phase three

C.1 Testing phase three - process

Before test:

- table one, single garment with three tags
- Extra user content tag and pen next to the garment
- table two, four garments each with a single tag
- Extra user content tags
- Instruction sheet on each table
- Label on each table
- Camera on tripod (clear view)
- Laptop/iphone set up to record the interview
- Interview questions
- iPad charged and Aurasma open

Test:

1. User enters
2. Facilitator starts video
3. Facilitator explains concept
4. Facilitator shows how to use Aurasma
5. User views content / creates content
6. Facilitator conducts deep interviews

C.2 Testing phase three user prompt - single garment story

Welcome to the Story Store!

We believe in a retail experience that lets you envision how clothes might fit into the world outside the store, the best way to do this is through the power of stories.

Table One: Single Garment

This garment has multiple stories.

To experience the stories use the tablet to scan any of the three attached tags.

Use can experience as many of the stories as many times as you want.

Creating your own story

You can also create your own story.

Just use the tablet ' s video function to record your own 30 second (or less) video

*****please ask Jack to time you*****

After you have recorded and checked your finished video please take one of the blank tags next to the garment and write the title of your story in the blank.

Your story will be attached to the tag after the test.

***** If you have any questions during the test please ask the test facilitator.*****

C.3 Testing phase three user prompt - four garment story

Welcome to the Story Store!

We believe in a retail experience that lets you envision how clothes might fit into the world outside the store, the best way to do this is through the power of stories.

Table Two: Four Garment Story

This story is told through each of the garments.

To experience the stories use the tablet to scan the attached tags.

Use can experience the story in any order, and as many times as you want.

Creating your own part of the story

You can also add to this story as much as you ' d like.

You can replace one of the existing parts of the story or add a new garment to the story.

To replace one of the existing parts just use the tablet ' s video function to record your own 30 second (or less) video.

*****please ask Jack to time you*****

To add a new garment to the story first select a new garment from the table nearby, just use the tablet ' s video function to record your own 30 second (or less) video.

*****please ask Jack to time you*****

After you have recorded and checked your finished video please take one of the extra tags blank tags next to the garments and write your name on the back.

Pin your tag to the garment your story relates to.

Your story will be attached to the tag after the test.

***** If you have any questions during the test please ask the test facilitator.*****

C.4 Testing phase three interview questions

Thank you for participating.

1. In the test I noticed you (Observed behavior).
How, Why, What
Repeat based on the noted observed behaviors
2. Did your impressions of any of the garments change from before or after the story?
3. Were you able to relate to the garments differently after the story?
4. Can you summarize the details of the story?
5. Which did you prefer telling your own story or contributing to a collective story?
6. How was creating content?
7. What kind of impression did you want to create for customers?

C.5 Testing phase Three - interview transcript

Test Phase 3

6/4/2015

Transcript

Jimi

Facilitator: Comparing the two stories you heard today, the option with one story per garment and the story with multiple stories per garment, which did you prefer?

User: I liked the one that just had one story. In the case of the bag with multiple stories it kind of lost its appeal, because if it can be any of them then I guess none of them are real. In a used clothing shop scenario I would assume none of them are real.

Facilitator: So you couldn't relate to any of the garment stories in particular because there are multiple options.

User: Yes. **Facilitator:** I notice in both the story creation sessions you didn't choose to create your own additions to the stories. Why was that?

User: It seemed like last time there were multiple peoples' voices in the content, so adding my own content seemed more normal. This time the story seemed more packaged and didn't feel like it needed to be edited. The last time was more like patchwork and I could add my own patch. This time felt more like I would have to start from scratch, although I had to do that last time it felt less easy to do for some reason.

Facilitator: Could that be because you have already done the test once?

User: Well I think that maybe because it felt that other people had also done it last time, so I felt more appeal to add my own voice. While this one felt like someone had decided to tell the story. I would feel like I'm saying he did a bad job almost.

Facilitator: You wouldn't feel comfortable being the first person to add content, you would feel more comfortable if it was a collective?

User: Right. I'm just adding one voice to it. That feels a bit more natural I think.

Facilitator: With the first set of stories connected to the bag, did any of those affect your image of the bag? I noticed you went through them rather quickly.

User: I wanted to get to the aviator story, that seemed like something I would be interested in. I was just trying to see if I could catch anything in the first two. Nothing really connected with me. With the last one maybe the storyline wasn't for me. I realized I wasn't the target audience.

Facilitator: What was your expectation?

User: I'm not sure what my expectation was with the aviator. Maybe I expected it to have sound effects and be more cinematic.

Facilitator: Do you think you would have preferred to have a description beforehand?

User: Hmm, it would be interesting to know which story had been heard the most. Like a rating or like a Youtube view count. I tend to check YouTube and if only 100 people have watched then it's probably a bad one. Or one of those annoying ones where it's just one picture the entire time.

Facilitator: With the second story were you able to relate to any of those garments to yourself after the story?

User: Not really, it's Summer and it's pretty warm now. I didn't really have a desire or an attraction to any of the objects either.

Facilitator: In the second story with multiple garments did that make you think differently about how the garments went together?

User: At first I was thinking along those lines. For whatever reason I didn't see them as connected.

Facilitator: So you wouldn't expect to see one person wearing these garments based on the story?

User: Right. That kind of threw me for a bit. I didn't listen to the content all the way through, numbers gave me a better idea where I was in the story. Even though I felt that way it might not be true. I guess it made it seem like there was a beginning and an end, while this one could have kept going.

Facilitator: Does that make you feel better that there is an end?

User: Yeah. There were four parts and I checked all the boxes as I went along. I can't tell you why.

Facilitator: Versus your previous test where you chose to create your own content would you say you actually prefer to listen?

User: Yeah, I suppose. I mean, maybe this time around I put myself more

into the shopper experience I am probably less likely to create a story if I am just here to shop. Maybe that was my mentality for today. Maybe watching video would be easier, maybe I ' m just lazy. I ' m not sure that ' s a fair excuse, but maybe it takes a bit more time to concentrate on audio versus video, or maybe even an image. If it was a photo of the scene which is being described in the audio. Just to get, like key pieces and see which ones I am interested in.

Facilitator: Where did your eyes go during the audio?

User: I just kept them looking at the device screen. It doesn ' t really offer any additional information than the actual object does. So it just becomes like only audio.

Facilitator: Was there any part of the experience that was confusing or difficult or made you have to think twice?

User: Not particularly, I think that I haven ' t been able to connect the imagery on the paper AR tags to the story. They seem pretty artistic and abstract. I don ' t find them too attractive I guess is what I am trying to say. Maybe if it just said point camera here I ' d feel less opinionated about them. They wouldn ' t distract from the clothing. Even if I was attracted to the garment I ' m not attracted to the styling of the tag, so I might not want to be a part of that story.

D. Testing phase four

D.1 Testing phase four - story script

Jacket

Intro:

I ' m looking for a few nice things to wear around the city this Fall.

Top 1

Conflict:

I had this great striped top last year that I loved, but I spilled coffee all over it. Whoops...

Top 2

Conflict:

There is a great concert happening down at the theater. I already have my tickets. An outfit to wear to that would be fun.

Pants

Conclusion:

Oh, this really coming together. I think this is something I ' m going to have a lot of fun in.

Accessories

Shoes

These are great for that time between late Summer and Fall before it gets too cold to wear open-toed shoes.

Sunglasses

I just got back from vacation, and left my sunglasses on the beach. Theses are good, since I can find them easily just feeling around in my purse while i ' m walking.

D.2 Testing phase four - user profile questionnaire

1. Name
2. Gender
3. Age
4. Nationality
5. Do you ever use your smartphone while shopping? If yes, please list the activities you use it for.
6. Check any of the following content types you consume by smartphone. Audio-books, podcasts, music, mobile games, e-books
7. How do you feel about shopping for clothes? 1 strongly dislike, 5 strongly enjoy
8. Please mark the level to which you agree or disagree with the following statements

1 strongly disagree, 5 strongly agree

Adventure Shopping

To me, shopping is an adventure

I find shopping stimulating

Shopping makes me feel like I am in my own universe

Gratification Shopping

When I ' m in a down mood, I go shopping to make me feel better.

To me, shopping is a way to relieve stress

I go shopping when I want to treat myself to something special.

Role Shopping

I like shopping for others because when they feel good I feel good.

I enjoy shopping for my friends and family.

I enjoy shopping around to find the perfect gift for someone.

Value Shopping

For the most part, I go shopping when there are sales.

I enjoy looking for discounts when I shop.

I enjoy hunting for bargains when I shop.

Social Shopping

I go shopping with my friends or family to socialize.

I enjoy socializing with others when I shop.

Shopping with others is a bonding experience.

Idea Shopping

I go shopping to keep up with the trends.

I go shopping to keep up with the new fashions.

I go shopping to see what new products are available.

Utilitarian

When shopping I usually find just the items I ' m looking for.

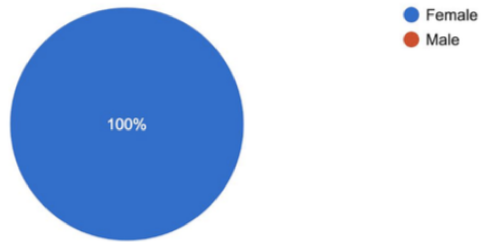
When shopping I usually accomplish just what I want to.

When shopping I can't buy what I really need.

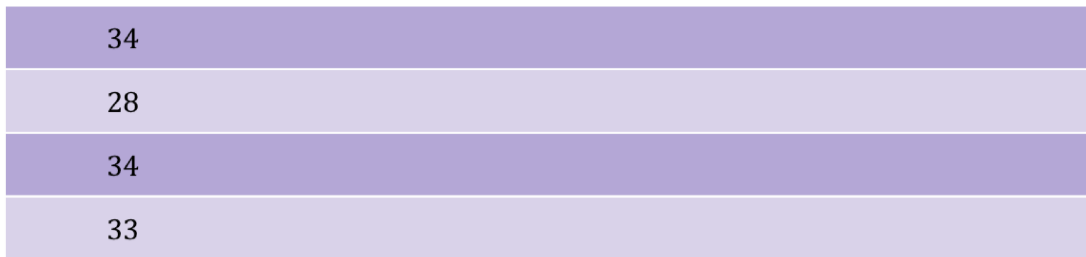
I am disappointed when I have to go to other store(s) to complete my shopping.

D.3 Testing phase four - user profile questionnaire results summary

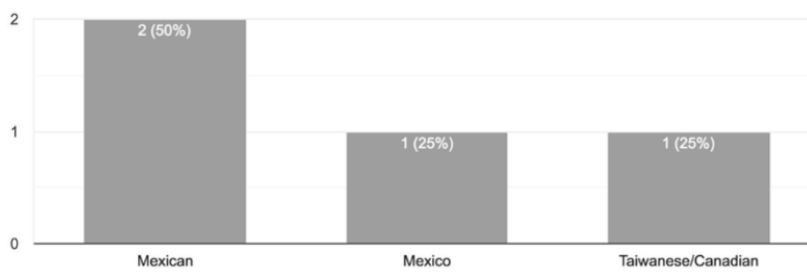
Gender:
4 responses



Age



Nationality:
4 responses



Do you ever use your smartphone while shopping? If yes, please list the activities you use it for:

4 responses

Yes, when I am looking for a specific item that I cannot find in the store, I browse the item on my phone and show it to the store attendant.

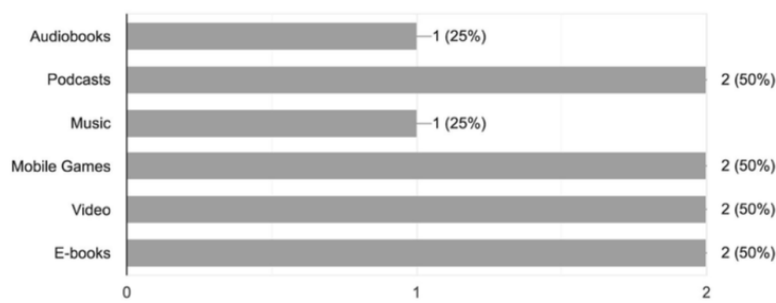
- Grocery lists
- Check product reviews
- Look for specific shops
- Take pictures of things I want to buy later
- Compare prices with other shops

Yes, Amazon Kindle books

Looking for ingredients needed, using it as a memo, chatting/replying to friends, checking the location of stores, using Google Map to find out how to get to stores, finding out store hours.

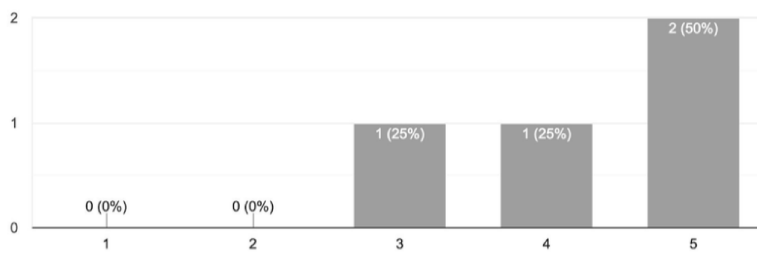
Check any of the following content types you consume by smartphone.

4 responses



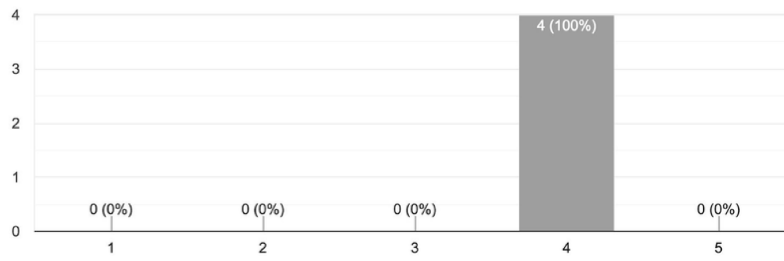
How do you feel about shopping for clothes?

4 responses



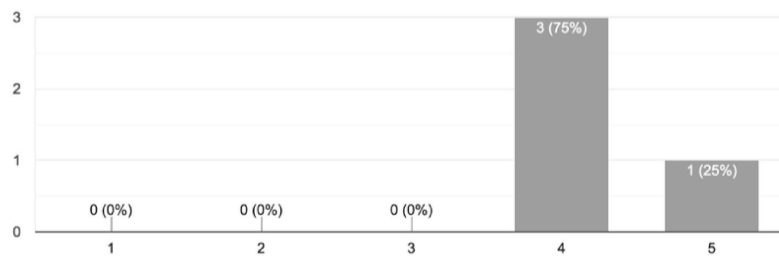
To me, shopping is an adventure .

4 responses



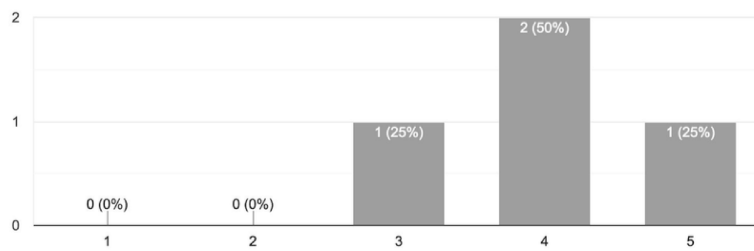
I find shopping stimulating.

4 responses



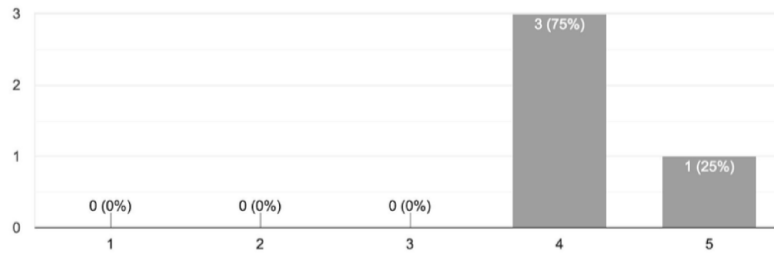
When I'm in a down mood, I go shopping to make me feel better.

4 responses



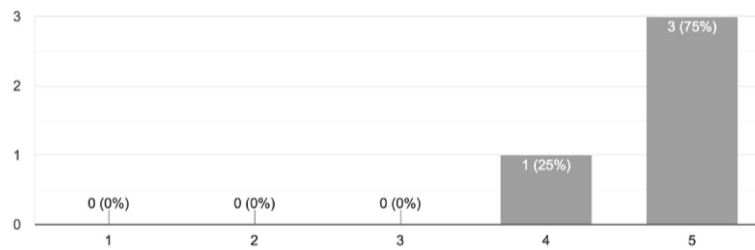
To me, shopping is a way to relieve stress.

4 responses



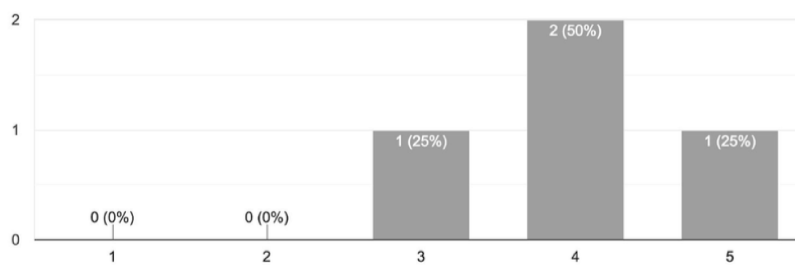
I go shopping when I want to treat myself to something special.

4 responses



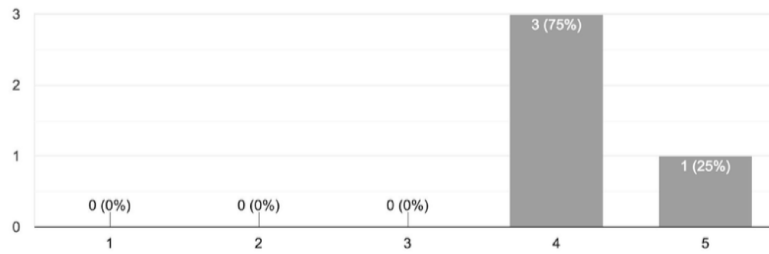
I like shopping for others because when they feel good I feel good.

4 responses



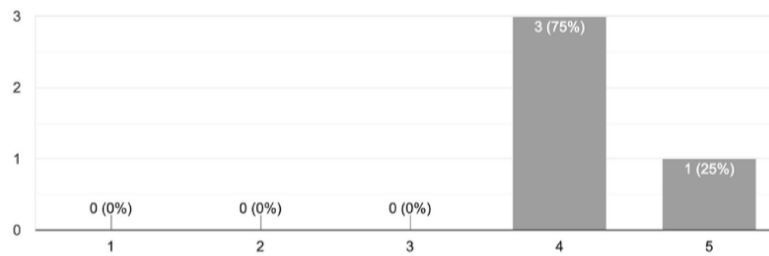
I enjoy shopping for my friends and family.

4 responses



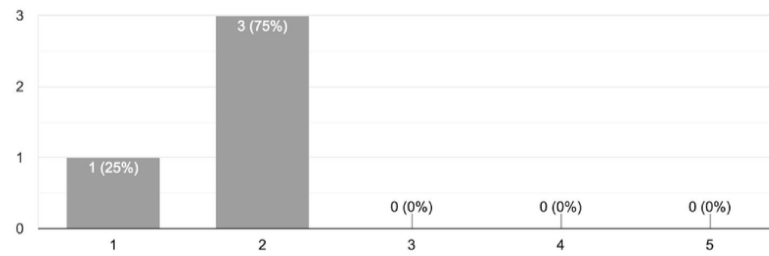
I enjoy shopping around to find the perfect gift for someone.

4 responses



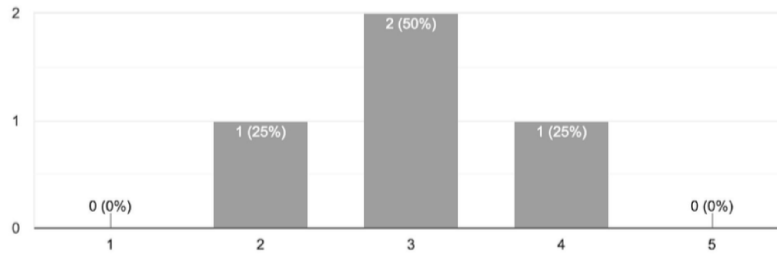
For the most part, I go shopping when there are sales.

4 responses



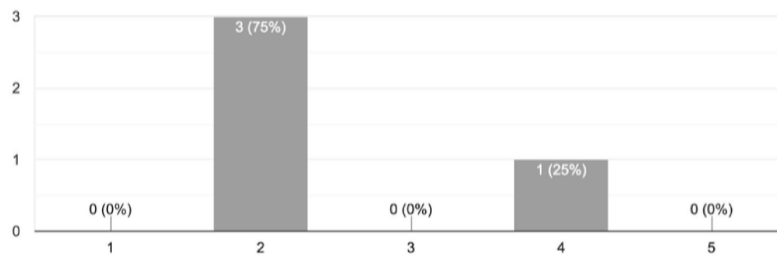
I enjoy looking for discounts when I shop.

4 responses



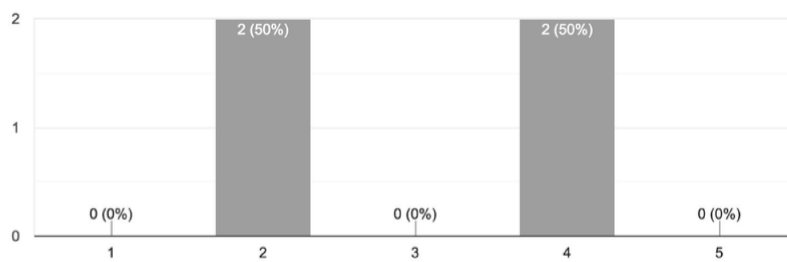
I enjoy hunting for bargains when I shop.

4 responses



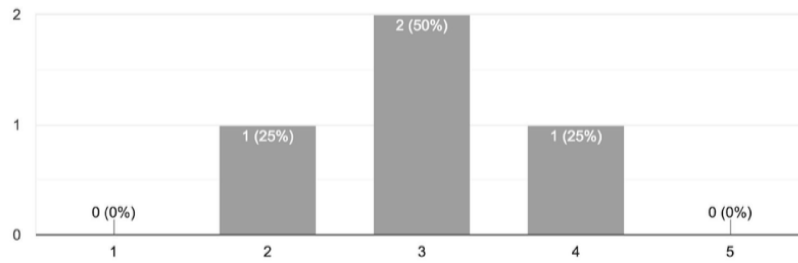
I go shopping with my friends or family to socialize.

4 responses



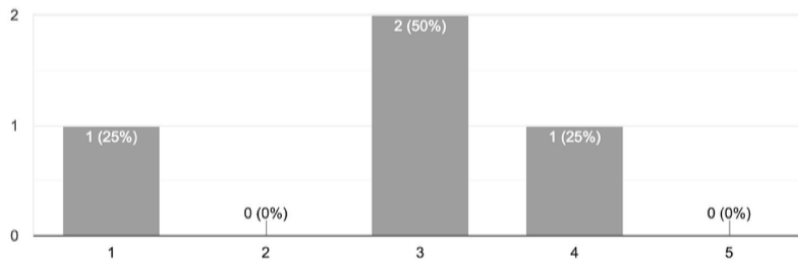
I enjoy socializing with others when I shop.

4 responses



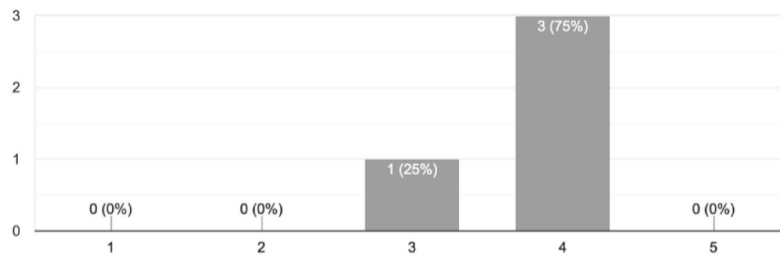
Shopping with others is a bonding experience.

4 responses



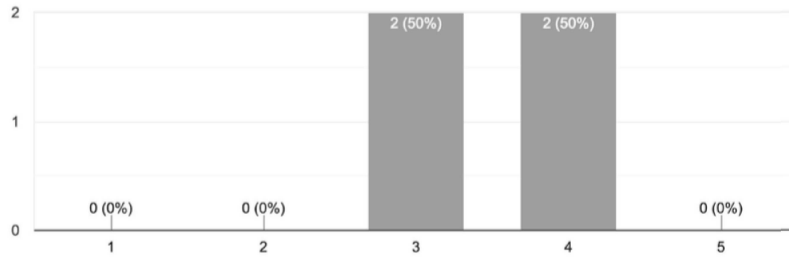
I go shopping to keep up with the trends.

4 responses



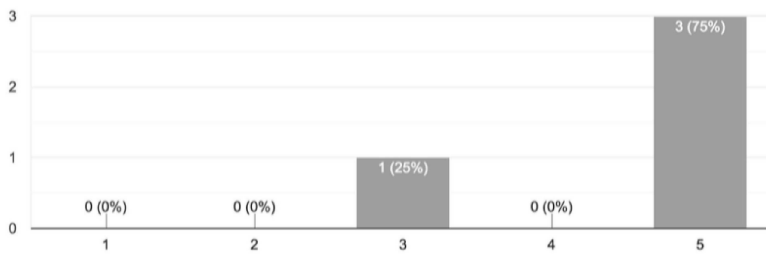
I go shopping to keep up with the new fashions.

4 responses



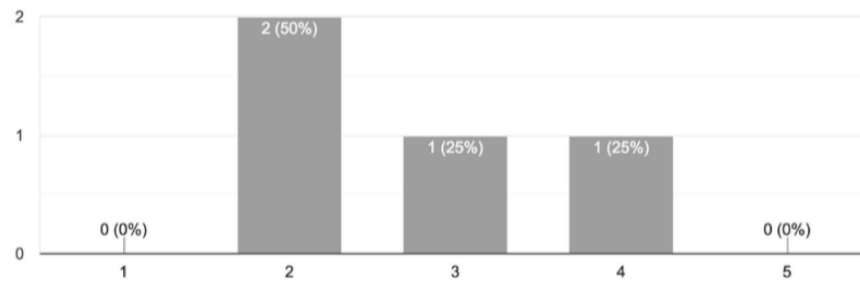
I go shopping to see what new products are available.

4 responses



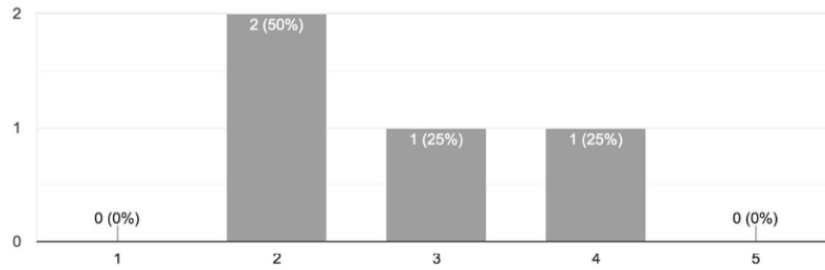
When shopping I usually find just the items I'm looking for.

4 responses



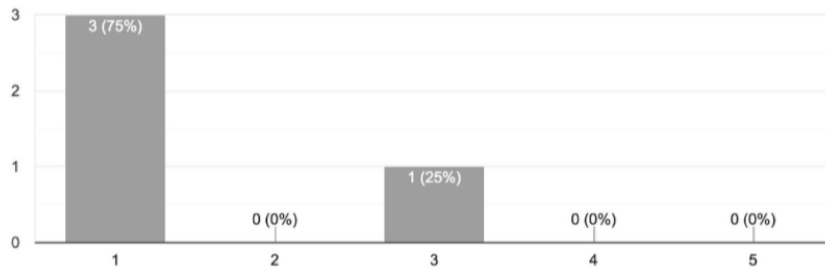
When shopping I usually accomplish just what I want to.

4 responses



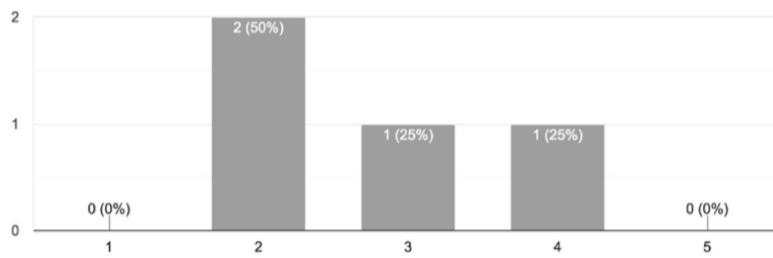
When shopping I can't buy what I really need.

4 responses



I am disappointed when I have to go to other store(s) to complete my shopping.

4 responses



D.4 Testing phase four - questionnaire

Name:

Asked after users complete experience.

Please describe the garments you selected for your final outfit.

Please describe the details of the story you heard.

Time Distortion

How much would you say you lost track of time during the experience?

How much would you say you time seemed to fly by during the experience?

Adventure Shopping

How much would you say this experience was an adventure?

How much would you say you found this experience stimulating?

How much would you say this experience made you feel like you were in your own universe?

Gratification Shopping

How much would you say this experience would make me feel better if you were in a down mood?

How much would you say this experience would relieve stress?

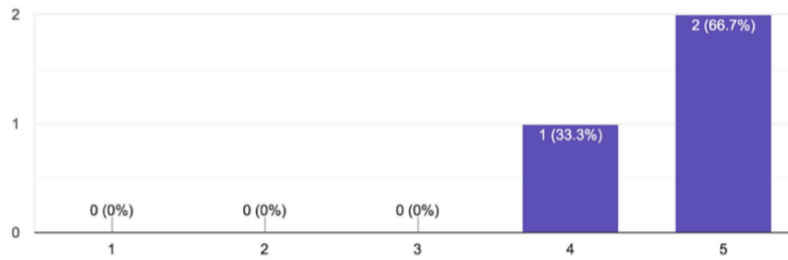
How much would you say I this experience would be a way to treat yourself to something special?

D.5 Testing phase four - questionnaire results summary

Control test

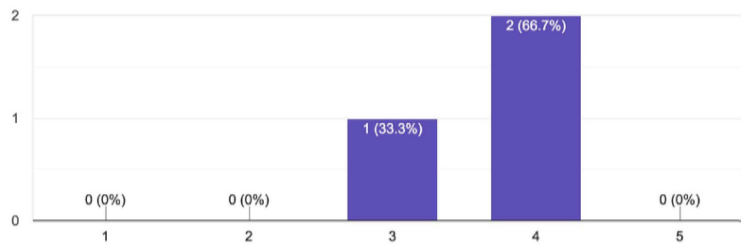
Based in the definition I experienced 'flow' during the shopping experience.

3 responses



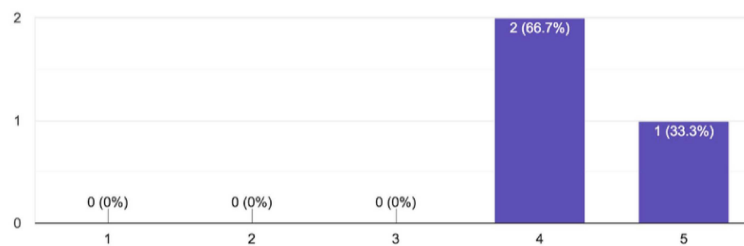
I lost track of time during the experience.

3 responses



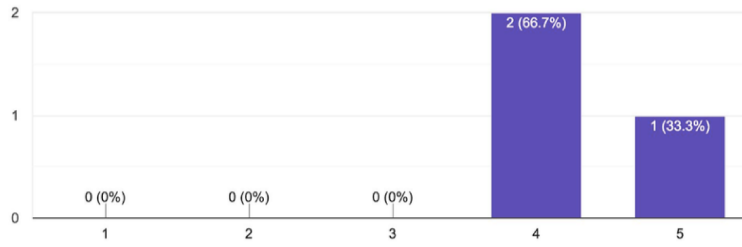
Time seemed to fly by during the experience.

3 responses



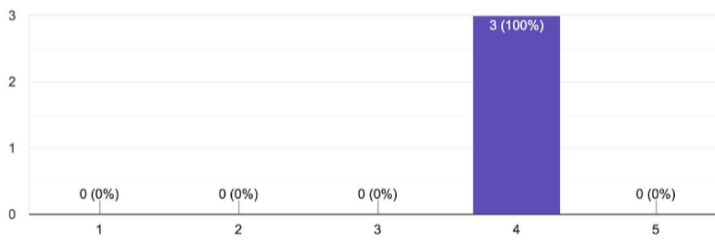
This experience was an adventure.

3 responses



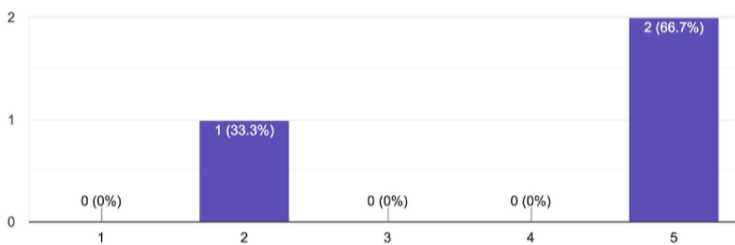
I found this experience stimulating.

3 responses



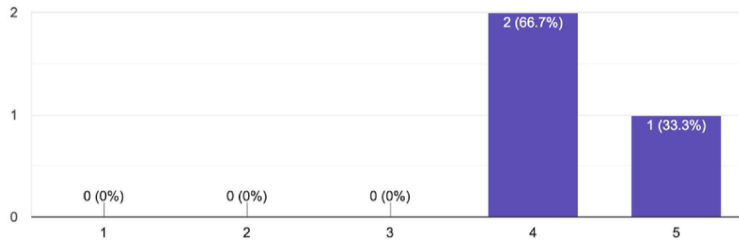
This experience made me feel like I was in my own universe.

3 responses



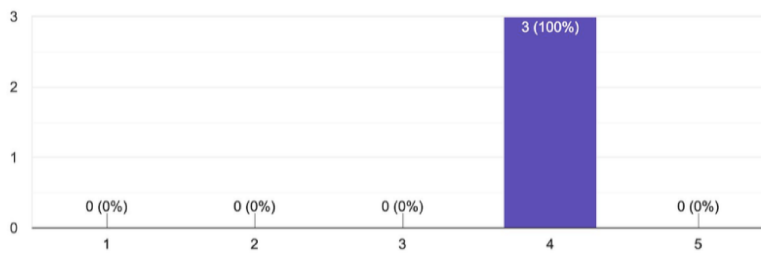
This experience improved my mood.

3 responses



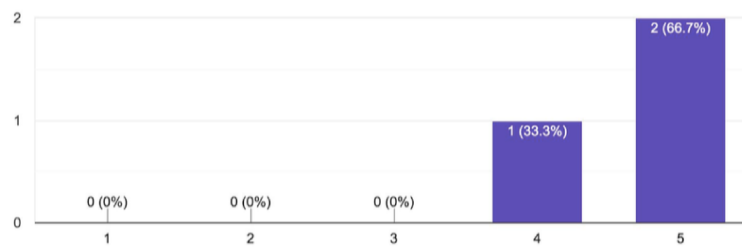
This experience relieved stress.

3 responses



This experience is a way to treat myself to something special.

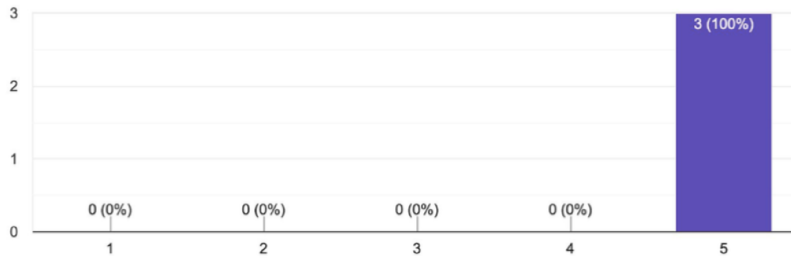
3 responses



Design Test

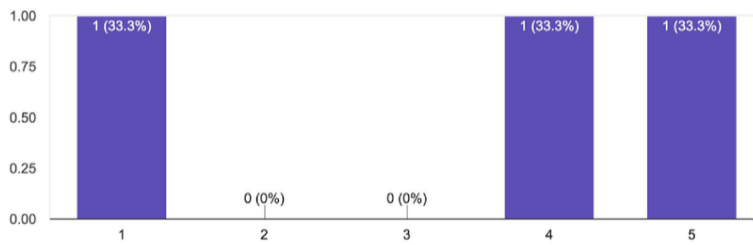
Based in the definition I experienced 'flow' during the shopping experience.

3 responses



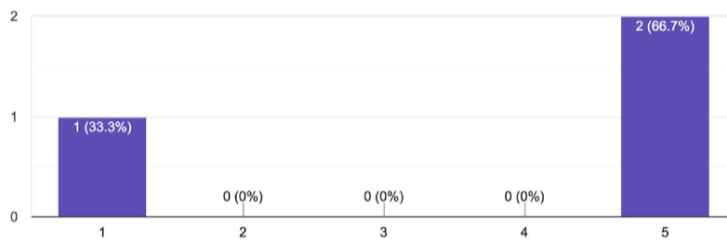
I lost track of time during the experience.

3 responses



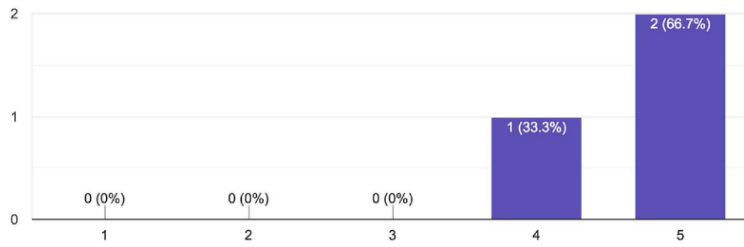
Time seemed to fly by during the experience.

3 responses



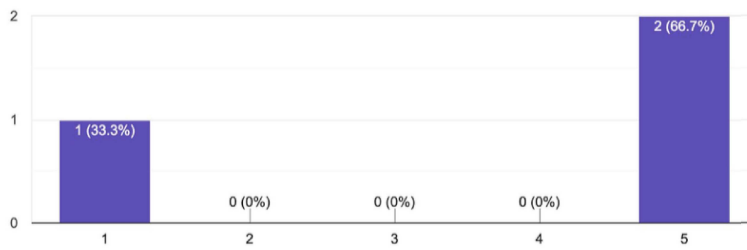
This experience was an adventure.

3 responses



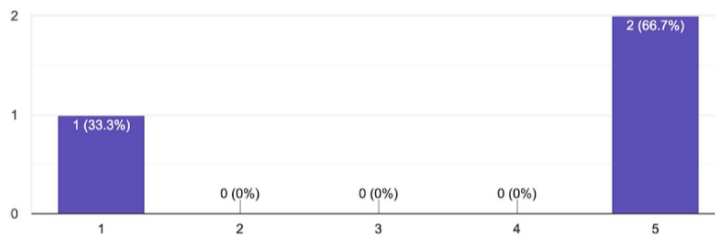
I found this experience stimulating.

3 responses



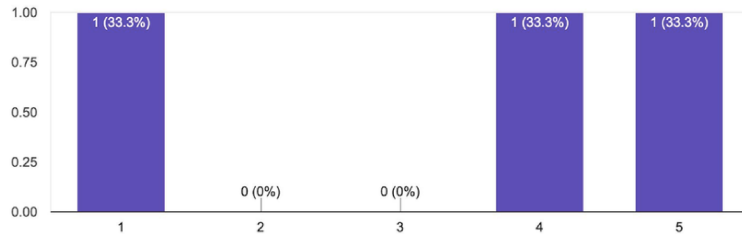
This experience made me feel like I was in my own universe.

3 responses



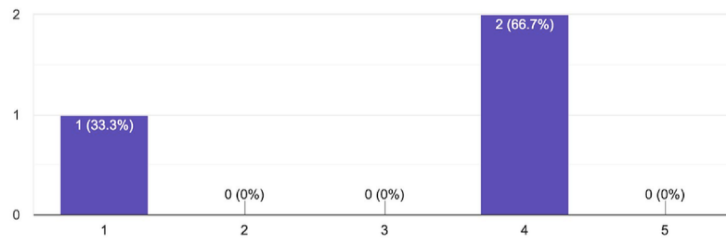
This experience improved my mood.

3 responses



This experience relieved stress.

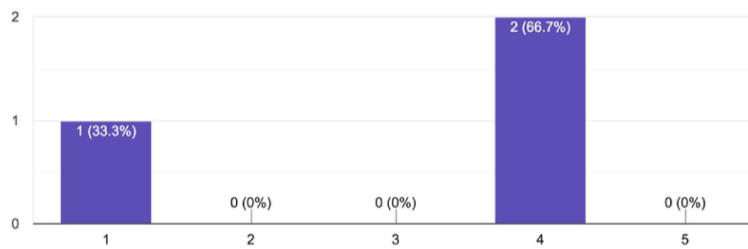
3 responses



Design test (revised)

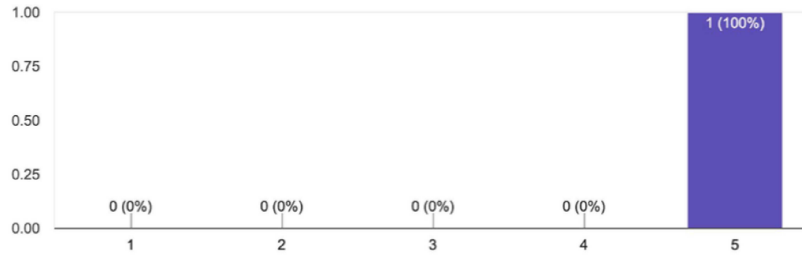
This experience is a way to treat myself to something special.

3 responses



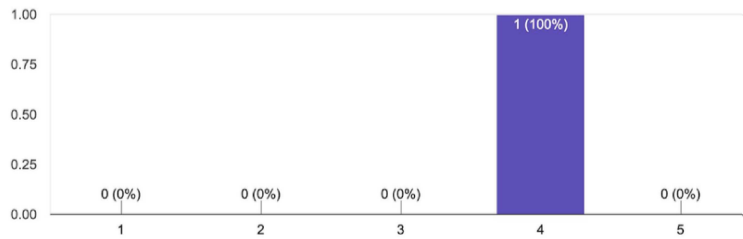
Based in the definition I experienced 'flow' during the shopping experience.

1 response



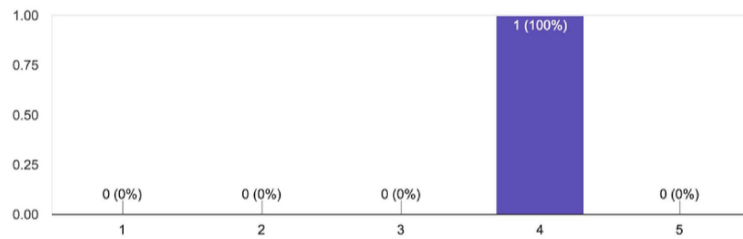
I lost track of time during the experience.

1 response



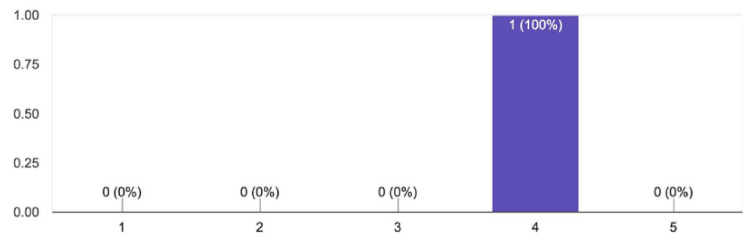
Time seemed to fly by during the experience.

1 response



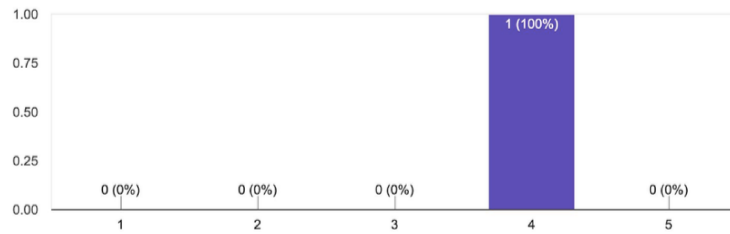
This experience was an adventure.

1 response



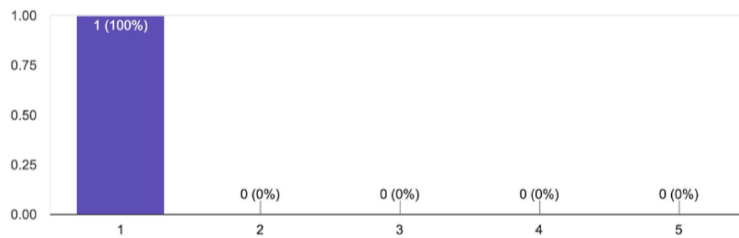
I found this experience stimulating.

1 response



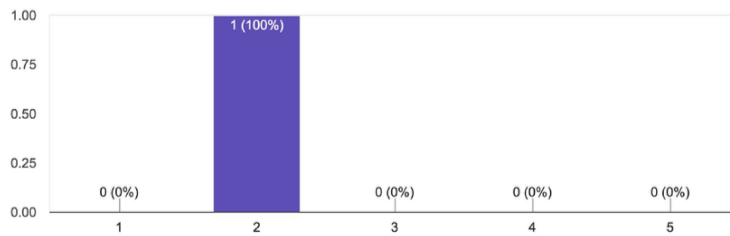
This experience made me feel like I was in my own universe.

1 response



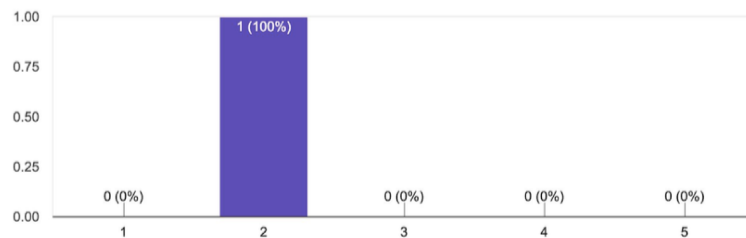
This experience improved my mood.

1 response



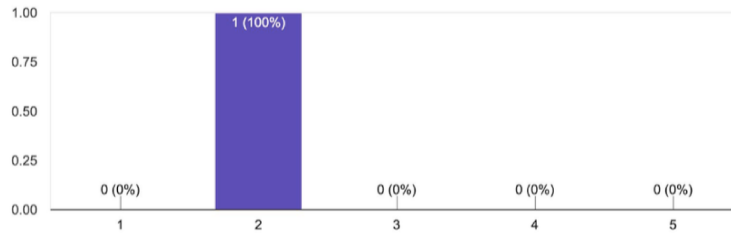
This experience relieved stress.

1 response



This experience is a way to treat myself to something special.

1 response



D.6 Testing phase four - qualitative interview question set

Interview:

1. Please state your name.
2. Please describe the garments you interacted with.
3. Please describe the details of the story you heard.
4. Did you feel the design was easy to use?
5. Did you feel the story was easy to understand?
6. How was the length of the story?
7. Did you encounter any problems while using the design?
8. Is there anything you would change about the design?
9. Is there anything you would like to see changed about the design in the future?

E. Guide for story creation

Congratulations! You have been selected to become an official storyteller for the Story Store.

The Story Store believes customers deserve a retail experience that helps them envision how clothes might fit into a world outside the store. We think the best way to do this is through the power of stories. That's where you come in. We've been looking for people we can trust to help create these 'storyworlds' and we think you are perfect

First some ground rules.

Fundamental Principles

Story must be in pieces

Each piece must correspond to an garment

Garments need to come together as an outfit

Stories can start from any type of garment

Stories can have as many pieces as you want

Storytelling grid

After complete outfit users can drop and replace a garment

Story Structure: Our stories are told through outfits, as customers choose different garments for an outfit they hear a different part of your story. The audience creates the version of your story they want to hear at the same time that they create the outfit they want to wear. They can then change the direction of your story and change their outfit at the same time.

Main Garment
Intro: When, Who, Where
Sample: "Hey, My name is Max. Can I ask you a question? I'm going apply to work here. I want to buy an outfit from the shop to wear to the interview."

Context, Conflict Choice 1
"Do you think I should try to dress more professional? or more casual for this shop?"

Proposed resolution
Sample: "Oh, yes these aren't bad. I have experience working in retail. I want to move up to management someday. I have dyslexia, so it was difficult to get into a leadership position at my last job. I think there will be more opportunities here."

Secondary Garment 1

Proposed resolution
Sample: "Ok, this matches what the current staff are wearing pretty well. I think it fits my personality too. I'm looking for a place I can really fit in, a place I belong."

Secondary Garment 2

2nd Conflict Choice 2.1
"What about these? Should I choose one that looks like I'm already successful, or this one which looks more practical?"

Actual resolution, MIP-Most important point

Accessory Garment 1
"The interview was a success! The manager asked me to come back next week and meet with the regional manager about a corporate job. I guess I finally dressed on the outside the way I feel on the inside."

Accessory Garment 2
"Guess what, I got the job. I'm going to be helping out in menswear starting next weekend. I feel like there are some real opportunities to make a life for myself here."

2nd Conflict Choice 2.2
"What do you think? Should I choose the one that looks more unique and stands out, or the one that matches the other staff?"

Actual resolution, MIP-Most important point

Accessory Garment 3
"Well, I was a little nervous at the interview, when they said, they had never seen anyone like me. But, I got the job in the end! I guess I learned it's ok to just be myself."

Accessory Garment 4
"I didn't get the job. They said they'd like to see me work on my people skills and try again. I'm an optimist I'm going to apply again in a few months. If at first you don't succeed, try and try again."

Getting started: To create this type of story you can use the storytelling worksheet provided. A sample completed worksheet is also provided as a reference.

Title	When, Who Where	Context, conflict, Proposed resolution, complication	Actual resolution, MIP-Most important point
	1 Garment		
		2.a Garment	3.a Garment
			3.b Garment
		2.b Garment	3.c Garment
			3.d Garment

Choose a main garment from the provided story garments. A main garment can be either a shirt, blouse, sweater or t-shirt. After choosing a main garment for your story, in the “1. Garment” box of the storytelling worksheet write the short intro to your story. This part of your story needs to inform your audience about the when, who and where of your story. Either keywords or full sentences are OK, keep in mind that you will be recording your story in audio form after you complete the worksheet. Each separate piece of your story is limited to 30 seconds of audio or less. See the sample worksheet for an example.

Sample “1. Garment” Text: “Hey, My name is Max. Can I ask you a question? I’m going apply to work here. I want to buy an outfit from the shop to wear to the interview.”

Next you will need to choose two secondary garments (trousers, shorts, track pants, or skirts) to coordinate with your main garment. One of these will be your “2.a Garment” and the other the “2.b Garment” on the storytelling worksheet. This part of your story represents different personality traits of the narrator from “1. Garment,” such as bold and shy, You may may also want to visually represent this with the look of the garment you choose. Now go to the “2.a Garment” and “2.b Garment” boxes on your storytelling worksheet. Here, as before write the next piece of your story. This needs to convey the narrator’s context, conflict, Proposed resolution or complication. Remember the narrator needs to explain this with the different personality traits you decided for each of the garments. The story content should be different for “2.a Garment” and “2.b Garment”, so the audience has a clear choice to make.

Sample “2.a Garment” Text: “Ok, this matches what the current staff are wearing pretty well. I think it fits my personality too. I’m looking for a place I can really fit in, a place I belong.”

Now, select four accessory garments (bags, hats, watches, gloves, neckties, shoes or jewelry), two of these garments will follow “2.a Garment” and will be “3.a Garment” and “3.b Garment” on the worksheet. The other two garments

will follow “ 2.b Garment ” in the story and will be “ 3.c Garment ” and “ 3.d Garment. ” Remember that the 2.a and 2.b garments set differing personality traits for the narrator, the 3.a, 3.b, 3.c, and 3.d garments describe specific actions and results that those personality types would take. After selecting your four accessory garments write the corresponding endings to your story in the 3.a, 3.b, 3.c, and 3.d garment boxes in the worksheet. The part of the story needs to offer an actual resolution and the MIP - most important point.

Sample “ 3.a Garment ” Text: “ Well, I was a little nervous at the interview, when they said, they had never seen anyone like me. But, I got the job in the end! I guess I learned it’s ok to just be myself. ”

Once you have filled in all the garment boxes on the storytelling worksheet, give your story a title and write it in the title box. You are now ready to record the audio version of your story.

Sample Title: The Greatest Job Interview