

ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL

**EXPLORING THE CONCEPT OF PRODUCT ATTACHMENT:
THE CASE OF PRECIOUS OBJECTS**



M.Sc. THESIS

Elif GÖKALTAY

Department of Industrial Design

Industrial Design Programme

JANUARY 2022

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**Elif GÖKALTAY
(502181903)**

Department of Industrial Design

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Thesis Advisor: Assist. Prof. Dr. Özge ÇELİKOĞLU

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**KIYMETLİ OBJELER BAĞLAMINDA ÜRÜN BAĞI KAVRAMININ
İNCELENMESİ**

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**Elif GÖKALTAY
(502181903)**

Endüstriyel Tasarım Anabilim Dalı

Endüstriyel Tasarım Programı

Tez Danışmanı: Dr. Öğr. Üyesi Özge ÇELİKOĞLU

OCAK 2022

Elif GÖKALTAY, a M.Sc. student of İTÜ Graduate School student ID 502181903 successfully defended the thesis entitled “EXPLORING THE CONCEPT OF PRODUCT ATTACHMENT: THE CASE OF PRECIOUS OBJECTS”, which she prepared after fulfilling the requirements specified in the associated legislations, before the jury whose signatures are below.

Thesis Advisor : **Dr. Öğr. Üyesi Özge ÇELİKOĞLU**
İstanbul Technical University

Jury Members : **Doç. Dr. Özge CORDAN**
İstanbul Technical University

Dr. Öğr. Üyesi Renk DİMLİ ORAKLIBEL
Bahçeşehir University

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To Boncuk & Pilav,



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EXPLORING THE CONCEPT OF PRODUCT ATTACHMENT: THE CASE OF PRECIOUS OBJECTS

SUMMARY

While most products lose their appeal with time some remain meaningful and precious for users that experience a form of attachment towards them. This thesis focuses on the concept of product attachment which is found to be a factor that leads users to keep their existing products for more prolonged periods instead of replacing them. This behavioral change results in lowering the high rate of consumption. The thesis consists of six chapters. The first chapter is an introduction covering the background information about the subject and presenting the aim and scope of the study along with the research questions. The second chapter includes a literature review covering topics of product attachment, meaningful products, and emotional durability. Product attachment is explored through examining product-user relationships. In the third chapter, the methodology is explained. The research has a qualitative and exploratory quality and has an interpretive approach. Two research methods have been implemented to gather data, these were cultural probes and semi-structured interviews. Literature concerning the implemented methods was provided. In the fourth chapter all stages of the fieldwork are covered. The primary research was conducted using the method of cultural probes. This method involves a period that provokes a reflection process and was selected to gather insightful material regarding participants' experiences. Following a one-week cultural probes process a series of semi-structured interviews have been conducted to gain a deeper understanding of the data gathered from the primary research. The fifth chapter consists of the analysis and interpretation of findings. The method qualitative content analysis was implemented, and the according literature is presented. The cultural probes material was analyzed under sixteen main categories which corresponded to tasks which were taken as units during the coding process. The findings were interpreted and presented under main categories and their subcategories. A data-driven and concept-driven strategy was pursued. As interviews were audio recorded all were transcribed. The sixth chapter is the last chapter that consists of the conclusion where it has been stated that the findings and categories derived from the research analysis corresponded with the categories of the product attachment literature.



KIYMETLİ OBJELER BAĞLAMINDA ÜRÜN BAĞI KAVRAMININ İNCELENMESİ

ÖZET

Yeni ürünlere olan ilgi ve hayranlık zamanla azalmaktadır, bu da onları daha az arzu edilir ve daha elden çıkarılabilir hale getirmektedir. Bununla birlikte, zamanla bazı ürünler daha değerli veya daha anlamlı hale gelebilmektedir ve kullanıcıların onlarla olan ilişkisi zayıflamaz. Bu tez, kullanıcıları mevcut ürünlerini değiştirmek yerine daha uzun süre elinde tutmaya yönlendiren bir faktör olarak görülen ürün bağlılığı kavramına odaklanmaktadır. Bu davranış değişikliği, yüksek tüketim oranının düşmesine bir katkı sağlayabilmektedir. Bu tezde amaçlanan uzun süreli kullanıcı-ürün ilişkileri yaratan özelliklere ve nesnelere anlam verme sürecine daha yakından bakmaktır. Elde edilen sonuçlar, nesnelere daha sürdürülebilir kılmak için bu tür özelliklerin ve süreçlerin uygulanmasının mümkün olup olmadığını tartışmaya izin verecektir.

Tez altı bölümden oluşmaktadır. Birinci bölüm giriş bölümünü oluşturmaktadır, bu bölüm konuyla ilgili arka plan bilgilerini içerir. Araştırmanın amaç ve kapsamını, araştırma soruları ile birlikte sunulmuştur. Bu çalışmada, kullanıcılar ve sahip oldukları nesnelere arasındaki ilişkileri keşfedilmektedir. “Kullanıcılar sahip oldukları şeylerle olan ilişkilerini nasıl algılıyor?” temel araştırma sorusudur.

İkinci bölüm, ürün bağlılığı, anlamlı ürünler ve duygusal dayanıklılık konularını kapsayan bir literatür taramasını içermektedir. Bu çalışmada ürün bağlılığı, ürün-kullanıcı ilişkileri üzerinden incelenmiştir. Bu bölümde yer alan başlıklar sırasıyla şöyledir: “Duygusal Bağlamda Dayanıklılık ve Sürdürülebilirlik”, “Gerçek Ürün Ömürleri”, “Ürünlerin Anlamı ve Ürüne Bağlılığı”, “Ürün Örnekleri ile Ürün Kategorisinin Karşılaştırılması” ve “Duygusal Dayanıklılık”. Uzun süreli ürün-kullanıcı ilişkileri konusunu ele alırken, kullanıcının ürün ömrü beklentilerine bakış açısını anlamak önemlidir. Çünkü değiştirilen her ürün onarılamayacak kadar bozuk değildir ve çalışan ürünlerin atılmasına yol açan çok sayıda faktör vardır. Her gün satın alınan çoğu ürün, zaten sahip olunanların yerine geçer. Her ürünün gerektiği gibi çalışması beklenir, ancak kullanıcının ürüne bağlanması için ürünün özel bir anlama sahip olması gerekmektedir. Bağlanma hissi, kullanıcıları ürünle ilgilenmeye, onları korumaya ve belki de ürünün yerine başka bir ürün alma kararını ertelemeye teşvik eder.

Üçüncü bölümde çalışmanın metodolojisi açıklanmıştır. Araştırma nitel ve keşif odaklı nitelikte olup yorumlayıcı bir yaklaşıma sahiptir. Veri toplamak için iki araştırma yöntemi uygulanmıştır. Cultural probes yöntemi ve yarı yapılandırılmış görüşmeler uygulanmış ve bu yöntemlerle ilgili literatür sağlanmıştır.

Birincil araştırma, cultural probes yöntemini kullanılarak yapılmıştır. Cultural probes yöntemi, hayal gücünü harekete geçirerek ilham verici çıktılar elde etmeyi amaçlayan nitel bir araştırma yöntemidir. Cultural probes yöntemi katılımcıların, kendi kendini belgeleyerek deneyimlerine dair veri toplamayı olanaklı kılar ve kullanıcıların da eylemleri ve deneyimleri üzerinde düşünmesini sağlar. Bu çalışmada cultural probes yöntemi derinlemesine bilgi edinmek için seçilmiştir ve yöntemin içerdiği süreç katılımcılarda bir düşünce sürecini tetiklemesi amaçlanmıştır.

Katılımcıların seçilen nesnelere karşı hissettikleri bağların dinamiklerini anlamak için ikincil bir veri toplama yöntemine ihtiyaç duyulmuştur. Bu ikincil yöntemin uygulanmasıyla, daha derinlemesine bilgi edinmek ve katılımcıların değerli öğeleriyle ilgili deneyimlerine ve ilişkilerine daha yakından bakmak amaçlanmıştır.

Dördüncü bölümde saha çalışmasının tüm aşamaları ele alınmıştır. Cultural probes yöntemi doğası gereği ilham verici bir niteliğe sahip olduğundan, onu katılımcıların metaforlar üreteceği şekilde kurgulamak tutarlı bir araştırma tasarımı seçimi olarak değerlendirilebilir. Yöntem, katılımcıları, onları yansıtıcı bir sürece yönlendirerek değerli nesnelere yeni bir ışık altında görmeye davet etmiştir. COVID-19 şartları göz önünde bulundurularak ve aynı zamanda daha çok katılımcıya ulaşabilmek için çalışma çevrimiçi olarak *Instagram* sosyal medya platformu üzerinde gerçekleştirildi. Yedi günlük bir cultural probes çalışmasına ek olarak platformun test edilmesi ve katılımın ölçülmesi için bir test gününün yapılması planlandı. Bir hafta boyunca öğleden sonra aynı saatte yayınlanmak üzere sorular ve görevler içeren hikayeler tasarlandı. Hikayeler 24 saat boyunca yayınlandıktan sonra ertesi gün kaçırın katılımcılar için gönderi olarak yayınlandı. Bir haftalık cultural probes sürecinin ardından, birincil araştırmadan toplanan verileri daha iyi anlamak adına bir dizi yarı yapılandırılmış görüşme yapılmıştır. Tüm katılımcılar uzaktan yapılan görüşmelere evlerinden katıldı. Görüşmelerin önceden kayıt altına alınabilmesi için katılımcılardan izinleri alınmıştır. Zoom platformu üzerinden yapılan görüşmeler platform üzerinden kayıt altına alındı ve birçoğunda video kaydı da yer aldı. Telefonla ve yüz yüze yapılan görüşmeler mobil uygulamalar kullanılarak kayıt altına alındı. Görüşmelerin kaydedilmesi, sırasında not alma ihtiyacını en aza indirdiği için görüşmeler sırasında bölünmeler en aza indirilmiş oldu. Planlanan tüm görüşmeler tamamlandığında ses kayıtları yazıya dökülmüştür.

Beşinci bölüm, bulguların analizi ve yorumlanmasından oluşmaktadır. Nitel içerik analizi yöntemi uygulanmış ve ilgili literatür sunulmuştur. Bu analiz yöntemi ister sözlü ister görsel olsun, nitel verilerin sistematik bir şekilde yorumlanmasında kullanılabilir. Cultural probes yönteminden elde edilen veri, kodlama sürecinde birim olarak alınan görevlere karşılık gelen on altı ana kategori altında incelenmiştir. Kategoriler öncelikle analiz boyunca yapılandırılmış ve süreçle birlikte düzenlenmiştir, bazı kategoriler ise ürün bağı literatürüne dayandırılarak önceden oluşturulmuştur; bu bağlamda strateji hem veriye dayalı hem de konseptle dayalı özelliktedir. Oluşturulan kategoriler içinde kodlanan veri segmentleri, bir kodlama çerçevesini oluşturmaktadır. Elde edilen bulgular ana kategoriler ve onların alt kategoriler altında yorumlanarak sunulmuştur. Yorumlanan bulgular kategorilerin ait olduğu günlere göre düzenlenmiştir. Tüm ses kaydına alınan görüşmeler yazıya dökülmüştür.

Altıncı bölüm tezin son bölümüdür. Bu bölümde araştırma analizinden elde edilen bulguların ve kategorilerin, ürün bağı literatüründeki kategoriler ile örtüştüğünün belirtildiği sonuç bölümü yer almaktadır. Buna ek olarak analiz kısmında öne çıkan bulgu ve yorumlar ifade edilmiştir.





1. INTRODUCTION

In this chapter, the aim and objective of the study are presented with a background of the subject. Also, the structure of the thesis demonstrating each main chapters and research questions are provided.

1.1 Purpose of Thesis

Interest and admiration towards new products, unfortunately, diminish over time, which makes them less desirable and more disposable. However, with time, some products remain desirable or even become more meaningful, and the relationship users have with them does not wear off. Our planet cannot keep up with this high pace consumption culture, so behavioral change concerning replacement habits is a beneficial area to explore. In order to do so, it is essential to understand the reasons which make users want to keep what they already own. This thesis focuses on users' relationships with their products based on the concept of product attachment.

The aim was to define features that create long-lasting user-product relationships and get a closer look at the process of giving meaning to objects. The outcome will allow discussing if implementations of such features and processes are possible to design objects in order to make them more sustainable.

1.2 Structure of The Thesis

- The thesis consists of six chapters. The first part is the introduction part, this part contains background information about the subject. The purpose and scope of the research are presented together with the research questions.
- The second part consists of a literature review covering the titles “Durability and Sustainability in The Emotional Context”, “Actual Product Lifetimes”, “Meaningful Products and Product Attachment”, “A comparison of Product Specimens vs. Product Category” and “Emotional Durability”.

- The third chapter consists of the methodology and the related literature related to these methods was provided. The study was qualitative and exploratory in nature with an interpretative approach. The applied methods were cultural probes and semi-structured interviews.
- The fourth chapter consists of the fieldwork. The procedure and implementation of selected research methods were described in detail.
- The fifth section consists of the analysis and interpretation of the findings. Qualitative content analysis method was applied, and the relevant literature was presented. The cultural probes material was interpreted under sixteen main categories and their sub-categories.
- The sixth chapter consists of the conclusion, in which the findings from the research analysis and the categories are discussed.

1.3 Research Questions

Main Research Questions:

This research will explore the relations between users and the objects they possess. What are users' most precious belongings? How do users perceive their relationship with their possessions?

Sub-questions:

- Which objects are more likely to become irreplaceable?
- What are the most valued objects/products, and why?
- To what extent these valued objects stand the test of time?
- How do objects/products become meaningful?
- How is the decision of discarding an object/product given?
- Which features are regarded in the process of deciding to throw or to keep objects?
- To what degree materials affect decision making?
- What categories could be derived in the context of attachment?

2. LITERATURE REVIEW

2.1 Durability and Sustainability in The Context of Attachment

Stuart Walker points to a “detachment from our material world” which he believes is closely tied with the number of products that are available and the ones that we already possess (Walker, 2006, p. 53). Walker explains this occurrence with people becoming estranged to products origins. Currently, nearly all our products have various components manufactured and assembled in different parts of the world. Users, in general, are unaware of the origins of materials put into the process of production. All these factors make people become distant from the material world as the things we use lack meaning to us. Walker (2006) states that products were “built to last” but now this detachment enables users to see their possessions disposable. Unfortunately, the world cannot keep up with this high rate of consumption and the amount of waste. This is where strong product attachments may have an impact. To slow down this culture of consumption, designers must play an active role as to design in a way that enables users to form durable relationships with their products. As people tend to seek the newest of technology of following new trends, many of them are inclined to get rid of perfectly functioning products just because a new model has been launched. Yet, this search for the latest and the trendiest has no end to it. Chapman states that consumption is an endless cycle of desire and disappointment triggered by complex emotions (2009). The current system is built to make users unsatisfied with their current product as soon as another version of comes out. In the sustainability field, durable person-product relationships are presented as *an eco-design strategy* (Mugge, 2007). By enabling users to build stronger relationships with their possessions the devastating impact of consumption could be decreased.

Chapman states that consumer behaviors are not as simple as they seem as it is a reflection of the users’ aspirations and who they want to become (2009). Understanding the user’ perspective on product life expectancies is important while tackling the subject of long-lasting product-user relationships. Because not every product being replaced is broken beyond repair, and there are numerous factors that

lead to the disposal of functioning products. Most products that are purchased every day are replacements for the already owned ones (Nes & Cramer, 2005). It is stated that consumers want their products to last as long as they want them to, as in, not longer than that (Cox, Griffith, Giorgi, & King, 2013). With this being said, a separation has been made between “absolute obsolescence”, when a product cannot function physically, and “relative obsolescence” replacement of the product for other reasons (Granberg 1997, p.17). This is a reliable indicator that an actual lifetime of a product loses its importance when it becomes replaceable for the user. At this point it becomes crucial to extend the *psychological lifetime* of product; the period where the possession maintain its value for the user (Mugge et al., 2008). Cox et al., also stated that users experience social pressure to keep up with the newly launched products (2013). It is also mentioned that participants failed to see any liaisons between the high rate of consumption and the environment (Cox et al., 2013).

2.2 Meaningful Product Relationships and Product Attachment

What is referred as product attachment is a bond between a specific person and a specific product they own (Kleine,1995; Schifferstein, Mugge, and Hekkert 2004; Mugge et al., 2008). Chapman explains attachment as users feeling a bond with the product because of “the service it provides, the information it contains, and the meaning it conveys” (2009). Product attachment becomes a relevant topic in the design field in two ways. Primarily the creation of product attachment can be used to generate emotional experiences or it can be used as a sustainability tool to prolong product lifecycles (Mugge, Schoormans, & Schifferstein, 2008). The feeling of attachment triggers users to take care of, protect, and perhaps postpone the replacement of products (Mugge et al., 2005; Savaş, 2004). Every product is expected to function the way they are meant to, but for an attachment to form, a special meaning is required (Mugge, Schoormans, & Schifferstein, 2008).

2.2.1 Meaningful Products

Richins states that meanings are what makes possessions valuable and discusses the meanings of possessions in two categories being “public meaning” and “private meaning” (1994). Public meanings are appointed and shared by members of a society while private meanings are personal (Richins, 1994). Both categories of meaning are

subjective and objects that possess private meanings are not excluded from public meanings. Battarbee and Mattelmaki suggested a categorization for “meaningful product relationships” as followed (Figure 2.1); “meaningful tool”, “meaningful association”, and “living object” (2004).

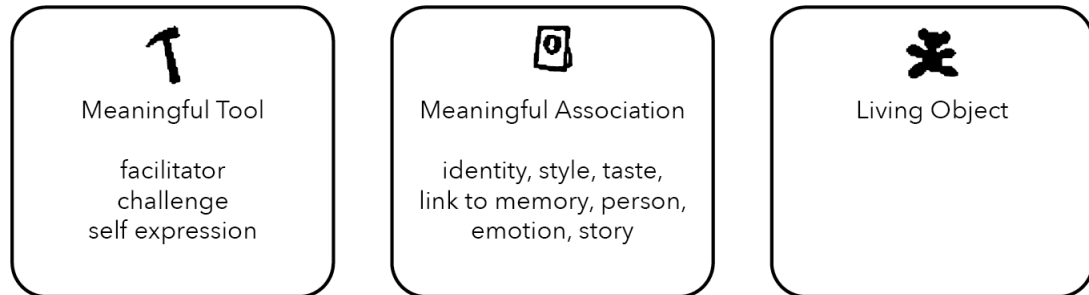


Figure 2.1 : Meaningful product categories (Batterbee and Mattelmaki, 2004)

The category of “meaningful tool” consists of things that are used to accomplish a purpose, and the meaning lies within the goal and not the object itself. There are also three sub-groups of meaningful tools which are: facilitator, challenge and self-expression. A facilitator is explained as a tool for fulfilling any kind of need. The challenge category includes tools that require the user's attention and time to perform a certain task like a musical instrument. Lastly, self-expression tools allow users to express their selves. These sub-groups may also intersect as in a musical instrument which is a combination of both categories challenge and self-expression.

Battarbee and Mattelmaki’s second category is "meaningful association" which includes subgroups of identity, style/taste, link to a memory/a person/an emotion/a story (2004). Products that fall into this category have a meaning other than their purpose, and they represent a part of the user’s identity, past or loved one. A significant aspect of attachment is the link with the owners’ self. Possessions to which one is attached to reflect elements of their life; these objects tell segments of the owners story (Kleine, 1995). It is also stated that possessions are used as tools to become and identify one's self (Belk, 1988; Kamptner, 1991). Belk adds, materials owned are used as ways of self-expression, reminders of people, memories, past experiences, and even the very self (1988). What people chose to surround themselves are reflections of their identity (Csikszentmihalyi and Rochberg-Halton, 1998). This means what is chosen to be owned can have a meaning in the first place. Possessions which are linked to the owner’s identity may also embody beliefs and values (Belk, 1992; Kamptner, 1991).

Lastly, the living object category stands for “companion” products that have a long history with the user and believed to have its own identity (Batterbee and Mattelmaki, 2004). Besides the first category “meaningful tool” it could be said that meaning is closely linked with experience and memories. By looking at this, memories seem to be a dominant theme when it comes to meaning as they are personal and constitute a part of one's identity. Mugge, Schoormans, and Schifferstein, claim that memories could be an important factor for long-lasting user-product relationships (2008). Tom Page’s research findings also suggest that the essential concept of attachment was memories (Page, 2014).

2.2.2 Product Attachment

Schifferstein and Zwartkruis-Pelgrim, (2008) state that an irreplaceable product must have a symbolic meaning for the user, and no other product could take its place even if it were “physically identical”. This being said, the distinction between attachment to a “product specimen” and “product type” should be made. Attachment to a product specimen refers to a particular product which is unique for the user. While attachment to a product type stands for an attachment to a category of products, which means all products in that specific category will have value and meaning to the user (Mugge et al., 2008).

Schifferstein and Zwartkruis-Pelgrim claim that the strongest bonds observed between users and products are with the newest and the oldest ones (2008). Mugge et al. present four categories of product attachment determinants (2008). These determinants which can stimulate attachment are “pleasure”, “self-expression”, “group affiliation”, and “memories”.

- The first category of pleasure includes products that give the user a sense of pleasure and could be summarized as being of good quality, having superior features than other specimens and offering some kind of entertainment and relaxation. However, pleasure will not necessarily result in attachment. A product may be of a good quality, but other specimens from the same type of products will also elicit similar or even more positive feelings. Pleasure alone will not be enough for a user to keep a product longer with all the new models and technologies emerging. Nevertheless, pleasure is not an exclusive quality for only new products. Products that are owned for a long time have the ability to elicit feelings of comfort

and familiarity (Page, 2014). Page suggests, in the theme of pleasure, users are found to be experiencing most enjoyment and satisfaction of the tangible and material properties of products which are also relevant in the case of products that are owned for a long time period (Page, 2014). Even in the case of appearance, products which show marks of being used and wears in a way that pleases the eye allow users to have a stronger bond with them as the marks reflect a personal history (Schifferstein, Zwartkruis-Pelgrim, 2008). Chapman also states the importance of “growing gracefully” as in, a product being more attractive with the wear and tear (Chapman, 2015). As marks of usage provide a sense of character, they offer multiple layers of meaning firstly, a feeling of uniqueness, past, and a pleasing appearance. Marks being unique may increase the attachment and make the product irreplaceable. Chapman (2015) says users cannot be attached to products which do not reflect a character.

- Self-expression is a subject that often comes up in the context of product attachment. Products can represent one’s individuality (Mugge, 2007). Products which reflect a part of the user’s identity will usually have a meaning for them and thus will stimulate attachment (Mugge et al., 2008). Yet, it is also stated that people do not have fixed identities as they are evolving throughout their life which makes them outgrow their possessions (Chapman, 2015).
- Products under the category of group affiliation also stand for a symbolic meaning and connectedness with other people like family, social groups and family. (Mugge et al., 2008).
- The previously mentioned category of memories act as a symbolic reminder of people, places and the past for owners (Belk, 1990). Page states that memories stood forward as the most mentioned aspect of valued products (2014). Mugge, Schoormans and Schifferstein (2005) claim point out that users’ memories with products are formed apart from the design of products; rendering the implications of design choices unclear in the context of memory formation.



3. METHODOLOGY

The research's focus was to explore users' attachments to their most valued possessions, i.e. a variety of different objects and products, and to gather metaphors concerning these possessions and attachments. This research is of a qualitative and exploratory quality and has an interpretive approach. The primary data is gathered through the use of cultural probes and is supported by data collected at an individual level with semi-structured interviews to get an in-depth understanding of participants' relationships and experiences with their objects. Lastly, data was analyzed using the qualitative content analysis method. The research methods, research design choices, data collection and data analysis method are demonstrated and justified in the following segments.

3.1 Cultural Probes

Cultural probes method was originally established by Gaver, Dunne and Pacenti (1999) during the research project Presence investigating three different elderly communities. The cultural probes method is intended to gather inspiring outputs by sparking the imagination (Gaver, Dunne, & Pacenti, 1999). Essentially, probes offer deep understanding by self-documentation, making users reflect on their actions and experiences (Mattelmäki, 2005). The method also aims for a balance to establish an open dialogue between designers/researchers and users/participants. This dialogue is steered by the researcher and yet the users are understood (Gaver et al., 1999). While doing so, the researcher provokes participants with probe kits for self-documentation to receive enriching insights concerning their experiences, perspectives and emotions (Gaver et al., 1999). Kits contain elements which offer participants various tools to get inspired and imaginative, such as disposable cameras, crayons, maps, questions with illustrations and photo albums (Mattelmäki, 2006). The cultural probes method laid the foundation of the method design probes which was used in the context of user centered design as it serves as "agents of dialogue" (Mattelmäki, 2006).

As cultural probes method has an inspiring quality by its nature, implementing it through generating metaphors was a consistent research design choice. The method invited participants to see their valued possessions, i.e. precious objects, in a new light by leading them through a reflective process.

3.2 Semi-Structured Interviews

In the pursuit of understanding the dynamics of the attachments felt towards participants' selected objects, a secondary data gathering method was needed. This secondary method ensured in-depth information and a closer look at the participants' experiences and relationships concerning their valued items.

Semi-structured interview is a qualitative data gathering method at an individual level (Schensul, 2012). With semi-structured interviews there are generally some distinct information which researchers aim to acquire (Merriam & Tisdell, 2016, p. 110). The questions aimed for receiving these answers make up the more structured parts of the interviews. There usually is a list of questions and topics yet the researcher does not follow a specific order and can also take initiative with responses by asking further questions, exploring new ideas and issues that come up during interviews (Merriam & Tisdell, 2016, p. 110). This was a key point in choosing semi-structured interview method in the research. The cultural probes would be a process of reflection and as a secondary method the semi-structured interviews would serve the study by making participants explore the topic in more depth and express ideas concerning the process.

3.3 Qualitative Content Analysis

The method qualitative content analysis was implemented for the generated data. Qualitative content analysis is used when data needs an extent of interpretation. This analysis method involves the interpretation of qualitative data, whether verbal or visual, in a systematic manner. Segments of data are coded within categories that constitute a coding frame. While doing so, the material is reduced, meaning that relevant parts of data are included in the analysis (Çelikoğlu, 2015). This method of analysis is not applied to acquire the complete meaning of the material. The researcher must specify the angles from which they will be examining the data according to their research questions (Schreier, 2013). The method is also flexible as the coding frame

built around the material will be revised along the analysis to remain valid and consistent (Çelikođlu, 2015).





4. FIELDWORK

The fieldwork consisted of two stages of data generation: First, cultural probes kits were prepared and introduced to the participants through an online medium. Once the cultural probes process was completed, semi-structured interviews were conducted with individual participants who took part in the cultural probes process. Both data collection processes are described in detail in the following sections.

4.1 Cultural probes

4.1.1 Participants

The study initially had 47 participants, yet not all have completed the probes process. Twenty-five of the participants have attended until the end of the study which lasted seven days and have completed tasks. The ages of the participants ranged between 18-65, the majority being young adults between 25-35 living in Istanbul. However, age did not have significance in the study. Also, gender had no importance in the research, so this information was not requested from the participants. The only requirement for participants was to have an object, product, or item they would not prefer to give up on and which they possessed for a long time.

4.1.2 Cultural Probes Implementation

The method cultural probes was conducted on an online social media platform as it could be a means to reach more participants. Also, the COVID-19 pandemic was a factor in the decision to conduct the research online. Hamarat (2021) states, the familiarity aspect of the social media platform Instagram could serve as an advantage in the study. Before designing the tasks, the platform was examined to see in which ways it allows participants to respond and interact. It has been observed that participants could respond to daily stories which had question stickers. There were other stickers available which allowed them to pick songs and directly send them. Also, participants could send reactions and images. In the information provided ahead and throughout the study the participants were made known the ways in which they

can convey their feedbacks. These were typing in the designated area on the stickers, sending answers as comments on the related post or sending answers as direct messages to the account. Songs could also be sent through reacting to the specialized stickers and also by written form through direct messages and comments. Following this examination tasks were designed considering these means provided by the platform.

In the preparation stage of the study a new account was created on Instagram with the username “kiymetli_seylerimiz”. The username could be translated as “our precious stuff”. Later, a theme and a graphic outline were established for the posts, stories and highlights (Figure 4.1).

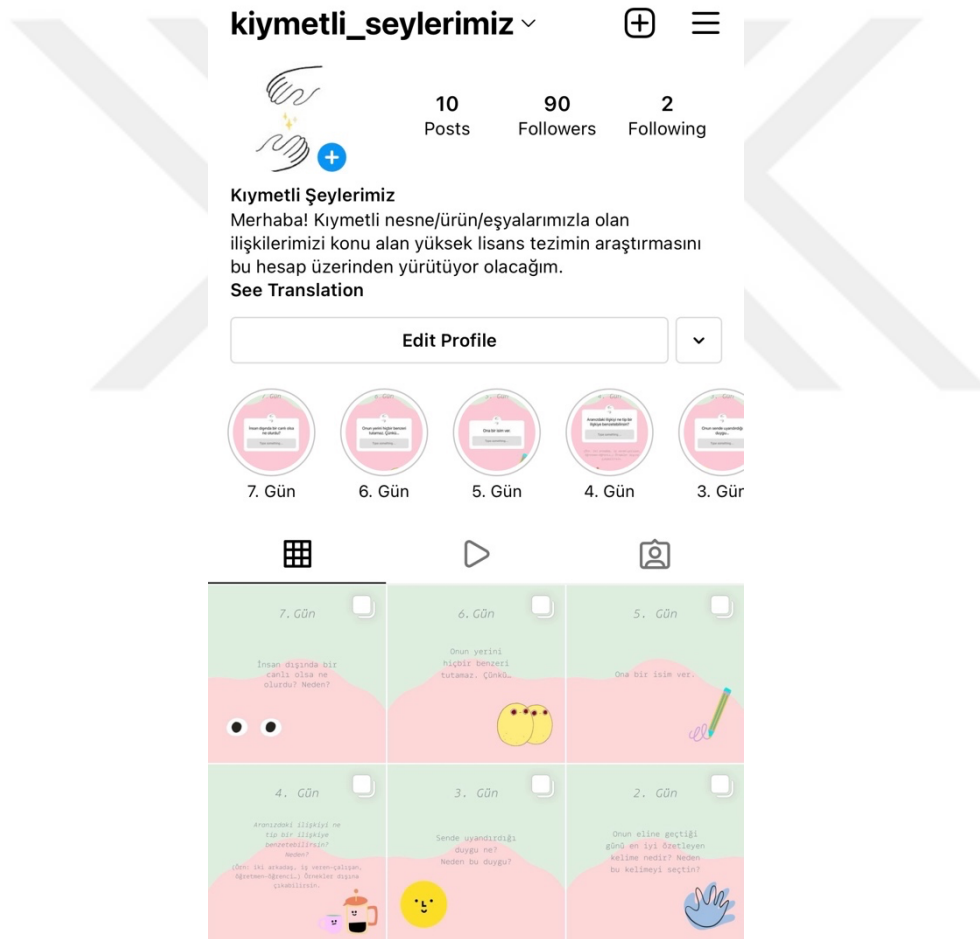


Figure 4.1 : An overview of the cultural probes account.

As the nature of the context was personal, the design of the probe, as in colors and graphics was intended to have a friendly, humorous and fun character. The illustrations and GIFs were also meant to add a more approachable tone to the overall design. The attitude of the account was important for it was the medium of communication that

could allow participants to feel sympathetic and open. This was essential in getting genuine and insightful responses.

The cultural probes study was planned to be seven days long, plus a day for testing the medium and participation. Every day there were stories consisting mainly of questions and some tasks. These were posted at the same time for a week, that being 3 PM. The stories were available for 24 hours, then they were put up as posts for participants who missed them the following day. Also, past stories were fixed as story highlights the next day. This posting and story system, which was implemented, was inspired by the research of Hamarat (2021) conducted on Instagram on the account “hey_scooty”.

Following the creation of the account, templates of posts and the overall design the account and study was announced to gain followers who were willing to be participants for the research. Two informative images were posted regarding the process and scope of the study (Figure 4.2). The first post disclosed the requirement to be a participant in the study which was having a treasured product/object/item for a long time which one would not prefer giving up. On the second post, participants were informed on the process, the eight-day duration and how the tasks could be accessed. Another information provided was that all tasks would be done regarding the selected product/object/item except the trial day.

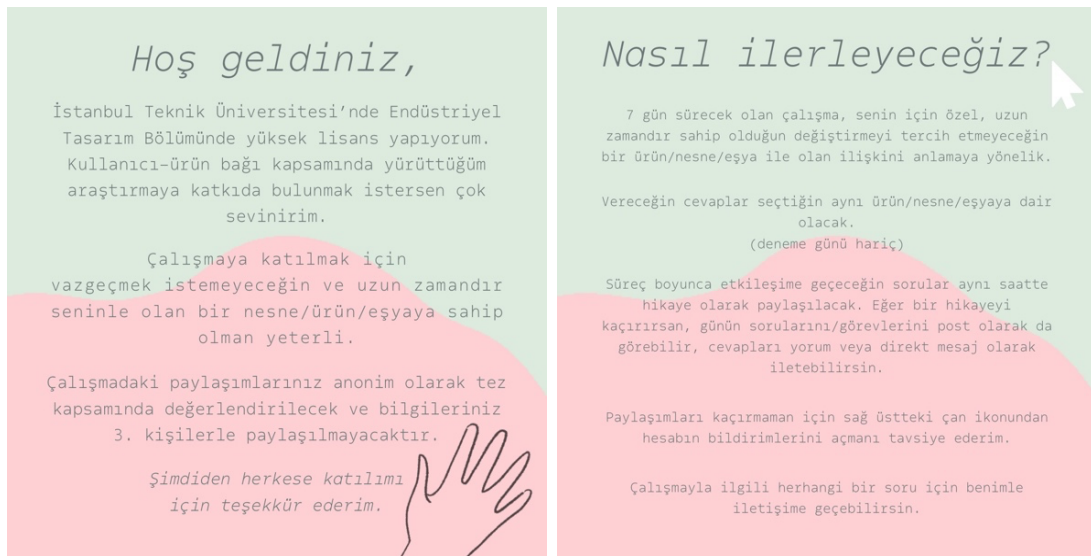


Figure 4.2 : Informative posts.

Prior to the trial day task, a countdown animation was shared, and the trial day was announced (Figure 4.3). Participants were advised to follow the account and to enable notifications to be reminded and notified of tasks as they were posted. The countdown

animation and the following stories were all posted with music. All stories prepared for the eight days had separate songs chosen for them to make the process more fun and interesting for the participants. Also, all tasks were presented with related GIFs to both draw the attention of participants and to inspire them. Each day's tasks were presented individually and sequentially. Every task had its separate sticker and story slide with a bar in which participants could type in or pick a song. Originally, in most studies cultural probe kits included disposable cameras for participants to take photographs for tasks. In this study participants were able to take photographs and send images with their smartphones which would make the process more convenient for them.

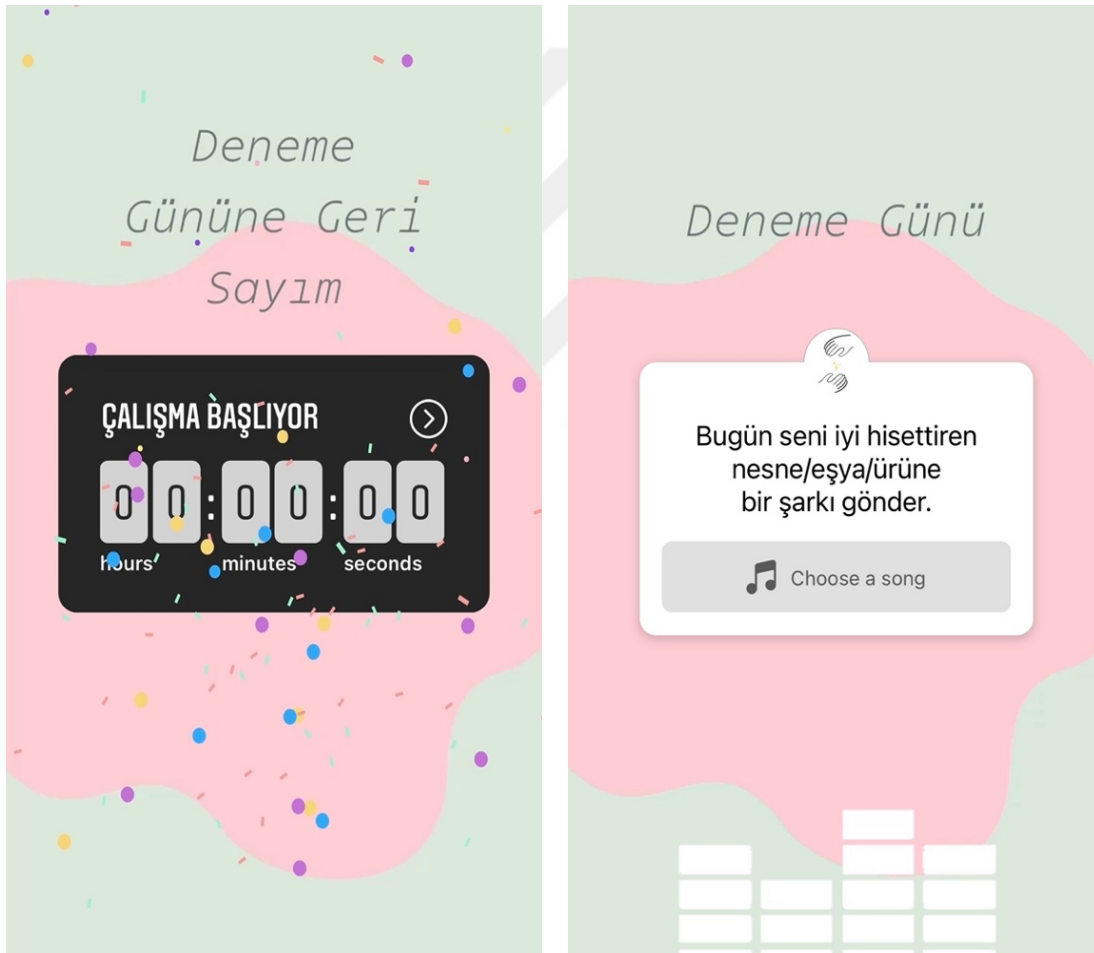


Figure 4.3 : Countdown and trial day stories.

Through the literature research there were certain key points in the context of attachment which were touched upon in questions to investigate the attachments. The questions were also constructed in a manner which would promote participants to reflect on their possessions and their relationships with them, metaphorically. This was ensured through questions and tasks which guided them to liken and compare aspects

of the possessions and relationships (Table 4.1). The goal in doing so, was to gather metaphors that would shed a light on how participants perceived their belongings and the relationship they had with them.

Table 4.1 : Tasks and their distribution.

Day	Task
Trial	1- Send a song to an object/item/product that made you feel good today.
1	<p>1- Can you give an example of a product/objects/item that you would not prefer replacing and that you've had for a long time?</p> <p>Can you describe your product?</p> <p>2- How long has it been with you? How did you acquire it?</p>
2	<p>1- Which word best describes the day you acquired it?</p> <p>2- Why did you choose this word?</p> <p>3- Which period of your life would you associate it with?</p>
3	<p>1- The feeling it evokes...</p> <p>2- Why?</p> <p>3- It symbolizes...</p> <p>4- Why?</p>
4	<p>1- What type of relationship would you say your relationship is like?</p> <p>2- Why?</p> <p>3- If your relationship with your product was a story, what would the theme be?</p> <p>How would your story end?</p> <p>4- Chose a song that describes your relationship.</p>

Table 4.1 (continued): Tasks and their distribution.

Day	Task
	5- Your similarities...
	6- Your differences...
5	1- Can you name it?
	2- If it had a face, who would it look like?
	3- Why?
	4- What would the first thing that it would say to you?
6	1- Nothing can replace it. Because...
	2- How would it convince you to stay, if you wanted it to leave?
	3- What would make you want it to leave?
	4- How do you take care of it?
7	1- What would it be if it were a living being other than human?
	2- Why?
	3- What would its good and bad character traits be if it were the main character of a story?
	4- If it had a three-sentence adventure, how would it go?
	Sentence 1...
	5- Sentence 2...
	6- Sentence 3...

On the trial day participants had one task which was to pick and send a song to an object/product/item that made them feel good that day. The intention was to let the participants have an idea about how the tasks will proceed and how they will interact

with the account created for the research. They could pick any object and have a general feeling of how the study will go on.

The tasks of the first day were formed to make participants define and describe their treasured belonging (Figure 4.4). The questions were asked to gain some general information on the type of the belonging, how old it is and its origin story. The participant was asked to describe it to provide a feeling of how the object is perceived by them. Lastly, they were asked to send a photograph of the object.

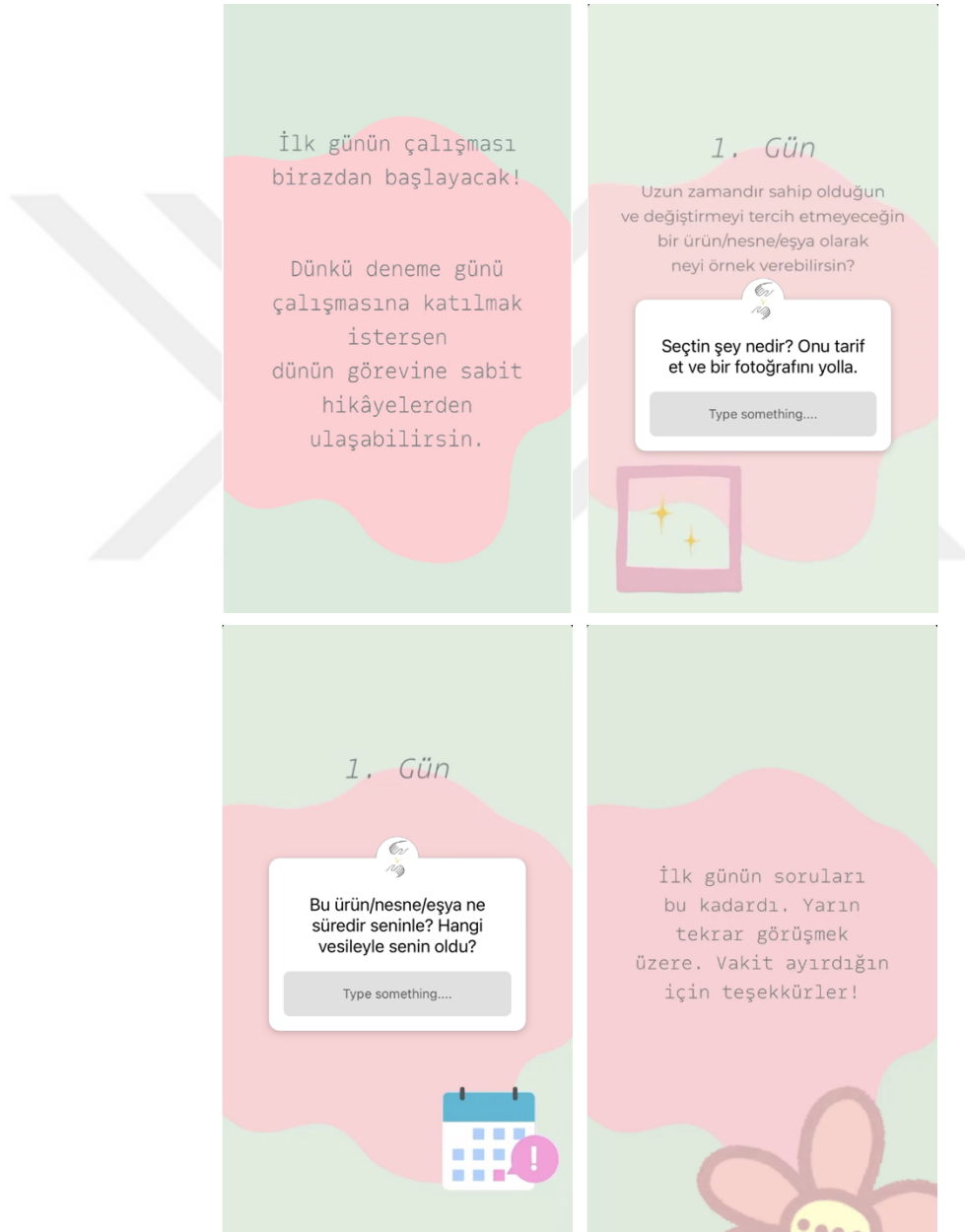


Figure 4.4 : Some stories from the first day.

The second day consisted of three tasks which were mainly in the domain of the origin story of the selected belonging (Figure 4.5). The first task was about the day the

belonging was acquired; participants were asked to provide a word that would best describe the day. The intention was to explore any meaningful associations with the object and time. Also, they were asked if the object was linked with a period of their lives again to investigate any connotations which the object would possibly have.

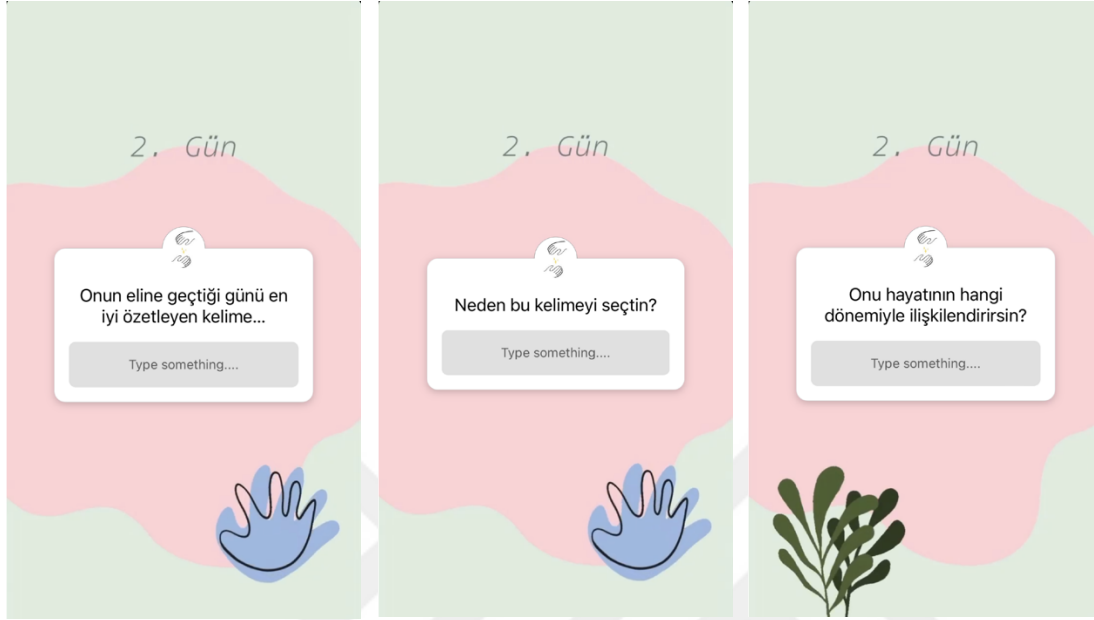


Figure 4.5 : Some stories from the second day.

The third day consisted of four tasks that examined the feelings which the belongings evoked and what the belongings symbolized for the participants (Figure 4.6). These tasks were aimed to discover the kind of meaning that is attributed to these belongings by the participants. The questions were meant to investigate the significance of the selected objects by allowing the participants to elaborate on their feelings and thoughts concerning them.



Figure 4.6 : Some stories from the third day.

The fourth day included six tasks (Figure 4.7). The first task's aim was to prompt the participant to reflect on the relationship by asking them to liken it to another form of relationship and to give reasoning to their answer. This was intended to reveal the dynamics of the relationship as well as the role of the belonging in the eyes of the participant. Next, the participant was asked to provide a theme for their relationship if it were to have a story and to again give reasoning. This was also to have the participant reflect on the relationship further also to have them think of the general feeling and atmosphere regarding. Following, they were requested to pick a song that would best describe the relationship which was also part of the reflection process.

Finally, the first attempt to personify was made with the tasks that asked the participants their similarities and differences with their belonging. This task also aimed to make participants generate some metaphors and inspire them to reveal more meaning regarding their object.

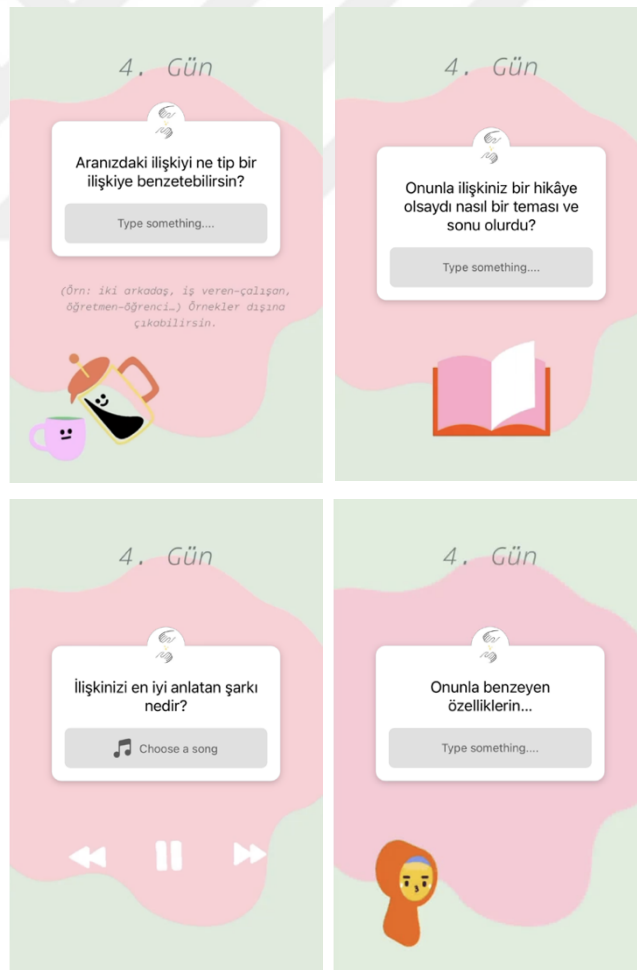


Figure 4.7 : Some stories from the fourth day.

The fifth day consisted of four tasks. The first task was to give a name to the object. This was another step to animate the belonging and making it easier for the participant to express emotions and associations. Next task was meant to make participants assign characteristics with the help of metaphors by imagining a face for the object. Last task of the day was to make the participant imagine the object talking that would again unveil aspects of the relationship (Figure 4.8).

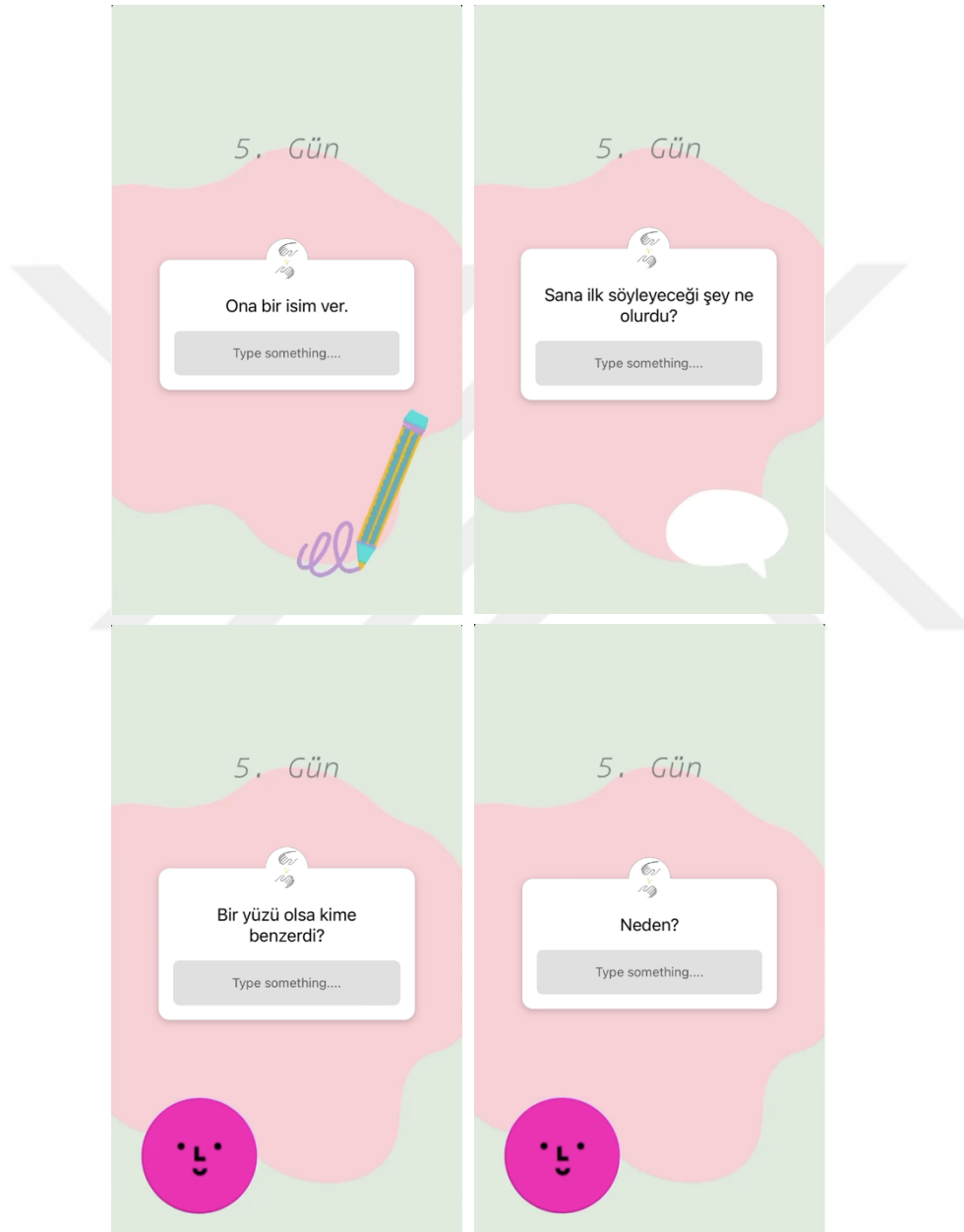


Figure 4.8 : Some stories from the fifth day.

The sixth day had four tasks (Figure 4.9). The first task was about the aspect of the irreplaceability of the chosen object, which is an indicator of attachment. Participants were asked to state the properties that made their belonging irreplaceable. Following

the first task, they were asked to explain how the belonging would argue against leaving. This second task was also referencing a similar domain. Additionally, it had the potential to reveal deeper meaning by having the participant empathize with the object during the reflection. The third task was on the act of discarding the object. The purpose was to determine how, when and if the participant decides on giving up on the belonging. Lastly, they were asked to state the ways in which they took care of their products, as maintenance and repairing are linked to product attachment.

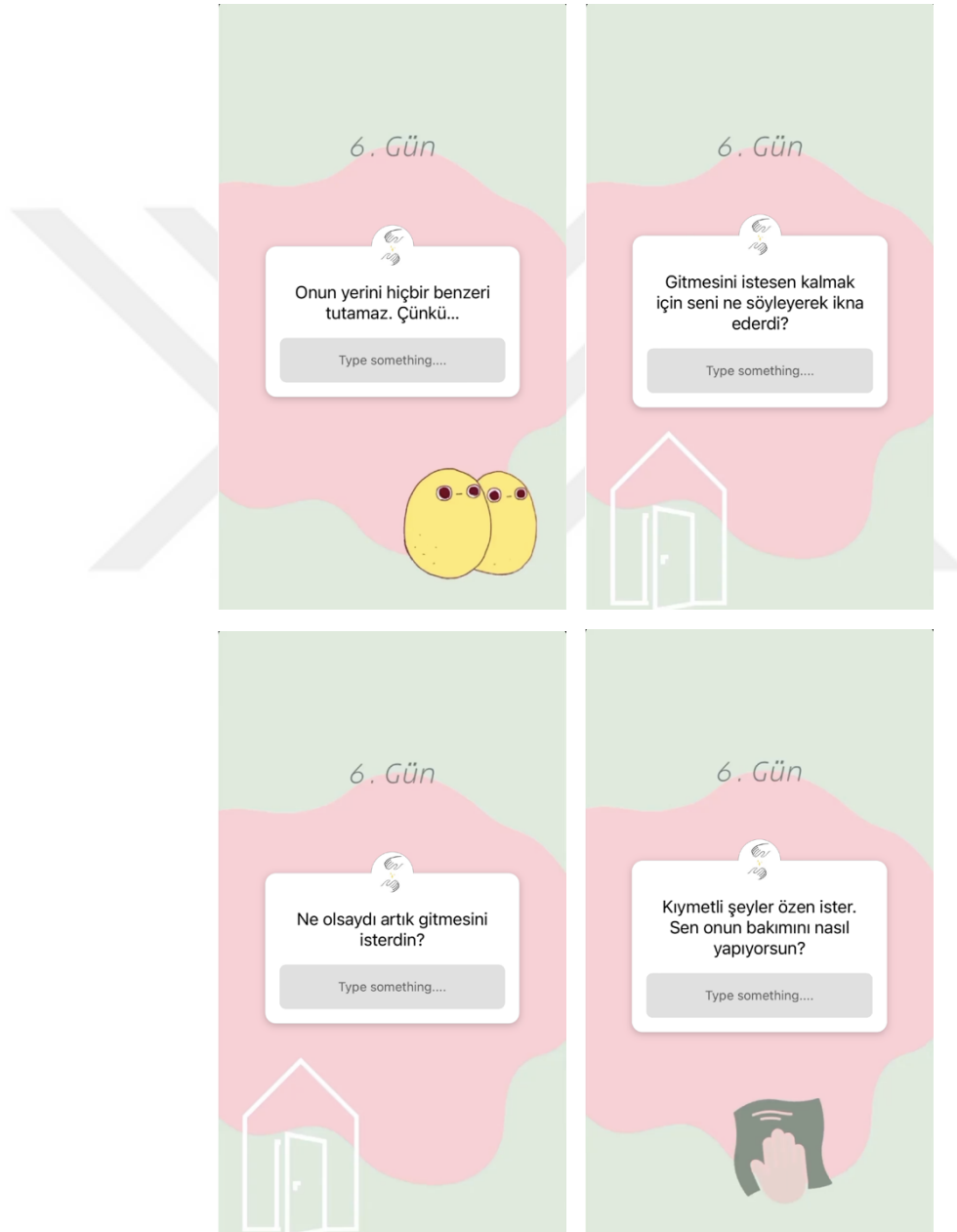


Figure 4.9 : Some stories from the sixth day.

On the final day there were six tasks to be completed (Figure 4.10). These tasks were essentially concerning animating the object. First, the participant was invited to

imagine their belonging as a living being which would result in another metaphor generation. Following this task, they were asked to state their reasoning for their response. The third task required to think of the object as a main character to lead the participant disclosing more personal detail about it. Finally, after picturing it as a main character the participant is requested to make up a three-sentence adventure of the object. This task also had the intention of having more light shed on the meaning the object possesses and having the participant further reflect on the relationship.



Figure 4.10 : Some stories from the seventh day.

4.2 Semi-structured Interviews

4.2.1 Participants

Eleven participants were selected to conduct semi-structured interviews following the cultural probes study. These participants were selected regarding the material they provided during the primary research as they could potentially offer more insight and understanding. Additionally, the participants who have been selected each had possessions belonging to different categories which offered variety. Ages of the participants ranged between 26 and 69. Occupations were also divergent. Participants were from fields such as marketing, design, academia, engineering, architecture and law.

4.1.2 Procedure

On average, the interviews lasted about fifteen minutes, most of which were conducted online over Zoom. Two participants preferred having the interview through phone calls because they were unfamiliar with the platform Zoom. In addition, one participant was interviewed in person as it was more convenient considering the circumstances at that moment. However, primarily online interviews were preferred because of COVID-19 safety reasons and also for convenience. All participants joined the distant interviews from their homes. Their consent was taken in order to record the interviews beforehand. The interviews conducted over Zoom were recorded through the platform and most of them also included video recordings. Audio of the ones conducted over the phone and in person were recorded with a mobile application. Recording the interviews allowed to have smoother processes as it minimized the need for taking notes during. When all planned interviews were finalized the audio recordings were transcribed.

The selected participants' belongings were a necklace, a lamp, a nightstand, a backpack, a laptop, a seating group, a pair of sneakers, a swiss knife, a sketchbook, a cup and a laptop stand. Questions for the interview were formed considering the material generated from the cultural probes and they included specific questions related to the individual responses of the participants. Each interview started with a question that invited to talk about their selected belonging reminding them what they have chosen. Alternatively, participants were asked to talk about their objects. In other cases, the primary question would be about the origin story of the object that led the participant to elaborate on the object's history. Following the initial responses following questions would differ regarding the participants' answers. Lastly, all were asked what they would do if their belongings broke and became unusable.



5. ANALYSIS AND INTERPRETATION OF THE FINDINGS

5.1 Coding

The data generated from the implementation of the cultural probes method was handled regarding each individual task. The tasks were distributed over seven days. In the following section, interpretations of the findings are presented according to the days to which tasks belong. Categories were primarily structured and adjusted along the analysis, while some categories were established beforehand based upon the literature of product attachment making the strategy both data-driven and concept-driven. While analyzing the material all tasks were taken as individual coding units. These categories have sub-categories which consist of the coded material (Figure 5.1). The analysis and coding were done using the software MAXQDA (Figure 5.2).

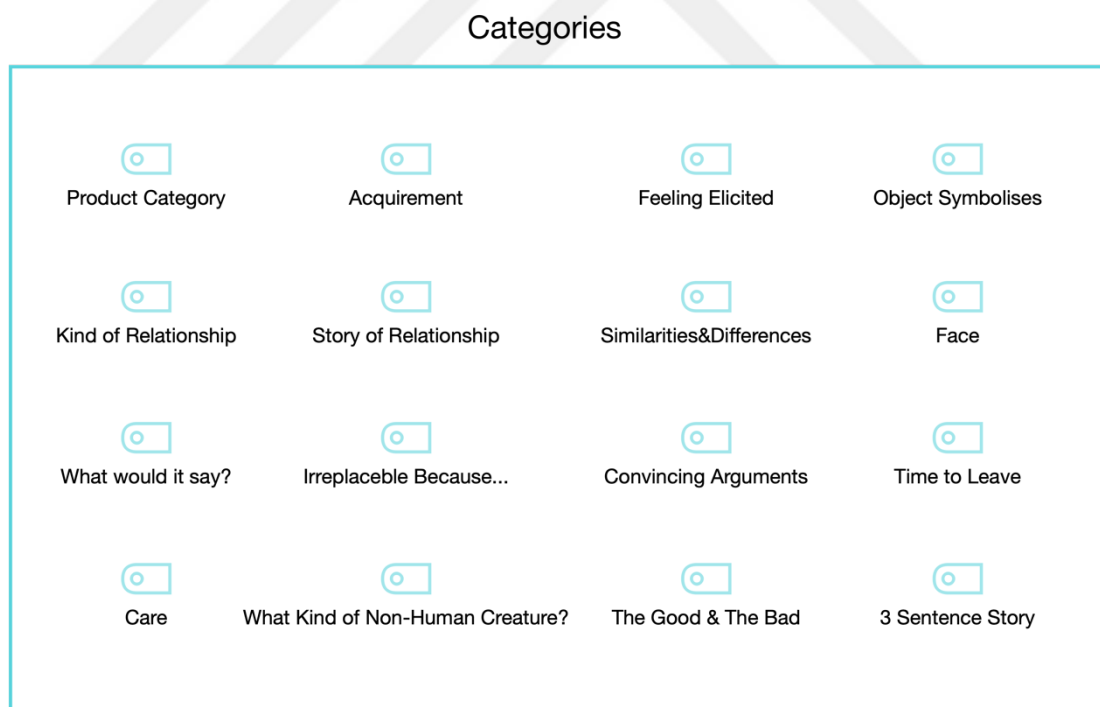


Figure 5.1 : Categories derived from data.

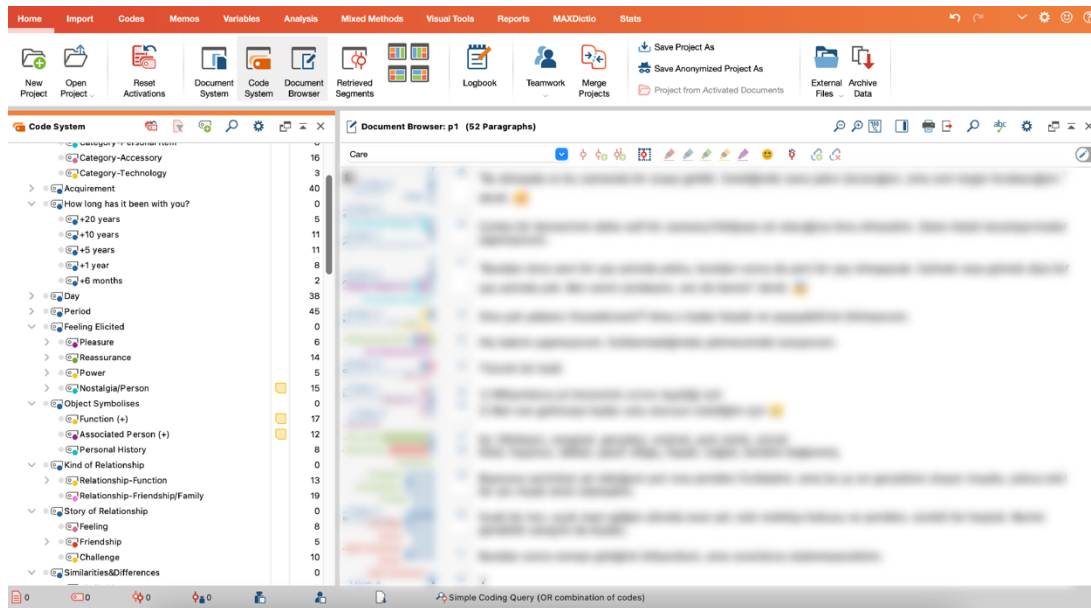


Figure 5.2 : An instance of coding process using MAXQDA.

5.2 Interpretation of the findings

- Day of testing

Send a song to an object/item/product that made you feel good today.

This task was aimed to see the level of participation and to have the participants' attention. The song picking task was meant to add a fun element while providing the participants with an idea of the process. Outcomes of the trial task were not included in the analysis.

- First day of the study

Task 1 - Can you give an example of a product/objects/item that you would not prefer replacing and that you've had for a long time? Describe your product and send a photograph of it.

The first task of the participants was to decide on a belonging which could be a product, an object or an item which they would rather not give up and which they had for a long period of time. This task was the beginning of the reflection process and it led participants to further examine their selection by describing it. Data of this task was categorized into product categories. Thirty-eight participants have completed this task and the following six categories were deducted: furniture, domestic product, technology product, mobility product, accessory and personal item.

Photographs of objects that were shared by the participants are presented in the Appendix A (Figure A.1; Figure A.2). Sixteen participants have selected a product which belongs to the accessory category making it the top category followed by the order furniture (7), personal item (6), technology (3), domestic (3) and mobility product categories (2) (Figure 5.3).

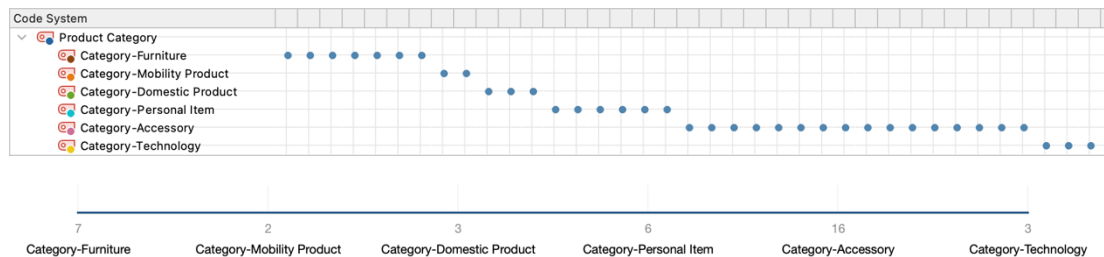


Figure 5.3 : Product categories.

- Task 2 - How long has it been with you? How did you acquire it?

The results for the first question which was answered by thirty-six participants, ranged between +6 months to +20 years. Only two participants selected items which they owned for a period of approximately 6 months. Eight participants had their selected belongings for over a year, eleven participants over five years, ten participants over ten years and five participants over 20 years (Figure 5.4).



Figure 5.4 : Distribution of the products' ages.

In the next part of the task the way in which participants acquired was asked. The data from this question was categorized into three groups being “bought”, “gift” and “self-made” (Figure 5.5). Twenty-three of the selected belongings were self-bought, sixteen were gifted to the participant and one was self-made.



Figure 5.5 : Distribution of acquisition ways.

- Second day of the study

Task 1&2 - Which word best describes the day you acquired it? Why did you choose this word?

Thirty-eight participants have answered these two questions. The answers were coded, and five categories were derived: “place/state”, “appearance/style”, “associated person”, “product”, and “ordinary”.

The data coded as place/state included emotions concerning the day, mood or place in which the participant happened to be. For example, a participant bought the product in question in a chaotic day and their answer was “chaos”. Some participants gave answers related to travelling, the city they were visiting and the emotions they felt in regard to it. Like “Berliner” referring to a feeling of belonging or “feeling fluid” because of the distinct flow of the day.

The code appearance/style included answers stating how the participant perceived themselves appearance and style wise. Two answers had been coded as this category and they were “cool” and “felt beautiful”.

“Associated person” was one of the prevalent codes for this task. Nine participants have chosen the words concerning the person who is associated with the product to describe the day. Not all words were openly related to the associated person, the second task’s answers provided reasoning for the chosen words. The reasons were evaluated, and the coding was made accordingly. We can give “decluttering”, a participant’s response, as an example. The link with a person is not apparent yet the following answer reveals that the belonging has been gifted by the mother of the participant and decluttering was something that her mother did.

The code “product” was the most frequent out of the five. This code was given to answers related to the selected belongings. The answers included emotions, physical properties or functionality. Nearly all attributes and feelings were positive except one which was “fear” yet what was feared was the loss of the belonging. Other emotions were joy, excitement, curiosity, feeling of accomplishment which were all related to the belonging. Answers mentioning physical and functional properties were about endurance, multifunctionality and comfort.

The last code was “ordinary” which included statements indicating the day had nothing particular or that the participant is not able to recall the day.

- Task 3 - Which period of your life would you associate it with?

Thirty-four participants have answered the question. Nearly all responses consisted of periods which could be regarded as favorable. Responses included periods referred as freedom, youth, new beginnings, changes, childhood, college, marriage and maturity.

- Third day of the study

Task 1&2 – The feeling it evokes...Why?

The first and second tasks were completed by thirty-one participants. Responses were categorized and five codes were deducted: reassurance, memories/person, pleasure, and power (Figure 5.6).

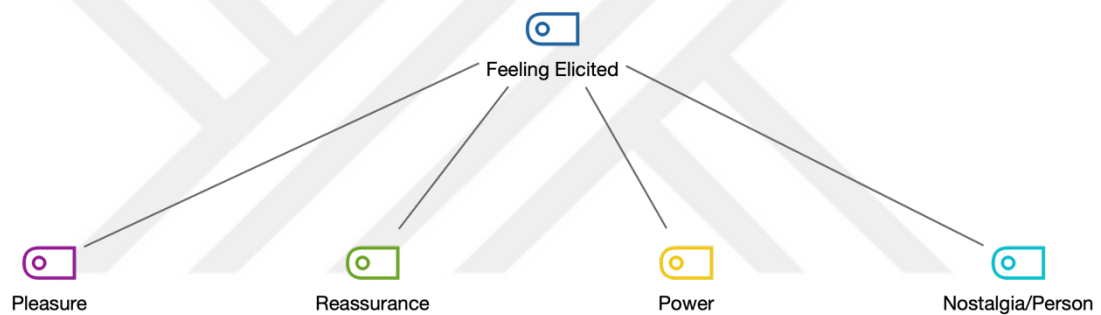


Figure 5.6 : Categories of feelings.

Thirteen statements were coded as reassurance which refers to feelings that comforts the participant such as trust, security, feeling home, warmth and tranquility. Eleven statements were coded as memories/person. These statements include feelings like nostalgia, love, sadness and motherhood which are associated with memories or certain people.

Power as the third code with five statements includes feelings that provide participants with a sense of capability and potential. Responses of participants such as feeling strong, functional, stylish, eye catching were coded as power because the belongings grant them a means to feel strength in a particular area. Lastly, the code pleasure includes positive feelings that are linked to the use of the selected products such as excitement, curiosity and joy. Five statements fell into this category.

- Task 3&4 – It symbolizes...Why?

Thirty-two participants responded to the third and fourth tasks. Three codes were deducted from the data: associated person, personal history and object property (Figure 5.7).

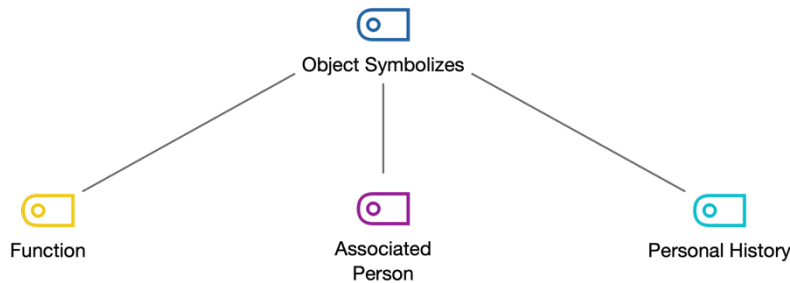


Figure 5.7 : Categories of symbols.

Twelve responses were coded as “associated people” (Figure 5.8). The statements were in relation to the important people in the participants’ lives. Responses included symbols such as friendship, family members, love and heirloom. “I mean, if I could find a pair of shoes just as beautiful, I would love it too. Surely, I would feel comfortable, but my aunt is such an important person in my life, she has always given me confidence. Let's call this one a symbolic object.”

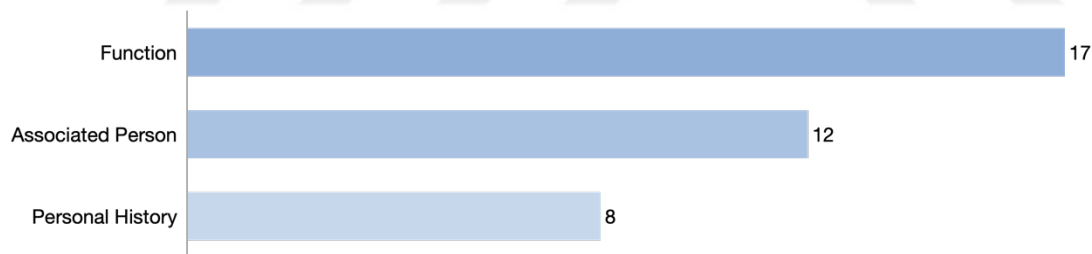


Figure 5.8 : Distribution of symbols codes.

For seventeen of the participants their objects symbolize things regarding a certain property of the belonging that may be physical or functional. The symbols stated in this context were coded as “object property”. For example, some participants stated that their belongings symbolized comfort, durability and technology in the context of function, while others mentioned them being symbols of grace and harmony. In another instance, a participant states that their laptop symbolizes “a friend who I can reach out to at any moment”.

The third code was personal history. The seven symbols that were coded as personal history consisted of certain memories, times spent and experiences. Participants mentioned their childhood, times they spent working and change.

- Fourth day of the study

Task 1&2 - What type of relationship would you say your relationship is like? Why?

The first question was intended to make responders reflect on their relationship with their belonging and generate metaphors. Second part was to ensure that they elaborated the reasoning for their responses so that the meaning would be clearer. The responses to the main question were categorized with two codes being “function” and “friendship/family”. (Figure 5.9)

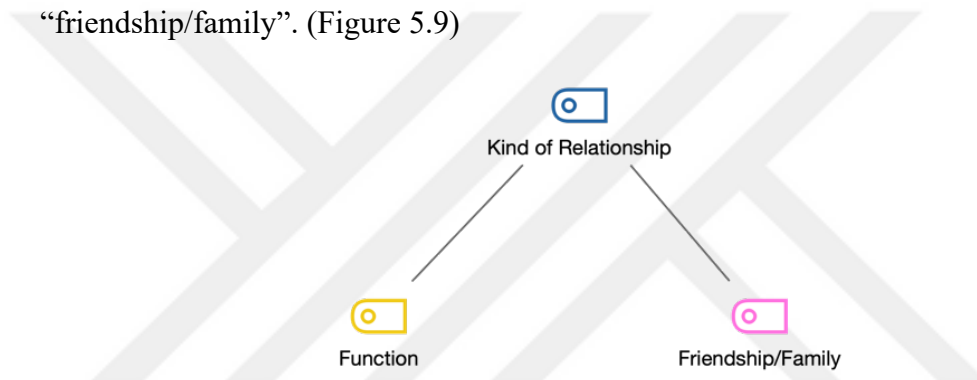


Figure 5.9 : Categories of “kind of relationship”.

Nineteen segments were coded as friendship/family while thirteen were coded as function. The responses coded as function were relationships where the defining feature is the function of the belonging. For example, a participant made the comparison of “butler and mistress” for the relationship with her nightstand. In this category the function may also be of a nature that is more sentimental. For instance, some participants have brought up the concept of “souvenir” which serves as a tool to remember. The other category of responses coded as “friendship/family” consisted of metaphors such as friends, companions or grandmother-granddaughter.



Figure 5.10 : Distribution of kind of relationship codes.

- Task 3 - If your relationship with your product was a story, what would the theme be? How would your story end?

The responses given to this question were categorized considering their themes (Figure 5.11). The three main themes were derived from the data which were “feeling”, “friendship” and “challenge” (Figure 5.12).

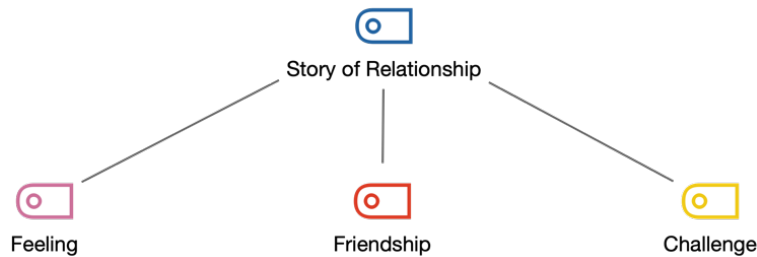


Figure 5.11 : Categories of “story of relationship”.

The first theme “feeling” includes eight stories and it refers to an atmosphere in line with the emotions that the participant experiences in regard to their belongings. Responses which are put in this category give a general feeling and they are mostly positive. Some examples include descriptions such as calm, happy, feel good, romantic, simple and slow. The second category is “friendship” where the main characteristics of the stories are friendship and companionship. Four responses have been categorized as “friendship”. The third category is “challenge” where participants have mentioned challenging events while describing themes for their stories. Responses included themes such as solving problems, overcoming obstacles, having hope, facing reality and putting in effort. These themes were either referring to the function of the belonging or the way in which the belonging has been acquired.

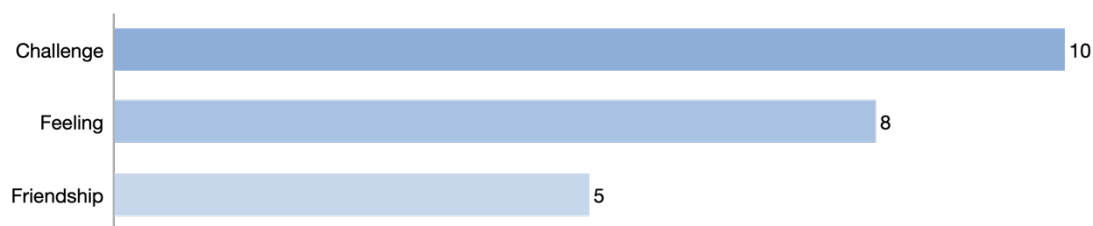


Figure 5.12 : Distribution of “story of relationship” codes.

- Task 4 - Pick a song that describes your relationship.

This task was set out to have the participants reflect on the relationships with their belongings. Some participants have selected songs which had an emphasis on

friendship (Figure 5.13). One of these participants has stated that previous tasks of the day had an effect on the song decision. Another interesting song theme was time.

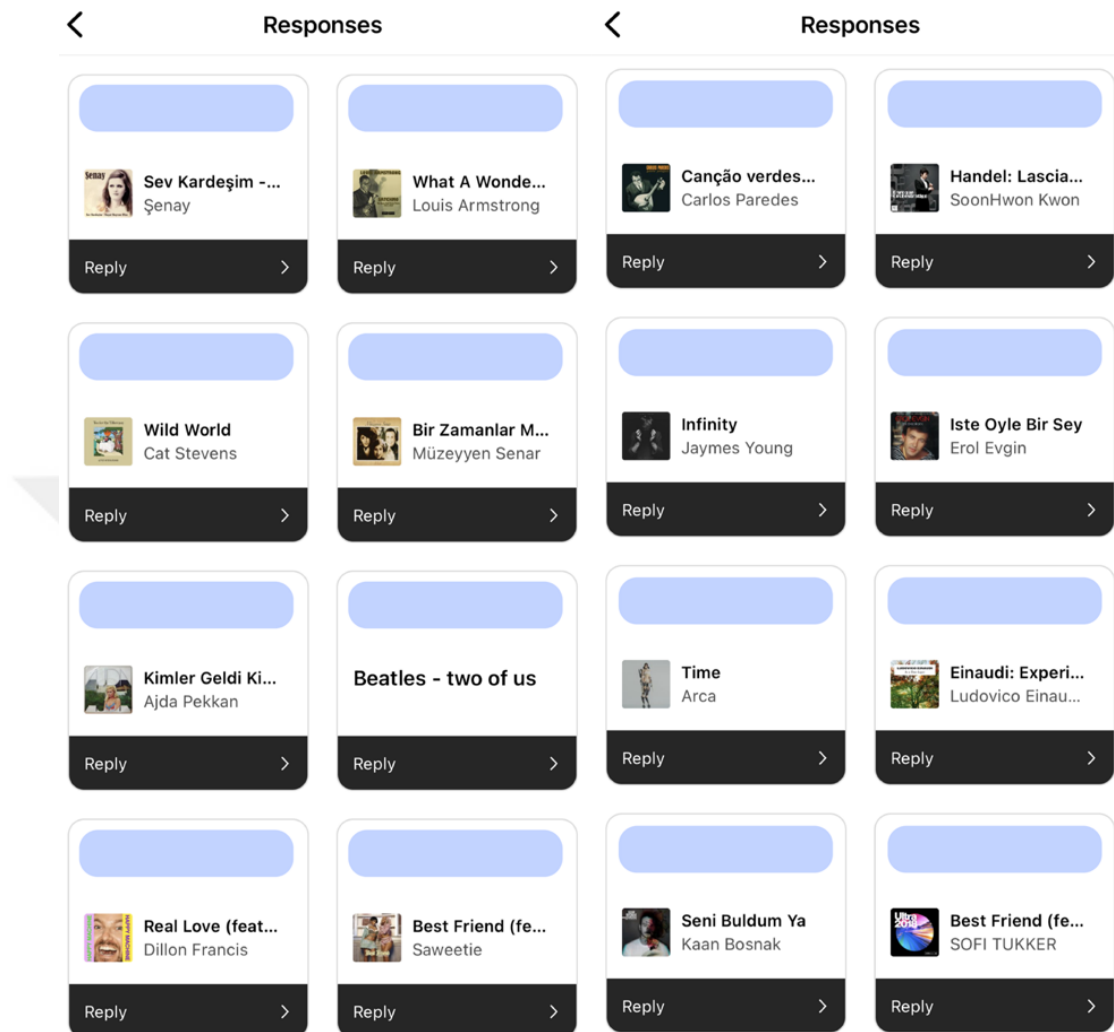


Figure 5.13 : Songs participants have picked out.

- Task 5&6 - Your similarities...Your differences...

In the fifth and sixth tasks participants were required to state their similarities and differences regarding their selected possession (Figure 5.14).

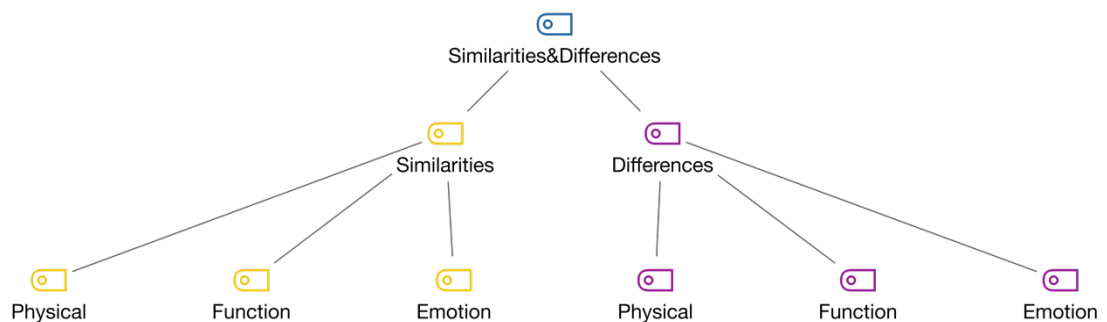


Figure 5.14 : Categories of “similarities & differences”.

For both tasks concerning the similarities and differences, three sub-categories were deducted from the material (Figure 5.15). These categories were emotion, function and physical.

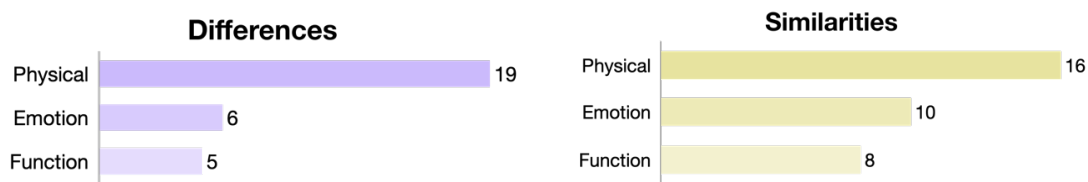


Figure 5.15 : Distribution of differences and similarities codes.

The category of emotion comprises responses for the similarities and differences based on how participants perceive their objects in the intersection of their own character traits and emotions. These were based on how they describe themselves and how they relate these descriptions to their objects. In similarities participants have responded with features such as lonely, sympathetic, thoughtful, comforting, calm, precious and loyal. An interesting finding was that for the differences task three participants have responded with the words like calm, tranquil and at ease. Others have responded with properties like bold, timeless, loved, well thought out and knowing self-worth.

Similarities coded as physical included properties that were related to appearance, style, material and structure. An honest representation, unusual, pretty, chubby and imperfect were some responses in line with appearance while some responses like classic, versatile and timeless were considered more in line with style. Warm, cold, sparkling, soft were also mentioned that were properties of the object's material. Only one answer in this category referred to a structural property which was the ability to expand. In differences, nineteen statements have been coded as physical. Prevalent responses were referring to objects' being fixed, immobile and passive. Properties concerning the appearance and material were also brought up such as being shiny, worn-out and old-looking. In the context of structure, a participant has pointed out that their laptop stand was on four legs.

Similarities concerning function consisted of responses such as being adaptable, making life easier for others, being good at what one does, taking initiative and having a broken graphics card. In the case of differences, two responses based on function stated the fact that their product could only perform in a specific way and that its function is fixed.

- Fifth day of the study

Task 1 - Can you name it?

Thirty-one participants have given names to their possession for this task. Some have chosen names directly aligned with the functional aspects of the products such as Müfettiş Gadget (Inspector Gadget) for their swiss knife, Düldül (Jolly Jumper in Lucky Luke comics) for their electric scooter or Sil-Süpür (Wipe-Sweep) for their robot vacuum. Also, a number of names were given attributing to certain physical features like form and material, i.e., Stella for a star-shaped pair of earrings and Işıltı (Sparkle) for a necklace. In addition, a participant has named their lamp Ay (Moon) and stated “because it’s on during the night and because I love the moon.”. (B) In another instance, a brass cup with embossed figures was named Masal (Story/Fairy Tale) because the participant envisions stories narrated by the figures. Some named were simply chosen because the participants liked them or found them sympathetic i.e., Aurora, Tavuk (Chicken) of Kütik (a cuter version of saying log, like Loggy).

- Task 2&3 - If it had a face who would it look like? Why?

Twenty-nine participants have completed these tasks answers included celebrities, people known by participants, fictional characters and animals (Figure 5.16).

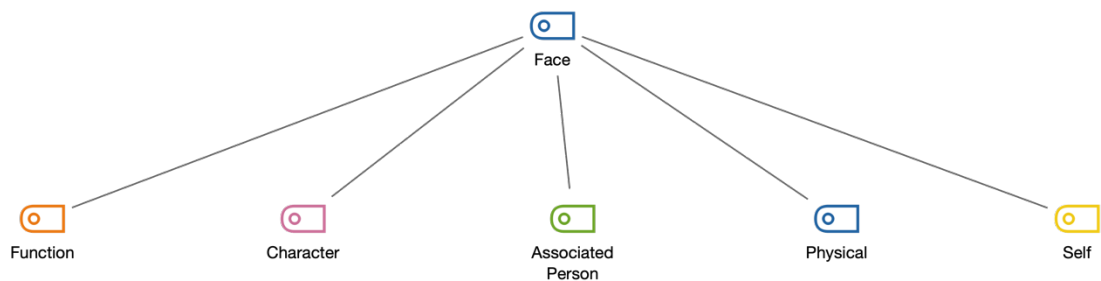


Figure 5.16 : Categories of “face”.

Eleven participants have responded in regard to their belonging’s physical features such as form and appearance which were coded as physical (Figure 5.17).



Figure 5.17 : Distribution of face codes.

The sun, a dog with a small tongue, Groot were some responses in the physical category. One participant responded by saying that their Turkish coffee maker would look like Türkan Şoray (an actress) because it's beautiful. A round robot vacuum had a face like the sun because of its form, a pair of sneakers reminded another participant of a small dog's face and another participant likened their night stand to Groot (an animated tree character) because of its wood material also because they found it cute. In another example, a participant stated, "It would look like Songül Oden (an actress)" referring to a pair of earrings and explained saying "petite, fine, delicate and elegant". This association like some others coded as physical also has an intersection with the second most coded category character. Nine responses were coded as character. One response was "Bill Murray (an actor) with his exhausted yet warm and reliable stare" concerning a frame with a 3D cactus inside. Another example to responses in this category was a lamp that would have a cat face because of its self-sufficient character. Five participants have responded saying that their objects would look like people which they have associated them with mostly because the objects have been given by them. Five participants have responded saying that the object's face would look like them. A prevalent reason for this was that the belongings were seen as a part of the participants. Some have stated "it's always with me", "it was made for me", "I see it as an extension of myself" and "some say that pets look like their owners".

The last category had four coded segments. A participant responded "İrem Derici" (a singer) regarding their mirror, stating that she was honest and blunt. They made an association based on the products function to reflect reality. Participants who have named their belongings as Müfettiş Gadget and Düldül again responded in the same way regarding the functional aspect of their products.

- Task 4 - What would the first thing that it would say to you?

The last task of the fifth day required participants to imagine what their belongings would say if they could speak. The answers were categorized under three categories (Figure 5.18) being, Something The Related Person Would Say, Reassuring, Advice About Usage/Object.

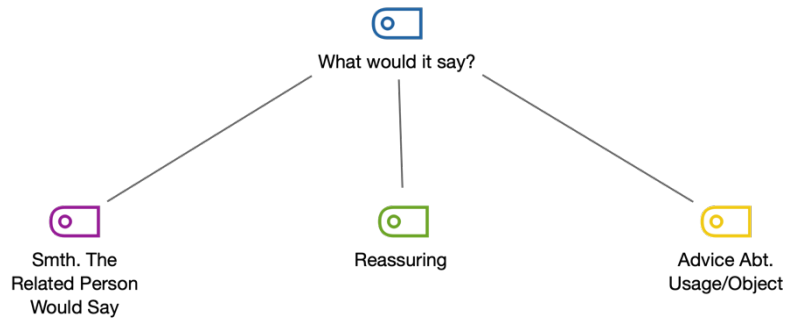


Figure 5.18 : Categories of “What would it say?”.

An interesting finding was that most of the responses (13) were coded in the category of usage/advice (Figure 5.19). The answers included statements related to the usage of the products, most of them being advice like "wear me more", "don't overload me", "don't lose me". One response from the mouth of a participant's backpack was, "could you prepare in advance and not stuff me at the last minute?".



Figure 5.19 : Distribution of what would it say codes.

The second category included responses that had a reassuring quality. Three reassuring responses included statements like "I am here with you", other comforting statements included "breathe", "you are safe" and "relax". The third category includes six statements that belong directly to the person associated with the object. An example from this category is a seating unit saying, "can you not just sit around, pick up and do something while you're sitting" like the participant's mother would say in reality. The participant added in the interview “whenever I look at that armchair I get reminded of my mother. Something triggers me and I tell myself to do something and not just sit around”.

- Sixth day of the study

Task 1 - Nothing can replace it. Because...

From the material gathered from this task five categories were derived (Figure 5.20). These categories were personal history, perfect fit, memory of someone, unique in some kind of way and not irreplaceable. (Figure 5.21)

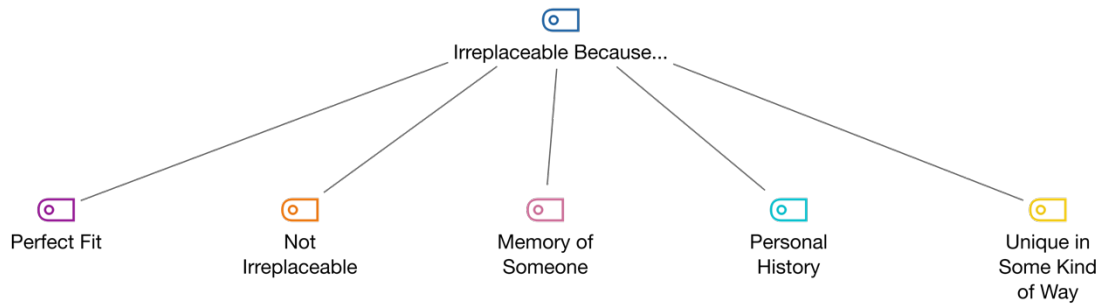


Figure 5.20 : Categories of “irreplaceable because...”.

The category with the most coded segments was personal history that is in the field of meaningful association. This category involves responses addressing participants’ experiences with their belongings which renders them unique. Most have pointed out memories or the time they have spent with them. One participant has stated “it’s like my journey in time”. In another case a participant has stated the effort spent to make the product (nightstand).



Figure 5.21 : Distribution of irreplaceable because... codes.

The next category perfect fit included properties of products which make them ideal for their owners. One participant states that their laptop is the expert as to why it is irreplaceable. In the interview the participant has said that the laptop does occasionally have issues, but she knows how to handle them as she is very familiar with the product. In other responses properties like having the perfect size, most beautiful tone, being the most practical and other preferred physical qualities came up. The third category memory of someone which was also in the context of meaningful association, had eight coded segments. Responses were mostly based on the origin story of the objects like the day they were gifted by a certain person. Objects in this category are irreplaceable because they were given, made by, or acquired with someone significant. For example, a participant responded “because my husband thought of it and picked it” referring to her necklace. The fourth category unique in some kind of way has seven

coded segments. Statements included in this category brings up physical attributes of the objects that make them literally unique for the owner. Like a historical artifact that does not have a copy or a pair of handmade marble bird figures. In an interview a participant has said, “in my opinion, if there were any other product just like this one, still it would not be the same because it has these handmade figures/drawings on it. It doesn’t seem like something mass produced.”.

- Task 2 - How would it convince you to stay, if you wanted it to leave?

For the second task of the sixth day participants have given responses as their objects explaining why they shouldn’t be discarded. Their answers were categorized into four codes: memory of someone, other ways of being, personal history and best for the job (Figure 5.22).

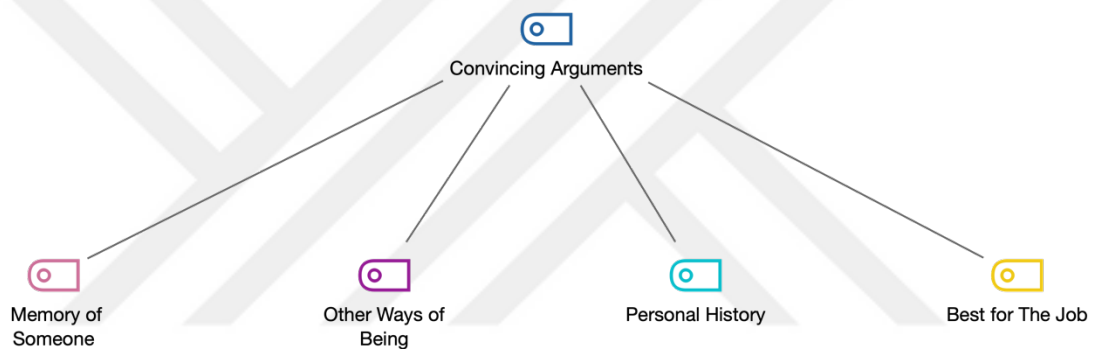


Figure 5.22 : Categories of “convincing arguments”.

The category with the most coded segments was personal history with twelve segments followed by best for the job with ten segments, other ways of being with five segments and memory of someone with three segments (Figure 5.23).

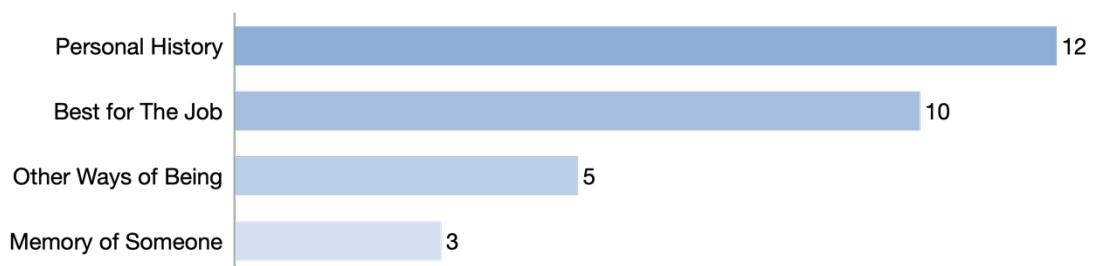


Figure 5.23 : Distribution of convincing arguments codes.

Responses coded in the category of personal history were in the domain of memories associated with the objects. Coded segments included statements like “we shared so much”, “I contain all your past”, “do you really want to forget the high school you?”, “we shared so many secrets” and “I’ve been with you all these years”. All these

responses had an emphasis on time spent together, shared memories and experiences involving the object.

The responses included in the second category best for the job pointed out reasons for staying mainly from a functional angle. For example, statements included “if it weren’t for me, you would get tired” (robot vacuum), “you couldn’t find a pair more comfortable than me” (pair of sneakers), “I’ll go faster” (electric scooter) and “no one is like me” (a discontinued shade of lipstick).

The next category, other ways of being, includes responses of the objects that suggest alternative ways of being used for other purposes or being discarded yet retaining the existing bond in a way. Some answers were “I could just stand there quietly in the corner” (pair of earrings), “wouldn’t it be nice if I could just stand there and hold your makeup products” (brass cup) and “I don’t have to leave we could still be friends in different ways.” (lamp). Other responses were, “There is no such thing as coming or leaving. I am inside you as you are inside me.” and “it would know that I didn’t need it anymore and wouldn’t try to convince me”.

The last category, memory of someone, included responses indicating the object’s meaning regarding its link with the associated person. A statement was “My Glove...” (a necklace) which the participant has explained by saying that this is something which her husband calls her. In another example, the object is imagined saying, “I am here in the name of your whole family” (pair of marble bird figures).

- Task 3 - What would make you want it to leave?

The responses for the third task of the sixth day were coded in four categories. These categories were broken/doesn’t do the job, change, hazardous and don’t leave (Figure 5.24).

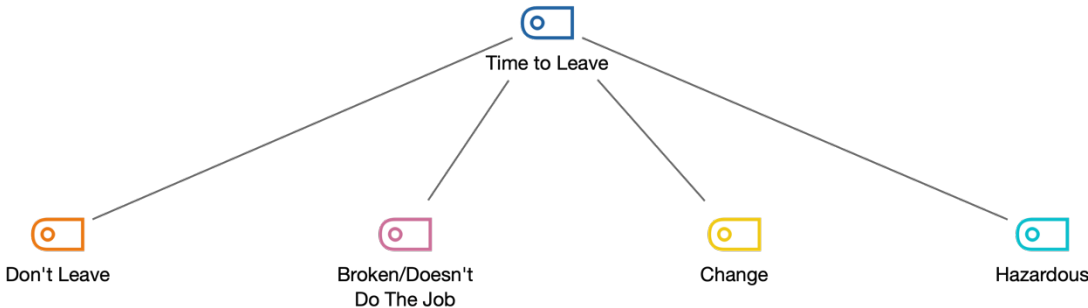


Figure 5.24 : Categories derived from “time to leave”.

The first category broken/doesn't do the job include sixteen segments stating that the participant would discard the object if it could no longer function, function the way it used to or would be broken beyond repair or spoiled. The second most coded category was change with eleven segments. Some of these segments suggest major changes that are not very likely to happen in their opinion i.e. becoming estranged to the object, experiencing something that would make them to forget their past, having a divorce or having amnesia. Three participants could not think of a reason that would make them want to give up their belonging. In an interview a participant has said, "I'm not someone who's comfortable discarding old stuff. I'll keep it in a corner. If it weren't made of canvas I would plant flowers in it. So, I wouldn't use it and still keep it around. I couldn't give it to anyone. Besides, it wouldn't serve anyone, if it did I would, So, I wouldn't want to let it go." In another case a participant who has stated in the probes that she would let their laptop go if it was broken beyond repair yet in the interview she has stated, "I don't want to throw it away because I've been with him for as long as I can remember. I can look at it and be reminded of past memories. But I would have it repaired, so if it couldn't be repaired, let's say it fell and broke into 10 pieces, I'll glue it, but it will remain in my house like an exhibition." Lastly, two segments suggested cases where the object could be harmful to them or their loved ones (Figure 5.25).

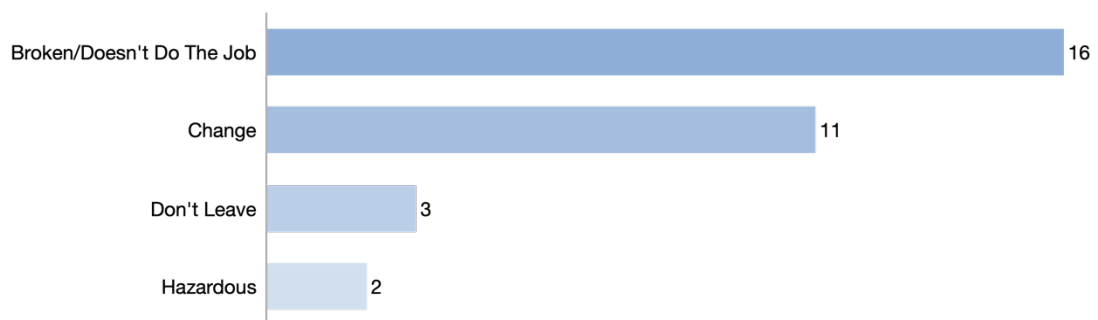


Figure 5.25 : Distribution of codes from the category “time to leave”.

A participant has responded to this task by stating, “At this point I wouldn't ever want it to leave. If I get bored of it, I would use it in another room or paint. If it were to become idle, I would take it apart and keep a piece of it; like its ugly stand. Maybe I would make a frame out of it or at least put it on my bookshelf.” (lamp).

The same participant has also mentioned in the interview that the probe process has affected her view of the product stating, “I never thought about it. The time we spent

together. That it belongs to a certain period of my life. Reflecting on it made me assign meaning to it.”

- Task 4 - How do you take care of it?

Answers to given to the question regarding care were categorized into five groups as following cleaning/organizing, attentive use/protection, no maintenance, dedicated storage/out of reach and repairing (Figure 5.26). Twenty of the responses had statements which included cleaning and organizing (Figure 5.27). Some examples of this category are “by keeping it clean” (wedding ring), “I dust and occasionally organize it” (nightstand), “by keeping it tidy” (bed), “I wipe it every day” (mirror).

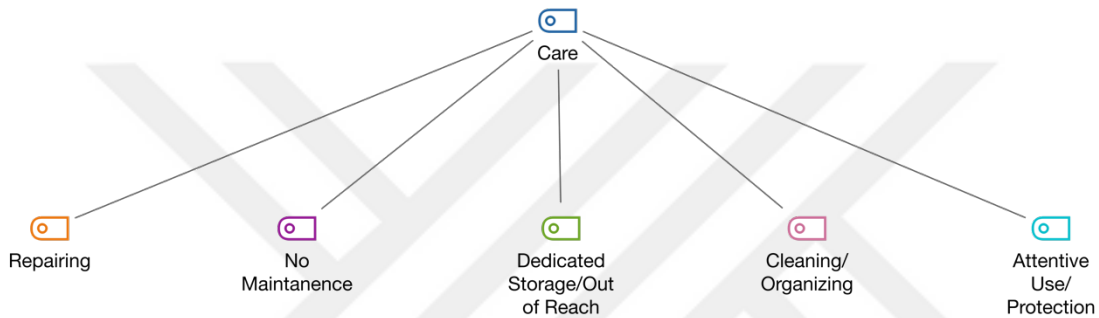


Figure 5.26 : Categories derived from “how do you take care of it?”.

In the next category attentive use/protection statements included practices that minimize wear as the participant uses the product. Some examples were “I use it neatly and I have a winter cover made for it.” (seating unit), “I use it carefully” (laptop), “I protect it from everything because it’s delicate” (dinner table), “I don’t leave it dirty. I clean it right after using it” (mug). In seven responses participants have claimed that they did nothing specific to care for their belonging. Seven segments were coded as dedicated storage/out of reach which meant that participants kept their objects in a specific area or a hard-to-reach place in order to protect it from damage. Lastly, there were two segments coded as repairing, an example was “its dress had become worn out, I found someone and made them do a new one for it” (doll).

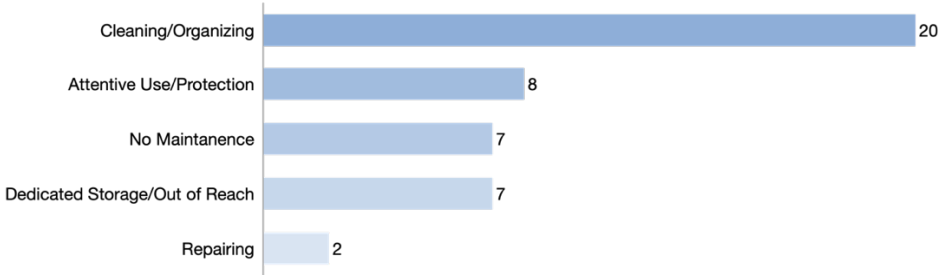


Figure 5.27 : Distribution of codes in the “how do you take care of it?” category.

- Seventh day of the study

Task 1&2 - What would it be if it were a living being other than human? Why?

The material gathered from the first task of the last day were categorized into four groups (Figure 5.28): spirit of object, function, material, and object reference/resemblance (Figure 5.29). Responses included animals, plants, microorganisms, and fictional characters.

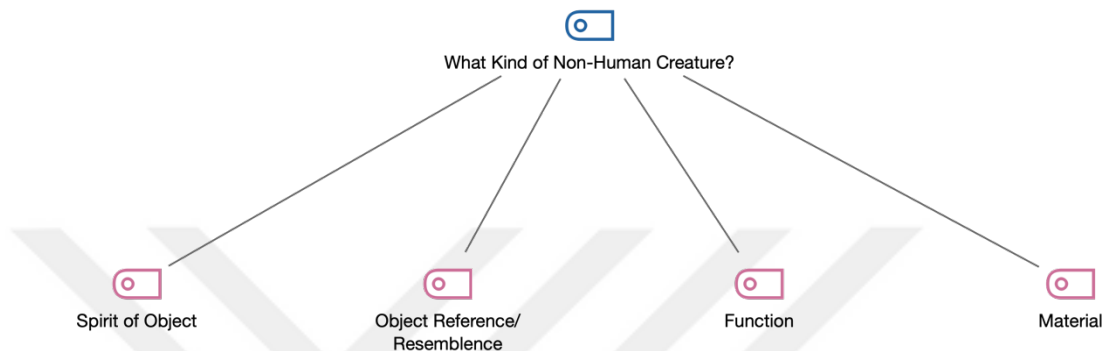


Figure 5.28 : Categories of “non-human creatures”.

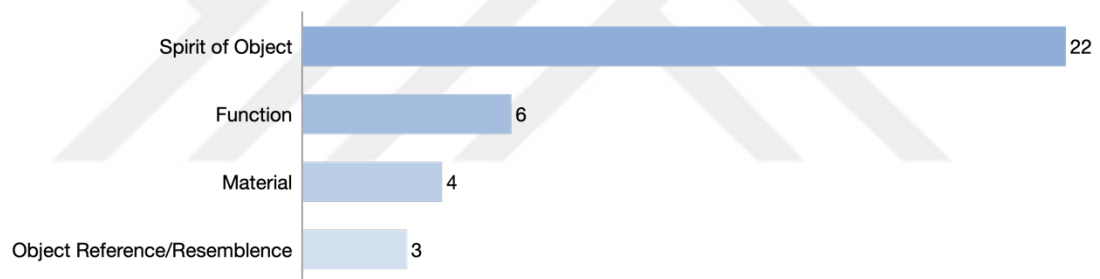


Figure 5.29 : Distribution of “non-human creatures” codes.

In the category of spirit of object, most participants have responded with various animals like dogs, birds, cats and so on. These were based on the character of the objects assigned to them by the participants. A theme that came up many times was loyalty, and it was always accompanied by dogs. A response from this category was “A dormouse. Small, cute, lively and loves to spend time in the kitchen. The next category, function, included responses that were given by related to a function provided by the objects. The functions vary in their nature. While one participant responded by stating that their robot vacuum would be a cat because of its speed, another participant stated that their notebook would be a bacteria because it breaks down elements and it is perceived as a tool for processing while drawing. In the material category associations were made considering the material and physical attributes of the objects. A participant has responded with moss piglet and explained

by stating “it’s so sturdy, it could even live in space”. Another response was “A talismanic cat. Because it holds the secret from millions of years” (a necklace). In the interview the participant has explained that the connotation they have made was based on the necklace being metal. The last category includes responses which are references or directly resembling the object in question.

- Task 3 - What would its good and bad character traits be if it were the main character of a story?

The data gathered from this task were examined as good and bad traits then they were divided into sub-categories which were physical, memories and function (Figure 5.30). Ten segments were coded which were related to some kind of physical feature of the object like appearance, structure and material.

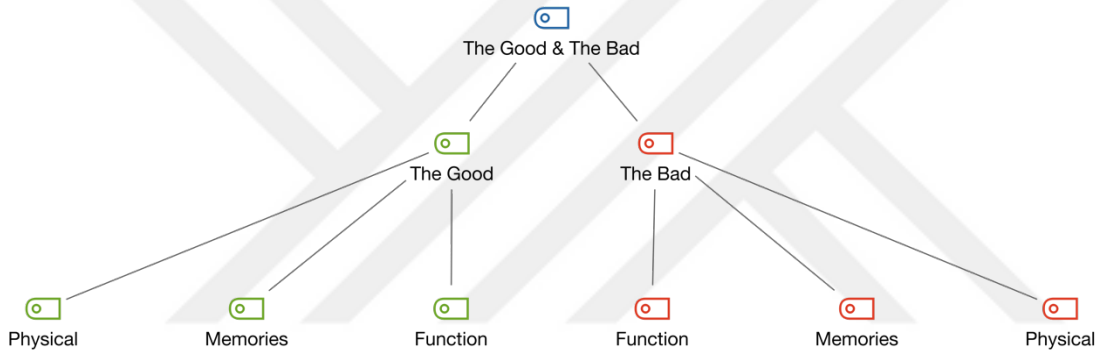


Figure 5.30 : Categories of “the good & the bad”.

Some positive responses coded as physical were “ages well”, “frank”, “original”, “genuine”, “charming”, “poetic” and “stands upright”. Some negative traits associated with physical attributes were “not expressive”, “passive”, “boring”, “self-centered”, “aloof”, “dirty” and “fragile”. The category of memories was related to meaningful associations. Some statements were “someone who stored good memories”, “someone who could keep secrets”, “wise”, “conversable”, “calm”, “kind”, “loyal” and “fun”. An intriguing finding was that there were only two negative segments coded in memories. These segments were “she would be outspoken but hurtful, bluntly spelling out the bitter truth” and “it would fall for anything (as in being naïve)”. The function category consisted of responses which were related to the product’s function and how it makes the user feel while using it. Some positive examples were “protective”, “helpful”, “curious”, “selfless”, “thoughtful”, “practical”, “smart”, “reliable”, “kind”, “fast” and “handy”. There were not many negative traits in the function category.

Three participants have stated the product being unreliable. One participant said that their wedding ring was conditional to their marriage’s continuity.

- Task 4, 5&6 - If it had a three-sentence adventure, how would it go? 1st sentence... 2nd sentence... 3rd sentence...

The last task of the cultural probe study consisted of three phases which asked the participant to write a three-sentence adventure for their belonging. Segments of the adventures generated by the participants were categorized into three groups which were meaningful association, physical feature and function (Figure 5.31).

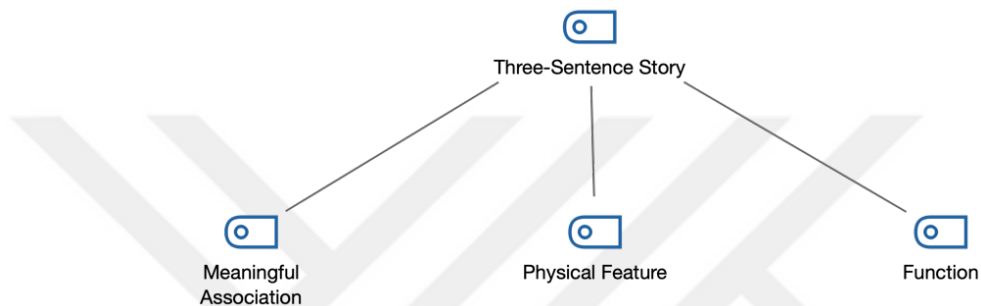


Figure 5.31 : Categories of “three-sentence story”.

There were fourteen segments coded as meaningful association, eleven segments coded as physical feature and eight segments coded as function (Figure 5.32)

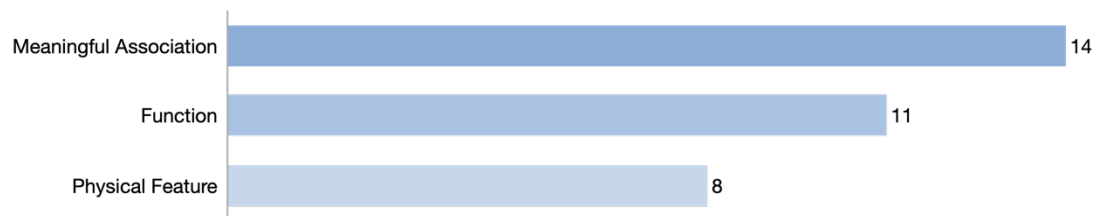


Figure 5.32 : Distribution of “three-sentence story” codes.

For example there were intersections in five instances, adventures with meaningful associations contained elements of function (Figure 5.33). Secondly, function and physical feature intersected in four responses.

Code System	Meaningful Association	Physical Feature	Function
3 Sentence Story			
Meaningful Association		1	5
Physical Feature	1		4
Function	5	4	

Figure 5.33 : Intersection between “three-sentence story” codes.

The material coded as meaningful association had dominant elements which suggested a presence of personal meaning like memories and associated people. One example

was “It sets out to cheer people's lives and accompany them. It comes across someone and accompanies them wherever they go during their student years. Then when the time comes, they say goodbye and it crosses paths with someone else who needs it more, just as their paths crossed with the person it said goodbye to.”.

An example for the intersection between meaningful association and function was “Once upon a time, there was a young and dynamic computer that was eagerly looking for its new companion. When it found its best friend, they had traveled all over the country for many years and did everything together. However, the wear and tear of all those years caused it to become tired and old, and it passed away happily.”.

Additionally, in this example there is an intersection of function and physical feature: “I woke up this morning with my soul stuck in this old body, the door slamming into my drawer, the cat climbing on me, the tiny insects crawling between my boards. I still protected what was inside me.”.

6. CONCLUSION

Product attachment is an essential factor for the overall durability of products as it is widespread for users to replace products prior to becoming obsolete. The literature review of this thesis has covered subjects concerning product attachment, product meaning, and emotional durability. In the methodology chapter, the study's qualitative approach was presented with the corresponding literature of the applied methods: cultural probes and semi-structured interviews. The material generated with these two research methods was analyzed with the method qualitative content analysis. The interpretations of the findings were disclosed previously, and some noteworthy findings are indicated below.

- The categories which were derived from the data were in accordance with the categorization of meaningful product relationships made by Batterbee and Mattelmaki which were; meaningful tool, meaningful association, and living object (Batterbee and Mattelmaki, 2004). Also, the four categories of product attachment determinants which were pleasure, self-expression, group affiliation, and memories defined by Mugge, Schoormans, and Schifferstein (2008) were identified in the case of treasured objects.
- Most of the reasons to why the objects in question are irreplaceable to participants were related to personal history which could be identified in the subgroups identity, link to a memory/an emotion/a story under the "meaningful association" category made by Batterbee and Mattelmaki (2004) also the attachment determinants self-expression and memories were prevalent.
- The before mentioned category of living object came up many times identified by concepts like companionship and friendship.

- When participants were asked to imagine what their belongings would say to them all segments included in the categories “reassuring” and “something the related person would say” which made up most of the responses had a comforting quality. This could be an indicator that these objects provide a sense of comfort to their owners.
- The material indicates that the participants who would not consider discarding their possession even in a case of absolute obsolescence have meaningful associations with them.
- The semi-structured interviews provided substantial insight concerning how participants experienced the cultural probes study. A significant finding from the feedback following or during interviews was that the reflection triggered by the probe process led participants to see their possessions in a different light. Some have reported that they have not thought of their possession in such angle and one participant has stated that she felt a stronger attachment after participating.

A limitation was that because of the cultural probes method being conducted online some participants have not completed the study and the initial number of participants have dropped during the one week study. This may be due to having no direct contact with participants making them feel less responsible to pursue the study entirely. A compensating factor was that the number of participants would have been much lower if the research had not been online. The platform provided a larger reach while also being in line with the general familiar and personal atmosphere of the study.

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APPENDICES

APPENDIX A: Images of selected objects provided by participants.



APPENDIX A

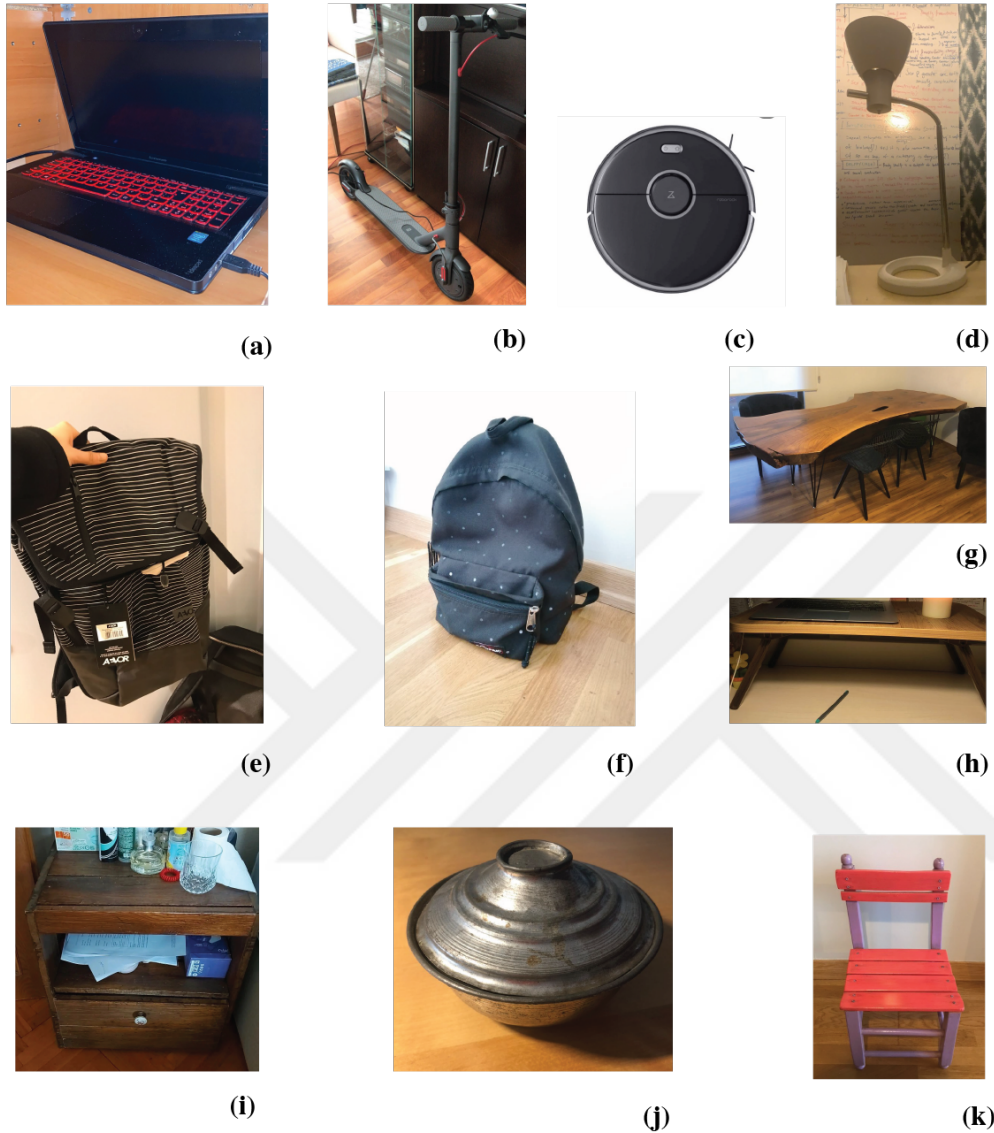


Figure A.1 : Images of selected objects provided by participants: (a) Laptop (b) Electric scooter (c) Robot vacuum (d) Lamp (e) Backpack 1 (f) Backpack 2 (g) Dining table (h) Laptop stand (i) Nightstand (j) Childhood toy cooking pot (k) Childhood chair



(l)



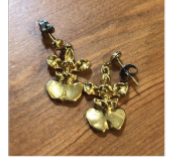
(m)



(o)



(n)



(p)



(q)



(r)



(s)



(t)



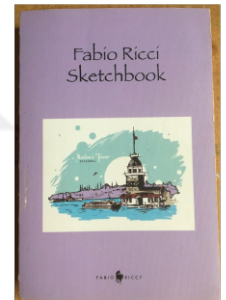
(u)



(v)



(w)



(x)



(y)

Figure A.2 : Images of selected objects provided by participants: (l) Necklace 1 (m) Necklace 2 (n) Glasses frame (o) Star earrings (p) Orchid earrings (q) Fairy with flying horse figure (r) Historic roof tile (g) Cactus figure in frame (t) Marble bird figures in frame (u) Brass cup (v) Mug (w) Teacup (x) Sketchbook (y) Swiss pocket knife



CURRICULUM VITAE

Name Surname : **Elif Gökaltay**

EDUCATION :

- **B.Sc.** : 2015, Bahçeşehir University, Faculty of Architecture and Design, Department of Industrial Product Design

PROFESSIONAL EXPERIENCE AND REWARDS:

- 2019-(ongoing) – Research Assistant at the Department of Industrial Design, Istanbul Commerce University

PUBLICATIONS, PRESENTATIONS AND PATENTS ON THE THESIS: