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Master's Thesis  
Academic Year 2021

Meet My Monogatari: Design an Offline  
Interactive System Where People Can Share a  
Story



Keio University  
Graduate School of Media Design

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A Master's Thesis  
submitted to Keio University Graduate School of Media Design  
in partial fulfillment of the requirements for the degree of  
Master of Media Design

Chenwei Song

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Abstract of Master's Thesis of Academic Year 2021

# Meet My Monogatari: Design an Offline Interactive System Where People Can Share a Story

Category: Design

## Summary

As a society matures, the intrinsic worth of things has almost been eroded, and a society based on mass production, mass consumption, and mass waste has developed. Additionally, when comparable goods become abundant, the need for scarcity rises in order to distinguish oneself from others, and the value of "ordinary" products utilized by a large number of people diminishes.

In this research, we presented Meet My Monogatari, a platform that gathers a range of "valuable" secondhand products and provides consumers with the stories and meanings behind them. Meet My Monogatari is a second-hand shop that anthropomorphic the things with which the previous owner had a particular connection and tells the story of the objects to the subsequent owners. In contrast to traditional second-hand stores, which are distinguished by low prices, the primary emphasis is on products with high-value attributes. The objective is to instill a feeling of connection in the consumer with the product, as the shared story of the product will help the product maintain its uniqueness and specialness for an extended period of time.

We defined product attachment using a questionnaire survey and validated its efficacy using two prototypes. The findings indicate that Meet My Monogatari has the ability to positively influence the way people interact with products. This also confirms that by endowing objects with distinct stories and anthropomorphic characteristics, we can increase people's reliance on them and endow them with higher emotional value attributes, thereby resolving the aforementioned situation of mass production, consumption, and disposal while satisfying people's desire for scarce products. Objects imbued with emotions and memories will become "friends" for life.

Keywords:

attachment, second-hand store, storytelling, anthropomorphism, interaction, memory

Keio University Graduate School of Media Design

Chenwei Song

# Contents

<b>Acknowledgements</b>	<b>ix</b>
<b>1 Introduction</b>	<b>1</b>
1.1. Background . . . . .	1
1.1.1 Consumer Need for Uniqueness . . . . .	2
1.1.2 Wasteful Consumption . . . . .	3
1.2. Research Questions . . . . .	5
1.3. Contribution . . . . .	6
1.4. Thesis Organization . . . . .	6
Notes . . . . .	6
<b>2 Related Works</b>	<b>8</b>
2.1. Second-hand Shop . . . . .	9
2.1.1 Jimote . . . . .	9
2.1.2 Mercari . . . . .	9
2.1.3 Tokyo Freecycle . . . . .	10
2.2. Story(telling) . . . . .	11
2.2.1 Personal/Emotional Connection . . . . .	11
2.2.2 Visual Communication . . . . .	14
2.2.3 Entertaining Content . . . . .	15
2.3. Anthropomorphism . . . . .	17
2.3.1 Anthropomorphism and Object Attachment . . . . .	17
2.3.2 Below-replacement fertility . . . . .	19
2.4. Summary . . . . .	19
Notes . . . . .	21

<b>3</b>	<b>Design Concept</b>	<b>22</b>
3.1.	Meet My Monogatari . . . . .	22
3.2.	Design Process . . . . .	23
3.3.	Ideation . . . . .	25
3.3.1	Design Components . . . . .	25
3.3.2	Sketch of Concept . . . . .	26
3.3.3	Target Users . . . . .	26
3.4.	Fieldwork Research . . . . .	28
3.5.	Scenario Design . . . . .	29
3.5.1	User Persona . . . . .	29
3.5.2	Scenario . . . . .	30
3.5.3	Use Case . . . . .	33
3.6.	Concept Summary . . . . .	36
3.7.	Preliminary Research . . . . .	37
3.8.	First Prototype . . . . .	39
3.8.1	Setting-up . . . . .	39
3.8.2	Testing and Results . . . . .	44
3.8.3	Revision . . . . .	46
3.9.	Second Prototype . . . . .	48
3.9.1	Revised Interaction . . . . .	48
3.9.2	Setting-up . . . . .	52
	Notes . . . . .	61
<b>4</b>	<b>Proof of Concept</b>	<b>62</b>
4.1.	Methodology . . . . .	62
4.2.	Result . . . . .	62
4.2.1	Likert Scale . . . . .	63
4.2.2	UEQ . . . . .	64
4.2.3	Interview . . . . .	70
4.3.	Considerations . . . . .	73
	Notes . . . . .	73
<b>5</b>	<b>Conclusion</b>	<b>75</b>
5.1.	Contribution . . . . .	75

5.2. Future Works . . . . .	77
5.2.1 Offline Store . . . . .	77
5.2.2 Modifying the Graphics and Producing a Video . . . . .	77
<b>References</b>	<b>79</b>
<b>Appendices</b>	<b>81</b>



# List of Figures

1.1	Most customers show that the many companies are failing to meet CX expectations . . . . .	3
1.2	Compared to 16 years ago (2002), the average person buys 60% more clothing and keeps them for half as long . . . . .	4
1.3	Projected waste generation, by region (millions of tones/year) . .	5
2.1	There is no payment method and users must contact the vendor	10
2.2	Selling defective products at high prices . . . . .	11
2.3	At Tokyo Freecycle products are given away for free . . . . .	12
2.4	Airbnb Story about Carol . . . . .	12
2.5	From Harvard Business Review: Customer Value in Relation to Highly Satisfied Customer . . . . .	13
2.6	For brands, visual content is preferred . . . . .	15
2.7	Entertaining and enjoyable content from Coca-Cola and Weis . .	16
2.8	“The Power of Turmeric” in the Nikkei Shimbun . . . . .	18
3.1	Concept Sketch: Second-hand Shop Interior Image . . . . .	27
3.2	Concept Sketch: User interact with Meet My Monogatari . . . .	27
3.3	Persona 1: Wang as the Seller . . . . .	30
3.4	Persona 2: Yang as the Buyer . . . . .	31
3.5	Selling a Product to Meet My Monogatari . . . . .	34
3.6	Buying a Product to Meet My Monogatari . . . . .	34
3.7	Interaction Between User and Buttons . . . . .	35
3.8	Ratio of male and female survey targets . . . . .	38
3.9	Results of a survey on whether people become attached to things	38
3.10	Survey results of whether have interested in the stories of other people’s items . . . . .	38

3.11	Survey results on whether video is better or text is better . . . .	39
3.12	Concept Video: find a product the user likes and click the "Know Me" button . . . . .	40
3.13	Concept Video: the story of the product will play . . . . .	40
3.14	Step1 of the first prototype: create a 3D model for a bag . . . .	41
3.15	Step 2 of the first prototype: move the character . . . . .	42
3.16	Step 3 of the first prototype: rewrite the product's name on POP	43
3.17	Step 3 of the first prototype: merge all the footage . . . . .	43
3.18	AIDMA Model . . . . .	47
3.19	Turning Points in Story . . . . .	48
3.20	The inside of the store . . . . .	49
3.21	The display table . . . . .	49
3.22	Step1 of the final prototype: Create a 3D model of the second-hand shop . . . . .	53
3.23	Step2 of the final prototype: Create a 3D model of the bag . . .	54
3.24	Step2 of the final prototype: Create a 3D model of the robot . .	54
3.25	Step2 of the final prototype: Create a 3D model of the lighter . .	55
3.26	Step 3 of the final prototype: import files . . . . .	56
3.27	Step 3 of the final prototype: add a player to the software . . . .	57
3.28	Step 3 of the final prototype: assign a player movement . . . . .	57
3.29	Step 3 of the final prototype: assign a rotation range and rotation speed . . . . .	58
3.30	Step 3 of the final prototype: adjust ShowMouseLayer . . . . .	58
3.31	Step 3 of the final prototype: write a fetch component . . . . .	59
3.32	Step 3 of the final prototype: add a collider to a prop . . . . .	60
3.33	Step 3 of the final prototype: create the UI for props (buttons and videos) . . . . .	60
3.34	Step 3 of the final prototype: create the UI (NPC) . . . . .	61
4.1	The three stories about each product in Meet My Monogatari .	64
4.2	User Experience Questionnaire (short version) . . . . .	67
4.3	User Experience Questionnaire (short version) . . . . .	68
4.4	The three UEQs' interacted values . . . . .	68
4.5	UEQ results of three tests . . . . .	69

# List of Tables

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# Chapter 1

## Introduction

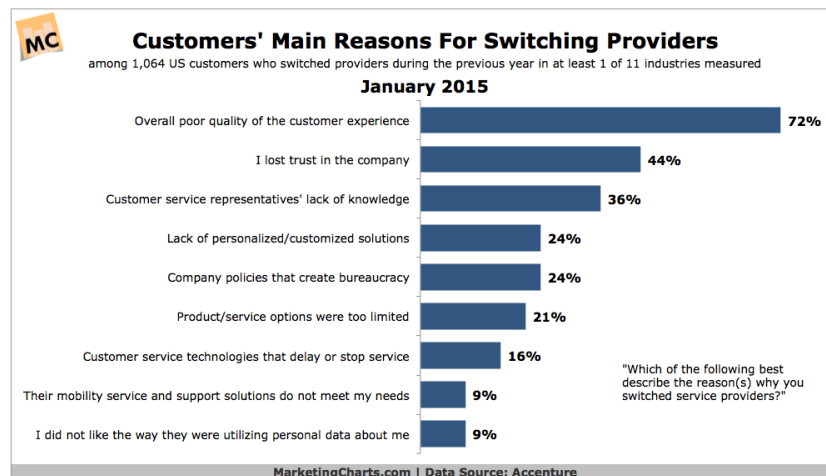
### 1.1. Background

Customers have never had so many options as they do now. Gaining the ability to make choices seems completely natural to the digital native generation, since they were raised in a more abundant and diverse world. In certain cases, too much is more of a distraction than an advantage. Most product categories include far too many identical offerings, and these goods cannot gain customers' attention. Poor customer experience, including wasted consumption, may result from failing to fulfill customers' expectations of specialness. As a consequence, the worth of things diminishes without being fully recognized, and the number of items intended to be used once and then discarded rises. During the research, I asked one of my friends about her purchasing behavior. She stated that she often her photographs shot wearing the clothes and the return them or chuck them out. It seems that some people shop for excitement of the transaction rather than the anticipated pleasure of having or utilizing something. How can we increase the value of objects and answer the needs of consumers? This paper aims to answer this question in the scenario of a new offline synergistic system resembling a second-hand shop, which serve as typical examples of the situation.

The goal of this research is to help the product maintain its uniqueness for an extended period of time by focusing the "inside" of the product. The research proposes Meet My Monogatari, which demonstrate the product's value through an object-based storytelling as a novel alternative to traditional atmospherics in the second-hand store context, thereby extending the time that products retain their uniqueness and strengthens the bond through interaction between the consumer and the product.

### 1.1.1 Consumer Need for Uniqueness

There has been unprecedented economic development and significant social change, both of which have led to radical shifts in purchasing habits. Consumers are growing in their desire to be unique and different. Tian et al. (2001) refer to this as the customer's need for uniqueness (Tian et al. 2001). Signals communicated by the materials that customers choose to exhibit (e.g., social status) may influence people's tendency to stand out from the crowd. The main, intentional consequence of an individual's activities is the desire to be distinct from others. The presentation of differentiating consumer items may be the main, intentional consequence of a person's activities motivated by a desire to feel unique. This desire, dubbed "counterconformity motivation" (Nail 1986), arises when individuals see a danger to their identity, such as when they perceive themselves to be very similar to others (Snyder and Fromkin 1977). In this case, individuals may get pleasure from distinguishing consumer products because they mitigate the threat to their identity (Snyder and Fromkin 1977). To appeal to an individual's need to be unique, marketers have created new advertising messages that emphasize product scarcity, originality, and breaking the norms of one's reference group (Snyder 1992). Marketers have begun to promote the idea that a product, brand, or style contributes to one's uniqueness. However, since many customers react identically to advertising appeals, each consumer's expectation of uniqueness is not met. On that basis, Acquia's second annual study indicates that 90% of brands continue to fall short of CX standards <sup>1</sup>. According to the findings of Acquia's second annual worldwide study, 90% of consumers believe companies are falling short of the mark (Acquia 2019). Additionally, 94% of marketers agree with consumers that companies are falling short of experience expectations (Acquia 2019). This should serve as a warning that action is required (Figure 1.1) <sup>2</sup>. Consumers may discard popular items and restart the cycle outlined before in pursuit of new products, inventions, and rising fashion trends. As a result, those who strive to remain one step ahead of fashion trends by discarding fashionable clothing and pursuing new trends are considered resistant to conformity.



(Sourced: Top Reasons People Switch Service Providers(Erickson 2015))

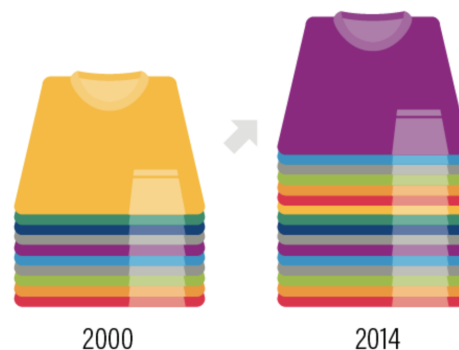
Figure 1.1 Most customers show that the many companies are failing to meet CX expectations

### 1.1.2 Wasteful Consumption

Online shopping has exploded in popularity over the past decade, transforming customer purchasing behavior in the retail industry. These technology-enabled services increase efficiency and offer consumers with a variety of buying alternatives, which may influence consumer behavior and lifestyle choices. With the bulk of online merchants offering low- or no-cost returns, a "buy before you try" attitude has developed, with consumers often buying much more than they plan to retain (Figure 1.2) <sup>3</sup>. Simultaneously, the "fast fashion" business has come under criticism in recent years for fostering a culture of more or less throwaway clothes that are priced so low that consumers can afford to purchase them just once. They get their photographs shot wearing the garments and then return them or chuck them out. According to VICE UK's poll, "Do you ever purchase an item and wear it just once before discarding it?" was asked by 9,549 respondents. Yes, according to 23% of respondents (Vice 2020). People seem to shop for the excitement of the transaction rather than the anticipated pleasure of having or utilizing something. Consumer expenditure on products and services that are not consumed may be thought of as wasteful consumption. It may refer to things that are purchased but

never utilized or to goods whose use is only partially realized. By skipping the consuming stage of the production-consumption-waste cycle, the whole process's justification is called into question. Nevertheless, in wealthy cultures, when the majority of people spend in excess of any realistic measure of need, this seems to be the tendency. When shopping is used to elevate one's mood, garbage and squandered resources cannot be dismissed as inconvenient byproducts of what individuals consume. On the other hand, when individuals buy goods to satisfy solely psychological demands, increasing waste is inevitable. Dealing with the repercussions of consumption and excessive spending is no longer simply a technical issue in affluent consumer cultures; it is also a psychological and social one. If people do not address this issue quickly, worldwide trash production is projected to increase to 3.40 billion tons by 2050, more than doubling population growth over the same time (Figure 1.3) <sup>4</sup>.

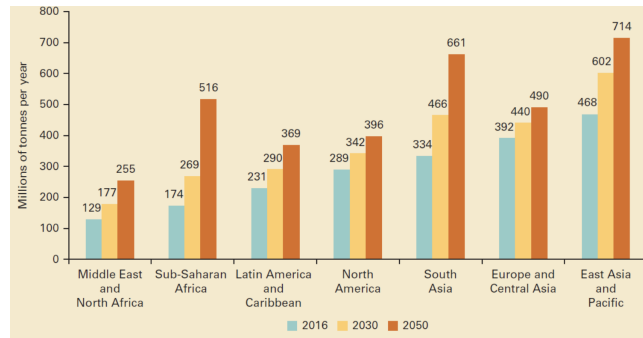
Average Consumer Bought **60%** More Clothing in 2014 Than in 2000,  
But Kept Each Garment Half as Long



(Sourced: The unfashionable cost of fast fashion(con 2199a))

Figure 1.2 Compared to 16 years ago (2002), the average person buys 60% more clothing and keeps them for half as long





(Sourced: Trends in Solid Waste Management(tre 2199b))

Figure 1.3 Projected waste generation, by region (millions of tonnes/year)

## 1.2. Research Questions

Today, individuals have begun the practice of disposability and over-consumption. These two actions are worsening the problem globally. Over the last several decades, psychologists have examined our shopping behavior more closely and believe that there is a distinction to be made between purchasing merchandise at a store and consuming purchased items (Holbrook 2001). There is evidence that some people like to shop for fun and don't really like using the items they purchase. The analysis reveals that we're in the midst of a complete about-face in our relationship with consumption. Gone are the concerns about status, acquisition, and the need to show off our things. This means that objects are therefore not seen as having great emotional value to those who come into contact with them. And therefore, object is slowly losing its original value. How might these items assist consumers in bringing their own identities to life? What identity must consumers' items assume to enable them to function in society? One of the most effective ways to increase the emotional connection of consumers to goods and make consumers feel strongly attached to the products is to use examples of emotions to connect the user to the product. The questions that motivated this study are the ones listed above.

## 1.3. Contribution

Having acknowledged that story can create connections between the consumer and the product, and evoke strong feelings of empathy for the customer, in this thesis I would like to call attention to a further relationship between products and consumers. Designing an offline interactive system considered a second-hand item shop to strength the bond between consumers and products through storytelling method. The outcome of this thesis is to use the platform as mentioned above to demonstrates how the designed interaction model work effectively, and to see whether the storytelling method extend the time that products maintain their uniqueness/specialness, so the customer will show a strong emotional band toward the products.

## 1.4. Thesis Organization

This thesis consists of five chapters, as following:

- 1) Introduction that discusses the background and motivation for this thesis.
- 2) Related Works, which includes references to previous publications and research on topics covered in this thesis.
- 3) Design Concept, which details the numerous concepts and decisions that went into the design of my model.
- 4) Evaluation, which details the user tests I conducted to assess my model and its output.
- 5) Conclusion, which summarizes the thesis's findings and discussion of the model's extensibility, as well as future work.

## Notes

- 1 Sourced <https://searchcustomerexperience.techtarget.com/definition/customer-experience-CX>

- 2 Sourced <https://www.acquia.com/newsroom/press-releases/personalize-or-else-customers-demand-convenience-recognition>
- 3 Sourced <https://www.containerdepositsystems.com.au/articles/the-unfashionable-cost-of-fast-fashion>
- 4 Sourced [https://datatopics.worldbank.org/what-a-waste/trends\\_in\\_solid\\_waste\\_management.html](https://datatopics.worldbank.org/what-a-waste/trends_in_solid_waste_management.html)

## Chapter 2

# Related Works

This chapter will discuss previous related works, both academic and industrial or commercial, which I deemed relevant to various elements of this work.

The Consumers particularly the X, Y, and Z generations like items that are only available to a select few and are one-of-a-kind. This impact is a result of the human need for distinction, to be unique. These generations place a premium on individuality and view material goods as a means of expressing their identity. As a consequence, a growing number of customers tend to go to second-hand store, because it is only not cheap but also often stock items that are not commonly owned. As a result, in today's platforms such as Jimoti, Mercari, and Tokyo Freecycle are extremely popular with the younger generation. The majority of items in second hand stores open up unlimited options for combining and styling in a creative and original way.

A storytelling combines action and emotion. However, while selling our products and services, we frequently overlook the emotional component. This is critical because the story, as opposed to concepts and storylines, frequently gives the reader a reason to care and increase the product's value. Furthermore, a compelling story may compel people to respond to a CTA (Call To Action) considerably more effectively than a data-heavy piece of advertising content. That elements of the story within it can be crafted to address a problem or pain point the customer has which the product or service actually solves.

Anthropomorphism is extremely effective, as is the ability to ascribe human emotions to products. The anthropomorphic images will encourage a young consumer to draw closer to the product and avoid destruction of the product. There are an infinite number of brands that lend themselves to humanistic comparison in this way. To enhance consumers' emotional empathy and attachment towards the products, understand the phenomenon of brand anthropomorphism via focusing

on two literature reviews.

## 2.1. Second-hand Shop

### 2.1.1 Jimote

JMTY was created in 2011 as the Japanese counterpart of Craigslist. Originally, it was a bulletin board-style classifieds website with job ads, housing listings, and goods for sale. It evolved into a site and app devoted entirely to the purchasing, reselling, and giving away of primarily home products and other common Japanese requirements, such as bicycles, over time. While readers will find little information on the site in English on the Internet, it is a hugely popular resource in Japan, with around 11 million monthly visits. The site is divided by districts and even the nearest railway stations, allowing users to search for items in their immediate vicinity. Individuals advertise their things and their prices, and, similar to Craigslist, users may contact them directly. Once consumers locate what they're searching for, they may communicate directly with the vendor to arrange a meeting/pick-up time and place. The inconvenience is that the site lacks a payment method (Figure 2.1) <sup>1</sup>; users must pay cash on delivery (or pick-up). Additionally, users are subjected to peer review for additional assurance. While non-Japanese speakers may find it more difficult to navigate, it is an excellent website with some fantastic discounts.

### 2.1.2 Mercari

Mercari describes itself as an 'easy flea market' (Selina 2021), which is certainly accurate. It's an online and mobile marketplace for individuals wanting to purchase and sell primarily used products. However, some more enterprising individuals utilize the site as a standard e-commerce business, offering their own brands and items.

The site has just started in the United States, with the majority of marketing efforts directed towards people looking to sell and earn money from their used products. In Japan, it has long been a go-to for individuals looking to get rid of unwanted things and those on the lookout for a good deal.



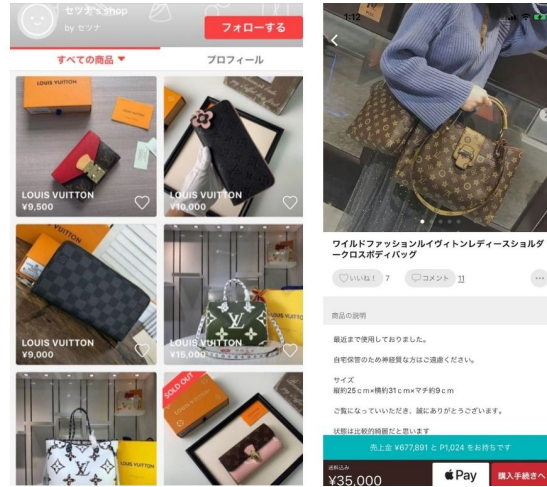
(Sourced <https://jmt.y.jp/> and accessed in July 23, 2021)

Figure 2.1 There is no payment method and users must contact the vendor

Unlike Jimoti, Mercari includes an online payment system, which means that many of the products customers see here may be purchased with a credit card and sent to their house. In the case of internet shopping, buyers cannot touch or feel the goods. The user can only look at the image and read the description. So, they have no choice but to believe what the description says. As a result, there have been several instances of individuals selling faulty items on Mercari at excessive prices (Figure 2.2) <sup>2</sup>. Therefore, online shopping is not suitable for people who want to try and feel before they buy.

### 2.1.3 Tokyo Freecycle

Tokyo Freecycle has grown into a global phenomenon, but slightly smaller than in some other countries. It encourages individuals to provide useable goods to anybody in need. This is another public forum where people may advertise unwanted furniture; however, unlike Jimote and Mercari, everything on Tokyo Freecycle must be given away for free (Figure 2.3) <sup>3</sup>. This is a sure-fire technique to ensure that consumers' old possessions rapidly find new homes. However, the group



(Sourced <https://www.mercari.com/jp/> and accessed in July 23, 2021)

Figure 2.2 Selling defective products at high prices

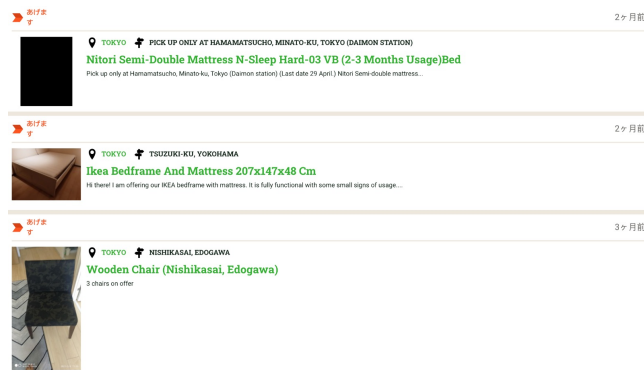
— which is maintained via a Yahoo! Account — would only allow other Tokyo Freecycle members to view it. Additionally, it is unmoderated, and users are required to include their personal contact information with their item.

## 2.2. Story(telling)

### 2.2.1 Personal/Emotional Connection

Emotion is what drives people into action. Vivek Bedi, Head of Product at Learn-Vest with 20 years of industry experience, gives this nugget of wisdom: "Telling great stories enables you to convince others to help you build a great product and convince people to buy that great product (Chen 2021)".

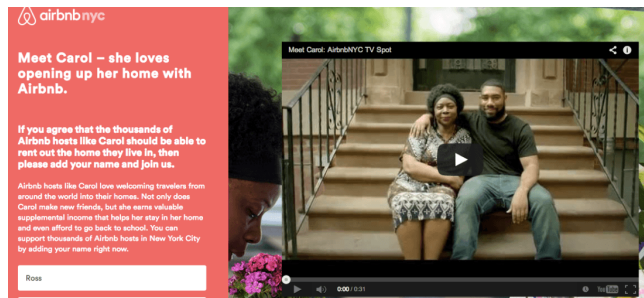
Recent years have seen an increase in the importance of information advertising as a source of product knowledge for information searchers (Lin and Chen 2006). Consumers' decisions, on the other hand, are frequently transnational. People acquire commodities not out of necessity, but out of want. Consumers' desires for self-expression or socializing frequently rationalize their purchasing decisions when they are emotionally linked to a product.



(Sourced <https://www.freecycle.org/town/Tokyo> and accessed in July 23, 2021)

Figure 2.3 At Tokyo Freecycle products are given away for free

Airbnb is a fantastic illustration of this. Airbnb launched a campaign in New York City in 2014 that utilized narrative to build an emotional connection with potential consumers (Rosscranwell 2020). This campaign has altered public perceptions of Airbnb. The Airbnb tale focuses on Carol, who uses Airbnb to supplement her income while returning to school. The 30-second YouTube video details how she's lived in Lower Manhattan for 34 years, lost her job, yet still enjoys hosting guests on Airbnb (Figure 2.4) <sup>4</sup>.



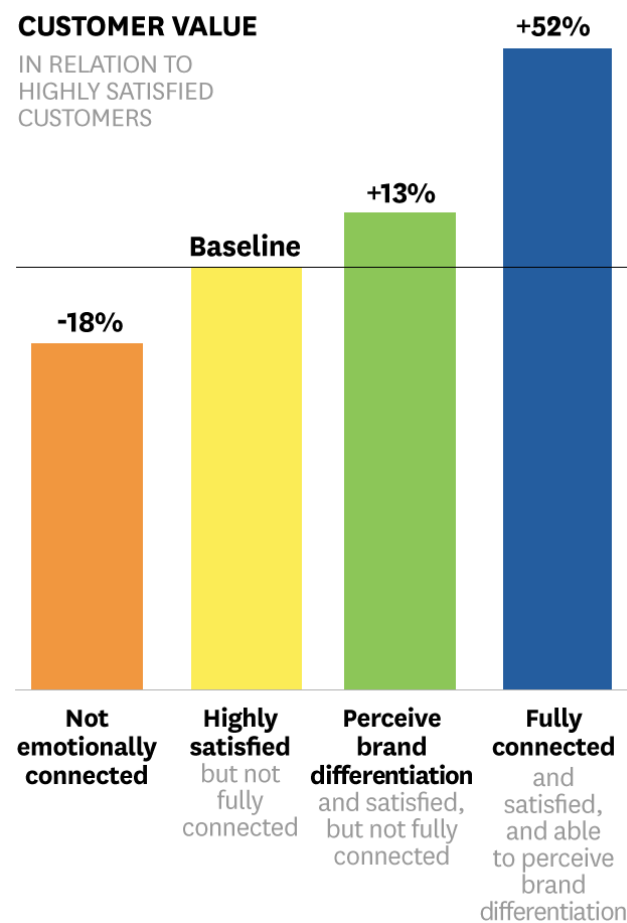
(Sourced: Startup Marketing Hacks(Rosscranwell 2020))

Figure 2.4 Airbnb Story about Carol

This sort of tale appeals to humanity's inherent desire to assist others. By utilizing Airbnb, individuals may not only find a place to stay, but also meet new people and contribute to the upkeep of people like Carol's property and lifestyle.



Additionally, according to the Harvard Business Review, when a customer's relationship with a brand grows stronger, they go down the route toward complete emotional connection (Schulman 2019). Although they rise in value with each phase, there is a huge increase in the last one: completely connected consumers are, on average, 52 percent more valuable than extremely pleased customers (Figure 2.5).



(Sourced: Harvard Business Review(sch 2199))

Figure 2.5 From Harvard Business Review: Customer Value in Relation to Highly Satisfied Customer

As a result of the above, it can be assumed that storytelling is a very effec-

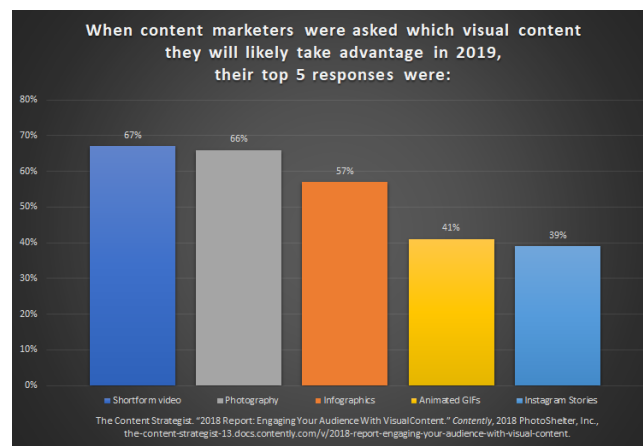
tive method for conveying a message and engaging the receiver's emotions. The brand's emotional experience will be equally as essential, if not more so, than the product's functional purpose (Franzen and Moriarty 2008).

However, it is not straightforward to construct trials that accurately replicate the impacts of narrative in the actual world. Due to the abundance of messaging tactics and product possibilities, researchers struggle to choose which ones to employ and how to create them. Additionally, it is difficult to determine which types of stories truly reflect tale efficacy, which is inherently subjective.

### 2.2.2 Visual Communication

In other media, such as social media, there has been a further movement towards more visual-based communication, with just fragments of text, if at all (Walter, 2012). (e.g., Facebook status updates; Twitter's 140-character limit; Instagram; Pinterest; and the most recent newsworthy photo-messaging application, Snapchat). The results of new media research also appear to support the superior effectiveness of visual formats. For example, (Kim and Lennon 2008) study of apparel product presentation in a visual versus textual format in an online shopping environment demonstrates that the visual format has a positive effect on attitude and purchase intention. According to a HubSpot poll, 54% of customers expressed a desire to see more video content from a brand or business they support (Figure 2.6) <sup>5</sup>. Due to the increased availability of information on social media, people choose to skim over numerous contents until they find them more appealing and convinced that they are beneficial to them. Additionally, due to limited cognitive capability and restricted resource availability, available information is usually ignored, and consumers frequently make suboptimal decisions. In comparison, the high-quality graphic ensures visibility on social media since it is eye-catching and effectively delivers the message. According to (Sharma et al. 2012), visual communication accounts for 75% of all information processed in the human brain. Additionally, they sought to describe the visual processing system and the consequences of the visual system's operation. When information is communicated visually via a specific media, the viewer's brain absorbs the visuals and then interprets and comprehends them through personal filters comprised of personal experiences, cultural and social backgrounds, and attitudes.

Previous research has demonstrated that visual advertisements containing more information and requiring no cognitive load are more compelling than spoken advertisements because they transmit significant amounts of information immediately (Sharma et al. 2012). However, it appears as though a combination of visual and spoken information elicits the best responses from viewers (Russmann and Svensson 2017). Additionally, visual communication has a strong correlation with individuals' own preferences, which impacts consumer behavior, attitudes, and memory (Schreiber 2017). Thus, visual communication research is critical in the area of social media, particularly the examination of visual information that elicits responses from viewers. Additionally, despite visual forms' greater efficacy, it is not always possible to provide information in meaningful visual representations. This leaves the question of how to resolve the situation unresolved.



(Sourced: Ritribes(rit 2020))

Figure 2.6 For brands, visual content is preferred

### 2.2.3 Entertaining Content

Traditional advertising has lost its charm.(Ducoffe 1995). As a result, marketers agree that content must be relevant in order to compete with other forms of entertainment; as intrusive techniques become increasingly ineffective, the use of branded entertainment is expected to grow significantly in the near future;

and branded entertainment is perceived as the most effective tool for generating consumer engagement. Recently, businesses have used a variety of entertaining and enjoyable content (e.g., riddles and jokes, daily horoscopes, music, videos of brand endorsers, human interest stories, games, and interesting applications) to advertise new products and services as well as existing ones in order to attract and engage their valuable attention and engage them in brand-related activities (Figure 2.7) <sup>6 7</sup>. To differentiate themselves from competing material, businesses must produce something really distinctive and distinct in the form of branded entertainment. (Kamp and MacInnis 1995) discovered that advertisements with characters depicting strong emotions elicited greater attention, empathy, and more positive evaluations among consumers when the emotions were effectively tied to the brand. It is proven that emotionally charged advertisements have been shown to be more successful than informational advertisements. (Obermiller, Spangenberg, and MacLachlan 2005). However, more research is needed to demonstrate the usefulness and viability of which entertainment methods are better.



(Sourced: Open a Coke. Open Happiness. Coca-Cola.(jazzyjazz15005 2018))

(Sourced: Weis Lemon Delicious Frozen Yogurt bar(Richards et al. 2016))

Figure 2.7 Entertaining and enjoyable content from Coca-Cola and Weis

## 2.3. Anthropomorphism

### 2.3.1 Anthropomorphism and Object Attachment

Anthropomorphism is a term that refers to the perception of non-human objects as human. A recent study indicates that anthropomorphizing items may have an effect on people's psychological and emotional attachment to them. Anthropomorphism endows non-human things with human-like traits, modifies people's interactions with the items, and modifies people's emotional and cognitive reactions to the objects. Additionally, characteristics linked with individual differences, such as loneliness and the need for social contact, are connected with a greater proclivity to anthropomorphize things (Epley, Akalis, Waytz, & Cacioppo, 2008). The findings are consistent with generic theories of information accessibility (Higgins, 1996) and indicate that any variable that promotes the momentary or chronic accessibility of agentic beliefs is likely to promote anthropomorphic cognition about objects (Epley, Waytz & Cacioppo, 2007). Once a product is anthropomorphized, customers might form a connection with it, altering the emotional nature of their interactions with their belongings. Social connection is enjoyable, and imbuing a product with that feeling while interacting with it is also gratifying (Wang, Baker, Wagner & Wakefield, 2007). Indeed, even in the absence of anthropomorphic signals, some consumers spontaneously feel distinctively social emotions such as love (Ball 2008) and trust while engaging with things (Aaker et al. 2004).

Nevertheless, on December 17, 2004, the Nikkei Shimbun published a funny illustration portraying an anthropomorphic can of "the Power of Turmeric." The hilarious picture portrays a person working diligently at the end of the year, when many people struggle in the morning following excessive drinking at year-end parties, etc. It drew the attention of a large number of others who were also working hard, increasing their likelihood of purchasing the product. The product sold 100,000 cases, and the number of units sold grew by 170 to 250 percent in each channel(Figure 2.8) <sup>8</sup>.



(Sourced <https://www.pressnet.or.jp/adarc/ex/ex.html?dno=d0031> and accessed in July 23, 2021)

Figure 2.8 “The Power of Turmeric” in the Nikkei Shimbun

### 2.3.2 Below-replacement fertility

Additionally, anthropomorphizing a product may decrease the often-found correlation between perceived product quality and the desire to replace it. Consumers' desire to replace their possessions was reduced when they were encouraged to think of them in anthropomorphic terms. More importantly, anthropomorphizing one's possessions separates replacement intentions from the perceived quality and functioning of the item. As a result, they will not be forced to switch to a different product when the current one no longer serves its intended purpose.

When individuals conceive of inanimate things as anthropomorphic, they are applying social knowledge to the inanimate environment. This is evident in categorization choices (e.g., Jones et al., 2001) and the incorporation of social characteristics (such as gender or age) into object descriptions (Berry and Springer 1993). Additionally, individuals assign social schemas to things and favor those that conform to the schema. This results in customers preferring product lines that correspond to social structures, such as "family," and smiling automobiles rather than frowning automobiles (Aggarwal and McGill 2007). Thus, "ownership" may be recast as a "relationship," and the characteristics associated with relational partners may be extended to anthropomorphized things.

While customers enjoy the distinct shape of human-like characters, advertising is frequently dissatisfied with consumers' expectations.

## 2.4. Summary

Consumers like items that are only available to a select few and are one-of-a-kind. This impact is a result of the human need for distinction, to be unique. This effect explains why the demand for goods held by a large number of individuals declines while the desire for products owned by a small number of people rises. As a consequence, a growing number of customers are gravitating toward second-hand stores. Second-hand stores often stock items that are not commonly owned or are not extensively accessible around the globe. Unfortunately, many second-hand shops have started selling faulty goods or things that do not match the photographs on their websites in recent years. Even though the price is cheap, if the product is of poor quality, it is difficult to develop an attachment to it. As a

result, this research suggests a second-hand store called Meet My Monogatari that incorporates an attachment viewpoint into goods based on psychological theories that explain the original meaning of attachment. Including a narrative element in the product, such as a story or drama, is one of the most effective methods of increasing attachment. The reason for this is because customers project themselves into the characters and sympathize with them as a result of their interaction with the story's content.

Recent studies have shown that learning the stories behind a product may elevate it from a simple item to one to which people develop an attachment. To encourage individuals to develop an attachment to goods and sympathize with them via tales, Meet My Monogatari must offer a sufficient number of stories. This initiative tries to face the difficulty of transforming an apparently insignificant product into a useful one.

Additionally, in response to a study of the connection between anthropomorphism and item attachment, Meet My Monogatari selected anthropomorphism as the output medium for a computerized control system aimed at increasing customer attachment to goods. In the case of House Foods' "The Power of Turmeric," the can was personified as a person working hard toward the end of the year, when many people struggle in the morning after year-end celebrations. This amusing picture caught the attention of a large number of individuals who were also working hard, and sales rose by 170 to 250 percent. From this vantage point, it seems as if anthropomorphism is the more successful medium. The anthropomorphic appearance enables the presentation of difficult-to-understand ideas in an approachable way, using the same emotional feelings as humans; it makes people feel emotionally attached; and it connects them closer to the product. According to early studies, anthropomorphism is an effective method of increasing product attachment.

To summarize, those involved in product design have been paying attention to the fact that items characterized as being connected to the user have a high psychological value for the user over time, as shown by a literature study. However, how individuals develop attachments to things and what practical methods are available to promote them remain unknown. Due to the fact that second-hand stores, storytelling, and anthropomorphism have the ability to capture people's



attention and elicit an emotional response, this study will utilize these three components to create a new initiative named "Meet My Monogatari".

## Notes

- 1 Sourced <https://jmtty.jp/>
- 2 Sourced <https://www.mercari.com/jp/>
- 3 Sourced <https://beta.freecycle.org/town/Tokyo>
- 4 Sourced [https://www.youtube.com/watch?v=sDt50u3FBls&ab\\_channel=AirbnbPublicPolicy](https://www.youtube.com/watch?v=sDt50u3FBls&ab_channel=AirbnbPublicPolicy)
- 5 Sourced <https://www.easel.ly/blog/text-vs-images-which-content-format-effective/>
- 6 Sourced <https://meganwallaceblogs.wordpress.com/2017/03/26/how-effective-is-happiness-in-advertising/>
- 7 Sourced <https://www.smartcompany.com.au/marketing/advertising/weis-frozen-treat-ad-not-too-tarty-says-advertising-watchdog/>
- 8 Sourced <https://www.pressnet.or.jp/adarc/ex/ex.html?dno=d0031>

# Chapter 3

## Design Concept

### 3.1. Meet My Monogatari

Meet My Monogatari is an offline interactive platform. It is a second-hand item store where items are sold and stories about the products are exchanged to provoke the next users' feelings of empathy, relationships, and possessions. The aim of this project is to discover the value of an item through its story, and to motivate the next consumer to consume it through their memory of it, thereby increasing the demand for the item and bringing higher added value to the customer.

Some second-hand stores include vintage goods or antique goods that are not available in mass. These antique items have intrinsic value, but there are customers who do not know the "inside" of the items, or are so used to seeing them that they do not realize their value and are reluctant to buy them. However, consumers who seek uniqueness and want to resist conformity tend to show more interest in these products. "Meet My Monogatari" will show more features of these items through stories and anthropomorphism, which will stimulate consumption, increase customer demand for the items, and bring higher added value. The majority of existing second-hand platform models are built on the internet's C2C business model, in which firms establish a second-hand trading platform to provide a bridge between consumers who want to purchase and sell second-hand. Based on the original idea, it has committed to constructing a platform based on offline physical stores mixed with future technologies, such as AR or projection mapping to show the story behind the used products. "Meet My Monogatari" is designed an environment where things that have intrinsic value but are no longer needed due to personal reasons can be baton passed on to the next consumer who needs it. Simultaneously, anthropomorphizing used products and presenting them

in the form of anime cartoon characters, they are brought to life. This is because in the previous arguments, it was proven that features like anthropomorphism and stories would increase people's attachment to the item. This will differentiate from the existing second-hand trading platform, which expresses the uniqueness of the products in the future by increasing value of it and at the same times, increase the customer's attachment to the products. Finally, build a 3D model and program it to present the imaginary second-hand store for the future. By interaction with the story, it is intended to foster emotional attachment to the product, and consumers will experience uniquely social emotions. Moreover, it becomes possible for consumers to enter into a relationship with it, changing the emotional quality of consumers' experience with the product.

The idea was inspired from the American computer-animated comedy film, "Toy Story" <sup>1</sup>. The film provides viewers a glimpse into the other side of this relationship, that is, from the perspective of the toys. Through a highly sophisticated use of anthropomorphism, the films reveal that these relationships are far from one-sided, value-based, identity-laden, symbolic manifestations. The film certified that high animacy is therefore linked with familiarity and kinship, and by extension, empathy.

Based on the studies in the previous chapter, Meet My Monogatari is designed as a catalyst to enhance relationship with products with story that is told through projection mapping. The story given by the previous owner is reassembled like a POP (Point-of-Purchase) <sup>2</sup> written by a clerk, using the anthropomorphic process. For example, "I have such a history and have such scratches; can you take me back?" It creates a cozy environment not only by understanding the product's information to help people getting to know the product, but also altering consumer's relationship with the product, and shift their emotional and cognitive responses towards the it. Besides, it decouples replacement intentions from the possession's perceived quality and functionality.

## 3.2. Design Process

The general image of the design mentioned above was created upon design thinking process as well as research analysis. Meet My Monogatari was created by

addressing problems in real-life contexts, and attempted to shed light on a reasonable solution through literature review, ideation, scenario design, prototyping and testing, Chapter 1 and Chapter 2 has mentioned the first two steps already, ideation, fieldwork, scenario design, concept summary, and prototype will be iterated in this chapter to reach the final concept.

- 1) Problem Research: personal experience motivated the research of the wasteful consumption problem from last decade, and an online research helped to disclose that the lack of uniqueness or specialness, so people starts to lose emotional attachment to materials object.
- 2) Literature Review: literature review and related work studies about current second-hand shop, and the effect of storytelling and anthropomorphism was implemented to seek out three core components and their separate functions.
- 3) Ideation: analysis if the design components and a concept sketch contributed a comprehensive image of the design.
- 4) Fieldwork: questionnaire and answers from three interviewees. The research started from real life experience.
- 5) Scenario design: a user-centered method, including user persona, scenario storyboard and use case, helped to consolidate details of a final concept.
- 6) Concept Summary: The necessary elements that make up the concept are fundamentally described.
- 7) Prototyping: the creation of two prototype for the realization of the initial concept. Final design details evolved through empirical experience originated a testing.
- 8) Proof of Concept: identify adjustments based on user testing of the prototype, and employ interview research methodologies using WeChat to determine what methods are best for proving the concept.

## 3.3. Ideation

### 3.3.1 Design Components

Based on research into the addressed problem and literature review, key components were created to consolidate the design as mentioned in the summary of Chapter 2. Emphasis of each components is analyzed as follows:

- **Second-hand Shop:** the design aims to strengthens the bond through interaction between the consumer and the product. This second-hand store presents the internal characteristics and memories behind second-hand goods in the form of a story. Unlike traditional second-hand stores characterized by cheapness, the main focus is on goods with high-value attributes. To make the store more interactive, Meet My Monogatari includes an interactive display system in the store, seamlessly integrate rich media content into the in-store shopping experiences. The challenge is to select products that customers are able to find a way to express their own personality and satisfy their desire. The main purpose of the store is to provide products with a sense of history, such as antique, rather than just furniture and home appliances that are generally sold in any second-hand store.
- **Storytelling:** the design intended to customer's boredom of just reading the fact or bullet point. The story given by the previous owner is reassembled like a POP (Point-of-Purchase) written by a clerk. Benefits for user to remember the content and feel connected to the product. The challenge is to carefully consider the story content and words choose when organizing with POP (Point-of-Purchase). Additionally, the axis is basically that the value of an object is increased by its story, but the story is not about a celebrity or anything like that; rather, it is about a story that can interest the customer and emphasizes the unique points of the object.
- **Anthropomorphism:** the design is utilized to increase the customer's purchase intention and create emotional attachment. Therefore, it should obtain a sequence of smoothly changed facial expressions, and be enjoyable enough to increase participation frequency. The main idea here is to use the

method of anthropomorphism, which is formed by attachment, to bring out the value of things that previously had no value.

### 3.3.2 Sketch of Concept

Keep in mind of the goal to amplify positive effect of changing the emotional quality of consumers' experience with the product, the design process started with three components mentioned above. Meet My Monogatari should produce impressive projection mapping to draw buyer's attention and encourage them to get to know the product better, and react more favorably in all conditions of product characteristics by imitating the strategy of the American computer-animated comedy film, "Toy Story". In addition, core of a functional Meet My Monogatari is to creating a content that the product resonates with the customers, enabling the customer to immerse himself/herself in the history of the product, understand the memories behind it, and care more about the product.

To achieve it, Meet My Monogatari adopts the Disney's worldview which create a fully-realized and immaculately themed environment and let the guests fill in the plot details for themselves. Since in play project we create a memorable, surprising narratives of future life, my second-hand shop creates a futuristic story world. The idea aims to produce a digital atmosphere similar to future world in Walt Disney World, where underpinned by technology and a projector is installed above all the display table. Moreover, the store includes a talking human hologram store guide that greets customers and introduce the store's concept.

Figure 3.1 was drawn to visualize the concept, and Figure 3.2 was used to envision a potential customer encounters her favorite product and listing its history behind it. After showing them to a group of people to check how people understand it from the first impression. The feedback received are promising. People like the visual of the store and the idea of building an emotional intimacy with the product. The concept sounds like unique/special.

### 3.3.3 Target Users

There are two types of target users. The person who sells, consumers who buy. As mentioned in Chapter 2, the person who buys refers to the people who seek

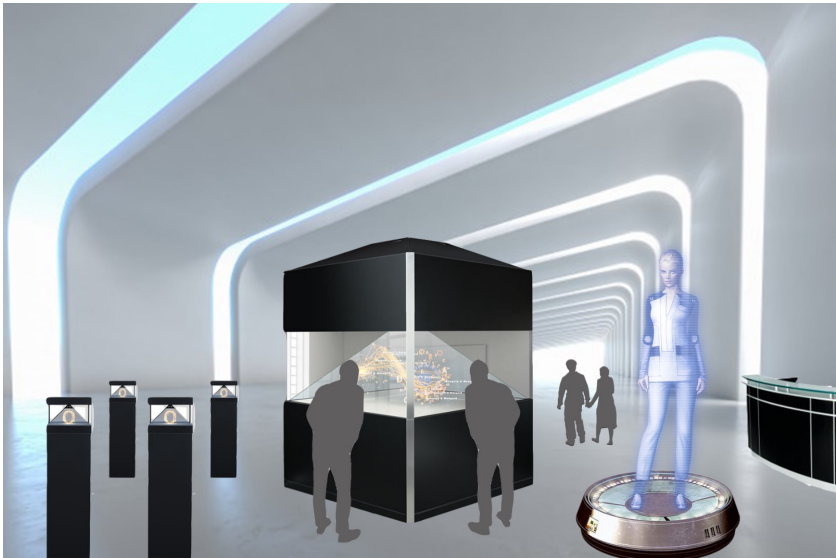


Figure 3.1 Concept Sketch: Second-hand Shop Interior Image



Figure 3.2 Concept Sketch: User interact with Meet My Monogatari

for uniqueness/specialness and “wow” factor are targeted of the design. In particular, those who have a desire for strong emotional band toward the products but lacks channel to achieve it, or those who have the feeling of emptiness and no excitement when buying stuff and throw it away afterward. Another target user which the person who sells refers to the people who want maintaining a value of their belongings and let the next user to treat it as important as ever through its memory.

### 3.4. Fieldwork Research

The research started from real life experience. Before the design, it is necessary to have a deeper investigation. Fieldwork among different people was carried out to know more exactly how people share story about their own possessions and how they feel when hearing other’s story. The three main interview questions are:

- Do you usually throw your possession away which only used once?
- Whether do you have any emotional connections to a specific item?
- How do you feel when you share your story to others?
- How do you feel when people share you their story?

#### Case 1

Aged 24, Interviewee A is a male graduate school student. He said that he often bought a lot of useless things, and finally threw them away. However, he ties memories to meaningful objects. He tends to save mementos of special times. he will continue to use the items as long as they are not damaged.

Talking about telling own possession’s story, “If anyone seem to interest in my story, I’m happy to tell them”. At the same times, if someone share him their story, “it will satisfy my curiosity and satisfaction”.

#### Case 2

Aged 19, Interviewee B is a male undergraduate student. He does not often throw things away even it is unusual. He will have an attachment to an object when



it is given from others or a memorable gift. He said that he will feel grateful or proudful to share the story of his special possession to his friends. However, he continues, “if I am interested in the item itself, I will be more curious about his past memories, if not, I do not really want to hear it”.

### Case 3

Aged 53, Interview is a 53-year-old housewife. She loves shopping and usually buy a lot of stuffs than expected, she keeps use them until they are broken. She said that she always has emotional connections to a specific item. She continues that, “I knew that I didn’t need them but felt unwilling to let go. This feeling came up the most with clothes, as it turns out I’d attached a lot of meaning to fabric and thread. Like my white dress that a bought when I’m still 25. It’s that rare shade that suited me perfectly. The shape was flattering—a random woman once came up to me in the street to say how great my legs looked. That dress reminded me of a time in my life where I lived in an exciting city and felt successful”.

Talking about telling own possession’s story, she tends to tell her daughter about the dress. She laughs. “I always feel grateful to share my own story to my family and friends. And I also enjoy hearing their story”.

## 3.5. Scenario Design

### 3.5.1 User Persona

A user-centered method was adopted to emphasize the critical role of emotional attachment with products in this design. Two user personae are built up as follow:

- The Seller: refers to Tiffany introduced in Figure 3.3, representing who selling her possession as the first person. The person needs help and suggestions for problem emerging constantly after giving or selling her stuff that has long history with her to another person. However, she knew that keeping some unused items just make her living space uninhabitable and it’s time to make room for new things. She has suspicion of other people don’t take good care of their possession and treat it so carelessly. The user is looking for a way to solve her anxiety. The value proposition to this person is the desire for

emotional security that the next user treasure her possession like she did. This person serves as an ideal user of Meet My Monogatari.

- The Buyer: refers to Yang introduced in Figure 3.4, representing who buying a product at Meet My Monogatari. He usually goes shopping at second-hand shop and he is always looking for unique items. However, he said that sometime he attracts by some items that look has long history but could not find any story of it. This person is likely to be attracted by historical story/information and is willing to know why the product is so unique/special. The value proposition to this person is to have the desire to know the story about how the product comes from and its values are. He is the one who serves as an ideal user of Meet My Monogatari for the willingness to engage in this project.

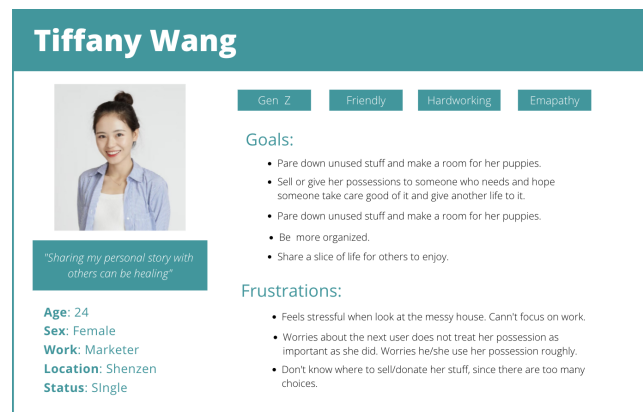


Figure 3.3 Persona 1: Wang as the Seller

### 3.5.2 Scenario

Storyboard works to visualize an ideal scenario of Meet My Monogatari with the two target users created above. Expectations and motivations are defined as well.

Storyboard: The metropolis of Tokyo in 2030 has been revolutionized by the technological innovation offered by 5G, which has revolutionized the way we live and work. While new conveniences and pleasures are being developed, it appears

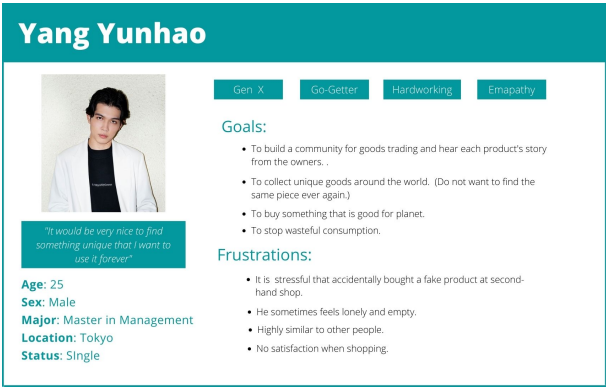


Figure 3.4 Persona 2: Yang as the Buyer

that consumers are still dissatisfied when it comes to shopping. Although 5G has altered people’s lives, the ongoing boredom of the Corona tragedy and a lack of excitement in our everyday lives may be the reasons why people continue to buy products impulsively in huge amounts to relieve stress. Furthermore, the new habit of “one-shot consumption,” which has been popular since roughly 2009, continues to expand even in 2030, particularly among young people. Because of the overabundance of products, the desire to buy for the sake of possession is decreasing. People find greater value in wearing it, bragging about it on social networking sites, and satisfying their need for approval. This has resulted in a generation of young people who do not have a feeling of specialness and connection to every item they buy. As a result, in the commercial world, there is a war over the smallest distinctions. In such a situation, Meet My Monogatari, a second-hand shop that tells the story of product established in a commercial facility in a corner of the Shimokita line street.

One night, a young woman called Wang was meandering aimlessly along a dark neighborhood, attempting to relieve the stress of her job. After a life of staying at home and rarely venturing out, the ambiance of the city at night when she went out for the day seemed really wonderful. When she looked up, she noticed a store she had never seen before. She could tell from the show window that the shop had just recently opened. Colorful neon lights flashed and lighted the shops within. “What a cute store,” she grumbled to herself. When she looked up, she noticed a

giant neon-lit sign that read Meet My Monogatari Second-hand Shop. "It seems intriguing; I'll return when I have time," she said to herself as she swiftly headed back home. She had a bad tendency of buying a lot of stuff on the spur of the moment. She hadn't properly sorted her belongings since moving into her new home, and many of her unused items had been lying in the closet for a long time. She had recently purchased two puppies and wanted to make a big space for them, so she was wondering whether she should give or sell her unused possessions to other people.

At night, she pulled out an LV bag from the back of her closet that she hadn't used in years. As she stared at it, it brought back vivid memories of her school days, which warmed her heart. It was a present from her father, who had spent a lot of money on it. It was the first high-end purse she'd ever had, so she wore it wherever she went outside and boasted about it to her friends. She always took it with her when she traveled to Guam, Turkey, Mexico, and many other places. Whenever she broke up with her boyfriend, had a quarrel with a friend, or failed an exam, the bag was constantly at her side. "I can't get rid of it..." She mumbled with a sneer on her face. But, with more bags than she could ever use, she wouldn't use the purse any more. "You should give it to someone who will take great care of it. It would be a pity to leave it in the closet forever," someone whispered in her ear. She spent the rest of the night debating whether or not to sell it.

The next day, with the LV bag in her hand, she stepped cautiously into the store she had peeked into yesterday. As the "hologram image" receptionist guided her, she typed her memories of the bag into the computer. Using the 3D scan and software, an anthropomorphic figure of the bag appeared, and the text she had entered into the computer was rewritten to relate the story of her previous experiences from the bag's first-person perspective. The images of the anthropomorphic bag character presenting the narrative were then projected onto the projection mapping table. She was astounded by the technology and was certain that the bag's new owner would treasure it.

A few months later, a man in a suit was in the store, gazing at the LV bag. This man's name was Yang Yunhao. He came here after hearing rumors about this secondhand store. This bag is a type that is hard to find nowadays, and the

man is highly interested in it. The man couldn't stop himself from pressing the "Know Me" button on the projection mapping table. Then a film about the bag's history began to play. In the video, the characterized bag charmingly talks about the days he spent with Wang and the trips they took together." The man felt that this was an item that had been with him for such a wonderful time. The bag was in good condition and had been well cared for, giving it a really warm and wonderful feeling. For some reason, at that moment, the man felt a strong urge to take the bag home with him and take good care of it. Simultaneously, he began to wonder who the previous owner of this lovely bag was, and touched the "Last Owner's Information" button on the projection mapping table. He put his finger on it.

Three months later, Wang and Yang are lying on the beach, the sun shining brightly on them. Next to them, the LV bag was beside them, gazing at them warmly. The memories of the past and the scenes of the here and now are slowly merging and being shared, cuddling up to their future owners.

### 3.5.3 Use Case

To understand the outline of the process when a customer buys and a customer sells at Meet My Monogatari, use case was adopted to understand touch points that starts the process. Each step in a complete interaction process was broken down to clarify inputs, outputs and potential errors. As illustrated in Figure 3.5, Figure 3.6, and Figure 3.7 different use cases have been created to visualize possible interactions.

#### Selling a Product to Meet My Monogatari

Firstly, the user hands the product they intend to sell to the store staff. The users then asked to write down the story behind the product (What is the most memorable memory of it? Why did you decide to sell it?) The staff will then utilize software to anthropomorphize the product, reassemble the story like a POP (Point-of-Purchase), and tell the story to the consumer, such as, "I have this history, so I have these flavors (scratches). Will you take me home? Can you take me home?" The assembled POP is given a final check by the users, and if



Figure 3.5 Selling a Product to Meet My Monogatari

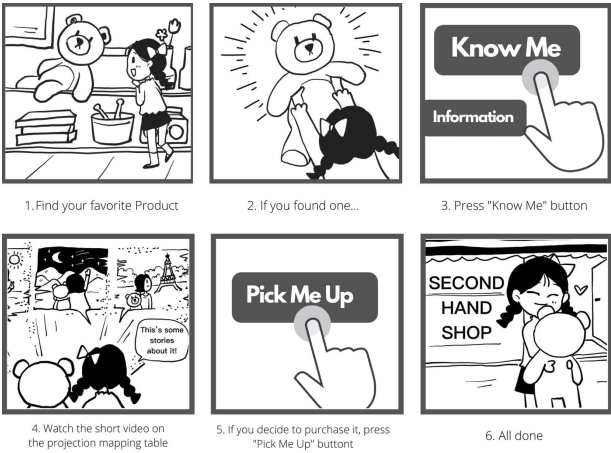


Figure 3.6 Buying a Product to Meet My Monogatari

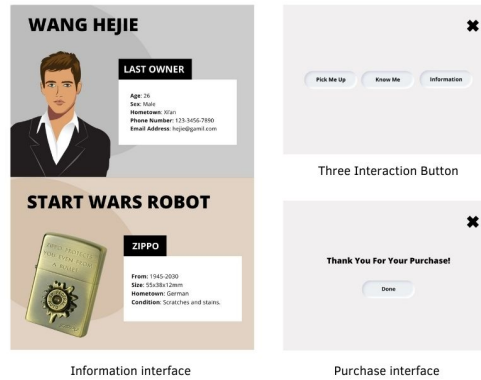


Figure 3.7 Interaction Between User and Buttons

they are not satisfied with it, the staff will rewrite it.

### Buying a Product at Meet My Monogatari

Each projection mapping table has three items. On the screen, there are "Know Me," "Information," and "Pick Me Up" buttons, and user may use these buttons to find information and stories about their favorite products. Payment for purchases can also be made through this screen.

### Interaction Between User and Buttons

When user clicks on the "Know Me" button, he/she will see a video of a characterized product telling its own story. When user clicks on the "Information" button, he/she can get information about the previous owner, the period of time the product was used, its size, place of production, and its condition, as shown in the figure in 3.5. When user clicks on the "Pick Me Up" button, he/she will be taken to the purchase page, where you can pay for the item.

## 3.6. Concept Summary

To sum up, Meet My Monogatari is a second-hand item store where items are sold and stories about the products are exchanged to provoke the next users' feelings of empathy, relationships, and possessions. It is created to allow the importance of the possessions to be preserved, and the next consumer to treat it as valuable as ever through his memories. The prominent features of Meet My Monogatari are:

- 1) At Meet My Monogatari, we will have an interactive display system in the store. The story of each product will be projected by projection mapping to create a space with the story of the product. Users will be the first to show an interest in products that blend into the world of the story.
- 2) Meet My Monogatari draws attention from users with the story behind the product. Assume that simply listing product information in bullet points will not hold the users' attention and that they will quickly become bored. The addition of a mini-story can reduce the consumer's rational distress power. Furthermore, it advantages for the consumer in terms of remembering the content and feeling connected to the product.
- 3) Meet My Monogatari has the ability to anthropomorphize a product given by the user and create a video in which the product talks about its memories from a first-person perspective. The effect is to strengthen the relationship between the sender and receiver around the anthropomorphic metaphor, thereby reinforcing the desire to treat items with care.

Meet My Monogatari demonstrates the uniqueness of using stories as an output medium to lowers customers' rational defenses:

- The use of a story-based approach will draw the target audience in unconsciously. As a result, they will become aware of the need for the product without feeling like they are being sold.
- A story-based approach can be memorable, emotionally connecting, intriguing, truthful, and persuasive. This can promote purchase motivation and suppress objections to the message.



Meet My Monogatari uses anthropomorphic techniques to amplify users' attachment to things and increase their desire to keep them.

- The effect is to strengthen the interaction between the product and receiver around the anthropomorphic metaphor.
- The effect will make people feel emotionally attached to the product, which will lead to familiarity and reduce the replacement's intention.
- The effect of this is that people can handle things better.

The initial concept was consolidating through testing on two prototypes. All the details concerning prototyping and setting of user tests will be described in the following chapter.

### 3.7. Preliminary Research

A questionnaire survey was conducted to ascertain whether it is better to tell the story in written or visual form among the target users of this study. The survey was conducted among 55 men and women with the concept explained at the beginning, and all responses were received online using a questionnaire form on WeChat. The questions and survey results are as follows.

- Sex(Figure 3.8)
- Whether do you have any emotional connection to a specific item(Figure 3.9)?
- Are you curious about the backstories of other people's possessions(Figure 3.10)?
- How do you want your story to view(Figure 3.11)?

The data obtained (about a 78.2% response rate) indicated that there is some type of connection between certain specific items, and the majority of the participants (around a 74.5% response rate) were willing to hear the stories of other people's possessions. The most intriguing aspect of the survey is that the majority of respondents chose to watch their narrative through a video (hologram). As a result, in this study, it was determined to build a prototype that depicts the story through video.

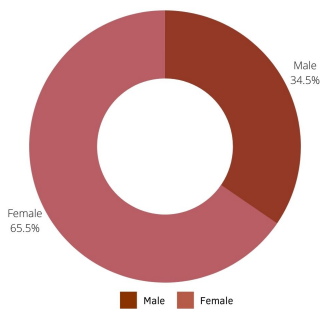


Figure 3.8 Ratio of male and female survey targets

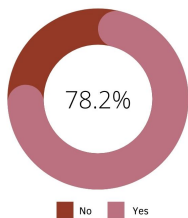


Figure 3.9 Results of a survey on whether people become attached to things

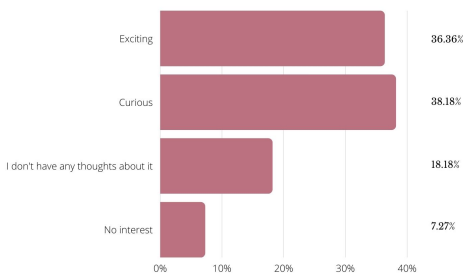


Figure 3.10 Survey results of whether have interested in the stories of other people's items

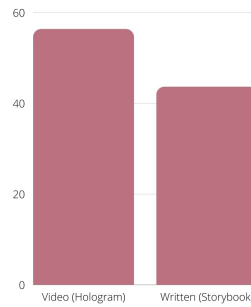


Figure 3.11 Survey results on whether video is better or text is better

## 3.8. First Prototype

In this section, the first prototype was used to develop the initial concept. Following the initial concept, a verification experiment was conducted in which users experienced a temporary tool to demonstrate if anthropomorphic stories might increase user interest in the product and whether this technique was strong enough to make users feel connected to the product. Following the experience, the results were analyzed based on user comments and interviews.

### 3.8.1 Setting-up

Regarding the previously described Meet My Monogatari design components, the first prototype developed a concept video using Adobe Animate, After Effects, and Final Cut Pro as temporary tools. The concept video for the prototype is shown in Figure 3.12 and Figure 3.13.

#### Step 1: Create a 3D model of an anthropomorphic product

Before drawing, consider the contour of the appearance; after drawing and adjusting the size and proportion, add the elements that want to enter the color; and lastly, adjust the size proportion and color matching (Figure 3.14).

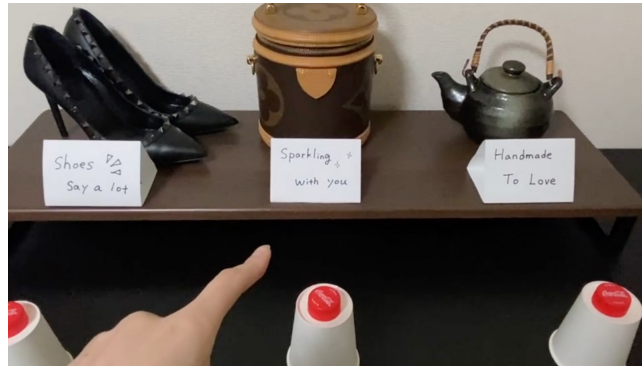


Figure 3.12 Concept Video: find a product the user likes and click the "Know Me" button



Figure 3.13 Concept Video: the story of the product will play

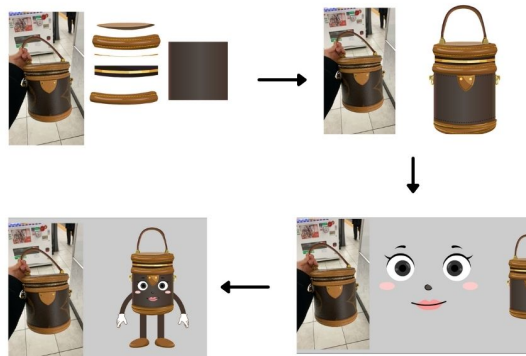


Figure 3.14 Step1 of the first prototype: create a 3D model for a bag

### Step 2: Move a character

To design a charming character that people will enjoy, use AE to move the character (Figure 3.15). The first step is to create the wink. Drag and drop the newly produced image, then use the toolbar's "pen tool" to encircle the region that is to be moved. Then concentrate on fine-tuning the wink's timing. Set the "eyes closed" option first, then slide the left edge of the "time graph" of the "eyes closed" layer to approximately the third second to smooth down the movement. Set the "Eyes Open" setting and drag the right edge of the "Time Graph" of the "Eyes Closed" layer to about 4 seconds. Finally, on the Preview Panel, hit the Play button to customize the length and time of the wink, and the wink is complete. Following that, create a gesture that communicates with the user by rearranging the character's hands and mouth to make it more expressive, following the same approach as in the wink.

### Step 3: Shoot Video and put in order

Once the product story video has been completed, recorded a video of the customer browsing at the store from the user's point of view. The rationale for the first point of view is that the user's eyes are gazing at the shop from the same viewpoint as they would in the real store, which creates a feeling of reality and allows the user

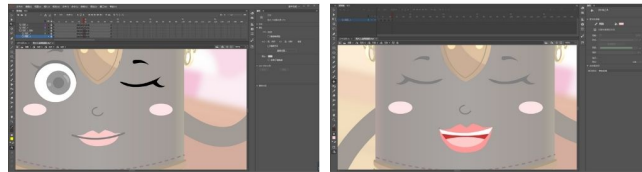


Figure 3.15 Step 2 of the first prototype: move the character

to feel as if they are truly in the store. recorded a video of the customer browsing in the store from the user's point of view. The rationale for the first point of view is that the user's eyes are gazing at the shop from the same viewpoint as they would in a real store, which creates a feeling of reality and allows the user to feel as if they are truly in the store. The video was shot at one of the users' homes, with three items for sale displayed on a desk that also served as a display table. Underneath each item, I stuck three bottle caps, which looked like buttons, on the table and fixed them in place. Normally, writing the product's name on the nameplate is tedious and fails to capture the user's attention. So, I worked on rewriting the product name on POP (Figure 3.16). The effect of POP is that when POP is mixed in with the product as a "foreign object," it catches the eye. Moreover, when POP is blended into a product as a "foreign object," it stops the eye. So, even if a product is not looked at at all, the presence of POP will have the effect of making people find it. After everything is set up, I take a picture with my cell phone of the scene where the user enters the store and purchases the product. Finally, I used Final Cut Pro to merge all of the footage, add background music and subtitles, and edit it into a one-minute video(Figure 3.17).



Figure 3.16 Step 3 of the first prototype: rewrite the product's name on POP

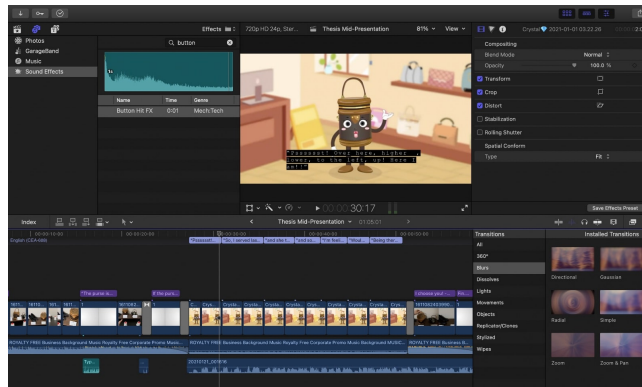


Figure 3.17 Step 3 of the first prototype: merge all the footage

### 3.8.2 Testing and Results

The experiment was conducted from April 18 to April 25, 2021, with 6 male and female interviewers participating, who posted a question box on WeChat and accepted all responses online. The questionnaire began with an explanation of the concept of the project: in order to meet the personal needs of people, we are working on second-hand goods as a career that presents the stories behind them, and I want to create a second-hand store that present the stories and meanings behind the used items to our customers. And also, the purpose of the project was also indicated: in the fast-paced life of modern society, I hope to add emotional communication between people and satisfy their lack of spiritual needs. A link to the concept video is also provided. As an aside, I mentioned in advance that the red button on the desk is a "Know Me" button that allows you to see the product's history. The following is a summary of the results of the interviews, which mainly focused on the subjects' daily ways of taking care of their personal belongings and their experiences at second hand stores. The following 6 basic questions were asked in the interviews to check whether the subjects were able to achieve the state of attachment to objects defined in the previous section through their experiences.

- 1) How do you dispose of mementos and valuables that you no longer need?
- 2) Have you ever sold an item that you fancy yourself as a friend? How did you feel/mood after you sell it?
- 3) Are you willing to tell the next user about your beloved item? If so, how are you going to tell them about it?
- 4) What is your unforgettable experience on buying second-hand product?
- 5) Do you think the story/memory increase the value of an item?
- 6) Would you like to visit a store like this?

The result of the data collected for the first question (response rate of around 83.1%) revealed that respondents either threw away useless items or gave them to others.



In the second question, 83 % had previously sold their beloved personal belongings, and the majority of them wished that the personal belongings they sold would be used carefully, such as "I have complicated feelings and regret after selling them," "I want the buyer to use them carefully," and "I want to know if they are used properly this time".

In response to the third question, many individuals save a snapshot of their personal items after they sell them to remember them, and one person stated that she pasted the photo into a journal and wrote down the memorable incident with the item.

In response to the fourth question, one person indicated that he had never been to a second-hand store, while three people noted that they sometimes prefer to go to second hand stores because of the low prices, and two answered that they often go to second hand stores to look for treasures because they can buy items that are rare and cannot be bought elsewhere, which makes them feel superior. Then, there people noted that they have an unforgettable experience on buying second-hand product. The answers are: "The COVID-19 outbreak has made it harder to be with others which causes feelings of loneliness. Then, I decided to buy a second-hand piano for my daughter. I was happy to see that she finally found her own happiness and self-confidence", "I bought an antique sweater from a vintage store. First of all, I like the design of this sweater. It is completely different from current trend and I felt special. It makes me wonder who is the original owner." And "Truly, used clothes have more life rather than new fake fabric clothes."

As for the fifth question, some people think that it is the source of an object that creates its value. Others believe that a meaningful story will be the most important factor in attracting the customer's attention. On the other hand, some people expressed their opinions about the valuable problem of meaningless experiences and memories that make people uncomfortable and discourage them from buying.

The prototype received mostly positive feedback, with many people showing interest in the hologram, which is the main attraction of this secondhand store. As for the attachment state defined in the previous section, the following four responses were given: "Seeing the bag personified and the bag itself talking about

its memory changed the way I looked at things. "the concept of knowing the product's story definitely increased my desire to take good care of it," "The branded bag looks cute," and "The story is depressing, and the bag seemed pathetic when it talked." As a result, this approach is likely to be effective in establishing attachments.

However, there were some negative comments regarding the storytelling method. In contrast to the users who said that they were slightly influenced by the story of the product, negative opinions were confirmed that the current story structure is not persuasive and does not resonate well with them. In this regard, it was found that the construction of the story is a point to be considered in the future.

In addition, respondents to this survey advised me, "I think it would be more informative if you provided a profile of the product itself that you offer," "I feel like I'd like to know what the previous owner was like," "If future shopping is the backdrop, I'd like to see a little of that," and "Next, I believe it would be cool if people could really engage with it." As a result, it is possible that information regarding the core product is not effectively transmitted to users. There is also space for improvement in this area.

### 3.8.3 Revision

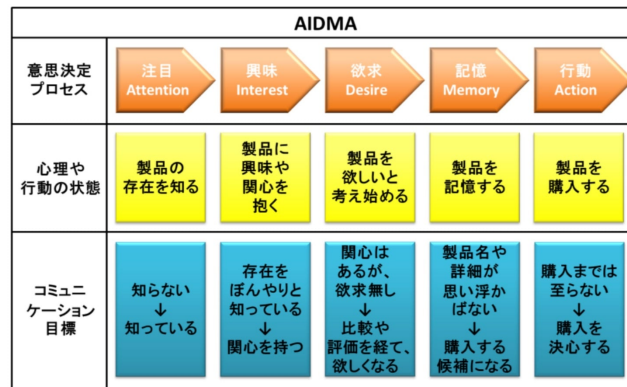
As initially planned, the observations provided encouraging findings. First and foremost, the method of making the product anthropomorphic has turned out to be effective in leading to the formation of a sense of attachment. In addition, while it is possible that showing a story can help people develop an emotional attachment to that product, it is possible that the structure of the story can make a difference in the formation of the user's sense of attachment. As there are examples where simple episodes alone do not resonate with users, further improvements are needed. And, as I was advised, I needed to improve the prototype to give it a futuristic feel and to improve the aspect of providing more information about the product.

Based on all of this, further updates to the prototype are necessary. The following are some of the key points:

- 1) Communication: Due to the lack of user engagement, the results of this

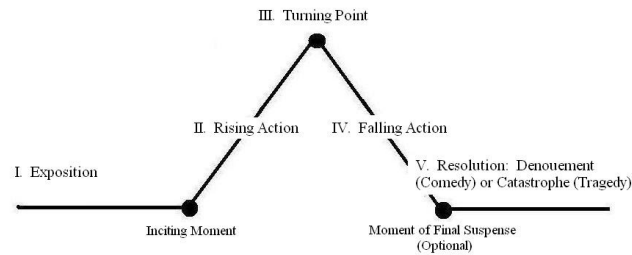
experiment suggest that it is difficult to accurately evaluate the relationship between story, anthropomorphism, and attachment. As a result, rather than simply viewing a prototype, it is important to develop one that can be managed by the consumers themselves

- 2) Product Information: Since there is little information provided about the product itself, the story and anthropomorphism can be used to get users interested in the product, but it does not progress to the desire and motivation to act that leads them to purchase. The AIDMA Model is used in this case to improve the user's attachment to the product and the incentive to acquire it (Figure 3.18) <sup>3</sup>.
- 3) Storytelling: Opinions are divided on whether or not it is possible to form a sense of attachment among users due to the lack of turning point (Figure 3.19) <sup>4</sup> in the story. Therefore, there are not enough elements to reach the right conclusion.



(Sourced [https://www.axc.ne.jp/preparations/glossary/purchasing\\_decision\\_making\\_process.html](https://www.axc.ne.jp/preparations/glossary/purchasing_decision_making_process.html) and  
accessed in July 23, 2021)

Figure 3.18 AIDMA Model



(Sourced: Putting Freytag's Pyramid To Use In Charting Your Own Stories(Pullman 1970))

Figure 3.19 Turning Points in Story

## 3.9. Second Prototype

The second version of the prototype was created using 3ds Max and Substance Painter to create a 3D virtual store. The images of final prototype are shown in (Figure 3.20) and (Figure 3.21). The aim of this prototype is to enable visitors to experience the ambiance and world perspective of a shop through a virtual tour, as well as to more directly convey the idea. The virtual tour's benefit is that it is available 24 hours a day, 365 days a year, enabling customers to explore the store at their convenience. Additionally, it is a great method of reaching out to faraway consumers who are unable to visit the physical shop. Additionally, by using videos and images, it is able to communicate the attraction of goods from a variety of perspectives. The following sections detail the processes required in establishing a 3D virtual store.

### 3.9.1 Revised Interaction

Meet My Monogatari is based on the premise that users will enjoy shopping at second hand stores, and that interaction with the story will foster attachment to the product and change the emotional quality of the product as consumers relate to the story of the product. The user's sense of attachment is expected to increase when the product itself tells a story by personifying the product that is

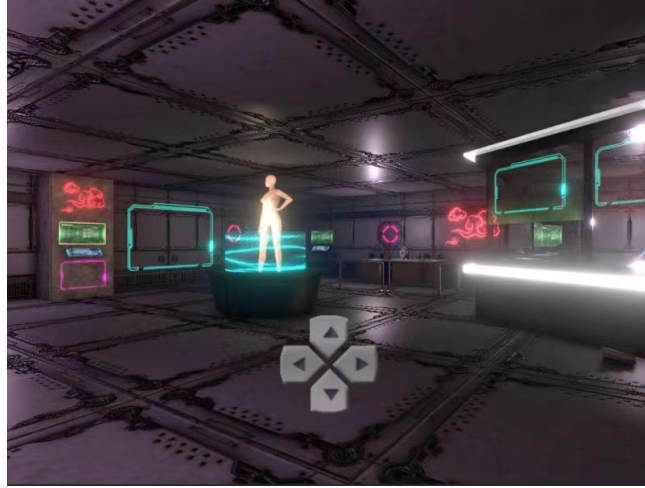


Figure 3.20 The inside of the store



Figure 3.21 The display table

no longer needed. And the first test indicated that the structure of the story and the interaction needed to be enhanced.

### **Communication**

To increase user involvement, the second prototype incorporated a 3D virtual store that users could manage themselves to get more involved. Users are free to move about the shop. This enables users to experience the store's areas in 3D and gain a good grasp of the store's environment. When users click on the holographic employees at the store, a description of the store's concept appears, and users may learn more about the store here. When the user moves his or her gaze to the display table, he or she will receive a virtual 360-degree view of the products. By clicking on each product, a "Know Me," "Information," and "Pick Me Up" button will emerge, allowing consumers to freely engage.

### **Product Information**

People want to buy things without having any regrets, so they will thoroughly research a product before purchasing it. As a result, an "information" button was added that was not included in the prior prototype. By pressing the "information" button on the display table, users will be given a brief introduction to the previous owner as well as information about the product he or she is selling, including how long it was used, the year it was manufactured, the size of the product, and the condition of the product. Furthermore, when users click on the "Know Me" button, they can see the first-person story of the product associated with that product. By providing a lot of information about the product and learning more about its features, the user will have the desire to acquire it and will have the motivation to buy it. In addition, they will be less likely to regret their purchase.

### **Storytelling**

Previous experiments have demonstrated that the narrative is not captivating, and a story that does not resonate with the consumer will differ from person to person in terms of forming a sense of attachment to the product. As a result, this time I'll incorporate the personality of each product into the story and characterize

it. Each product tells the story of its previous owner from the product's point of view. If users can relate to or be touched by the narrative, it is extremely likely that they will strengthen their commitment to the product and use it with care. The backstories of the three products used in the prototype are as follows.

**Bag:** "Huh? A girl is smiling at me. Do you think she likes me? But who is this person? I feel like water is falling from the sky... It's kind of scary. There's a rumbling sound that scares me. Huh? But I'm not wet. She's here to protect me. But her clothes are wet. I wonder if she's okay. Thank you for protecting me all these years. I feel so safe when I'm with you. Let's keep being together. I love you!"

#### THREE YEARS PASSED

"Why haven't you been bothering me lately? I don't want to be alone in the dark all the time. I'm so scared. I haven't seen her lately. Where is she? I guess she's gone."

**Lighter:** "I'm scared! I hear so many explosions! Aah! I just saw a man fall! He's bleeding. I wonder if he's dead. I'm scared... Am I going to be killed like him? The person in front of me is crying. Is he scared too? Don't worry. I'll protect you. We'll hold on together!" Zap!

"Ow... It hurts. Something just pierced my body! The person in front of me is falling in slow motion... I'm worried that he's okay... But his heart is still pounding in his chest. Almost there. Let's hold on a little longer. But, I'm getting sleepy now. I'm going to sleep a little bit. Good night buddy..."

#### ONE WEEK LATER

"Ah... It's the guy from last time. His stomach is rumbling all the time. I wonder if he is hungry? He seems to have lost a lot of weight and his face is getting thinner. I'm worried about him. He looks so sad. Where is he taking me? He's talking to someone, but what is he talking about? What is it? Where are you going without me? Did you forget I exist? Don't go! I'll protect you forever..."

**LEGO:** "Yoo-hoo! Do you guys know who I am? I know you do! I'm the most powerful robot in Star Wars! Today, I'm playing hero with my buddy. Today is my buddy's birthday and we're going to eat lots of good food. What? Someone is running towards us. I wonder if it's his friend... Arrrrrrrrggghhhhhhhhh!!!!!!

Don't pull my head, Ouch, you'll break my body. It's a precious body that my buddy made for me."

CRACK!!

"See... I told you that you're going to destroy my body... My buddy's crying. It's okay buddy! Let's get your dad to fix me...Oh? Don't go! Hey! I'm not broken! Hey!"

ONE MONTH LATER

"I wonder if my buddy has forgotten about me. I've been in a small, dark and damp place lately... Where am I? Oh! Maybe my partner is looking for me too. I want to shout louder and call him that I'm here, but I can't speak..."

### 3.9.2 Setting-up

#### Step 1: Create a 3D model of the second-hand shop

Before beginning to develop a 3D modeling, it is important to understand the approximate proportions of the item to be created. The initial stage in modeling is to create a flat basis to facilitate in modelling in the correct direction, followed by the creation of the most outward shape. Buildings such as walls and floors, for example, must be created first so that the inside and outside of the store can be recognized to simplify later model building and scale setup. To build the interior model once the exterior has been completed. The larger model was created first so that it could instantly observe how the model felt after it was built and installed. After completing the internal model, the exterior section of the signboard was constructed. It is critical to understand the scale of the signboard as well as the position of the sign support bar while constructing the signboard. Following completion of the preceding stages, begin importing material elements into the modeling, for example (wood for the door frame, clear glass for the floor window, but the parameters of the clear glass should be adjusted well or it will look fake). When all of the materials have been imported, configure the luminous model to be a clear luminous body and then color, so that future technology may be displayed. When the 3D image is finished, run the picture rendering on it (Figure 3.22).





Figure 3.22 Step1 of the final prototype: Create a 3D model of the second-hand shop

### Step 2: Make a model of the products

The bag modeling will be simpler than the shop modeling, but before beginning, give a certain proportion, so that the model made out of mistrust does not seem terrible. To develop the model of the bag, begin with the main look of the bag. Create a cylinder first, then move into the details to adjust the appearance of various modifications in the form. After this step is completed, construct some exterior parts, and in the building of parts, the mechanism and clips will need to do a good job to enable later assembly. Following the completion of the exterior pieces, the assembly process commenced. The item is finished after construction(Figure 3.23).

Using the LEGO idea to construct a robot, sketched the robot is assembled with a piece of pieces (Figure 3.24). Begin with modeling the location of the head, followed by the construction of robot vision and perception elements. Then, construct the robot's body pieces. After finishing the body modeling,start to working on the robot's feet. On completion, everything is created to bring the body and foot group back together.

Setting the parameters on the surface of the lighter model is more challenging

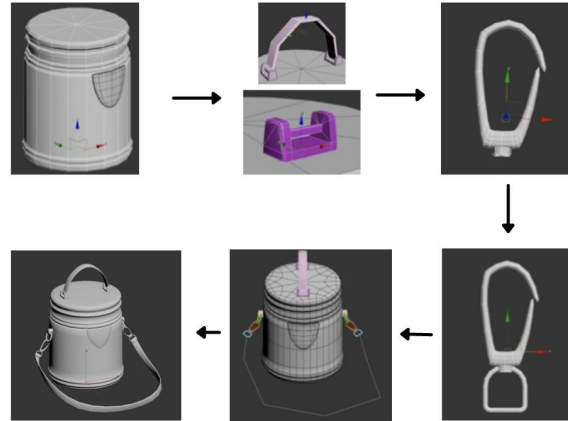


Figure 3.23 Step2 of the final prototype: Create a 3D model of the bag

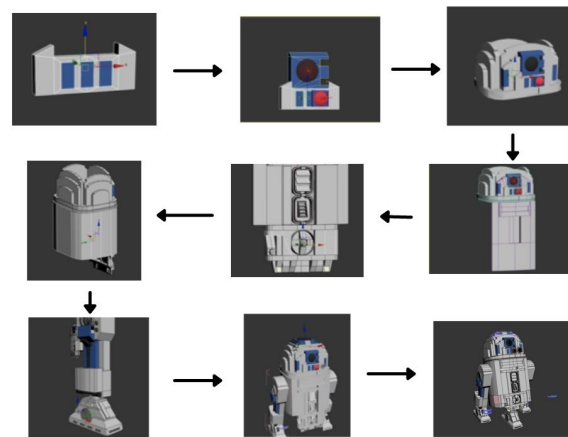


Figure 3.24 Step2 of the final prototype: Create a 3D model of the robot

since the simpler the design in the 3D drawing, the more difficult it is to convey a realistic impression. To make the object look more authentic, various patterns and engraved inscriptions were added to the surface to make it look more like a step unit, and make the item look more lifelike (Figure 3.25).

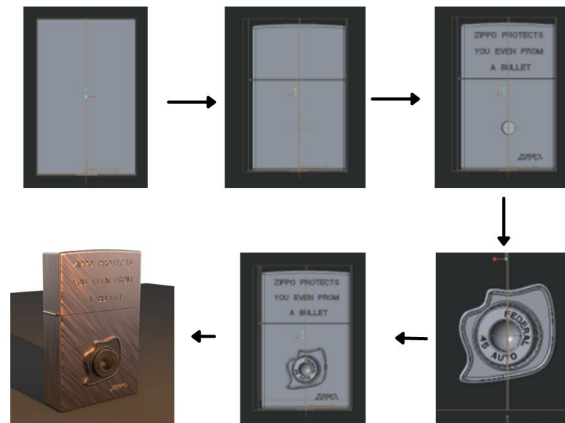


Figure 3.25 Step2 of the final prototype: Create a 3D model of the lighter

### Step 3: Programming

Before creating this 3D virtual store for human-machine interaction, it is critical to understand what functions the software can do. Customers may freely interact with the store, as stated in the preceding section; by clicking on a display table in the store, a 360-degree virtual projection of the product's appearance is displayed. On the table, there is an interactive interface that features three buttons: "Know Me," "Pick Me Up," and "Information." The "Know Me" button is to present the product's story using projection mapping and audio. To access the purchase payment interface, click the "Pick Me Up" button. Click on the "Information" button to learn the previous owner's personal information as well as specific product information, and so on. The main programming process is shown below.

First, import the previously constructed 3D model, then open previously prepared files such as the exterior model of the store, the interior facilities, and three

used products, and import that file into the software (Figure 3.26).



Figure 3.26 Step 3 of the final prototype: import files

To establish human-machine interaction, a player must be added to the software (Figure 3.27). The player is rendered more lifelike and embodied by the addition of a gravity component and a collider component. In this way, the user is immersed in the operation, as if in the 2030s, with a sense of futuristic technology in the store.

Because, in order to allow users to move freely in this store, a movement script Player was written for the player, assigning a player movement speed of 3 and Jump Pow of 150 (Figure 3.28). Such a value allows users to use the program from the perspective of the switch more smoothly, but also the best value to adapt to human visual movement viewing.

Next, write the Rotate By Mouse script for the player, assigning the rotation range and rotation speed (Figure 3.29).

In the GameController, the player's mouse is displayed (ShowMouseLayer), and the mouse is hidden at the beginning so that the user can subconsciously ignore that it is a computer program at the beginning of the interface, allowing the user to be more involved in the store. The mouse is displayed when the human-machine interface of the booth is opened, so that the player can clearly select the next action step by clicking on the button (Figure 3.30).

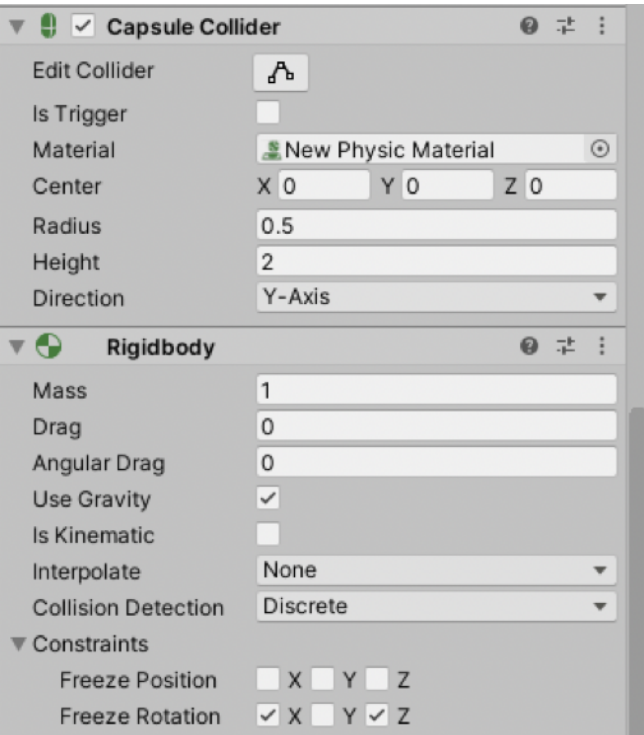


Figure 3.27 Step 3 of the final prototype: add a player to the software

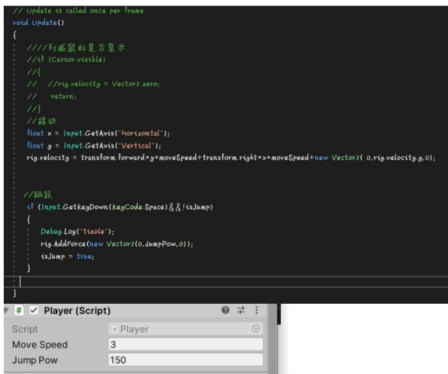


Figure 3.28 Step 3 of the final prototype: assign a player movement

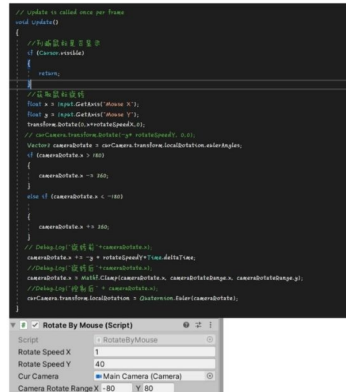


Figure 3.29 Step 3 of the final prototype: assign a rotation range and rotation speed

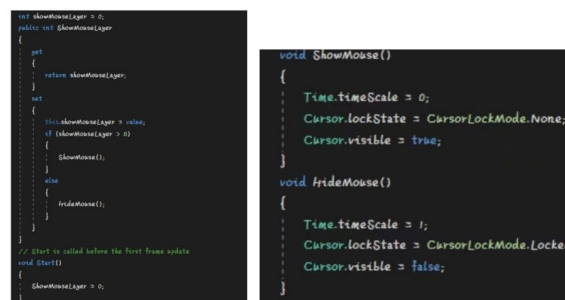


Figure 3.30 Step 3 of the final prototype: adjust ShowMouseLayer

Write a fetch component (PlayerCatch) for the player (Figure 3.31), and use ray detection to determine the target of the click in the center of the screen. Determine the target and trigger a response effect based on the component carried by the target or the target's tag (replaced by a standard image).

```
void Update()
{
    if (Input.GetMouseButtonDown(0))
    {
        //发射射线
        Ray ray = Camera.main.ScreenPointToRay(Input.mousePosition);
        if (GameController.Instance.ShowMouseLayer > 0)
        {
            return;
        }
        RaycastHit[] hit = Physics.RaycastAll(ray, msnCatch);
        string tip = "";
        for (int i = 0; i < hit.Length; i++)
        {
            if (hit[i].transform.GetComponent<VideoProp>())
            {
                hit[i].transform.GetComponent<VideoProp>().Use();
                break;
            }
            else if (hit[i].transform.name == "People")
            {
                people.Show();
            }
        }
    }
}
```

Figure 3.31 Step 3 of the final prototype: write a fetch component

Adding a collider to a prop, a prop component (Video Prop), and calling the OnUse method to display the corresponding UI (Figure 3.32). When it is clicked, it allows the prop to be independent of the entire store environment, and the individual product prop component can be manipulated by the user to achieve a process that shows the buyer purchasing the product in the store and taking it away.

Create the UI for props: add the UI display function for buttons, and add the video player component to play videos (Figure 3.33) so that the anthropomorphized cartoon character image of the item can be played in the interactive interface by clicking the "Know Me" button to show the story through the narration of the cartoon character.

In the center of the store, there is a humanoid light source NPC design. By clicking on this NPC, the user may learn about the entire shop design concept and function, increasing the project's interaction. Create the UI for the human click display, and add a collider to the human NPC to identify the player with this

```

public ChooseUI showGO;
public void Use()
{
    showGO.Open();
}

```

Figure 3.32 Step 3 of the final prototype: add a collider to a prop

```

public void OnClick()
{
    GameController.Instance.ShowMessageGO.SetActive(true);
    GameController.Instance.PlayVideo();
    // Start is called before the first frame update
    and Start()
    {
        videoLife.onClick.AddListener(() =>
        {
            PlayVideo();
        });
        closeLife.onClick.AddListener(() =>
        {
            GameController.Instance.ShowMessageGO.SetActive(false);
            GameController.Instance.ShowMessageLayer.SetActive(false);
        });
    }
    ShowMessageLife.onClick.AddListener(() =>
    {
        ShowMessage();
    });
    ShowMessageLife.onClick.AddListener(() =>
    {
        CloseMessage();
    });
}

```

```

}
public VideoClip video;
void PlayVideo()
{
    if (video != null)
    {
        GameController.Instance.PlayVideo(video);
    }
}
public GameObject showMessageGO;
public void ShowMessage()
{
    showMessageGO.SetActive(true);
}
public void CloseMessage()
{
    showMessageGO.SetActive(false);
}
}

```

Figure 3.33 Step 3 of the final prototype: create the UI for props (buttons and videos)



NPC, as well as the text hopping system and this article adaption function. This text may be filled out word by word by typing in the previously typed content (Figure 3.34).

```
public float jumpInterval=0.02f;
Coroutine jumpCor = null;
IEnumerator jumpTextIE()
{
    for (int i = 0; i < jumpText.Length; i++)
    {
        yield return new WaitForSecondsRealtime(jumpInterval);
        showText.text = jumpText.Substring(0,i+1);
    }
}

public void Show()
{
    GameController.Instance.ShowMouseLayer++;
    gameObject.SetActive(true);
    if (jumpCor!=null)
    {
        StopCoroutine(jumpCor);
    }
    showText.text = "";
    jumpCor = StartCoroutine(jumpTextIE());
}

public void Close()
{
    GameController.Instance.ShowMouseLayer--;
    gameObject.SetActive(false);
}
```

Figure 3.34 Step 3 of the final prototype: create the UI (NPC)

## Notes

- 1 Sourced <https://toystory.disney.com/>
- 2 Sourced <https://www.repsly.com/blog/consumer-goods/30-powerful-point-of-purchase-displays-to-make-your-products-pop>
- 3 Sourced <https://cyber-synapse.com/dictionary/en-all/aidma.html>
- 4 Sourced <http://writinghorrorfiction.blogspot.com/2011/03/putting-freytags-pyramid-to-use-in.html>

## Chapter 4

# Proof of Concept

Another user test was conducted to confirm the effectiveness and possibilities of the concept, with the second prototype emphasizing the cognitive features of the design to increase user attachment to the products.

### 4.1. Methodology

Method adopted in the second prototype are described as below:

- Likert scale <sup>1</sup>: with a seven-point scale for testers to express how much they agree or disagree with a certain statement.
- User Experience Questionnaire (short version) <sup>2</sup>: with 8 elements to quantitatively understand testers' overall assessment of the design.
- Qualitative Methodology <sup>3</sup>: it consists of interview. The interview was conducted after showing the 3D virtual store to the users, and direct feedback and further expectations were given.

### 4.2. Result

The experiment included a total of 10 participants, 5 males and 5 females. The participants' ages ranged from 22 to 28 years old, and the majority are in master's programs; one is a PhD student, and the other is currently working. Among all the participants are from China.

### 4.2.1 Likert Scale

Participants were asked to interact with the Meet My Monogatari products (bag, zippo, robot) and rate their motivation for the product three times: only with a photo, with an additional product description, and with a full effect (story, anthropomorphism).

The Likert Scale was used to score "very much want" as 7 points and "don't think so at all" as 1 point. First, 50% of the participants gave a score of 4 for the first impression of the bag when they just saw the photo. Following that, when shown the introduction of the product, 20% of the participants each gave a score of 3, 4, 5, 6, or 7. Based on this, it is conceivable that learning the description of the bag will not raise the participants' awareness of the purchase, but rather diminish it. The participants were then asked to read the backstory of the bag, which received a score of 6 from 40% of them. Although the difference was slight, it was proven that understanding the story improved purchase awareness when compared to simply seeing the photo.

The next score for first impressions just by looking at the picture of the zippo was 4, given by 50% of the participants, with no one scoring a 6. Next, when shown the product introduction, 20% of the participants scored it a 6. However, still no one scored a 7. This was a little more effective than the bag, indicating that the content of the information provided may increase purchase awareness. Next, when the Zippo story was read to the participants, 40% of them scored a 6 and 20% scored a 7. This was the first 7 score in this experiment, showing a marked influence on the story.

Half of the participants gave the robot a 5 for first impressions, while the other half gave it a 7 for first impressions. Following the introduction of the product, half of the participants scored a 6 and the other half scored a 7. This also had a somewhat greater effect than the bag. Following that, when the subjects were told the robot's backstory, they all scored a 7. In other words, after hearing the story about the robot, all of the participants grew more interested in acquiring it and developed an attachment to it.

According to the Likert Scale results, including a product description did not improve the participants' interest in the product. However, when the product has the full effect (story and anthropomorphism), users may become substantially

more interested in the product, albeit to a lesser extent. The story of the robot with the highest score featured the robot's personality significantly. When a product is anthropomorphized, it may be more effective if the personality is well expressed. The three stories that were utilized in this experiment are listed in Figure 4.1. A bag, a zippo, and a robot are seen from right to left.

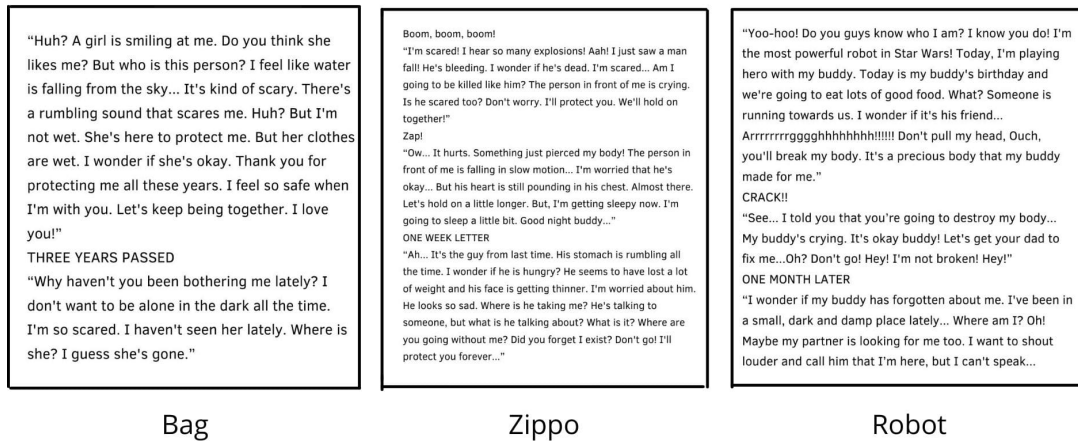


Figure 4.1 The three stories about each product in Meet My Monogatari

#### 4.2.2 UEQ

The usage of anthropomorphism in the preceding prototype was ineffective, and it was objectively difficult to state the concept that anthropomorphism may generate a sense of attachment to the user. This time, three different methods for employing anthropomorphism on users were tested and compared using UEQ to determine which technique is the best. The user experience questionnaire (UEQ) is a commonly used questionnaire for measuring consumers' subjective impressions of product user experience. The UEQ is a 26-item semantic differential. Filling out the UEQ takes around 3-5 minutes, indicating that the UEQ is already fairly efficient in terms of the time needed to answer all items.

This analysis resulted in the final questionnaire, which included 26 questions organized into six scales:

- **Attractiveness:** The overall appearance of the goods. Is it well-liked or despised by users? Is it appealing, pleasurable, or enjoyable?
- **Perspiscacity:** Is it simple to get acquainted with the product? Is it simple to learn? Is the product simple to grasp and unambiguous?
- **Efficiency:** Can users do their jobs with little effort? Is the engagement quick and efficient? Is the product responsive to user input?
- **Dependability:** Does the user have a sense of control over the interaction? Is he or she capable of predicting the system's behavior? Is the consumer at ease while interacting with the product?
- **Stimulation:** Is using the product interesting and motivating? Is it pleasurable to use?
- **Novelty:** Is the product unique and innovative? Does it pique the user's interest?

### **Visually Anthropomorphic**

The first method was designing a character for the product, animating it, sound-proofing it, and adding subtitles. Making the product look more human by giving it eyes, a nose, facial expressions, and movements. By changing the tone of voice, such as pleased or sad, to make customers feel as though the product, which before had no life or heart, was suddenly a human with life. Users were supposed to be attached to the product by creating a "loving factor" and a "sense of familiarity." The animation video used for method 1 was the same video used for the initial prototype.

### **Anthropomorphism in Stories**

Secondly, the story unfolded from the perspective of the product. In the second method, the story is told in the voice of the product's mind about the days it

spent with its previous owner, and anthropomorphism is used more directly, so that the user is assumed to quickly become emotionally involved with the object.

### **Anthropomorphism in Writing (anthropomorphism told from the perspective of the previous owner)**

The third is a description of the product from the previous owner's point of view. In the slide, I described the product from the previous owner's point of view, detailing the product's personality, likes and dislikes, and how he/she would like the product to be handled the next time. This approach to anthropomorphizing is not particularly direct, but it has been utilized in a number of stores in recent years and is seen to be beneficial.

As qualitative evidence, the questionnaire helped in measuring the overall impression of the design. Despite the limited number of participants, it is worth noting that the questionnaire findings indicate the design's potential. This time, in order to shorten the UEQ, it was decided to skip measuring the single dimensions and instead focus on measuring the two meta-dimensions pragmatic and hedonic quality. Four objects are selected for each of these dimensions. As a result, the short version of the UEQ will only include eight items divided into two scales. Furthermore, the average value of the eight elements will be provided as an overall UX value. The eight UEQ elements are shown in Figure 4.2<sup>4</sup>. The values range from -3 to +3. As a result, -3 indicates the greatest unfavorable response, whereas 0 represents a neutral response. The first four measures evaluate pragmatic quality (practicability), while the last four evaluate hedonic quality (pleasure), which is a general measure of "attractiveness."

The results of the three user tests are summarized in Figure 4.3. Figure 4.4 illustrates the data analysis of the pragmatic and hedonic quality attributes. It demonstrates that the third test (anthropomorphism in writing) performed better on both attributes, and that most participants thought it was more appealing to users to communicate the appeal of the product through anthropomorphism told from the previous owner's point of view, rather than anthropomorphism in story and visual anthropomorphism. Furthermore, in both the first and second tests, the hedonic quality was much greater than the pragmatic quality. According to

<div style="border: 1px solid black; padding: 2px; display: inline-block;"> -3      0      +3 </div>			
(Pragmatic 1)	<b>obstructive</b>	o o o o o o o	<b>supportive</b>
(Pragmatic 2)	<b>complicated</b>	o o o o o o o	<b>easy</b>
(Pragmatic 3)	<b>inefficient</b>	o o o o o o o	<b>efficient</b>
(Pragmatic 4)	<b>confusing</b>	o o o o o o o	<b>clear</b>
(Hedonic 1)	<b>boring</b>	o o o o o o o	<b>exciting</b>
(Hedonic 2)	<b>not interesting</b>	o o o o o o o	<b>interesting</b>
(Hedonic 3)	<b>conventional</b>	o o o o o o o	<b>inventive</b>
(Hedonic 4)	<b>usual</b>	o o o o o o o	<b>leading edge</b>

Figure 4.2 User Experience Questionnaire (short version)

those who gave high marks to the anthropomorphic method of storytelling from the perspective of the previous owner, they gave positive feedback that they were excited about thinking about the situation depicted in the advertisement.

Figure 4.5 shows a comparison of the three tests for each item. The largest difference was found in the Pragmatic 3 item. The method of anthropomorphizing the product from the previous owner's point of view was rated as the most capable of increasing impressions, while visual anthropomorphization and narrative anthropomorphization were rated as less capable of increasing impressions. This result suggests that the method of anthropomorphizing the product from the perspective of the previous owner was successful in making a strong impression on the participants. According to those who experienced it, they felt that the message was direct and easy to understand. This suggests that the third method has a persuasive function. Because the method of communication is easy to understand, it is likely to be memorable.

To summarize, the UEQ test findings revealed that the majority of participants preferred the method of anthropomorphizing the product from the previous

Visually Anthropomorphic							
Item	Mean	Variance	Std. Dev.	No.	Negative	Positive	Scale
1	↓ -1.4	2.0	1.4	10	obstructive	supportive	Pragmatic Quality
2	↓ -0.6	1.8	1.3	10	complicated	easy	Pragmatic Quality
3	↓ -1.7	1.6	1.3	10	inefficient	efficient	Pragmatic Quality
4	↓ -1.2	2.2	1.5	10	confusing	clear	Pragmatic Quality
5	↓ -1.5	1.4	1.2	10	boring	exciting	Hedonic Quality
6	↓ -1.1	2.1	1.4	10	not interesting	interesting	Hedonic Quality
7	↑ 1.3	1.1	1.1	10	conventional	inventive	Hedonic Quality
8	↓ -0.9	3.0	1.7	10	usual	leading edge	Hedonic Quality

Anthropomorphism in Stories							
Item	Mean	Variance	Std. Dev.	No.	Negative	Positive	Scale
1	↑ 0.9	1.0	1.0	10	obstructive	supportive	Pragmatic Quality
2	↑ 0.8	3.3	1.8	10	complicated	easy	Pragmatic Quality
3	↓ 0.2	2.0	1.4	10	inefficient	efficient	Pragmatic Quality
4	↑ 1.4	2.7	1.6	10	confusing	clear	Pragmatic Quality
5	↑ 1.3	2.5	1.6	10	boring	exciting	Hedonic Quality
6	↑ 1.9	1.7	1.3	10	not interesting	interesting	Hedonic Quality
7	↑ 1.3	1.0	1.0	9	conventional	inventive	Hedonic Quality
8	↑ 1.5	0.5	0.7	10	usual	leading edge	Hedonic Quality

Personification in Writing							
Item	Mean	Variance	Std. Dev.	No.	Negative	Positive	Scale
1	↑ 2.0	1.1	1.1	10	obstructive	supportive	Pragmatic Quality
2	↑ 2.0	1.1	1.1	10	complicated	easy	Pragmatic Quality
3	↑ 1.9	1.4	1.2	10	inefficient	efficient	Pragmatic Quality
4	↑ 2.0	1.8	1.3	10	confusing	clear	Pragmatic Quality
5	↑ 1.2	2.0	1.4	10	boring	exciting	Hedonic Quality
6	↑ 2.0	0.7	0.8	10	not interesting	interesting	Hedonic Quality
7	↑ 1.8	1.3	1.1	10	conventional	inventive	Hedonic Quality
8	↑ 2.3	0.9	0.9	10	usual	leading edge	Hedonic Quality

Figure 4.3 User Experience Questionnaire (short version)

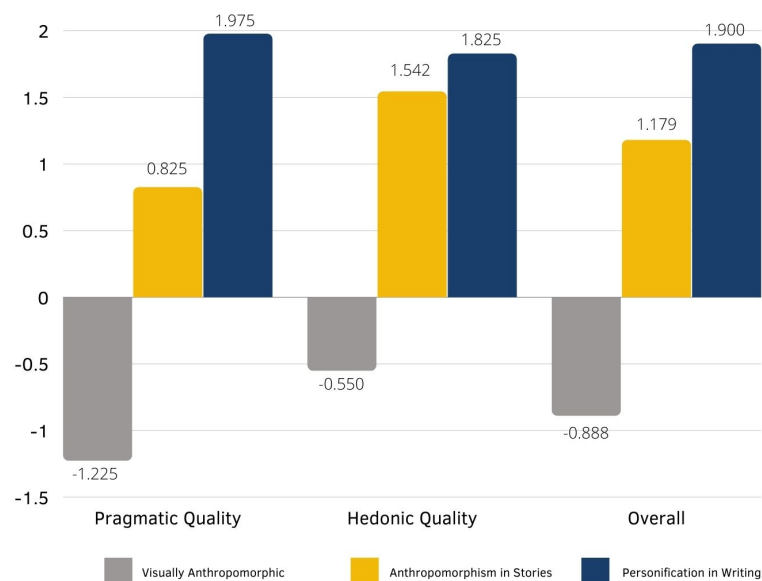


Figure 4.4 The three UEQs' interacted values



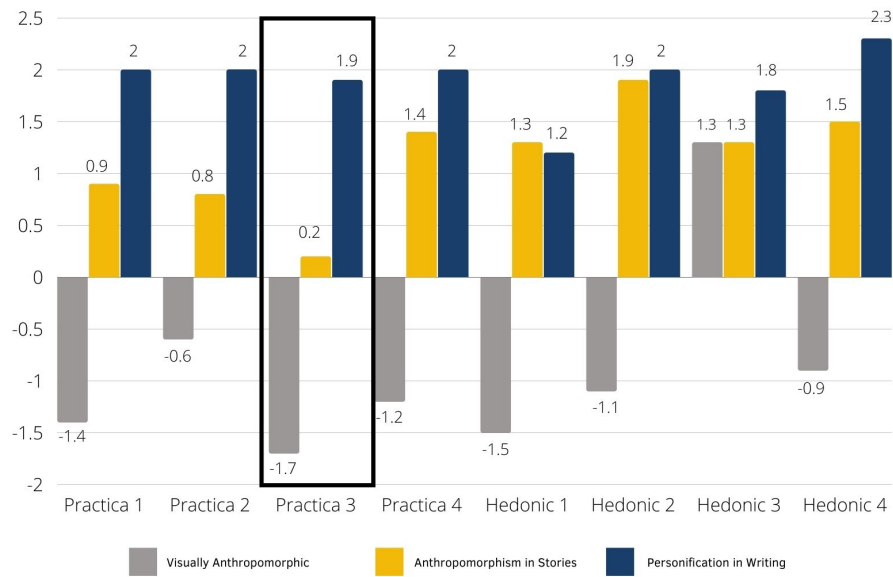


Figure 4.5 UEQ results of three tests

owner's perspective. I may deduce that participants will begin to see the product in their minds, increasing their probability of enjoying it. Additionally, it may be deduced that the message is direct and the product is easily comprehended at a look. There are still participants liked anthropomorphization in stories, but some thought it was "tough to read due to the many texts", "interesting but easier to read in point form", and "it would be fascinating to adapt this story into an animation like Toy Story." As a consequence, there is a trend toward conveying information with rich content through video rather than text, which makes it simpler for people to comprehend the story. The technique of visual anthropomorphism, which got the lowest grade, has an excessive amount of character rather than anthropomorphism, thus it is subjective. And, given that no one who experienced this project liked this image of the character, I can only infer that this is why it received such a poor rating. As a result, it was determined that video anthropomorphism may not appropriate for the aim of this study.

### 4.2.3 Interview

Given that Meet My Monogatari's goal is to increase people's connection to people and goods and to encourage people to use them for an extended period of time, qualitative techniques, such as a user-centered approach, are critical for evaluating user experience. It involves behavioral monitoring and subsequent direct feedback from the user.

Individual interviews were performed at the end of the experimental process to obtain direct feedback and potential expectations. The following 5 questions were used to determine if participants were able to adopt the attachment state described in Chapter 3 via their experience.

- 1) How did you feel about this second-hand store in comparison to other second-hand platforms that are presently available?
- 2) Were you impressed by the product's backstory in this project?
- 3) Did the story of this product leave a lasting impression on you?
- 4) Did you want to make more frequent use of the product?
- 5) Would you be interested in visiting a similar secondhand shop in the future?

The following summarizes the findings from the observations and interviews:

#### **Intrusion with 3D virtual store**

This 3D virtual shop caught the attention of a large number of participants. Many male participants, in particular, were drawn to the Sci-Fi interface design and expressed delight at the ability to control the shop, click on items inside, and watch what would emerge. Additionally, they liked the 3D interface, which allowed them to view the entire shop and the details of the products while running it, which piqued their interest. When asked how the shop compared to current secondhand stores, they said that the idea was very unique and that they hoped it would be implemented in the future. And one subject responded, "The current thrift store is just like a store, but I thought this project was like a social platform for people to interact with each other." This made me realize that people may be able to make

new connections by learning the story of the products sold by the previous owners. Along with, one of the participants who gave the store a high rating said that it "uses storytelling, commemorative, and emotional components to crystallize the value of second-hand products" and expressed an interest in selling items in the store. According to one female participant, "Some of the second-hand stores now sell at lower prices, which motivates me to go there, but in my experience, I often purchase inexpensive items that I find myself not requiring in a short period of time. However, from this second-hand store, I had the impression that the used products had a soul. I get the impression that objects have a life of their own and that I will not discard them as readily as I used to. I was attracted to the fact that it focusses on each item rather than the price." Three other participants had this sentiment, and they hoped that by learning the narrative, they would be able to discover products with unique memories that they would treasure after knowing them. In this experiment, six more participants expressed a desire to visit this store in real life. In conclusion, many participants were attracted to the concept of an interaction where they could learn about the products' backstories, and unlike the traditional second-hand shops that exist today, this store is more like an auction, but with lower prices, which is what attracted many participants. However, I was not able to let the participants actually experience the store offline this time, and it seems that recreating this 3D virtual world offline will be an issue for the future, as the participants want to see the products in real life and not just through a screen.

### **Forming a sense of attachment**

This experiment demonstrates that it is possible to develop a connection with a product by utilizing anthropomorphism to convey the product's story. However, whether a connection is established or not is determined by the story's structure and the product itself. For instance, many women were drawn to the story of the bag, while many males liked the story of the robot and zippo. However, this difference is merely due to the differences in what men and women like, not the differences they get from the stories of things. For this reason, I felt it was necessary to conduct a survey using products that both men and women might like from the next experiment, and developing a story with different elements. In

addition, I received an opinion that the value of an object would be enhanced if its unique points were emphasized more in the story. For example, he suggested that it would be more interesting if the object had a strange point, such as the fact that it had been bitten by a cat. There are examples of real estate in the U.S. where the value of the property has increased as the residents have added something to it. In this way, by adding some unique elements, or by repairing something that was once broken and providing a story with an anthropomorphic, the value of the broken object may increase. How to structure the story so that this happens, and what kinds of objects to sell in the store were the topics of this discussion, and I was able to achieve this goal. However, I feel the need to study these issues more deeply in the future.

In the UEQ test, participants felt uncomfortable reading stories with a lot of information in text form, and six out of ten said that they would prefer to view them in animation or video with 3D projection. This point should be strengthened in future trials. Participants who participated in the UEQ test also commented on the anthropomorphic story: "I felt like I was in the middle of this story," "This story influenced my image of the product. Seeing the story has given me other ideas about how I will treat the thing in the future." This is the information I received. This finding implies that anthropomorphic stories have the potential to alter users' perceptions of objects and prevent them from being discarded again in a short amount of time.

To continue, when asked "Do you believe the story behind this product will stick with you?" 70% of participants said "yes," adding, "I believe I will remember it when I use the product in the future." In response to the question, "Did this experience make you want to use this product more carefully in the future?" participants responded. "I will use it with caution because the product's story is one that I enjoy and have an emotional connection to. "I may recall the story when I use it in the future. "I will appreciate it each time I recall it." "Perhaps I'll start smoking more frequently. "Throughout the experience period, the six participants were able to affirm that they would take excellent care of the items in the future. As a result, it is highly possible that Meet My Monogatari is successful in influencing people's behavior to use items wisely over an extended period of time.

### 4.3. Considerations

As stated by Franzen et al. (2015), the positive results show the effectiveness of the initial concept of presenting the stories and meanings behind used goods to customers, encouraging them to reevaluate their views on each object and to take good care of them in the future.

”Emotional experience is as important as, or even more important than, the functional purpose of a product,” as evidenced by the selection of subjects in the Likert Chart test. Even though participants were unaware of the product’s practical features, they were obviously more pleased with it and more likely to purchase it after hearing the story behind it. According to one of the subjects, she had been mostly content with worldly possessions and had neglected to consider the spiritual requirements met by those possessions. Nonetheless, she stated that Meet My Monogatari satisfied her spiritual requirements for the first time in a long time.

In our everyday lives, we rarely share the stories of our own possessions. Foremost, we regard things as simple objects and hardly ever consider how to care for them properly over time. The participants that took part in this experience had positive attitudes, stating that the object episodes altered their perceptions of things and increased their awareness of continuity.

The visually anthropomorphic method was judged to be inappropriate for this study because opinions were greatly divided about the likes and dislikes of the image, so the method did not produce accurate results. According to the findings of the UEQ test, the anthropomorphic approach of presenting the product from the perspective of the previous owner was more understandable. While some liked the approach of building the story from the first glimpse of the product, others complained that the text format was too dense and tiresome, and it was determined that the inclusion of visuals such as animation would be more beneficial. As a result, further upgrades are required.

### Notes

- 1 Sourced <https://www.simplypsychology.org/likert-scale.html>
- 2 Sourced file:///Users/crystalson/Downloads/UEQS\_Items.pdf

- 3    Sourced <https://www.scribbr.com/methodology/qualitative-research/#:~:text=Qualitative%20research%20involves%20collecting%20and,generate%20new%20ideas%20for%20research>
- 4    Sourced <https://www.ueq-online.org/>

# Chapter 5

## Conclusion

As society developed, the nature of consuming changed as well. The inherent worth of objects has almost vanished, and a civilization based on mass production, mass consumption, and mass waste has emerged. Simultaneously, when similar items become more abundant, consumers, particularly the younger generation, want scarcity in order to distinguish themselves from others, and the value of "ordinary" things used by many people decreases.

### 5.1. Contribution

Meet My Monogatari is an offline interactive platform. It is a second-hand item store where items are sold and stories about the products are exchanged to provoke the next users' feelings of empathy, relationships, and possessions. The aim of this project is to allow the importance of the possessions to be preserved, and the next consumer to treat it as valuable as ever through his memories.

In terms of the situation, this study shed light on the challenge of creating a connection with a product through its story in order to develop an emotional attachment to the product. The objectives of this research are to communicate the product's story with the customer, to preserve the product's uniqueness and specialness for an extended period of time, and to create a sense of connection with the consumer. To achieve it, Meet My Monogatari, an offline interactive second-hand store, is proposed. It is designed as a catalyst to enhance the relationship with products with a story that is told through projection mapping. The story was given by the previous owner and reassembled like a POP (Point-of-Purchase) written by a clerk, using the anthropomorphic process. Meet My Monogatari can assist in transforming items that are emotionally charged and loaded with

memories into everlasting "friends" for their new owner. The value of the product itself changes when it is in different contexts, different demand situations. If a person doesn't want it, it becomes a low-value item for that person. By showing consumers the "inside" of an object through a story, conveying the characteristics of the object, and highlighting its unique elements, consumers will become more interested in the product. For those who are in desperate need of the product, the value of the product will make them want to pay the price to get it. The aim of this second-hand store is not only to sell products at a low price as in the original store, but also to restore as much as possible the original form of goods with a long history that the previous owner used for a long time, and to pass on the value of the product itself to the next customer who needs it with a story that personifies it. The purpose of this is to pass on the value of the product itself to the next customer who needs it. I have set my sights on customers who want to know more about what they are buying, who want to know what is "inside" the product, and who want the next person to take good care of it.

Meet My Monogatari's concept was developed through two prototypes and validated by a user experience experiment based on the second prototype. It demonstrates that it has the potential to improve how customers interact with products. The experiment's objective was to determine the concept's potential for fostering attachment to products: whether the storytelling method increases the amount of time that products retain their uniqueness/specialness; whether the anthropomorphic approach alters people's perceptions of products in a positive way; and whether it can resolve the situation of mass disposal. Overall, both the Likert Scale and the UEQ results indicate that Meet My Monogatari has the possibility to endow objects with distinct stories and anthropomorphic characteristics, to increase people's reliance on the products, and to endow them with higher emotional value attributes. Simultaneously, the constraints of the current design and the insights gained from final evaluations suggest areas for future improvement. The following sections include more information.



## 5.2. Future Works

The results of user experiments done to validate the concept revealed both the potential for Meet My Monogatari to create emotional attachment to products and the limits of the existing design. The section will outline future efforts.

### 5.2.1 Offline Store

Meet My Monogatari drew people's attention by developing a 3D virtual store that can be accessed and explored from any location. It was only after receiving feedback from subjects that it was determined that it was necessary to open an offline store in order for them to see the products they liked online in real life and to experiment with digital technologies such as 3D projection, and virtual reality (VR) in the physical store. How do consumers respond when they physically handle the object and then see the story projected onto the projection mapping table? Does it magnify the attachment more if it is an offline store? The next step would be to compare offline and online stores to see whether there is any difference in the user's reaction.

### 5.2.2 Modifying the Graphics and Producing a Video

As stated in 4.2.2, many subjects prefer animation or videos over reading text-heavy stories. However, the UEQ test findings indicated that few participants preferred the visual anthropomorphism approach, which was significantly different from the method with the highest score. One might argue that there was an issue with the drawings in this respect. The characters in this experiment were not very endearing. One of the participants expressed a desire to watch an animation similar to Toy Story. There is a requirement to integrate the aesthetic and design aspects of an object's picture in order to identify the best visuals and to create animated characters that appeal to a broad range of customer groups. In the subsequent investigation, research will be conducted by presenting participants with anthropomorphic products with varying visual representations of the same story. For instance, it would be interesting to investigate if people prefer Pixar-style graphics like Toy Story or anthropomorphic pictures with additional "moe"

elements. Additionally, it would be worthwhile to conduct future polls to see if a change in aesthetics is sufficient to enhance consumers' attachment to a product and encourage them to use it for an extended period of time.

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- Aggarwal, Pankaj and Ann L McGill (2007) “Is that car smiling at me? Schema congruity as a basis for evaluating anthropomorphized products,” *Journal of consumer research*, Vol. 34, No. 4, pp. 468–479.
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# Appendices