Revealing the meaning of home possessions: designing, keeping, and material identity

Julia Keyte

A thesis submitted in partial fulfilment of the requirements of Sheffield Hallam University for the degree of Doctor of Philosophy

November 2024

Candidate Declaration

I hereby declare that:

1. I have not been enrolled for another award of the University, or other academic or professional organisation, whilst undertaking my research degree.

2. None of the material contained in the thesis has been used in any other submission for an academic award.

3. I certify that this thesis is my own work. The use of all published or other sources of material consulted have been properly and fully acknowledged. I confirm that I have sought and obtained copyright permission for any third party materials included in this thesis.

4. The work undertaken towards the thesis has been conducted in accordance with the SHU Principles of Integrity in Research and the SHU Research Ethics Policy, and ethics approval has been granted for all research studies in the thesis, as shown in the table below.

Ethics review reference number	Title of research study	Approval date	Date of any post-approval amendments (if applicable)
SHUREC1	Thinking Keeping	13 November 2015	
ER33442096	Material Meaning: An investigation into how meaning is organised in industrial design practice, and in practices of keeping possessions in the home	13 July 2021	

5. The word count of the thesis is 44,346 (including tables)

Name	*Julia Keyte*
Award	*PhD*
Date of Submission	*November 2024*
Faculty	*Culture and Creativity Research Institute*
Director(s) of Studies	*Nick Dulake*

Abstract

This study investigates the way meanings associated with everyday, material home possessions develop. It is a study of what influences these meanings, and how they build, ebb or flow to create value in an object. It examines how the meanings are acquired and how they evolve through practices of keeping in the home, and how this could inform approaches to design for emotional longevity. This is an established area of research and practice concerned with designing products that can hold lasting emotional attachments (van Hinte 1997 and 2004, Chapman 2005, Haug 2019).

The study takes an experimental approach to method design, prioritising hands-on practical experiences for participants. The methods incorporate artefacts, either physically present or recalled through memory by participants, as a prompt for reflection and relating of the story of encounter and ownership. Participant sketching activities provide a means of active reflection, as a way of capturing affective responses, and for considering the physical circumstances of an artefact. These approaches are integrated with semi-structured interviews.

Rather than focus on treasured possessions, which have been well studied, the study focuses on the uncherished. This approach builds a more informative picture of meaning as mutable and dynamic, waxing and waning to offer new understandings of emotional longevity in objects. They include uncherished gifts, antique ceramics, computing devices and fast fashion homewares.

The methods have produced situated, interpretive knowledge of our affective relationships with everyday possessions, and surfaced their complexity and texture. The study makes methodological contributions to knowledge for revealing meaning and affect associated with possessions. It also offers new understandings of emotional longevity in objects, including the critical role of human practices and the material surroundings of the home.

The study has been undertaken as an article based doctorate, by prospective publication.

Preface

My PhD study has been a journey over eleven years long that has given me a lot of valuable and enjoyable personal learning. A lot can change in that time, and I want to say something about my journey before I introduce the research itself.

I took the decision to embark on a part time PhD by prospective publication, because it gave me the structure to develop my capabilities as a researcher, alongside the demands of my teaching and programme leader positions, and parenting. The article-based route has allowed me to strategically plan projects, papers and articles that are achievable as shorter term goals, as opposed to a single larger first hand research activity. This has allowed me to access the deeper learning that PhD study offers whilst working as an established academic.

There have been significant life and health events over the period of registration that have meant I have taken periods of suspension from studies. I had my second child in 2015 after a pregnancy-long illness. With my baby son, daughter and husband, I then moved to an exciting new role in another university, moved cities, and moved house. Another period of suspension accommodated Covid and its impact on studying, working and parenting. And most recently, a severe back problem stopped me in my tracks for a period of time.

My doctoral research was partly seeded in my design and making practice, in which I was actively investigating the emotional connections that are often associated with jewellery, and exploring the creation of wearable artefacts with a social purpose. This built on dialogue within the field of contemporary jewellery, the field in which I practiced and taught at the time. I started a project and event, the Campaign for Objects in Purgatory. The project utilised original practice-based methods that drew on jewellery design practice, to more widely investigate the emotional attachments held by people to their possessions. The project raised questions about how and why we keep unwanted possessions, that I felt warranted interrogation through a PhD, and which I still feel are pertinent and important now.

Acknowledgments
I would like to thank my supervisors, official and unofficial, for their support, creativity and patience: Nick Dulake, Dr Kathy Doherty, Prof Paul Atkinson, Prof Becky Shaw, Prof Daniella Petrelli, Prof Chris Rust, and my husband Dr Jerome Harrington.

Table of Contents

Chapter 1
Introduction

Everyday possessions surround us in the home, shaping and reflecting our identities, routines, and emotional lives. While some of these objects are clearly cherished, others are kept without obvious value — unremarkable, or even unwanted. Existing research tends to focus on treasured possessions and the strong emotional attachments that sustain them. Less attention has been paid to everyday objects that are kept without obvious affection, such as uncherished gifts, outdated devices, and decorative homewares, and the complex meanings they can develop.

As a design researcher, I became interested in how these less-studied possessions can reveal rich insights into how meaning is formed through use, keeping, and domestic practices**.** This opens up important questions not only about how we ascribe meanings to objects, but about the role of designers in shaping those meanings**.** Using creative methods rooted in design practice combined with semi-structured interview, I investigated the way meanings associated with such possessions develop and evolve, and how the insights gathered from this enquiry could inform research on design for emotional longevity. This is an established area of research and practice concerned with designing products that can hold lasting emotional attachments, to mitigate wasteful consumption (van Hinte 1997 and 2004, Chapman 2005, Haug 2019).

My research is framed by the following core question:

> ***What can the stories of keeping uncherished, everyday home possessions reveal about how their meanings develop – and how could this inform design research approaches to the emotional lifespan of products?***

The study was undertaken as an article-based doctorate by prospective publication.

Topic introduction: The emotional lifespan of home possessions

The study of everyday home possessions in multiple disciplines

The study of everyday objects, how they represent us and how they become integrated in our lives is present in multiple disciplines, due to the embeddedness of objects in human experience. Disciplines embracing the cultural meanings or social significance of everyday artefacts as the focus of enquiry include design (Boradkar (2010), material culture studies (Miller 2008), anthropology (Hoskins 1998) psychology (Csikszentmihalyi and Rochberg-Halton 1981) sociology (Pink 2004) and

human geography (Gregson et al 2005). All of these fields offer insights on how meaning and value become associated with everyday objects from different perspectives, and how home possessions have become established as a worthy subject of study. Design and material culture scholar Judy Attfield (2000) argued that ordinary objects need to be placed on a level playing field with other artefacts. In her compelling book “Wild Things” she argued that meanings arise from a lived connection to a thing, and cannot be understood without becoming familiar with its intimate history. Things which aren’t the output of professional design, or celebrated for their aesthetic language, are nevertheless personally and therefore culturally significant (Attfield 2000). This important work, republished in 2020 as part of Bloomsbury’s “Radical Thinkers in Design” series edited by Staszowski and Dilnot (2024), calls for more focus on how we live with everyday things and identifies a need that my study responds to.

Two seminal works of the late 20th century are important to my study: Russell Belk’s paper “Possessions and the Extended Self” (1988) and Csikszentmihalyi and Rochberg-Halton’s book “The Meaning of Things” (1981). Both attested to the complex embeddedness of home possessions in our lives in industrialised societies and made compelling arguments for understanding our dependence on material things. These studies established that exploring how a possession acquires meaning and the ways it is valued is a critical area of enquiry. Scholar of consumption Belk (1988) cited a wide range of authors from different disciplines to identify how we integrate external objects into our selves, including material things, places, bodily limbs, other people, ideas and experiences. He drew on Sartre (1943) to describe how having and being converge when we consume an object. An object becomes integrated into the self, and in turn informs our self-development and communicates something of ourselves to others. In their qualitative study of possessions and their meanings, psychologists Csikszentmihalyi and Rochberg-Halton (1981) asked their participants in the United Stated to tell them about their most special home possessions. Their categorisation and analysis revealed the reasons for attachment to objects, and they concluded that owning things is a process of actively cultivating meanings that reflect and create an individual’s sense of purpose. They also described the home as the place most likely to hold objects of special personal meaning, giving us stability and continuity.

More recent key publications (e.g. Miller 2008, Hurdley 2013) show the continued importance of studying home possessions. Authors agree that possessions connect us to our past, present and future selves, marking our journeys, and reminding us of important people, places and experiences. However, in their book “The Design of Everyday Life” sociologists Shove et al (2007) argue that in socio-cultural studies objects are not often considered in terms of their material identity and composition, limiting consideration of how object qualities mesh with meaning in practice. They underscore the need to go much further to understand the role of material in the making of meanings, if we are to transition to environmentally sustainable practices

in our homes. I designed my study aims and methods to uncover the role material plays in the meanings home possessions come to acquire.

Emotional lifespan in design research

Everyday objects and their place in our lives is also the concern of design research (Boradkar 2010, Attfield 2000). Industrial designers are traditionally concerned with material artefacts (Buchanan 1992). They give consideration to user experience (IDSA 2023), the psychological, social and cultural context for a product (Buchanan 1992), and use of visual language to infer meaning (Krippendorff 2005). They are active agents in what Daston (2004) referred to as an object's "becoming": Working with other stakeholders they are involved in the process of imagining, projecting and shaping a new product. Therefore, industrial designers play an important role in the creation of new objects that become absorbed into our lives. Yet, there is a perceived need for designers to challenge people's dependence on material goods (Thorpe 2010).

Within design research, design for emotional longevity has become an important focus for enquiry, connected to a substantial body of research on product obsolescence developed over the last 60 years (Burns 2010). The ideas inherent in design for emotional longevity connect the meaningfulness and positive emotional experience of a product to environmental sustainability, and assume that a product may be discarded when there is a lack of meaningfulness (McDonagh and Thomas 2011, Chapman 2005). Authors have aimed to identify considerations and frameworks for designing products that can hold lasting emotional attachments, so that we feel compelled to keep and use them for longer. (Battarbee and Mattelmäki 2004, Chapman 2005, Fuad-Luke 2010, Haug 2019). This is seen as an approach that can help address people's dependence on acquiring material goods that quickly become a legacy of waste (Cooper 2010). Designing longer emotional lifespans relies on a product's capacity, shaped by a designer, to influence emotional connections and more sustainable keeping behaviours through its physical qualities and visual communication. However, authors have noted that strong attachment to a product doesn't necessarily mean it will be used in the long term and prevent the acquisition of a replacement (Evans and Cooper 2010, Kowalski and Yoon 2022), which suggests to me that there are limitations to focusing predominantly on objects associated with strong attachment.

Framing the study focus and research sub-questions

The studies introduced above are grounded in a spectrum of epistemological perspectives, which are explored in depth in my literature reviews in Chapters 2 and 3, and which offer a richness to the study. Collectively they establish home possessions as a sustained significant study focus. I argue that there are limitations to focusing on cherished home possessions, which have been well examined, and instead my research responds to studies that urge for the further study of everyday

objects residing in homes – significant cultural spaces where material objects and practices intersect to make meaning (Attfield 2000, Shove et al 2007). There is a need for studies that can access the personal spaces of the home so that we can better understand people's affective relationships to material goods, and how these insights could inform design research. This understanding has important implications for design research, particularly in expanding concepts of emotional durability beyond attachment and desirability, to include ambiguity, obligation, and the everyday negotiations of value in the home.

Examining the literature from the social sciences and humanities along with studies from design research illuminates the emotional lifespan of home possessions from different perspectives. For example, Csikszentmihalyi and Rochberg-Halton (1981) proposed that almost any meaning can be attached to any object. The physical characteristics of the object can lend themselves to certain meanings, but cannot be interpreted as meaning anything specific. This challenges design research perspectives that centralise the capacity for an industrial design to influence meaning. Can design activities effectively influence the meanings an object comes to hold? I set out to identify the meanings and value associated with material possessions, and how they build, ebb and flow. To do this, I needed to access people's affective relationships to their possessions (introduced below). I sought to understand the factors influencing why an object is kept, including identifying why it is kept in the long term.

To explore the overarching research question stated at the beginning of this introduction, the study is structured around the following sub-questions:

1. What factors influence the perceived value of an uncherished home possession and the build, ebb and flow of meanings associated with it?

2. How do the meanings of a home possession transition over time, and how do they shape the object's emotional lifespan?

3. Can the material and visual identity of a home possession influence how somebody feels about it, and whether they feel compelled to keep it?

4. Can design practice contribute to the meanings associated with a product for the home, and influence whether an object is kept?

5. How can creative research methods engage participants in sharing the stories of uncherished possessions, taking possessions that aren't secure in their meaning as the point of departure?

Approach to method: Employing iterative experiments incorporating hands-on experiences

To discover the factors that influence the perceived value of an uncherished object and how meaning can accrue, ebb and flow, I designed participatory methods that invited people to share the stories of their home possessions. I took categories of objects that are unlikely to be highly meaningful as a point of departure for exploring peoples' affective relationships with their possessions. They included uncherished gifts, antique ceramics, and computing devices kept within the home. I also investigated industrial designers' practices of creating decorative homewares, and whether they feel they can design meaning into products for the home.

I took a constructivist approach to my research, influenced by design thinking and practice. Exploration, opportunism and experimentation were key tenets of my approach, drawing on the work of key design scholars Schön (1983) and Cross (2011). I developed methods emphasising practical, hands-on experiences of research for participants. These incorporated artefacts, either physically present or recalled through memory by participants, as a prompt for reflection and narrative, and the relating of the story of encounter and ownership. As Attfield (2000) argued, we need to explore the intimate histories of objects to understand how meanings arise from lived connections with them. Embodied activities such as sketching can create rich data sets for revealing personal narratives and emotions (Knudsen and Sage 2015). I incorporated participant sketching activities as a means of active reflection, which often altered the pace and rhythm of the dialogue and provided a way of capturing some affective responses, and for considering the physical circumstances of an artefact. I integrated this with principles and methods from semi-structured interview.

Research projects

I developed my methods through a series of iterative experiments employing creative methods and semi-structured interview. (Please see discussion of Schön's (1983) definition of experimentation in design practice in Chapter 3.) The method experiments were undertaken as a series of 4 discrete, but closely interlinked projects, described below. Working in this way enabled me to manage my research strategically as described in the preface, and to evolve, explore and test method.

Each of the 4 projects was followed by a conference paper, and in some cases a journal article in a relevant publication area including design research, material thinking, design history, and product lifetime extension. The research activity table (Table 1 below) plots the projects, the specific aims of each one, the research activities and the written and published outcomes that they led to. The research activities were not linear, and sometimes developed on parallel tracks so that, for example, analysis and reflection developed though writing a paper informed the data

collection on another project. Each activity built on the preceding ones, and carried the investigation forwards. This can be seen in the Research Activity Map in Appendix 3 which plots the research activities against the period of registration, showing the relationship between projects, conference papers and journal articles. In the appendices there is also a list of publications with brief synopses, and the published papers themselves (Appendix 1).

Research projects

The research projects are introduced below in approximately consecutive order.

Project 1

Objects in Purgatory: Why do we keep uncherished gifts?

The study topic emerged from a practice-based research project called the Campaign for Objects in Purgatory, that I created prior to the start of the PhD registration period and which raised pertinent research questions. I made a participatory exhibition to which I invited visitors to contribute their uncherished gifts and associated narratives. The exhibition grew from my contemporary jewellery design practice to become the foundation for the PhD proposal, and the point of departure for the further experiments in method I used to investigate my research aims, introduced below. The writing of a conference paper and two journal articles (Keyte 2013a, 2013c, 2015b, submitted as part of my PhD) that then took place within the registration period gave me important opportunities to analyse the collected data, reflect, and understand the effectiveness of the exhibition as a research method.

The analysis of the Objects in Purgatory participatory exhibition showed that objects can be kept while being associated with challenging emotions and tensions in meaning. It suggested that the meanings possessions come to acquire are idiosyncratic and personal in nature (discussed and in Keyte 2013c). This raised important questions: Can the visual and material qualities of an object determine whether it is kept, and can the meaning be influenced by a designer? These were worthy of investigation and informed the aims of the following research projects.

Following my analysis of data collected through the Objects in Purgatory exhibition, I set out to further explore how making and sketching, incorporated into longer interviews, can support deeper reflection on affective relationships to possessions. I delivered a ‘Paper of Practice’ at the European Academy of Design. It took the form of a workshop that developed aspects of exchange, making, and material agency. It employed framing as a physical activity for ‘framing’ dilemmas associated with uncherished gifts. My intentions and workshop plan, contextualised by a literature review were accepted as a paper to the 10th European Academy of Design conference “Crafting the

Project title and aim	Study questions addressed	Project specific research questions	Activity	Papers and publications
Objects in Purgatory Why and how do we keep uncherished gifts?	1, 3, 5	• How gift exchange builds value in an object • How memories and emotions become connected to an uncherished material possession • Whether drawing, making and exchange can support deeper reflection on affective relationships to possessions	Participatory exhibition incorporating a sketching activity, collecting uncherished gifts and their stories at Sheffield Hallam University 2011 Participatory workshop incorporating sketching and making at the European Academy of Design conference 2013	Keyte, J. (2013a). Campaign badges: Creating meaning through making. Paper presented at the Praxis and Poetics: Research through Design 2013 Conference **(METHOD)** Keyte, J. (2015b). Objects in purgatory brooch exchange: Storytelling artefacts as agents for audience engagement. Studies in Material Thinking, 13 (**METHOD)** Keyte, J. (2013c). Objects in purgatory: How we live with uncherished gifts. Interiors, 4(3) **(FINDINGS)** Keyte, J. (2013b). Making, gifting and connecting. Paper presented at the Crafting the Future: 10th European Academy of Design Conference **(METHOD)** (Contributing author) von Busch, O. (2014). Knowledge in the making: the 'Power to the People' workshop track at Crafting the Future. The Design Journal, 17(3). **(METHOD)**
Antique washstand set case study How do the meanings of our possessions transition over time?	1,2,3	• The factors influencing the development and transition of meanings in a possession over time • How perceived value and meaning can shape the emotional lifespan of a possession	Semi-structured interview with the secretary of a community museum, about a Victorian washstand set 2014	Keyte, J. (2014). The Alternative History of a Victorian Washstand Set. *Blucher Design Proceedings, 1(5).* **(FINDINGS)**
Hardware Hopes Can home computing devices hold meaning, and what makes us keep them when they are out of date?	1,3,5	• Whether positive associated meanings can build in home computing devices and what factors influence this • Whether the material and visual language of a home computing device can influence how the person feels about it • Whether an object that quickly becomes functionally obsolete can have an extended emotional lifetime	Access space residency interviews about participants' relationships to computing hardware 2013-14 Participatory exhibition at Manchester Maker Faire, Museum of Science and Industry 2014	Keyte, J. (2015). Hardware Hopes: examining emotional connections to computers through creative story telling, In G. Salvia, T. Cooper and N. Braithwaite (Eds.), *Product Lifetimes and the Environment.* (pp 166-172). Nottingham Trent University: CADBE **(FINDINGS)**
Material Meaning Do designers feel they can shape the meaning of a product?	2,3,4,5	• Whether designers feel they can influence the meaning of a product to a user • What factors might influence the build, ebb and flow of meaning associated with an object during the design process • How meanings develop in objects, when designers are consumers of their own products • Whether material and visual language can be holders or triggers of meaning, and designers' intentions for shaping these	Interviews with 10 designers incorporating sketching activity 2021-22	Keyte, J. (2022). Material Meaning: An investigation into how meaning Is organised and interpreted in industrial design practice. In G. Bruyns and H. Wei (eds.), *[ ] With Design: Reinventing Design Modes (*pp 3558–3566). Springer **(FINDINGS)** Keyte, J. (planned) Material Meaning: Industrial Designers as Creators and Consumers of Artefacts [to be submitted to Design and Culture journal for consideration] **(FINDINGS)**

Table 1 Research activity table (see Appendix 2a for larger version)

Future" (Keyte 2013b). Following the conference I contributed to an article in the Design Journal reviewing the track (Von Busch 2014).

Project 2

The Victorian Washstand Set: How does the meaning of our possessions transition over time?

This project was a case study of a single uncherished object, a Victorian washstand set. While the set was given to the participant by one of her friends, rather than given as a gift it was passed on to her in an effort to find it a new home. I set out to identify the factors influencing the development and transition of meanings, and the influence of these on the object's emotional lifespan. I undertook a semi-structured interview with the owner of the set (a trustee of a small rural museum) intended to capture the journey of the washstand set as it transitioned from her possession and into the museum over time.

I framed the 'life' story of the set, punctuated by transitions in meaning, value and purpose, within a literature review on home possessions. I made a presentation at "Custodians of Home", the conference of the Centre for Studies of Home at Queen Mary University. This was followed by a published paper at the 9th International Committee Design History and Design Studies conference "Tradition, Transition, Trajectories: major or minor influences?" (Keyte 2014).

Project 3

Hardware Hopes: How do we feel about home computing devices?

I examined another category of object, home computing hardware, to discover whether findings similar to those concerning uncherished gifts arose. I aimed to find out whether positive meanings can build in home computing devices and whether its visual and material language can influence these. The data for this project was collected through two events: An artist's residency at Access Space, an open access digital arts space in Sheffield, and a 2 day participatory exhibition at Manchester Mini Maker Faire. Through these events I invited people to contribute the stories of the devices they own and keep (e.g. laptops, desktop computers, smartphones, tablets), and asked them to consider how they feel about them.

I published my findings in a paper accepted to the Product Lifetimes and the Environment conference (Keyte 2015a).

Project 4

Material Meaning: Can designers shape the meaning of homewares?

I set out to investigate whether industrial designers feel they can contribute to the meaning of products through design practice, and to study their intentions

in shaping the visual and material language of a product. I also sought to consider the cultural activities of keeping of objects in the home and design practice together, as they are rarely considered together in design literacy. Therefore I examined how meanings develop in objects, when designers are consumers of their own products.

I undertook a series of 10 virtual interviews with currently practising industrial designers working for the retail sector, designing fast moving hard goods for the home. The interviews incorporated elements of sketching as a reflective activity; discussion of the design process for a product intended to hold meaning for the user; and consideration of the designers' own practices of keeping.

I published a pilot discussion and analysis of 3 interviews in a paper accepted to the 9th Congress of the International Association of Societies of Design Research (Keyte 2022). I have also planned an article intended for the Design and Culture Journal published by Taylor and Francis, for their consideration (Keyte planned).

Brief summary of each chapter

Chapter 2 The development of meaning and value in material home possessions

Chapter 2 focuses on the well-studied role of home possessions in developing self-identity. This has been examined across multiple disciplines including material culture studies, sociology, design, anthropology and psychology. I take a detailed look at seminal publications: 'Possessions and the Extended Self' (Belk 1988); 'The Meaning of Things' (Csikszentmihalyi and Rochberg-Halton 1981); and the work of Daniel Miller (2001, 2005 a & b, 2008) all of which have had a significant impact on the study of our relationships to possessions. I then discuss themes from the literature identifying the types of perceived value arising in relation to home possessions, such as other people and memories. I also review key authors' accounts of curation and decoration in the home (Miller 2008, Pink 2004), practices through which artefacts become deeply embedded in our lives.

Chapter 3 Designing for emotional longevity

Chapter 3 investigates approaches to emotional lifespan in design research, which tend to rely on the design of a product and its visual and material identity to encourage users to become attached to and value the product. I then review how the creative processes of industrial designers are discussed in the literature, and how designers may organise meaning through the shaping of a product for the home. Following this I discuss studies viewing design as a socially situated practice,

including consideration of how the meanings of designed objects continue to be constituted once they become the possession of an individual.

Chapter 4 Methodology: Accessing the stories and meanings of home possessions

In chapter 4 I set out my approach to method, including discussing influences from design research and my professional background on my exploratory and iterative design thinking approach, and prioritisation of hands-on experiences for research participants. I note key publications and studies that embrace the narratives of everyday artefacts as a means of surfacing cultural and individual meanings, and my own approach to gathering the stories of home possessions by combining interview with embodied methods, including sketching and participatory exhibition. I explain ethical considerations and processes.

Chapter 5 Method: The 4 projects

I present a detailed explanation of each of the 4 research projects including data gathering activities, and data analysis methods. The chapter concludes with a detailed discussion of the 4 projects seen together, and how the methods have enabled me to answer my research questions. I identify areas of the enquiry that could be examined further.

Chapter 6 Discussion of findings and conclusions

Chapter 6 considers the findings from each of the first-hand research projects, in relationship with each other as a whole research study. It identifies key themes and apparent contradictions arising that address the build of meaning and value in possessions, where findings from the projects intersect. I identify categories of perceived value in home possessions including associations with other people, with personal memories, and with collective history. I explore the ways in which intended meanings associated with an object can fail to transfer, for example from a giver to a recipient, or a designer to consumer. I then examine the importance of practices to the build or change of meaning in an object: Everyday practices of keeping things, and professional practices of industrial design. Lastly, I consider all of the above in relation to the emotional lifespan of products, and whether this is something that can in fact be designed. In this chapter I explain contributions to knowledge, and finish with a section emphasising the contribution of my methods for eliciting rich accounts of our relationships to objects to design research.

Chapter 2
The development of meaning and value in home possessions

This chapter is the first of two literature review chapters, and explores how existing studies may help address the first 3 research sub-questions:

1. What factors influence the perceived value of an uncherished home possession and the build, ebb and flow of meanings associated with it?

2. How do the meanings of a home possession transition over time, and how do they shape the object's emotional lifespan?

3. Can the material and visual identity of a home possession influence how somebody feels about it, and whether they feel compelled to keep it?

The chapter examines how scholars in a range of fields including material culture studies, consumer studies, psychology and sociology have studied our affective relationships with home possessions, their associated meanings, and how perceived value emerges. As explained in the introduction, home possessions are substantially studied across disciplines in the social sciences and humanities, arguably due to the embeddedness of objects and home in human experience.

Integrating research from other disciplines is an approach which is integral to design (explained in chapters 3 and 4). The studies below are valuable to design research for their perspectives and findings on how objects - always an outcome of design, whether a formal practice or not - start to accrue personal and collective meanings. Design research relevant to my study is discussed in the following chapter (Chapter 3 Designing for Emotional Longevity).

It is important to note that my published papers, described in the introduction and included in the appendix, contain literature reviews of their own which cover the same areas and include many of the same authors. In particular, "The Alternative History of a Victorian Washstand Set" Keyte (2014) was intended as a literature review on how we invest home possessions with meaning, and can be read alongside the literature review below.

In this chapter I review the theories and ideas explored in seminal publications by scholars who establish the importance of possessions to self-development, as critical to being in the world. These include consumption scholar Belk (1988), psychologist and anthropologist Csikszentmihalyi and Rochberg-Halton (1981), and material cultural expert Daniel Miller (2008). I also review the themes arising from the

literature, suggesting themes for they ways that meanings that arise in our relationships to possessions and how we keep them. I incorporate references to other scholars working in this substantial area, as well as the 3 mentioned above. As I aim to contribute to design research, and the design of objects is in part concerned with the visual and material, I pay attention to how material qualities are discussed. In the chapter conclusion, I consider how the perspectives of the scholars whose work is examined in this chapter influence my own theoretical positioning.

Chapter structure
Following the introduction, I provide an overview of the study of home possessions in the literature, and how scholars describe the home as an important site of cultural production in industrialised economies. I then examine the ideas and perspectives of 3 significant scholars who establish the importance of home possessions to the development of a stable sense of self: Russell Belk; Mihaly Csikszentmihalyi and Eugene Rochberg-Halton; and Daniel Miller.

I move on to identify key themes arising from the literature. In the first, I discuss how scholars have explained the importance of a sense of past expressed through home possessions. This includes how objects can be perceived as markers of passed time, as well as how they can evoke important memories.

Following this I describe how home possessions are reflective of our relationships with other people, particular through the ideas of Daniel Miller, who argued that his study of 30 homes in a single London street revealed our practices of ordering possessions as expressive of our place in the world.

Next I discuss what key scholars, particularly anthropologists Marcel Mauss and James Carrier, have written about gift giving. Gift giving plays an essential role in the building of human relationships. Objects are bound up in gift exchange, and therefore directly expressive of our relationships to each other.

Lastly, I examine what researchers have said about how we interact with our possessions in our homes, and how what we do with them can shape and maintain meaning. Daniel Miller and Sarah Pink in particular show how practices of display, curation, and home decoration are critical to creating a continuously evolving pleasant and stable home environment.

The chapter finishes with a summary of key points and a discussion of how the literature contributes to the study, including my theoretical positioning.

Home possessions as an area of study
As noted in Keyte (2014), pioneering research from the 1980s and 1990s established the study of people's relationships with everyday home possessions as a

significant area of inquiry, challenging earlier academic perspectives that viewed objects solely as cultural symbols rather than as carriers of personal meaning (Appadurai 1986, Attfield 2000, Cieraad 1999, Kwint 1999, Miller 1998). More recent studies have further connected home possessions to memory, meaning-making, and everyday practices, emphasising their role in fostering creativity and human agency (e.g., Pink 2004, Hurdley 2013, Turkle 2011, Miller 2001 & 2008).

The home itself, as the space in which we dwell with our possessions, is well established as a critical site of cultural production. Scholars agree to the processual nature of the home. According to Csikszentmihalyi and Rochberg-Halton (1981), it is an important cultural space that supports human activities of self-cultivation that make up a life. From birth, we learn to grow through our interactions with the home environment. Making a home is a continual process of becoming a whole self, in which possessions are the key (Cooper Marcus 1995) and remind us of who we are Csikszentmihalyi and Rochberg-Halton (1981). Miller (2008) described how we cultivate our home material environments in order to establish and understand how we fit in the world. We are active agents in the cultivation of the home, storing things with potential to us and acquiring and divesting ourselves of objects as a continuous process of self-construction (Crewe et al 2005). While we invest things with "meanings that reflect and assert who we are" (Attfield 2000) and project ourselves and our families to the outside world (McCracken 2005), the environment we create in turn works on us (Yandell 1995). Bourdieu, in his reading of the politics of taste and class (2010), argued that the objects we own have a quiet agency, perpetuating the underlying social order through our repetitive interactions with them.

Anthropologist Appadurai (1986) explained that various types of transaction, within particular cultural contexts and regimes of value, shape the value of individual objects. To understand our relationships to home possessions, is important to acknowledge the economic context of industrialised societies, in which commercial objects have come to hold personal and cultural meanings (Belk 1988). As explained in Keyte (2013c and 2014) There have been significant historical shifts that underpin our consumption practices. The proliferation of goods originating in the 19th century became a means of expressing religious and moral values. The home evolved as an environment for the projection of identity and status, (Cohen 2006, Bronner 1989) and made it easier to shape a particular self-image and to cultivate individual self (Ladik et al 2015). In the 1960s, the escalation of modern production and consumption enabled people to be liberated from past values and to express individual self (Attfield 2000), allowing individuals relationships to possessions to become more transient.

Anthropologist Kopytoff (1986) emphasised the integrated nature of culture and economy, but how in our complex, industrialised societies cultural and monetary value are not in harmony with each other. The status and value of a commodity (an object with commercial value) can therefore change across its full biography, and an

object can have the same monetary value as something that appears very different. It can also become “singularised” or priceless, because it is culturally very significant (for example if it is an heirloom), or not significant at all (Kopytoff 1986). These analyses describe the complex societal circumstances for the perceived value of objects and explain that this can be inconsistent. They provide the backdrop for understanding how we find meaning in our home possessions.

The importance of home possessions to the development of the self

Russell Belk: Possessions and the extended self

A key thinker in the study of our relationships to home possessions is Russell Belk, a leading and often-cited scholar on consumer studies and materialism. His paper “Possessions and the Extended Self” (1988) became a seminal publication in consumer research, influential across a number of disciplines (Ladik et al 2014). In this paper, he synthesised the ideas of a very wide range of scholars to establish the importance of possessions to the development of our identities and selves. In doing so, Belk shifted his intellectual positioning “ from a positivist scholar to one who embedded himself firmly within the trajectory of interpretive social science" (Ladik et al 2014).

Belk’s interpretive approach taken in Possessions and the Extended Self gave emphasis to the meanings individuals attach to their material worlds. In my view Belk took a more sympathetic view of human processes of consumption than in his earlier positivist work, for example his 1984 paper developing three scales for measuring constructs related to materialism (Belk 1984). His position transmuted to one of asking how and why people consume rather than quantifying buyer behaviour, and he did this through a holistic enquiry that mapped connections between established theories. He later described this research endeavour as “a cyclical iterative hermeneutic tacking between materials, concepts, and the library” (Belk 2002 cited in Ladik et al date). His interpretive approach aligns with constructivist epistemologies, which assume that reality is co-constructed through language, culture, and practice rather than discovered through objective measurement.

Belk’s positioning reflects a broader movement within consumer research towards qualitative, meaning-centred methodologies. He has continued to advocate for richer, more nuanced understandings of consumption as relational, culturally embedded and emotionally resonant. Publishing more recently in the Routledge Handbook for Sustainable Product Design, Belk (2017) expressed deep concern about materialist ways of living inhibiting a sharing economy and a shift to sustainable lifestyles.

In Possessions and the Extended Self, Belk developed the concept of the “extended self” to explain how possessions (including things like our houses, bodies, and other

people as well as objects) are not merely external objects, but integral parts of who we are. To ‘consume’, Belk pointed out, is literally to make something a part of ourselves. Belk used concepts from existentialist philosopher Satre’s major work “Being and Nothingness” (1943) to determine that we have things to enlarge our sense of self, and can only know who we are by seeing what we have. Having and being are distinct states that merge when an object becomes a possession; when it is synthesised into the self. This can be a gentle, unconscious process that evolves over time: “objects… and household furnishings may become a part of us through the knowing that comes with habituation” (Belk 1988).

Belk identified a need to experience control over objects and the immediate environment, to feel a sense of possession. He argued that that the more we can control something, the 'more closely allied with self the object should become” (Belk 1988). For example, we have power to selectively acquire or reject objects to shape the self, if we have the ability to exchange money for material objects. On the other hand, Belk implied that the incorporating of an object into the self is not necessarily benign or intentional, as “possessions may impose their identities on us” including those with unwanted associations.

While we define ourselves with the possessions we acquire, they in turn inform our developing sense of self, remind us of who we are, and communicate something of us to other people. Belk suggested another person will at first associate possessor and possessions, and with greater knowledge of their possessions will “come to infer” the character of the possessor, or vice versa (Belk 1988). Some possessions define us as individuals and some as part of a family, collective or group.

Mihaly Csikszentmihalyi and Eugene Rochberg-Halton: The meaning of things
Csikszentmihalyi and Rochberg-Halton’s book “The Meaning of Things: Domestic Symbols and the Self” (1981), published in the US in the same decade as Belk’s paper above, is a very relevant study as it directly sought “to uncover generally shared patterns of meaning” in possessions. This is another pivotal publication important to my research, elements of which have also informed methodological considerations. The book documents a study of 300 people, and the categorisation of the meanings attached to home possessions they identified as special. They defined 37 meaning categories, combined into 11 meaning classes: Past; associations; present-future; intrinsic qualities of the object; style; utility; personal values; self; immediate family; kin; and non-family. Motivated by concerns about materialism, the researchers sought to show the meaning and purpose behind our accumulation of objects.

Like Belk’s paper on possessions and the extended self, Csikszentmihalyi and Rochberg-Halton’s book makes a compelling argument for the critical importance of home possessions to the self. Objects dynamically convey individuality, or bonds with others, and relations between the human and non-human. They can express

“deep human needs for relationship and continuity, as well as the fragility of the material world we create around us and the people and institutions that make up the world” (1981). The authors’ central hypothesis was that people create and communicate meaning through social interactions and that home possessions serve as symbols that convey these meanings. Rather than perceiving possessions as fixed or inherently meaningful, they focused on how people actively cultivate meaning through their engagements with material objects. It is important to note that the study only looks at ‘special’ objects with stable and significant meaning, rather than possessions in a wider context. However, it is very interesting for what it can tell us about the nature of our affective relationships with objects.

Csikszentmihalyi and Rochberg-Halton drew significantly on concepts rooted in psychology to develop their understanding of processes of active emotional investment in objects and their role in self-construction. They described what they saw as the focusing of attention, or “psychic energy”, on a material possession. They argued that this is integral to the way individuals cultivate objects “as an essential means for discovering and furthering goals”, as well as positive experiences. The meaning of an object is realised through interactions with it, and habitual interactions make up the processes of self-development that cherished objects are bound up in.

In approaching meaning as constructed through experience and purposeful engagement, the authors applied and drew inspiration from John Dewey’s pragmatist philosophy values of experiential learning, and the continuous process of reconstructing meaning in order to direct subsequent experiences. Drawing on Dewey (1934) they discussed the “vital” aesthetic dimension of transactions with objects: the appreciation and perception, through the senses, of a special object. They explained that “the object of interaction has some influence on the experiencer’s interpretation because of its own intrinsic qualities” and a transaction with it can allow new visual experiences, feelings and ideas. The habit of interacting with an object – for example revisiting a photograph or tending to a plant - is an essential part of cultivating the meaning. Our cultural context is the backdrop for our interactions: We develop an understanding of social expectations through our habitual interactions with the objects around us, shaped by the cultural scripting embedded in our material environments.

A person can also more consciously enlarge their interpretation of an object, by allowing its objective qualities to be part of the transaction, engaging with a more conscious or aware level of cultivation. An example of this could be seeking to learn the cultural background for an object.

One of my research sub-questions asks whether the material and visual identity of a home possession influence how somebody feels about it. In the above paragraphs I explain how Csikszentmihalyi and Rochberg-Halton identified a role for the intrinsic qualities of an object in a person’s experience of it, influencing interpretation,

cultivation of objects, and self-development. But in their analysis of collected data the authors struggled to find direct relationships between an object's visual and material qualities and its meaning. Their findings indicated that meaning and visual qualities are only indirectly related, and that this comes through in objects they categorised as 'visual art', or 'sculpture'. These encompassed any decorative object and are amongst the most special objects in the home, and could perhaps be assumed to be appreciated for their visual or material properties. However, the authors noted that they were not often valued for their intrinsic properties or aesthetic values (16% for visual art), although in some cases they were valued for their style. – No inference could be made about the likelihood of generalisable meanings becoming attached to particular objects. More usually they were valued for memories, characteristics of the self, associations, family and non-kin, i.e. the meanings refering to the immediate life history of their owners. There was enormous flexibility in how the respondents attached and derived meanings from their possessions. The authors found that almost any meaning can be attached to any object, although it was possible to identify patterns. The physical characteristics of the object can lend themselves to certain meanings, but they can't be interpreted as meaning anything specific.

A final note on making objects: In the paper discussed above, Belk informed his theories with these researchers' explanations of investing our energy, time and attention to an object, making it a part of self. He highlighted the investment of self in creating something, whether an object or merely a thought, and the universal understanding that it is then ours. In the case of an object, it becomes associated with the maker. The investment of self in an object, particularly if a person has made it, can infer value.

Daniel Miller: Material culture studies and The Comfort of Things

Anthropologist Daniel Miller has been prolific in the study of material culture, including home possessions and our affective relationships with them. In "Material Cultures: Why Some Things Matter" (1997), Miller foregrounded the ethnographic study of objects**,** arguing that paying attention to everyday artifacts (from radios to catalogues to domestic furnishings) reveals deeper cultural values and contradictions.

In "Clothing as Material Culture" (2005a) Miller explained that the study of material culture focuses on the objects themselves, and their properties, as well as what they can tell us as about culture and social relations. He described how this now-established approach has dissolved the divide between specialists focused on object properties (such as design historians and conservationists) and social scientists analysing cultural and symbolic meanings. His approach learns from both, and writing about the study of textiles, he argued that the sensory and aesthetic dimensions of things (how they look and feel) are integral to understanding their social significance (Miller 2005a). Much of Miller's writing is concerned with the agency of everyday home possessions, and he has sought to examine this through

the perspective of significant theorists as a means of understanding how objects can reveal deeper cultural values. An example is Miller's "Introduction to Materiality" (2005b) in which he described Bourdieu's practice theory as a foundation of anthropology in establishing ideas about the power of objects to determine our expectations and behaviours**,** viewing objects as embedded in habitual relations that constitutively shape identity and social order. He also invoked Lévi-Strauss's structuralist insight—the idea that objects' meanings emerge through their relational contexts rather than in isolation.

The humility of things

In an early book, Material Culture and Mass Consumption (1987), Miller advocated for the "humility of things"—the notion that everyday objects exert powerful influence precisely because we often overlook their presence. Reflecting on this in Miller (2005b) and drawing on Bourdieu, he suggested that material forms can profoundly structure everyday expectations and behaviours: "The less we are aware of them the more powerfully they can determine our expectations by setting the scene and ensuring normative behaviour, without being open to challenge. They determine what takes place to the extent that we are unconscious of their capacity to do so." Miller's carefully considered arguments about the value of studying everyday overlooked possessions help show the value of my investigation into uncherished objects.

Of particular interest to my study is Miller's book The Comfort of Things (2008), in which he explains home possessions as mediators of our relationships with each other. The discussions in the book are drawn from his study with Fiona Parrott on the material culture of loss, but as the book is not an academic publication as such, he wrote outside academic conventions with depth and in a way that is sensitive to people and their things. In this way the book makes clear that consumption is a site for constructing identity and meaning.

We value possessions for their associations with the past

Objects as markers of the past

Looking across literature on home possessions, a series of themes is clearly identifiable. One of the critical ways in which possessions hold meaning and support self-construction is as reminders of the past and holders of memory. How objects enable us to stay connected to individual and collective pasts and evoke memories arises throughout the literature. Belk explained that a sense of past is essential to the sense of self in the cultural and temporal context of the industrialised West. We are defined by our immediate circumstances, the past and the future, and we extend back and forwards in time through the material environment (Belk 1990). Belk discussed a number of distinct categories of possession which evoke the past, such as antiques, heirlooms, and markers of time in our individual past like souvenirs and photos. Kopytoff (1986) noted approaches to objects that help us mark the passing

of time, such as forming collections or rescuing objects a previous generation has deemed old and worthless.

Some markers of our personal pasts are directly linked with specific events or milestones, or remind us of points of change, such as a wedding dress or athletic trophy (Belk 1990). Interestingly, Belk noted how objects can help us to notice or cope with the passage of time through their material nature. For example, the perceived unchanging nature of objects like furniture and houses and clothing provide security through familiarity. Conversely, some possessions may show us the passing of time "by becoming stylistically outdated, physically worn, and sometimes altered by repainting, dying, or rearranging" (Belk 1990). This too can be reassuring, as an altered object may not suggest to us that we have changed.

Objects inherited from past family members can help mark our place in the the passage of time, beyond our own lifetime. Belk explained that heirlooms connect us directly to the family past and the experiences of previous family members, providing a sense of "familial self continuity" (Belk 1990). It is not only individuals that can assemble objects to develop a secure sense of self. "The family is able to build a similar archive and allow individual family members to gain a sense of permanence and place in the world…" (Belk 1988). Miller (2008) makes an interesting point about inherited clothes in relation to the nature of fabric. As fabric is flexible, it can stretch and take on the form of the wearer, and can fade, thus clothes more suited to gradual incorporation into the self. In this portrait of one individual and their home possessions, an item is treasured and evokes memories of lost special people, and embodies some of the psychic energy of the wearers.

Antiques occupy a different category of meaning to heirlooms, as they don't connect us to our personal past. They can appear to give us knowledge, imply past values, and connect us imaginatively to how it might have been to live then (Belk 1990). The rarity of an object can imply value, and meaning can build through the fact of its survival, and "even a trivial object becomes rare with age" (Csikszentmihalyi and Rochberg-Halton 1981). An objects' survival in spite of its fragility can make it "more extraordinary and sacred than objects of the present" (Belk 1988).

Objects and memory

Home possessions play a vital role as conductors of personal memory, and "making tangible" past experiences (Csikszentmihalyi and Rochberg-Halton 1981). We are likely to treasure possessions associated with pleasant memories (Belk 1990). Researchers with a Jungian perspective view the home as a kind of material framework for memory .

In "Poetics of Space" (1958) French philosopher Gaston made a phenomenological examination of the home, drawing heavily on Jung's psychoanalytical theories to interpret how domestic spaces occupy the imagination, and are present in literature.

His mediations on domestic spaces such as cellars, wardrobes, drawers and caskets develop the notion that physical spaces are inhabited by memory and imagination, and give material shape to the psychic past. Bachelard reflects on how we learn how to live in a house, in the house we live in from the beginning of life. Our intimate interaction with that house teaches us how to live and we take that understanding, and those memories, to all other houses we live in. A house 'houses' our memories.

Clare Cooper Marcus made a thoughtful study of the emotional ties between people and the homes they inhabit, published in her book "House as a Mirror of Self: Exploring the Deeper Meaning of Home" (1995). I discuss relevant aspects of her methods in Chapter 4: Method. Copper Marcus named Jung as a substantial influence and described his journey of building his own home as a conscious reflection of his psyche. Drawing on this she links a person's creation of a home environment to their psychological development. The objects we decorate our homes with have aesthetic and functional meanings as well as unconscious messages which, if paid attention to can support our personal and spiritual growth toward becoming a whole self. Memories of childhood homes (both good and bad) are resonant in present home creating.

Sensory experience and memory

The experience of an object – how it looks, feels and smells - is integral to the evocation of memory. It is part of the 'fetching out' of meanings, which evolve and consolidate through repeated encounters. The physical form and materiality of an object shapes our interactions through tactile engagement. The embodied and fragmented nature of memory has been addressed by historian Elizabeth Edwards (1999) who explained how the physical properties a printed photograph, potentially in a frame or book, shapes how we access the past through our bodily engagement with it.

A text deeply embedded in cultural discourse and celebrated for its vivid and immersive descriptions of arousing memory is "A la Recherche du Temps Perdu" written by Marcel (in 1909. In it, Proust famously described how the taste of a madeleine soaked in lime-blossom tea used by his aunt in childhood unlocked tangible memories of place and space. In Proust's writing, sensory encounters with everyday objects - such as tasting the madeleine – involuntarily trigger a complex network of memories, revealing how these recollections are deeply intertwined with, and supported by, the material world (Proust 1992). Belk (1990) noted that it has illustrated how objects of nostalgia provide not just "simple cues" to memory but also "provoke rich textural memories". Kwint (1999) highlighted that "here memory connects with the entire body and the full complexity of the world around".

Objects are valued for their associations with other people

In the study undertaken by Daniel Miller and Fiona Parrott documented in an article 'Loss and Material Culture in South London (2009) and the aforementioned book "The Comfort of Things" (Miller 2008) these researchers developed methods of in-depth biography as a means of getting at the "authentic" and individual meanings of objects.

In "The Comfort of Things", Miller made an insightful deep reading of people's relationships to their possessions in their homes, creating textual portraits of 30 people (the study participants) living on one London street. His central argument was that home possessions are mediators of people's relationships with each other. Miller connected the forming of positive attachments to objects to the forming of healthy attachments to other people. Possessions are an integral part of relationships with others and "just serve, in their relatively humble way, as forms through which relationships are expressed and developed" (Miller 2008). This view of consumption processes as the dynamic materialisation of relationships to other people makes the study of material culture a rich means of studying social relations.

The book thoughtfully charted a spectrum of relationships to possessions and concluded that people who form close attachments to things, form close attachments to people. If a person finds themselves living alone or without current close relationships, this change may be expressed through their approach to possessions, for example by living in the present with fewer objects. A full life, on the other hand, is generous in its care for the material environment of the home and the people who live in and pass through it. An outlying example, illustrating both a specific attitude to possessions and the importance of other people, was a Buddhist participant who lived without things, yet consciously brought in a candelabra "to accommodate particular relationships", compromising his core aesthetic.

Our lives have over time become largely devolved from state and religion, enabling us to evolve personal practices of acquiring and keeping possessions to create our own orders of '"things, values and relationships", or using Miller's term, 'cosmologies' (Miller 2008). This makes the home an important, but private place of cultural production, as demonstrated through the earlier collection of essays 'Home Possessions: Material Culture Behind Closed Doors" (2001) edited by Miller. Yet, his perspective on the warmth and humanity behind the accumulation of possessions challenges concerns about materialism, and the suspected danger of forming stronger bonds to things than people.

Objects acquire value through gift-giving

Gift giving plays a fundamental role in human societies, and as an area of ritual and practice concerning objects, it is a means of acquiring possessions and associating meanings with them, particularly connected to other people. In Keyte (2013b) I

discussed key literature explaining the way that gifting can build meanings and value in an object, and I have also summarised this below for the purposes of this chapter.

“The Gift”, written by Marcel Mauss in 1950 is an often-cited work on gift-giving in which he sought to argue the role of an obligation to reciprocate tied to receiving a gift. He studied small scale, traditional societies and in this context established that ritual gift giving is at the heart of all aspects of society and culture, based on stable systems of exchange value. Mauss viewed a gift exchange as giving a small part of oneself, thereby associating the gift with the giver, and an obligation to reciprocate. His recognition of this obligation as a deeply influential driving force in transactions between people was a central hypothesis, and he applied this finding to gift exchange within complex, industrialised Western societies.

More recent authors have continued to interpret Mauss’s theories within the context of Western society. For example, Belk (1988) explained gift giving as a process of extending the self to encompass others. Giving could be seen as a generous gesture of giving away part of the self, or conversely, a gesture of control, evident in continued association of the object with the giver. The giver makes a choice of object to give, whereas the recipient has to relinquish some control of their self-image to keep it. Csikszentmihalyi and Rochberg-Halton (1981) also drew on Mauss’s view of gifting as giving a part of one’s self. In their view, the attachment a recipient feels toward a gift may reflect a connection to the giver, making gifting an important way of fostering strong bonds between individuals. Sociologist Carrier (1991) conceptualised a stable interpersonal relationship as an ongoing cycle of giving and receiving, with gifts serving as tangible expressions of relationships and love. He explained the embarrassment felt by recipients wishing to dispose of a disappointing gift as rooted in the bond to the giver, interpreting the rejection of a gift is a rejection of the giver.

In Western societies, gifts are often commodities, which poses a challenge as commodities inherently appear impersonal (Carrier 1993). To counter this, we adopt rituals that detach them from their commercial origins and imbue them with individuality and meaning. Luxurious or frivolous items are frequently chosen as gifts to distinguish them from utilitarian purchases, allowing the giver to express themselves through their selection. Christmas rituals, such as wrapping gifts or attributing their origin to Santa, further elevate these items, making them feel magical or sacralised (Belk 1993; Searle-Chatterjee 1993). Wrapping, as an act of self-investment, personalises the gift and "singularises" it, while homemade items, like jams, bypass this process as they already carry the maker’s identity (Carrier 1993).

We curate the meaning of our possessions through practices of display

Whilst the above themes can tell us why something may hold perceived value, studies have shown that what we do with our possessions in everyday life is integral to the build of meaning. Csikszentmihalyi and Rochberg-Halton 1981, discussed above, ponder whether the environments we develop can be cultivated positively to enable continuity of good practices. Practices of display are practices of cultivating the home that are critical to the development of meaning and cultivation of the self. While individual objects can hold significance in themselves, they can also develop meaning in relevance to each other when they are curated to create a meaningful home environment (Miller 2008). In relation to one of the homes studied, Miller observed how studying the ordering of possessions "gives rise to our understanding of the overall aesthetic that gives form and pattern to the relationships which constitute this house" (Miller 2008).

According to Belk, we naturally curate and edit systems of objects. Just as in museums we "determine the picture of our cultural past" by curating objects, in our homes we select and edit out objects to establish a secure sense of who we are, and edit out possessions associated with unwanted reminders of the past (Belk 1988). He sees this as part of a human instinct to master the material world. Miller explains curation from a more holistic perspective, observing that objects can gain meaning through the ways in which they are assembled and juxtaposed, and not just as individual entities – meaning is negotiated in light of its surroundings. We tend to group related objects, groups which in turn relate to each other. We curate according to personal hierarchies that are not necessarily readable to others, sometimes making very conscious delineations of physical space to curate value (Miller 2008). Like Belk, Miller shows the need to edit out unwanted references, in the discussion of a participant "ambushing gifts before they arrive and finding appropriate spaces outside the main living area, so that her own self is not compromised too far".

The way the spaces of the home are delineated provides a structure that supports how we curate our possessions, and communicates expectations for how we should do this. Long-standing architectural elements or pieces of furniture embody historical practices that shape how we display objects (Chevalier 1998), contributing significantly to how we store and display objects. An example is the mantlepiece, studied extensively by sociologist Rachel (2013). Mantlepieces are an ubiquitous structure with a deep past, framing the hearth at the centre of a room and offering a platform that Hurdley's study has shown we use for displaying both the meaningful and the forgotten, and stowing things we need to hand. As "a display space with performative and ordering functions, enabling objects to be lifted above the ordinary run of things in the home", it has offered Hurdley a means of accessing biographies. Say something about Hurdley's approach – what being a sociologist allows

The display and storage functions of the spaces and structures of the home give us opportunities to develop a secure sense of self through the sifting and curation of personal meaning. Miller (2008) linked the layout of the home with comfort and stability: “Most households have a strong sense of spatial routine with long-term position, where things stay and people go”. Discussing the design of homeless shelters in the “Interiors” journal Pable (2013) illustrated the importance of the physical structure of the home supporting the display and ordering of personal possessions, by suggesting that without it vulnerable people may be less able to reestablish a more secure sense of home. These structures can be supportive of restoration process.

Graves (2012) writing expands this view of delineated home spaces by considering how we demarcate clutter in our homes as occupying a 'limbo' state, existing between the chaos of unintegrated items and the order of a well-maintained home. Graves noted that clutter has a mobile, fluid meaning that can ‘speak’ to us, reflecting the ongoing negotiation of what we keep, discard, or transform in our personal environments. Taking a step further back, writer on contemporary art Gonzalez (1995) explored amassed possessions as personal maps of memory, history, and beliefs. Miller suggested that the process of accumulating possessions is not merely about acquiring things but is also tied to a desire for comfort, where we layer objects around us to provide support during times of loss (2009).

Practices of home decoration

Activities of acquisition and display can be understood more broadly as integral to home decoration, serving to create a pleasant home and express self-identity (Gullestad 1993). Visual decoration can be a meaningful end in itself (Csikszentmihalyi and Rochberg-Halton 1981). As mentioned above, Miller urged us to consider the relationship ‘between things’ rather than ‘to things’. For example, objects are often acquired to match other items, to create a homely environment.

Rather than look specifically at the significance of objects or the material environment itself, sociologist Sarah Pink (2004) examined how the materiality and sensory experiences of the home are integral to everyday practices. She explained that activities like home decoration and housework help create a pleasant atmosphere, which in turn fosters positive experiences. These activities also serve as a means of unselfconscious self-expression and the performance of emotional narratives. Pink argued that these repetitive everyday actions allow us to construct realities and support human creativity and agency. She stated that “everyday practice should be seen not only as engagement with the […] visible, […] tangible and social aspects of home, but as being integrally related to sensory perception, experience and action.”

Practices of care such as cleaning can gently maintain the perceived value of possessions. Belk (1988) noted a relationship between highly cherished objects and

the care – such as washing and polishing - lavished on them. In Miller's accounts, he connected rituals of care for ornamental objects to class and aspiration. The meaningfulness of a fragile object like a ceramic plate can be preserved through protective practices such as keeping it out of the reach of children or placing it on a firm flat surface (Csikszentmihalyi & Rochberg Halton 1981), Almquist and Lupton 2010).

Chapter summary and conclusions

The chapter above offers an abundance of rich insight on how we come to attach meaning to objects, and their centrality to our selves. Researchers have consistently emphasised that possessions are deeply embedded in the construction of personal and collective identities, serving as expressions of self, tangible links to the past, and frameworks for social connections. Home possessions are undoubtably a very valuable subject of study, shown across the literature and specifically in the significant studies by Belk (1988), Csikszentmihalyi and Rochberg-Halton (1981) and Miller (2008) that I have given particular focus. Scholarship on the home demonstrates it as a critical site of cultural production and importantly, shows how everyday objects within it can exert powerful influence precisely because we often overlook their presence (Miller 2005b). It is therefore vital to find approaches that can access the hidden spaces of home and reveal the meanings and influence of objects.

What the literature can tell us about how home possessions hold meaning
What are the factors influencing perceived value and meaning? (research sub-question 1).

My study of literature from the humanities and social sciences provides useful insights into factors that can influence the perceived value of an uncherished home possession, and the meanings that become associated with it. In this chapter I have identified a number of clearly identifiable ways in which objects come to hold value and meaning, arising from the literature:

1. Objects can become valuable for their associations with the past. They can help us to stay connected to individual and collective pasts, and help us to notice or cope with the passage of time through their tangible, material nature.
2. Everyday objects can come to evoke memories, and sensory encounters with them can unlock a network of memories (Proust 1992). Recollections are deeply intertwined with, and supported by, the material world.
3. Objects are frequently mediators of our relationships with each other. People who form close attachments to things, form close attachments to people (Miller 2008).
4. Objects can acquire value through gift-giving, and can particularly develop meanings connected to other people. The role of an obligation to reciprocate may play a role in this, in different ways (Maus 1950) - the

attachment a recipient feels toward a gift may reflect a connection to the giver (Csikszentmihalyi and Rochberg-Halton 1981).

5. Practices of keeping possessions in the home can cultivate and sustain their meanings. We curate meaning through practices of display, supported by the spaces in the home. Objects can develop meaning in relevance to each other, through the ways in which they are assembled and juxtaposed (Miller 2008).
6. Practices of home decoration serve to create a pleasant home and express self-identity (Pink 2004).

How do the meanings of a home possession transition over time? (research sub-question 2)

An important insight arising from the literature is the dynamic nature of the meaning of objects. Scholars agree to the processual nature of the home - process and practice is integral to the evolving meaning and value of possessions, implying that the meaning of an object isn't static. This goes some way towards contributing to understanding how the meaning of an object could transition over time, and potentially wain or gain in value. The subject of study is often treasured and cared objects in the home, which may limit understanding of the movement of meaning.

Csikszentmihalyi and Rochberg-Halton (1981) have identified that interactions with a special object are activities that through their repetition constitute process. By interacting with the object a person perceives and appreciates it, gently producing new experiences and feelings. These repeated or habitual interactions make up the processes of self-development - and meaning making - that objects are bound up in. Our processual cultivation of meaningful home environments is integral to establishing and understanding how we fit in the world Miller (2008). Jungian scholars see the cultivation of the home as a continual process of becoming a whole self, in which possessions and spaces are the key, particularly as holders of memory. The evolution of an object's meaning over time is bound up in our processes and practices of cultivation.

Can the material and visual identity of a home possession influence how somebody feels about it? (Research sub-question 3)

The importance of the material and visual identity of objects to their meaning comes through the literature as a generalisable principle, but specific instances of reliably interpreting meanings attached to properties are not identified. The background for this absence is arguably the economic context of industrialised societies, where cultural and monetary value are not in harmony with each other, and the value of a commodity can therefore change across its full biography (Kopytoff 1986). Modern production and consumption have enabled people to more easily shape a particular self-image and to cultivate individual self (Ladik et al 2015), and so meanings are not stable or predictable across culture.

However, the materiality of objects is nevertheless deemed as very important. Discussing textiles, Miller (2005a) argued that the sensual and aesthetic dimensions of cloth – how it looks and feels – is the source of its capacity for cultural and personal value. Csikszentmihalyi and Rochberg-Halton (1981) identified a role for the intrinsic qualities of an object in a person's experience of it, influencing interpretation and self-development. However, they struggled to find direct relationships between an object's visual and material qualities and its meaning. Possessions were not frequently valued for their intrinsic properties or aesthetic values, but for their associations. There was enormous flexibility in how respondents attached and derived meanings from their treasured possessions.

There are several identifiable ways in which object qualities can be prompts to meaning. For example, an object's qualities can remain static, reminding us of the passing of time, or can be altered to reflect a changed identity. An object that survives in spite of its fragility can be perceived to be more valuable (Belk 1988). Recognisable forms, such as items of furniture whose form has changed little over generations, can indicate to us how we use or keep or display something (Bachelard 1958, Hurdley 2013). The physical form and materiality of an object, such as a printed photo, shapes our interactions through tactile engagement (Edwards 1999). The luxury look and feel of a gift, or making it oneself, can distinguish it from a utilitarian commodity - physical cues that detach it from its commercial origins (Belk 1993, Searle-Chatterjee 1993). These insights are interesting for how qualities of objects, expressed through their visual and material language, can offer gentle cues for the shaping of meaning. However, they don't offer specific or direct visual and material iconography that could be literally and pragmatically can transferred to a new object.

How the perspectives of the key studies influence my own theoretical positioning

The studies I have examined in this chapter offer a range of thoughtful constructivist views on our dependence on material things, from different disciplinary standpoints. Constructivist research takes an approach that is explorative "of the meaning attributed to aspects of the world as individual people experience it" and assumes that "we actively build our perspectives on the world" (Denicolo et al 2016). My personal perspective is one of perceiving reality to be co-constructed through language, culture, and practice. This perspective lends itself to deep exploration of how others interpret the material world they inhabit. I am sympathetic to constructivist positioning and the exploratory approaches taken by these researchers. I will discuss my own exploratory constructive approach in chapter 4 Methodology: Accessing the Stories and meanings of home possessions.

As key studies, the constructivist approaches taken in Belk's paper (1988) and Miller's book (2008), as well as their other work in this area, are useful for how they reach wide to explore and combine multiple sources and perspectives. Belk's paper

has been inspirational in its interpretivist immersion in a vast range of studies available at that time. He took a holistic approach that enables a very rich scoping of his research question. Miller's approach to the study of material culture - combining the study of the sensory and aesthetic with the social dimensions of the object's existence - is a powerful approach to unveiling the power of objects. These theoretical positions, in their holistic openness to multiple disciplines, and consideration of both the material object and its cultural and symbolic meaning, help shape my own research approach. These approaches help delineate the research position I want to occupy, and allow me to sift through research and insight from different disciplines. However, my position also differs, particularly as I bring some of the pragmatism of design thinking to my approach. Design is typically concerned with the creation of new objects, involving the direct shaping of their visual and material identity, rather than objects as social actors. There is a balance to achieve in reconciling these two perspectives.

There is one last point to make on the key studies I chose to focus on: It is important to situate these studies in their historical context. The works of Belk (1988), Csikszentmihalyi and Rochberg-Halton (1981), and Miller's early contributions to material culture (1987) all emerged in the 1980s - a period when consumer culture and materialism were attracting critical attention. Against the backdrop of expanding mass consumption, they all raised concerns about the potentially alienating effects of consumerism. However taken together, their work challenged reductive critiques of materialism by showing that possessions are active participants in processes of identity building, memory, and social connection. Later studies, like Miller's later work and Pink's contributions are more sympathetic to processes of cultivation, overturning the myth of materialism as a negative or inauthentic way of being.

Chapter 3
Designing for emotional longevity

Chapter Introduction

This second literature review chapter examines existing studies from design research, and includes a small number of studies on design from related fields. It scopes and examines approaches to the emotional lifespan of products, as an intention of my study is to bring new ways of thinking to these. It also sets out to respond to the fourth research sub-question:

4. Can design practice contribute to the meanings associated with a product for the home, and influence whether an object is kept?

Chapter structure

I firstly explain how industrial design is framed as a discipline and practice, in design research. I then review how the emotional lifespan of products has been interpreted, and identify the studies that have established this as an important area of enquiry. I also discuss limitations to these approaches and their reliance on designers' capacity to shape products that can hold meaning and perceived value to the user. In the latter part of this chapter, I widen the range of design literature to review how the processes and practices of industrial designing have been discussed by key scholars, in light of developing meaning in products. I investigate these studies to explore whether what designers do can shape the potential meaning of products, and ultimately to discover whether they can influence the meanings of products to encourage users to keep and value them.

What is industrial design?

As stated in the introduction, industrial designers are typically focused on the shaping of a product's form and appearance, the experience of the user engaging with it, and its manufacturability, among other things. Industrial design is a forward-facing activity, because it is focused on the creation of new products. Ideas for new products emerge through the process of visualisation, then reflecting, reimagining and shaping them towards future possibilities (Menezes and Lawson 2006, Cross 2011). The emergent nature of design makes the question of meaning an interesting and pertinent one, explored in Keyte (planned): Can future products can come to hold meanings embedded, intended or prompted by designers?

It is important to establish designers' direct involvement in shaping the form and appearance of home possessions, as one of the aims of my enquiry is to ascertain whether the form, material qualities and visual identity can influence meaning and emotional lifespan. Nigel Cross stated that designers generate design proposals describing what an artefact should be like, involving specifying "the artefact's

dimensions, materials, finishes and colours" (Cross 2006). In an earlier pivotal study, Christopher Alexander (1964) explained that design is about giving form in response to human needs, as well as organising physical construction. According to the Industrial Designers Society of America (IDSA), "Industrial designers occupied with the design of hard goods will ordinarily work with form and material in their practice, within a broad skill set that is understood to bring value to a product for users and stakeholders (IDSA 2023). Of the professionals involved in production, designers (rather than engineers, for example) determine value in the sorts of products where appearance is a priority. The IDSA also states that industrial designers "typically focus on the physical appearance, functionality, and manufacturability of a product" (IDSA 2023). Design theorist Richard Buchanan's often-cited paper from 1992 concurs that traditional concerns include the construction, "form and visual appearance of everyday artefacts".

Importantly, both definitions concur that industrial designers' activities go beyond this to encompass some responsibility for users' experiences of the products that enter their lives, Buchanan explaining that as well as the physical aspects of a product, industrial designers are occupied with the "psychological, social, and cultural relationships between products and human beings" (Buchanan 1992). Krippendorff (2005) set out the centrality of the user (or human) to contemporary design process, and relates this development to the existential challenges that have faced industrial design, amidst the recent proliferation of products, values, schools of thought, and emerging forms of design. Designers typically incorporate insights from other fields to innovate solutions to problems (Buchanan 1992, Cross 2011). Findelli et al (2008) state that the ultimate goal of design to improve the "habitability" of the world means it is multidisciplinary by nature, because comprehensively understanding the human experience requires the help of other disciplines.

How design is conceived as an epistemology

Nigel Cross's concept of "Designerly Ways of Knowing" (2006) framed design as a distinct epistemology, different from science (positivist) and humanities (interpretivist). Cross positioned design as constructivist and pragmatist, focusing on problem framing, iteration, and making as a way of knowing. In doing so he drew on Schön's (1983) presentation of design as a "conversation with the situation". As Buchanan (1992) positioned design as an integrative, problem solving discipline addressing indeterminate problems, not limited to purely technical or aesthetic solutions. All three scholars were influenced by John Dewey's pragmatism, emphasising inquiry as iterative and situated, and positioning design as a mode of knowledge production deeply embedded in human experience.

Design research is an established research domain originating in the 1960s (Cross 2006, Buchanan 1992). A design researcher synthesises information and experience to identify new knowledge about design, people and the designed world. (Findeli et al 2008). Bayazit (2004) charted the development of design research as systemic

enquiry into the creation of man-made things, how they perform, how they appear and what they mean, and knowledge arising from design activity. Frayling (1993) popularised the notions of research ‘Into’ ‘Through’ and ‘For’ art and design, distinguishing between: Research *into* theoretical perspectives; research *through* the design process; and research that informs the production of an artefact (*for*).

How designing for emotional longevity has become an established area of study

Emotional longevity in design is widely interpreted as the creation of products that last longer, because our affective or psychological relationships with them last longer. Designing products that can sustain longer emotional lifespans has become an important concern within design research. This has emerged from parallel threads of enquiry: Designing durable products within a circular economy approach; and shaping the emotional experience of products through design process. Both are explored below, followed by definitions of emotional longevity.

How the design of durable products is approached in design research

There is a substantial and long-standing area of study focused on extending the lifespan of products, including designing for emotional longevity. Product lifetime extension is seen as a means of avoiding uncontrolled product obsolescence, and addressing the significant environmental impact of waste resulting from industrial production and consumption. The Product Lifetimes and the Environment biennial conferences (2024) first initiated in 2015 bring together an international community concerned with this area of study and its application in industry, showing its current significance. (Please note that Keyte (2015a) was included in the first conference). Over the last decade or so, the study of prolonging the lifespan of products through design has become integral to dialogue on the circular economy (Bakker et al 2019). Ceschin and Gaziulusoy (2016) stated that emotionally durable design and product attachment have value as a product-level strategy, that can integrate with approaches aimed at more widespread systemic change.

The drive to prolong the lifespan of industrially produced products is often noted as stemming from Vance Packard’s early definitions of planned obsolescence in 1963. In his popular and critical book “Waste Makers” he introduced the idea of "obsolescence of desirability," (Packard 1960) referring to the failure of a product to stay desirable, even if still functioning well. Key scholars have defined types of product obsolescence, including technological, functional, economic and legal obsolescence, and aesthetic obsolescence e.g. when a product becomes outdated (Van Nes 2005, Cooper 2010, Burns 2010). Of interest to this study are approaches that recognise an emotional relationship between people and the products they own (e.g. Fuad-Luke 2010, van Hinte 2004, Chapman 2005), seeking “to increase the period of time between the acquisition of a product and its replacement for reasons other than absolute or technological obsolescence” (Haug 2019).

As a specific area of enquiry, designing for emotional longevity has roots in the pioneering work of the Eternally Yours Foundation of the 1990s (van Hinte 1997 and 2004, Verbeek and Kockelkoren 1998). Set up in 1993, it sought to position durability as a priority consideration for the design industry. It called for products that age gracefully, that prompt users to retain them for longer, and for better developed services supporting the lifespan of products, arguing that it had not been a priority as it implies lower turnover for producers. Taking a strong creative and multidisciplinary approach, the foundation explored hierarchies of value, newness expectations, and occurrences of emotional attachment. The Eternally Yours project mentioned above took an exploratory approach to questions of time and history in relation to the modern-day context for production, acknowledging the compression of time during previous 150 years of industrial progress (van Hinte 1997 and 2004).

Emotion as a focus for design research

Emotions have become an increasingly important topic in design research, emerging as part of a surge of interest in user experience around the beginning of the 21st century. This encompassed a greater recognition that all products enter the emotions – that none are neutral - and an awareness of the impact of experience in integrating products into people's lives. This created a drive for designers to encourage rich and meaningful interactions with products and technological devices, with the intention that the interactions become more authentic (Desmet et al 2013).

Key publications and organisations established an international dialogue around design and emotion. Donald Norman's book "Emotional Design: Why We Love (or Hate) Everyday Things" (2003) broke down the ways in which users can experience a product emotionally. A special issue *Design and Emotion* published by the International Journal of Design (Desmet and Hekkert 2009) brought together research examining emotion in user-centred design and interaction, to identify a spectrum of approaches. The same authors were instrumental in initiating the Design and Emotion society, whose conferences ran from 1999 until 2016. "Design + Empathy" (McDonagh and Thomas 2011), a special issue of the Design Journal, reflected an emphasis on more empathetic and sensitive methods of understanding how we with products and increasing the quality of life for all users.

These approaches largely focused on the role of emotion in user experience, user satisfaction and the integration of products and devices into their lives through a human-centred lens, possibly driven in part by a developing experience-based economy (at the time). However, they are one important context from which approaches to emotional longevity have emerged. Much of the research on design for emotional longevity, particularly that stemming from the University of Delft and associated with the Design and Emotion Society is positioned more closely in relation to psychology. Emotional experience is approached through models and frameworks grounded in quantitative, measurable constructs as opposed to more

constructivist or phenomenological approaches to meaning and emotional attachment.

Approaches to emotional longevity in design research

As stated above, designing for emotional longevity is a vein of enquiry arising from research into design and emotion, and designing durable products. Various terms have been employed in design research to describe the design of products with emotional longevity. Tim Cooper has used the term 'longevity' to describe a product's lifespan or lifetime, which he states is a different measure to physical durability as it is shaped by factors other than construction and manufacture, such as user behaviour and "wider, socio-cultural influences" (Cooper 2010). 'Psychologically durable design' is described by Louise Valentine (2019) as a "constant variable and perpetual work in progress" for design, and by Anders Haug (2019) as a broad field of thinking that includes product emotional durability. In Haug's view, emotional durability implies a strong positive attachment to a product. Similarly Mugge et al (2005) proposed a 'strong person-product relationship' as a strategy for design, in order to postpone product replacement. Jonathan Chapman (2005) used the term 'Emotionally Durable Design' to promote enduring emotional connections between the user and the product, believing that users will cherish and keep products for longer periods if a stronger emotional bond can be formed. In his research, he drew broadly on phenomenology, psychology, and material culture studies, even if not always explicitly, filtered through a lens focused on user experience.

Many of the studies in this area have been based on the premise that a strong emotional attachment to a product can be a means of prolonging product lifespan, therefore preventing replacement. Typically, studies have examined existing products and / or used interview or questionnaire-based methods (e.g. Battarbee and Mattelmaki 2004, Mugge et al 2005). These approaches have attempted to distil down and sometimes to categorise and quantify the reasons for product attachment (e.g. Schifferstein and Pelgrim 2008), pragmatically identifying qualities of attachment that could potentially be applied in industrial design practice. There has been broad agreement on factors that contribute to product attachment, and make them meaningful. These include enjoyable experiences of using a product; the product's utility value; its capacity to support self-identity; and connections to other people and memories. Associated memories have consistently been identified as being significant to highly meaningful objects (Schifferstein and Zwartkruis-Pelgrim 2008, Battarbee and Mattelmaki 2004, Schifferstein et al 2004. Chapman (2005) encouraged designers to consider strategies that enhance lasting emotional engagement and deepen meanings, for example enabling the user to personalise it, employing materials that age gracefully, or creating product narratives that resonate with users.

Limitations to approaches to emotionally sustainable design

A significant limitation of the approaches summarised here is that they rely on the capacity of the product to encourage the user to cherish and become attached to it.

The user needs to be correctly placed to interpret the designer's intentions. There is some acknowledgement of this in the literature. For example, Mugge et al (2005) acknowledged that this strategy can't work with all possessions, for example washing machines that are bought for solely functional reasons. Battarbee and Mattelmaki (2004) noted the importance of an empathetic approach remembering people are individuals, and Chapman too observed that a user's individual response is shaped by their background and experiences, therefore meaning "the explicit nature of the response is beyond the designer's control" (Chapman 2010). More recently, Haug (2019) acknowledged that the relationship matters, not just the artefact, and that it is not easy for designers to address longer term user-product relationships. "It should be noted that future-oriented estimates of a design's psychological durability are hard to make, since predictions of such developments are associated with much uncertainty." Haug notes that both personal and cultural value are factors in psychological durability, and that they can change over time.

Haug (2019) has claimed psychological durability is still not well understood, and has created a structured framework to aid designers in identifying types of durable value and relationship. His framework offers a means of analysing designs to try to reduce some of the uncertainty around designing for psychological durability. He suggested decoupling products from fashion trends and characteristics, and aiming for longer lasting ideals, which he illustrates through short accounts of a range of examples including several iconic products such as Phillipe Starck's Juicy Salif, as well as products that require an investment of money, time and / or care, such motorbikes, or leather sofas. In this approach, he arguably omited some of the ordinary and the everyday. While his article sough to amend some of the missing perspectives in the earlier studies described above, it was still reliant on the product and its visual and material characteristics to engender an attachment, and prioritised the product over the user.

In another recent study, authors Kowalski and Yoon (2022) were critical of established approaches to emotionally durable design. Through a thorough review of the literature, they stressed that there is little empirical evidence of actual long-term use of emotionally meaningful products, and questioned whether attachment and retention (keeping) is being conflated. They argued that empirical research (e.g. longitudinal studies, experimental studies) is lacking and often only theoretically discussed. Through their study they identified that irreplaceability is a quality of a strong attachment, but that this can effect usage. Products that became special were used less, and therefore replaced with alternative products to perform that use. It appears that a deep attachment to a product can translate to long-term keeping, but that that doesn't necessarily imply sustainable practices of acquiring products.

The idea that designers can encourage longer relationships with products is an interesting one that appears on the surface to address environmentally damaging consumption patterns. However, most studies in this area are product centric. The

focus is often ostensibly, or altruistically on the relationship, but yet tends to accentuate the possible role of the product. Authors have often incorporated references to the work of key scholars from the social sciences and humanities who have studied the importance of possessions to the self, such as Belk (1988) and Csikszentmihalyi and Rochberg-Halton (1981) (both covered in chapter 2), but these enquiries generally appear relatively superficial. This may be because scholars in design research naturally advocate considerations that are likely to be within a designer's control. They rely on a designer's capacity to shape the visual and material attributes of a product, whereas sociological and material cultural studies concern the social nature of our relationships to objects, and view meaning as constructed by social action. It begs the question: Can designers truly influence the relationship?

Constructive frameworks like Haug's may help to effectively encourage longer relationships with objects, but the designer's influence is partly dependent on their situation in industry and the network of stakeholders they work in. The Eternally Yours project argued that the designer is often dependent on decision makers and situational factors, and their work shaped by forces such as the need for return on investment (van Hinte 1997 and 2004).

Design process and practice, and their role in shaping meaning

The approaches discussed above are focused largely on identifying certain qualities of objects and human relationships with them, that may be incorporated into a new product. In this section rather than focusing on what designers create, I discuss literature that addresses what they do to realise the material and visual identities of products, and the skills they develop. I am interested in whether accounts of design process and design practice consider whether designers have a role in constructing meaning in products.

Accounts of the designer's process in design research

Since the early 1960s there has been a stream of research on how designers design, on the methods they use, the kind of thinking they do, and the skills this involves developing (e.g. Buchanan and Margolin 1995, Cross 2011 Lawson and Dorst 2009, and Dorst 2017). Nigel Cross, mentioned above, and discussed in the following chapter, is a design researcher whose work has been prominent in this dialogue. He is concerned with designers' knowledge which he has argued is distinct from other forms of knowledge in how it is developed and established through practice. He feels design is an essential force for good that needs full understanding. "Everything we have around us [...] has been designed. The quality of that design effort therefore profoundly effects our quality of life" (Cross 2006 p33). He has described the iterative nature of the design process, and how it allows information to be selectively embedded in a developing product, as appropriate to the design brief, or a design problem. He frames problem solving as a core design skill and facet of design

process, which incorporates cycles of framing, testing and reframing a problem or opportunity to identify possible solutions (Cross and Dorst 2001, Cross 2006, Schön 1983). He and other scholars have discussed the wide range of information and considerations industrial designers learn to fold into the design process, including technical, financial and legal issues as well as strategic, aesthetic and material, framing design as a social process with many variables, involving colleagues from other disciplines (Cross 2006, Kimbell 2012, Krippendorff 2005, Schön 1983). Findeli et al (2008) noted that the design process is usually focused toward creating an outcome for an identified user, which requires the designer to "hoist" the know-how they have gathered to a "more reflexive and explicit level" in "a hermeneutic transformation of knowledge into action". While the above accounts don't directly address meaning making, they do identify the skilled ways in which a designers employs problem solving skills to embed ideas and information into an object.

Designers as cultural hermeneutists

As argued above, designers have often been described as having responsibility for shaping the aesthetic dimensions of a product. However, amidst the focus on problem solving and designing with a user's experience in mind, study of design as a skilled process of shaping the material and visual identity of a product often gets lost. Design scholar Cameron Tonkinwise (2011) argued that the skilled 'styling' of the aesthetic identity of products is not readily studied and is little valued, in his article criticising accounts of design thinking. He argued that while aesthetics are likely always a consideration in design, styling is more idiosyncratic or intuitive than design led problem solving methods, so perhaps it is harder to qualify and describe. Interestingly, he emphasised the ability of the designer to give form and appearance to products in a way that will make them meaningful to a user, which he called "taste literacy". He argued designers are sensitive to overlapping tastes, and able to understand the practices that relate to them, and so able to identify what the individual may be persuaded to do or buy. Drawing on Bourdieu's writings, he framed aesthetic judgements as inherently political and signifying of cultural capital. Taste regimes are made manifest as the practices of designers and users.

Tonkinwise's account identified the importance of the designer being culturally placed to understand and design for the user. It differs from the approach taken by Krippendorff (2006), who took a hermeneutic and semiotic approach to design, focused on meaning and communication. He wrote with unspoken confidence in a designer's capacity to nudge the meaning a product may come to acquire for a given user. In his book "The Semantic Turn: A new Foundation for Design" Krippendorff emphasised the human-centred nature of design practice in its current form and charted its emergence from Modernist beliefs in the universality of messaging in design, through challenges facing industrial design such as the proliferation of products, to design practices which centralise the meaning conveyed by the product to the user. He asserted the importance of meaning to design, explaining the early roots of the definition: "The etymology of "design" goes far back, of course, to the Latin

de+signare, which means to mark out, set apart, give significance by assigning it to a use, a user, or an owner. Design has the same origin as ‘sign’ and to ‘designate’, calling attention to something other than its observer-independent existence: meaning” (Krippendorff 2005). Krippendorff’s approach to product semantics emphasised identifying the cultural meaning of existing objects and applying it into new ones – transforming meanings from the familiar into the new (Boradkar 2010). Cultural meanings and associations can be embedded in an artefact by a designer and manifested through use, in a “meaning-action circularity” (Krippendorff 2006).

Other scholars and writers have also framed the industrial designer as a cultural interlocutor or hermeneutist, interpreting existing cultural references into new objects. In his book “The Language of Things” Sudjic (2009) wrote about the role of the industrial designer having migrated away from the mechanics of a product to its surface: Its appearance and semantics. The focus has shifted to the message an object conveys: “The appearance and semantic shades of meaning that allows us to interpret and understand what an object is trying to tell us about itself”. Sudjic discussed the work of high status designers such as Raymond Loewy, Phillippe Starck and Dieter Rams and in doing so went as far as to suggest that design has become a language in itself that makes an object desirable. Also writing about Phillippe Starck, Cross (2011) illustrated how a designer draws on precedents (existing objects). He described Starck’s process of developing a concept pulling “upon a repertoire of precedents, of remembered images and recollections of other objects that helped him to give a more coherent, practicable and attractive form to the concept”. About practices of ‘ordinary’ designing outside of high profile designers, Cross (2006) wrote “most run-of the mill designing is actually based on making variations on previous designs” suggesting everyday professional practices of reappropriating object language.

Design as a socially situated practice

Researchers taking a practice orientation to design such as Comi et al (2019), Kimbell (2011 and 2012) and Shove et al (2007) have been sensitive to the situational context for design and are less accepting that designers are central actors in the shaping of meaning. They argued for deeper understandings of design in its socio-political context, as a set of practices and routines involving a range of stakeholders. These studies offer an important perspective to studying meaning making, as they focus on designers’ professional practices, opening up the possibility that practices rather than design intention may contribute to the build of meaning in an object. The studies of Kimbell and Shove et al drew on works by scholars of practice theory, including the significant works of seminal social theorists Reckwitz (2002) and Schatzki (2001), who identify the world as co-constituted relationally. Their studies expose how designers are entangled with objects.

Coming from a business and design thinking perspective, Comi et al (2019) examined designers’ practices of creating shared professional vision. They drew on

a range of studies of professional and design practice to explain design work as embodied, situated and multi-modal in its use of gestural, verbal and visual activities. Their study carefully observes the practices of professionals – in this case architects and engineers - engaging with analogue and digital drawings and sketches to develop a shared vision for design direction. They drew on studies such as Ewenstein & Whyte (2007) and Roth & Jornet (2018) to explain how the physical objects of design process support collective exploration and sense making, “hinting to a complex web of talks and gestures performed over visual objects” (Comi et al 2019). They emphasised the fluid dynamic of design work and material objects, which continue to move and change even after they are released and used. The methods they employed show how meanings develop within the bounds of a collaborative design process, mediating ideas and building vision through the discussion of and interaction with visual artefacts. In this context ‘meaning’ is meant as making meaning within the bounds of the collaborative design process associated with artefacts, to communicate and understand ideas, and build knowledge around. Whilst they examine the development of shared vision, their findings can also help show how the build of meaning in the outputs of design also comes through situated, embodied material practices. The authors argued for renewed focus on this, and identified a need for the close attentiveness paid to the role of artifacts found in material culture approaches.

In building her approach to design thinking, like Tonkinwise (2011) Lucy Kimbell (2011 and 2012) has been critical of many established accounts of design and design thinking which she has claimed centralise the designer, placing them as the main agent focused on empathetically solving the problems of users. She argued that these authors neglect other human and non-human actors in the design process, as well as the material expertise of the designer. In doing so, she emphasised the situated and embodied nature of design practices, noting that they are “habitual, possibly rule-governed, often routinized, conscious or unconscious” (Kimbell 2012). Kimbell examines the way designers are both embedded in and involved in the forming of the material world, grounded in their specific situation. “Design thinking can thus be rethought as a set of contingent, embodied routines that reconfigure the sociomaterial world, and which are institutionalized in different ways” Kimbell (2012)

Taking inspiration from Shove et al (2007), and building on the work of Ehn in participatory design (2008) she developed a very interesting pair of concepts aiming to enable design to be framed as a socially situated set of practices. The first concept is “Design-as-Practice”, framing design as socially situated practices contingent on a network of actors and forces. The second is “Designs in Practice”, acknowledging that designs continue to be constituted after design (Kimbell 2012). These terms offer a means of considering how practices constitute a design, and make it possible to consider the development of meaning (or the design) as a kind of continuum bridging an object’s journey through creation and human use or

possession. Kimbell does not see this as two separate ontological spheres: “The relationship between the two concepts is not temporal, with one following the other […] Instead, designs-in-practice and design-as-practice are better thought of as mutually structuring” (Kimbell 2012).

This pair of concepts is very interesting in establishing how the meaning associated with an object builds through design as a social, contingent and situated set of practices, and practices of using and keeping an object, as a possession. Kimbell argued that designing continues after the work undertaken by the designer and other stakeholders is complete: “When the designers have finished their work, and the engineers and manufacturers have finished theirs, and the marketers and retailers have finished theirs, and the customer or end-user has bought a product or started using a service artifact, the activity of designing is still not over. Through engagement with a product or service over time and space, the user or stakeholder continues to be involved in constituting what a design is” (Kimbell 2012). In other words, what a design means continues to build and evolve, long after the designer’s socially situated creative process is complete.

In their book “The Design of Everyday Life” sociologists Shove et al (2007) urged us to think about the relation between practices, bounded objects and the materials of which they are made. They noted how design is situated where object qualities and meaning in practice mesh, but argued that this is not well understood in theories of design. These overlook the importance of practices in constituting value, and the role of materials in the reproduction of the everyday, focusing instead on “the study of things as carriers of semiotic meaning”. Unlike established proponents of design process who set store by the capacity of the design process to influence human experiences for the better, Shove et al were critical of what designers do – design is said to add value – and proposed that this is powerful for design, but not the object. They draw the interesting conclusion that “value is determined in relation to the always changing practices in which products are integrated” rather than between the user and object, or in the object itself. The meaning of an object is not fixed, because practices are not fixed.

Their study illuminates the integrated nature of “complex assemblies of material objects” to the reproduction of everyday life through practices, from an intention to help transition us to future environmentally sustainable everyday practices and cultures. They call for different ways of thinking about the interaction between objects, infrastructures, people and practices, to inform more innovative ways for the design process to support future practices. They identify however that the embeddedness of design stakeholders in a highly structured system focused on market needs shapes the agency, theories and application of design.

Chapter Summary and conclusions

In this chapter I have examined the discussion of product emotional longevity in design research, scoping and setting out the scholarship in this area. I have also explored broader discussions on design process, practice and meaning making. In doing so, I have provided substantial context in response to research sub-question 4:

1. Can design practice contribute to the meanings associated with a product for the home, and influence whether an object is kept?

The chapter has also established industrial designers' direct and skilled involvement in shaping the form and appearance of home possessions, their integrative practices, and their entanglement with the material world. Their activities give visual language and identity to products (Krippendorff 2005) and arguably can affect our quality of life, and so need full understanding (Cross 2006). Taking into account their processes of folding in a wide range of information and cultural references into a material product, it appears very likely that their activities must influence the meanings a product comes to hold.

Established approaches to designing for emotional longevity are concerned with whether a product is kept and valued for longer. While these approaches appear to offer potential for promoting sustainable consumption, and counteracting product obsolescence, the chapter has highlighted the limitations to approaches taken by design researchers in this area. Many studies of emotional longevity in design have prioritised the product as the central agent of attachment. In these studies, the emotional experience of products is approached through models and frameworks grounded in empirical, measurable constructs, approaches which arguably overlook the variability and situated nature of user relationships. An alternative, constructivist approach would offer the potential for a more holistic view of the social and material context for product attachment, considering wider scholarship and achieving more qualitative depth of insight.

Scoping the literature above has revealed some of the challenges of seeking to embed emotional longevity in objects. The promise of creating durable emotional bonds through design is limited by the individual nature of emotional connections to products, which, as identified in Chapter 2, are shaped by personal histories, memories, and cultural contexts. The focus is often ostensibly, or altruistically on the relationship, but tends to accentuate the possible role of the product. This may be because scholars in design research are intellectually positioned to prioritise considerations that are likely to be within a designer's control. The user needs to be correctly placed to interpret the designer's intentions. The perspectives of researchers Kowalski and Yoon indicate the complexity of designing for sustainable user-product relationships, pointing to the need for deeper understanding.

The literature examining how the processes and practices of designing may influence the meanings of products offers excellent insight to my research focus, and I became aware of these later in my research journey. Central to these discussions is the role of industrial design as inherently processual, creative and social. As outlined by scholars Krippendorff and Kimbell, designers operate in networks of stakeholders and with technical and economic constraints. For example, their work is often shaped by the prioritisation of short-term market imperatives. The reframing of design as a socially situated practice by Comi et al (2019), Kimbell (2011 and 2012) and Shove et al (2007) presents an alternative view to designers as primary authors of meaning, to recognising the co-construction of meaning through design and user practices. Kimbell's concept of "design-as-practice" and "designs-in-practice" is particularly valuable, highlighting how the meanings of products continue to develop long after the design process is complete, as they are integrated into users' lives and routines. I am interested in how this view challenges deterministic approaches to designing for emotional longevity and encourages a more nuanced understanding of the interactions between objects, users, and the social contexts in which they exist. There is an argument for an approach to design for emotional longevity that recognises the limitations of the designer's influence on the eventual meaning of a product, that situates design within broader socio-material networks, and considers evolving practices of use and ownership as well as design.

Chapter 4
Methodology: Accessing the stories and meanings of home possessions

Chapter introduction

In this chapter I discuss my approach to research: My theoretical positioning and approach to study design.

I start by noting how the constructivist approaches taken by scholars discussed in the literature review chapters have influenced my theoretical positioning, combined with influences from design thinking and practice. I describe how exploration, opportunism and experimentation are key tenets of my approach, and how they appear in design research, particularly in the work of key scholars Schön (1983) and Cross (2011). I discuss how these key tenets have played out in my own research, and how they combine as a research approach that can elicit meaningful and rich data.

I then discuss how my theoretical positioning shaped my experimental approach to method design prioritising hands-on, practical experiences for participants. I write reflexively about how my approach to method was shaped by my circumstances, and the constraints on the research I was able to carry out, shaped in part by my personal journey and circumstances as a researcher and working mother.

My methods integrated hands-on creative activities, including sketching and participatory exhibition, with semi-structured interview to uncover meanings and access affect. I incorporated artefacts, either physically present, represented in an image, or recalled through memory by participants, as a prompt for reflection and narrative and relating the story of encounter and ownership. I introduce how I utilised these methods in a series of four discrete, but closely interlinked iterative projects. In the next chapter (Chapter 5 Method: The 4 projects) I explain the intention behind these, describe my activities, and reflect on how they met my aims and the limitations they presented.) I then explain my methods by breaking them down into the following facets, which I discuss and contextualise: Approaches to gathering the stories of ordinary artefacts; integrating practical experiences for participants into the collection of stories; semi-structured interview; sketching as an embodied method; participatory workshops; and participatory exhibitions.

It is important to note that I studied groupings of possessions that are not obvious holders of strong attachments, but whose meanings can be precarious or subtle. Focusing on uncherished possessions in this way has helped to help get at shifts and movement in meaning, and the affective dimensions of our relationships to our possessions.

At the end of the chapter I discuss how the ethical considerations associated with my method approaches.

The chapter finishes with a summary and conclusions.

Theoretical Positioning

Figure 1 below sets out influences on my constructivist theoretical positioning. Each of the 4 large yellow circles identify an area of scholarship that has influenced the shaping of my enquiry: Constructivist research on home possessions in the humanities and social sciences; material culture studies approaches; design research approaches conceiving design as pragmatist, exploratory and iterative; and key approaches to object biography. The larger blue circle represents the enquiry as a whole, and the smaller represents method. The diagram shows that the latter 2 areas, and my roots in design, have shaped my methodology. These are all discussed in the paragraphs below.

Reminder of the theoretical influences identified in the literature review chapters

In chapter 2, I noted how the studies examined offered a range of thoughtful constructivist views on our dependence on material things, from different disciplinary standpoints. Throughout my enquiry I have found Belk's paper 'Possessions and the Extended Self' (1981) inspirational in its interpretivist approach to a wide range of scholarship. I encountered it early in the study timeframe, and returned to it repeatedly. In chapter 2 I also noted Miller's approach to the study of material culture as an influence. He has described how combining the study of the sensory and aesthetic with the social dimensions of the object's existence is a powerful approach to unveiling the biographies of objects. These constructivist perspectives offer me approaches that span multiple facets of possessions and their meanings, and together form a picture of how material things become integral to processes of self development. These approaches help delineate the research position I want to occupy, and demonstrate the value of sifting through research and insight from different disciplines.

In chapter 3 I scoped research activity concerned with designing products for emotional longevity. Many of these studies prioritised the product as the central agent of attachment, possibly because design researchers are intellectually positioned to prioritise considerations that are likely to be within a designer's control. The emotional experience of products is typically approached through models and frameworks grounded in quantitative constructs. These approaches arguably overlook the variability and situated nature of user relationships conveyed by the constructivist researchers whose work is discussed in Chapter 2.

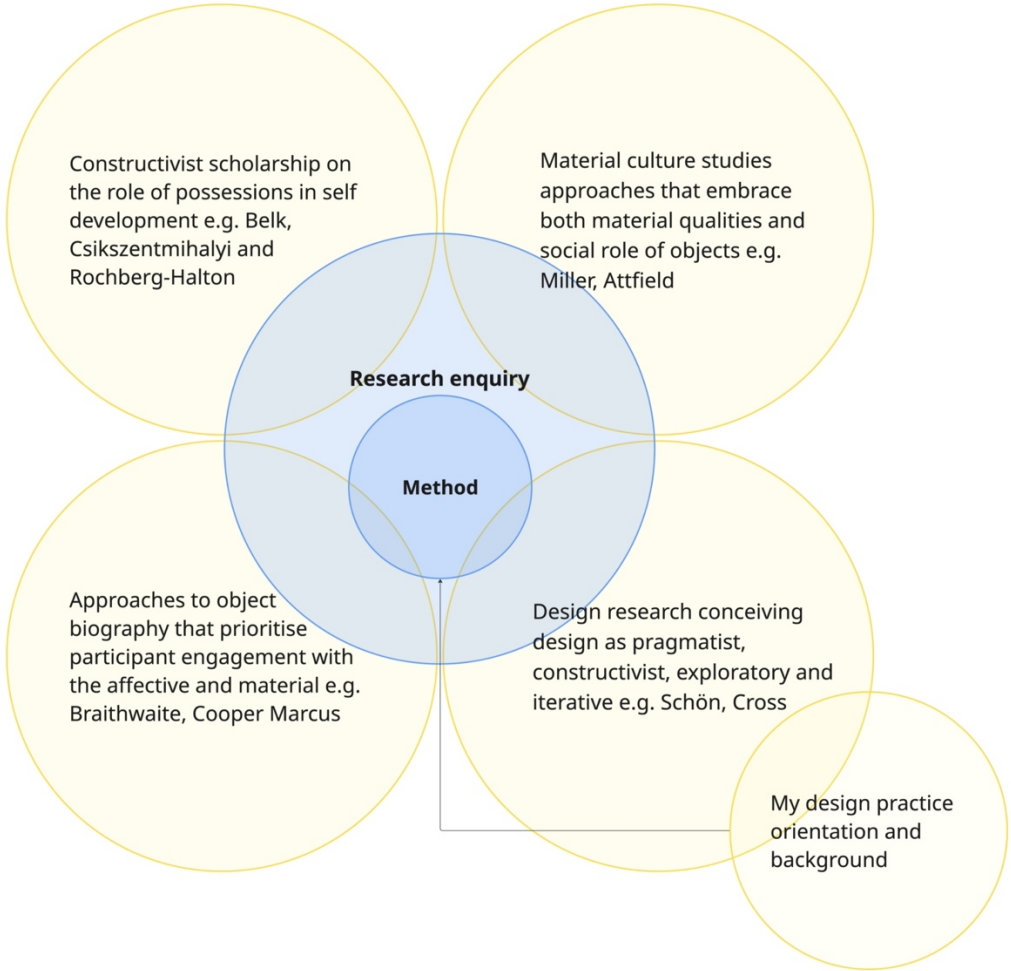


Figure 1 Theoretical positioning diagram

When I became familiar with this growing body of research at the start of my research timeframe, I felt driven by the limitations on these deterministic approaches to design for emotional longevity, and the opportunity to gain richer insights by using constructivist, creative processes. I became interested in challenging these approaches and encouraging a more nuanced understanding of the relationships between objects, users, and the social and material contexts in which they exist. Constructivist researchers see the world as socially and culturally constructed, where reality is not discovered as an objective given but co-created through human interpretation, interaction, and meaning-making. My personal perspective is one of perceiving reality to be co-constructed through language, culture, and practice and I am therefore sympathetic to these approaches.

Exploration in constructivism

Importantly for my research, a constructivist perspective is one that lends itself to deep exploration of how others interpret the material world they inhabit. This is emphasised by Denicolo et al (2016). In their view, constructivists approach research by not making assumptions about what might be, and remain open minded about possibilities arising from the research. Rather than seek ‘truth’ or ‘facts’, constructivists “move around in the territory in search of insights into personal meanings […] to seek understanding about how people make sense of their personal world”. They describe constructivist research as “an exploration of the meaning attributed to aspects of the world as individual people experience it”. Denicolo et al’s emphasis on open exploration helps to underpin my own research approach, and the value it offers. This is valuable to adopt for its capacity to elicit “rich and deep insights into people’s inner experience” (2016).

Exploration and experimentation in design thinking

Denicolo et al go on to elucidate an approach informed by personal construct philosophy in psychology. My own approach differs from this, and from the approaches of Belk, Miller, and other scholars discussed in chapter 2, in my grounding in design thinking. Design thinking is argued by Nigel Cross (2001, 2011) as an epistemology in its own right, with exploration, opportunism and reflection as integral to the “central, iterative activity of the design process”. Donal Schön (1983) also examined the exploratory nature of design process, by setting out the nature of experimentation in his celebrated and long valued book “The Reflective Practitioner”. These facets of design are highly relevant to my research, and are described further below, along with an explanation of the often pragmatic nature of design thinking. By learning from constructivist research in the humanities and sociology, and drawing on design thinking, I hope to achieve a balance between perceiving objects as social actors, and objects as the material products of design (Shove et al 2007). It is also important to note that my professional roots in design, including hands-on approaches to materials and problem solving, shape the way in which I approach the study.

In arguing design as a distinctive form of thinking in its own right, Nigel Cross (2011) explained that “the designer sets off to explore, to discover something new, rather than to return with yet another example of the already familiar”. This opportunism is sometimes understood by the designer to be intuitive, because decisions are influenced by what is learned during the process and by “partial glimpses of what might lie ahead”. As their project progresses the designer may take opportunities that offer something to their aims, including incorporating insights from other fields to innovate solutions to problems (Buchanan 1992, Cross 2011). The methodological orientation of design process is implicitly pragmatist — valuing knowledge for its usefulness in addressing real, situated problems. The design process also incorporates iterative practices of testing, rejecting and evaluating alternative proposals (Cross 2011). Donald Schön (1983) described how reflectively and iteratively reframing a problem enables the designer to develop solutions. In a good design process, this “reflective conversation with the situation” can generate new directions and implications.

As mentioned, I have been able to experiment with method by finding and responding to appropriate opportunities for data collection. My use of the word ‘experiment’ can be understood to mean framing and reframing an enquiry from different perspectives, rather than implying a lack of controls. In explaining his theory of reflection-in-action in professional practice, Schön (1983) described how the design process plays out through a series of experimental “moves”, where the designer tries out different possibilities, and where thinking and doing are not separated. Schön makes a clear distinction between this definition of ‘experiment’, and how the same term might be understood from an epistemological perspective of “technical rationality”, where an experiment is framed as the testing of a hypothesis, with an artificial target and controlled variables (Schön 1983).

Method design: collecting the stories of home possessions

The method design of this study follows directly from my theoretical positioning. A constructivist perspective requires methods that elicit the stories and interpretations through which people construct meaning, and design thinking contributes a pragmatic, iterative orientation, in which methods can be treated as experiments that evolve over time.

For these reasons, I embarked on a series of four exploratory linked projects that gathered the stories of home possessions, and combined semi-structured interviewing with hands-on, embodied activities such as sketching, making, and exhibition. This approach enabled participants to reflect actively on their affective relationships with possessions, while allowing me as researcher to iteratively test and reframe my enquiry, in line with Schön’s notion of reflection-in-action. The resulting methodology produces situated, interpretive knowledge of our affective relationships with everyday possessions.

Accessing the affective connections we have with everyday physical objects and the dynamics of our relationships with them is a potentially challenging analytical focus, as affect is "bodily, fleeting and immaterial and always in between entities or nods" (Knudsen and Sage 2015). I embedded the objects themselves in my methods as a locus for individual and collective meaning making. The data from my Objects in Purgatory participatory exhibition, analysed during the PhD registration period, showed that incorporating the objects, either physically present, as sketches, or as photographs, created an effective prompt for reflection and narrative (Keyte 2013a, Keyte 2015b). This brought the presence of material things firmly into the research, helping form an approach to discovering their meanings.

Critically, unlike the studies discussed in my literature reviews many of which focus on treasured objects, I focused on uncherished home possessions that are associated with precarious meanings, or that were not highly valued or singularised (Kopytoff 1986). The analysis of the Objects in Purgatory exhibition had revealed insights showing uncherished home possessions can hold conflicting or uncomfortable meanings, and that these can change (Keyte 2013c).

My methods also reflect the situated nature of this enquiry. As a working mother with substantial teaching and management roles in higher education, I could not plan a large-scale or longitudinal study. Instead, I pursued manageable but generative opportunities as they arose, designing projects that aligned with my overall research aims. I have been able to iteratively experiment with method, each iteration leading me to new learning and to evolve my thinking. This pragmatic, opportunistic orientation is consistent with the pragmatism expressed by Cross and Schön and underpinned by Dewey, and with the iterative ethos of design research, where enquiry develops through reflection-in-action rather than fixed, predetermined plans. It does of course also shape the limits to data collection, explored in the next chapter.

The four method projects

The four projects are a series of iterative experiments and a means of trying and testing possibilities to get 'underneath' how meanings are determined and enacted, and the implications for emotional lifespan. They are introduced briefly here. In the next chapter (Chapter 5 Method: The 4 projects) I explain the research aims and activities of each project in detail, and reflect on their effectiveness.

1. O*bjects in Purgatory: Why do we keep uncherished gifts?*
   This workshop set out to collect deeper narratives of uncherished gifts, through reciprocated interviewing, sketching and making in pairs.

2. *Hardware Hopes: How do we feel about home computing devices?*

This project extended the enquiry to everyday home computing devices and our relationships with them, by collecting stories through a participatory exhibition and residency.

3. *Antique Washstand Set: How do the meanings of our possessions transition over time?*
   This case study interview focused on the biography and emotional lifespan of a single possession, by examining a narrative of individual creative repurposing.

4. *Material Meaning: Can we shape the meaning of homewares?*
   These interviews with industrial designers examined how the design of homewares may influence the build of meaning in possessions. Designers were invited to relate their intentions for objects they have designed, along with the narratives of artefacts they have designed and own.

Existing design research approaches to gathering the stories of ordinary artefacts

Writers and scholars offer approaches to gathering narratives as a means of surfacing cultural and individual meanings. Design writer Deyan Sudjic (2008) reflects on his personal experiences of using iconic technology products, including an early MacBook. His descriptions of the seductive nature of its aesthetic vocabulary are a point of departure for discussing design as a language intended to carry inherent meanings, with origins in other products of design. Sociologist Sherry Turkle invited contributors from a range of disciplines to write autobiographical essays about everyday objects that hold some kind of emotional significance or power to prompt reflection. Her collection explores objects as “companions to our emotional lives or as provocations to thought”, “underscoring the inseparability of thought and feeling in our relationship to things” (Turkle 2016). These approaches are interesting for their use of written reflection to make meanings identifiable: In Turkle’s work meaningful provocations and associations, and in Sudjic’s work the framing of design as a meaningful language.

My own publications examining the participatory exhibition I created collecting uncherished gifts and their stories (Keyte 2013a, 2015b), established the effectiveness of this method for revealing mixed meanings associated with objects. The focus on individual possessions, inviting participants to tell the stories associated with them, and incorporating sketching and display offered a good methodological basis to build on. Two longitudinal studies in the UK that were in progress at the same time as mine helped to inform my ideas, although I wasn’t aware of them early on. Both studies invited participants to talk about their possessions as a means of data collection. Sociologist Rachel Hurdley (2013) conducted an ethnography interviewing participants in their homes about the objects they kept on their mantelpieces, to study identity, belonging and memory in the

material culture of the home. She utilised photography and sketching alongside interview “to keep the textures and multiplicity of mantlepieces, and practices around them”. Fashion marketing lecturer Naomi Braithwaite’s project “Shoe and Tell” examined the relationship between footwear and self-identity, adapting photography as a form of ethnographic research. Photographing her teenage participants’ chosen shoes helped build connection between herself as researcher and her participants. Starting the interview by inviting them to describe their shoes and reason for choosing them helped promote the flow of the conversation (Braithwaite 2021).

Integrating practical experiences for participants into the collection of stories
Key to my methodology is an emphasis on practical, hands-on experiences for participants, to engage them in active reflection on their affective connections to material possessions.

Employing participatory design approaches
Participatory design is an established methodological approach that actively involves communities and users in the design process, particularly those most affected by the outcome, facilitating mutual learning and shared decision-making (2013). Participatory design integrates methods such as workshops, prototyping, and context-based activities to enable designers and participants to collaboratively envision and evaluate ideas, deepening understanding of lived experiences. The ultimate outcome of participatory design is usually tangible artifacts or systems, services, and policies. I have shifted the emphasis of the participatory activity to generating understanding that can inform knowledge, rather than new product outcomes – my research sits outside the realm of production, and surfaces different considerations within the realm of design that can expose tension and complexity in our relationships with objects.

Within participatory design, physical artefacts and embodied activities such as sketching, model-making, and prototyping serve as mediating tools that support dialogue, imagination, and co-creation. Their incorporation into these activities enables participants to externalise tacit knowledge and explore ideas that are otherwise difficult to articulate verbally (Sanders and Stappers 2007, Spinuzzi 2005). As Buchenau and Fulton Suri’s concept of experience prototyping illustrated, engaging participants through active interaction with prototypes allows them to feel and reflect on potential futures, and designers are more likely to be able to empathise (Buchenau and Fulton Suri 2000). Similarly, Sanders and Stappers describe how generative tools, ranging from sketching materials to cultural probes, invite participants to express latent needs and aspirations (2007).

Semi-structured interview
Semi-structured interviews straddled all 4 projects as a means of inviting participants to tell me about their possessions and capturing their responses. Semi-structured interview is open enough to allow the interviewee to be a participant in producing

knowledge, and enables angles the interviewee feels are important to arise (Brinkmann 2014). Some interviews accommodated more depth and were given more structure, leaving room for co-identification of meanings, such as the interviews with industrial designers. Others were simpler and more flexible, allowing for 'lighter' engagement, such as those with Access Space Participants. Some interviews consisted of only 3 or 4 questions to accommodate more spontaneous participation, such as those in the Hardware Hopes participatory exhibition. Within the reciprocated exchange and physical framing of narratives in the Objects in Purgatory paper of practice, I designed a framework for participants to interview each other.

Sketching as an embodied method

Sketching had successfully enabled active reflection on relationships to artefacts in the Objects in Purgatory participatory exhibition, when it proved an effective vehicle for surfacing emotions including uncomfortable ones (Keyte 2013a, 2015b). Building on this I experimented with sketching within different formats in the 4 iterative projects. In the Objects in Purgatory paper of practice I combined sketching with a simple hands-on making activity. In the Hardware Hopes participatory exhibition I encouraged sketching within submissions, although with little success (explained in Chapter 5). Within my interviews with designers, sketching was a tool for reflection on products they had kept. The level of skill was not important; it was an embodied means of enabling deeper or more active reflection on relationships to objects.

I set out to use sketching to invite reflection, and uncover affective responses to artefacts, as affect is integral to how a person relates to a possession and to its associated meanings. While the rich constructivist approaches discussed in 'Affective Methodologies' by Knudsen and Sage (2015) typically identify intense affective responses to phenomena, I was seeking affect in the gentle ebb and flow of the everyday, presenting a further challenge for data collection. Knudsen and Sage advocate inventive experiments gathering embodied data sets and material to make expression of affect identifiable, and approaching it via concepts that help identify the presence and cultural meaning of affective forces (2015).

Drawing is an essential cognitive tool for design practice and drawing in different media is the central means for designers to iteratively generate, model, test, and evaluate design proposals (Cross 2006). As a tool for reflection and expression that offers potential for method, sketching can be seen as "thinking with a pencil" (Cross 2006) and the medium for reflection-in-action for the designer (Schön 1983). The act of drawing can be "rapid and spontaneous" but the designer can examine it at leisure, shift to another sheet of paper and try again (Schön 1983). Schön and Wiggins (1992) emphasised the importance of sketching as a form of dialogue with oneself and with others. They suggested that drawing serves as a way for designers to externalize their thoughts and engage in a conversation with their ideas. It is a means of seeing the world, and a language for expression and communication that works in parallel with spoken language (Schön 1983).

Coming from a design grounding and building on a Jungian frame of reference, Clare Cooper Marcus (1995) substantially developed methods incorporating drawing in her study of the emotional ties between people and the homes they inhabit. Within individual interviews in participants' homes, she invited them to draw with privacy at the start to focus on their feelings without speaking, before moving to the following stages of interview. Participants were invited to draw their feelings about their home and Cooper Marcus states that these were very effective in revealing emotion (sometimes revealing deep emotions), and focusing the interview. They were then invited to make sketch maps of their homes, to support reflection on how participants dwell in different spaces, and surface the affective dimensions of home and family. Cooper Marcus noted that she set out to reassure participants about the informality of the drawing exercise.

Participatory workshop

The Objects in Purgatory workshop I ran incorporated sketching and making as participatory methods for reflection and surfacing the affective nature of our relationships to artefacts. The value of incorporating practical experiences for participants is underscored by the conference strand the workshop ran within. It was set up by fashion design researchers Otto von Busch and Kate Fletcher, to share and test the role of hands-on, collaborative and speculative making within design research (von Busch et al 2014). Creative research methods that draw on embodied and visual work in art practice and methods in sociology have been developed by David Gauntlett. These involve participants in the act of making to express themselves and their ideas (Gauntlett 2007). These methods are important to the way I have approached my research.

Participatory exhibition

In creating the participatory exhibition, I adapted a form of artistic production (the exhibition) as a tool for research enquiry (Niedderer et al 2006). A participatory exhibition starts empty and invites audience contributions of objects to build the exhibit. There have been high profile examples of participatory exhibitions where the artist has taken the role of curator, collector and host, and invited contributions from a public audience. Artist Keith Wilson invited the general public to submit objects – whether special or ordinary – to his exhibition "Things" at the Wellcome Trust in 2010. The narratives of the objects were recorded through journalistic reports (e.g. BBC 2024), and through systematic documentation via the submission process. "Visitors' participation revealed their own value systems – their social, political, personal and aesthetic choices" (Wilson 2024). The ongoing Museum of Broken Relationships by Olinka Vištica and Dražen Grubišić (Marshal 2023) invites contributions of artefacts symbolic of failed love relationships, to encourage the sharing and discussion of difficult emotional scenarios, and the cultural significance of the objects and their stories. These examples both utilised the exhibition to gather the informal and idiosyncratic narratives of everyday and personal artefacts, and as

a platform for provocation and discussion. I adapted these activities from creative practice as a form of data collection, through a smaller scale event.

Approach to ethics

My methods combined semi-structured interview with embodied activities. As such, ethical guidance concerning qualitative interview was relevant, ensuring informed consent and protecting confidentiality. This included preparing written information about the study and consent forms ensuring participants were informed about how to withdraw (please see appendix 4 for samples). Verbal explanations were given at the start of each submission, including a group briefing at the start of the participatory workshop. Written information was kept as simple and engaging as possible for the participatory exhibition to encourage submissions (see below), while more detailed written information was provided for longer interviews. All participants were required to sign a consent form. To protect anonymity I ensured participants were not identifiable in any publications or documentation accessible beyond the supervision team. I used pseudonyms instead of names or removed names altogether, I avoided using photographs of participants without permission or pixelated their faces, and in the case of the interviews with designers I removed the names of the companies they worked for and photos of products they had designed. Data was stored on encrypted hard drives, and ethics clearance was received for all projects.

I anticipated the risks to participants were very low, as participants were not invited to share anything that may be personally or (in the case of the interviews with designers) professionally sensitive. As a topic, sharing the narratives of ordinary home possessions is unlikely to carry risk, unless it is focused on specific themes such as artefacts associated with challenging or traumatic experiences, which was not the case. The types of home possessions I was interested in were not likely to be highly meaningful, so the participant briefs steered participants away from objects that might surface difficult emotions. In practice, objects surfacing very difficult emotions did not arise. The study did not include research with people considered vulnerable; participants were able to give informed consent.

Qualitative research study design follows an inductive logic that allows for issues to arise as the study proceeds. The purpose is to understand the meanings that participants ascribe to their experiences (Marzano 2012). The semi-structured interviews were structured to create parameters to the topics covered and allow space for issues to surface. The participant information sheets therefore described the themes and aims of the research (see example from the interviews with designers in appendix 4b).

Creating the participatory exhibition required consideration of how I would adapt ethics process for this format for data collection. I approached it in the same way as the Objects in Purgatory participatory exhibition conducted before the period of

registration, as this had been successful. (Keyte 2013a, 2015b). Visitors were invited to talk about their possession and to answer a few simple questions, and their responses could be very brief. The immediacy of inviting and receiving responses meant that the process needed to be as easy as possible to engage with. I made the consent form as straightforward and easy to absorb as possible (see appendix 4c). Written information about the study was available, and in practice we gave verbal explanations to visitors. While I was not expecting contributions from vulnerable people, I aimed to approach the possibility of contributions from people who might be vulnerable with sensitivity and awareness, for example ensuring that any children who wanted to contribute were accompanied by parents. In proposing the exhibition to Manchester Maker Faire, I was required to use their organisational risk assessments.

Chapter summary and Conclusions

In this chapter I have explained how thoughtful constructivist research approaches to the study of home possessions in the humanities and social sciences, and explanations of the exploratory, pragmatist and opportunist nature of design thinking in design research, have shaped my enquiry. I have also described highly relevant methodological approaches to collecting object biographies in design that emphasise the material and effective. I have chosen to draw on these approaches to create a methodology that can produce situated, interpretive knowledge of our affective relationships with everyday possessions. I hope that it is an approach that can enable some of the close attentiveness paid to the role of artifacts found in material culture approaches (Comi et al 2019) and elucidate lived connections to everyday things (Judy Attfield 2000).

I have explained how I sought to challenge the limitations of current design research approaches to product emotional longevity, and develop a more nuanced and situated understanding of the relationships between objects, users, and the social and material contexts in which they exist. A constructivist perspective is one that lends itself to deep exploration of how others interpret the material world they inhabit.

Writing reflexively, I have discussed how my methodology, rooted partly in design thinking, has led to the creation of 4 iterative experiments in method. Design thinking is argued to be both explorative and pragmatic in nature (Cross 2011, Schön 2023), enabling me to take opportunities that help meet my aims, including incorporating insights from other fields. I have been able to respond to my own situation as a researcher, by taking generative opportunities that arose, and that aligned with my research aims. Design process is implicitly pragmatist — it values knowledge for its usefulness in addressing real, situated problems.

I have also discussed the qualitative methods I have employed to access the affective connections we have with everyday material objects, and the dynamics of

our relationships with them. I have contextualised my methods by writing about existing approaches to collecting the biographies of objects, that use creative and visual or material methods. I incorporated semi-structured interview with embodied hands-on methods for participant engagement, to surface kinds of information that may not have been available if I had used interview alone. Embedded in my methods are the objects themselves, physically present, or in the form of a drawing, as a prompt for reflection and narrative. I hope to achieve a balance between perceiving objects as social actors, and objects as the material products of design.

Importantly, I also note my focus on uncherished home possessions that are associated with precarious meanings. Focusing on uncherished, rather than treasured possessions offers scope for a more nuanced and fluid picture of the meanings of everyday objects.

Lastly, I have explained my approach to ethics.

Chapter 5
Method: The four projects

In this chapter I examine each of the four research projects in turn, in detail. Each project was an experiment in method, and my methodology evolved as the enquiry progressed. I explain how each project arose, the opportunities to collect data that I identified, and how my methods transitioned from one project to the next. I state the specific research questions for each project at the start of each section, followed by a description of and reflection on the project methods, supported by photos and excerpts from the data collection processes. Data analysis methods are explained, and the relative success and limitations of each activity are evaluated. I conclude the chapter with a critique of the four studies, followed by a chapter summary.

I collected and analysed the stories of home possessions through the methodology detailed in Chapter 4. My activities were intended to address research sub-questions 1-4:

1. What factors influence the perceived value of an uncherished home possession and the build, ebb and flow of meanings associated with it?

2. How do the meanings of a home possession transition over time, and how do they shape the object's emotional lifespan?

3. Can the material and visual identity of a home possession influence how somebody feels about it, and whether they feel compelled to keep it?

4. Can design practice contribute to the meanings associated with a product for the home, and influence whether an object is kept?

Table 2 below maps each project title and specific research questions against the overall study research questions and methods. The Research Activity Map (Appendix 3) plots the research activities against the period of registration, showing the relationship between the first-hand projects, conference papers and journal articles. The map also shows that there is a time gap and shift in focus between the earlier 3 projects and the final project. The first three investigated how meanings become associated with home possessions, while the fourth investigated whether industrial designers feel they can organise or structure meaning into the creation of home products.

Project	Project aim	Project specific research questions	Research methods
Objects in Purgatory paper of practice	Why and how do we keep uncherished gifts?	• How gift exchange builds value in an object • How memories and emotions become connected to an uncherished material possession • Whether drawing, making and exchange can support deeper reflection on affective relationships to possessions	A sketching and making activity combined with semi-structured interview Workshop conducted at European Academy of Design conference 2013 Reciprocal process of sketching, making and sharing between participants to encourage reflection on gifts received
Antique washstand set case study	How do the meanings of our possessions transition over time?	• The factors influencing the development and transition of meanings in a possession over time • How perceived value and meaning can shape the emotional lifespan of a possession	Semi-structured interview with a single participant Focused on a Victorian washstand set and its journey through the home, from acquisition to divestment Revealing transitions in meaning
Hardware Hopes	Can home computing devices hold meaning, and what makes us keep them when they are out of date?	• Whether positive associated meanings can build in home computing devices and what factors influence this • Whether the material and visual language of a home computing device can influence how the person feels about it • Whether an object that quickly becomes functionally obsolete can have an extended emotional lifetime	Semi-structured interviews conducted with participants in an open access digital arts space, through an artist's residency Public participatory exhibition at Manchester Maker Faire, collecting the stories of participants' home computing devices Exhibition incorporated a display of artefacts to prompt further stories, and encouraged sketching
Material Meaning: Interviews with designers	Do designers feel they can shape the meaning of a product?	• Whether designers feel they can influence the meaning of a product to a user • What factors might influence the build, ebb and flow of meaning associated with an object during the design process • How meanings develop in objects, when designers are consumers of their own products • Whether material and visual language can be holders or triggers of meaning, and designers' intentions for shaping these	1:1 online semi-structured interviews with industrial designers, incorporating a reflective sketching activity Phase 1 focused on a product the participant had designed Phase 2 invited the designer to sketch a possession that connected to their design practice, ideally a product they had designed

Table 2 Project specific research questions and methods, mapped against overall study research questions.

Objects in Purgatory participatory exhibition: How the study emerged from practice

The study emerged from a practice-based project that I created prior to the start of the PhD registration period. I made a participatory exhibition called the Campaign for Objects in Purgatory, to which I invited visitors to contribute their uncherished gifts – gifts they had received and didn't want, but nevertheless kept. The exhibition arose through my contemporary jewellery design practice to become the foundation for the PhD proposal, and the point of departure for the experiments in method described below which I employed to investigate my research questions.

I invited exhibition visitors to contribute objects, photos, or sketches of their uncherished gifts to the exhibition, and to tell me the stories associated with them. The exhibition generated a growing archive of 72 objects, sketches, photographs, and recorded stories. The narratives revealed contradictory emotions: participants often disliked the gifts yet felt compelled to keep them. The variety of reasons for keeping and feeling uncomfortable with the object hinted at more complex emotional factors influencing the keeping of an object. Some accounts also suggested that meanings could shift over time, with unwanted objects occasionally becoming valued possessions (Keyte 2013c).

The writing of a conference paper and two journal articles (Keyte 2013a, 2013c, 2015b) that then took place within the registration period gave me important opportunities to analyse the collected data, reflect, and understand the effectiveness of the exhibition as a research method. There are several ways in which the project formed the starting point for the later experiments in method. Incorporating sketching proved affective for eliciting emotional expression, while displaying the objects publicly introduced humour and taboo into the process of surfacing hidden possessions. Asking contributors to show where the object was kept, and to draw or photograph it in situ, proved valuable for exploring the relationship between storage, meaning, and emotion.

I also incorporated a live exchange. I used my skills as a jewellery designer and maker to create paper brooches framing photographs of uncherished gifts, which I gave to participants in return for their contribution. They were made with paper and wax – throw away materials of little value – which I attempted to give value by making the brooches with care. The brooch exchange functioned as a kind of experimental exchange of meaning, exploring the obligation to reciprocate when a gift is received. My intentions were partly rooted in my contemporary jewellery practice: I wanted to push the boundaries of practice to create objects that were active social agents, by stimulating interaction between people and things. I also used the brooches to frame the photographs of the uncherished objects – to frame and communicate their value, and give these unwanted objects visibility. This is explained in detail in Keyte 2015b)

In practice, the brooches catalysed further discussion of uncherished gifts between myself and the participants, and became an additional tool for provoking reflection. In return for the brooch, I received more consideration of the exhibition theme from contributors, which helped catalyse my own thinking about gift giving as a process of building value in an object.

This element of practice was one that I did not bring explicitly into the PhD enquiry, for a number of reasons. At the time of realising the project, I was interested in whether the investment of making I had put into the paper brooches gave them more value to the recipient, and encouraged their keeping. I found this was difficult to reliably and methodologically evaluate, and my intentions for the brooches stood in relation to contemporary jewellery practice. As my immersion in literature on home possessions and their meanings progressed, along with my data analysis, I found it harder to see a place for my own making in my research enquiry. I started to consider decentralising my practice to focus on existing scenarios experienced by participants. I did however transfer the making and framing elements of the brooch exchange into a participatory activity: The Objects in Purgatory paper of practice described in the next section of this chapter.

There were also very real practical constraints on my ability to practice, and it is important to reflexively acknowledge the changing context for me as a researcher. Making the brooches was very labour intensive, and with a growing family I had less time to invest, and less space to accommodate making activities. As these constraints evolved in tandem with my research aims, I established a methodology (described in the previous chapter) that allowed me to take relevant opportunities to shape data collection activities with different groups of participants.

Analysis of data from the Objects in Purgatory exhibition

I analysed the data from the exhibition within the PhD registration period, and this informed the writing of the associated papers. I adapted the data analysis methods used by Csikszentmihalyi and Rochberg-Halton, explained in their seminal book “The Meaning of Things” (1981) introduced in chapter 2. Their study was far larger in scope, but relevant in its emphasis on household objects and the meanings attributed to them. Their two-stage analysis method firstly categorised the objects into groups drawn inductively from the objects respondents named, characterising different general object categories (e.g. furniture, or visual art). Secondly, they developed meaning categories, identifying what made the object valuable (such as because it was a gift, or associated with experiences) “in an attempt to classify and statistically compare the meanings embodied in the various kinds of objects by respondents” (Csikszentmihalyi and Rochberg-Halton 1981).

My study looked at uncherished gifts rather than meaningful objects, which implies different limitations and potential themes, and I adapted my process accordingly as

themes arose from the data. I absorbed myself repeatedly in the audio recordings, sketches and photographs and became very familiar with them.

In my own analysis process, the first stage sought to categorise the type of object submitted as reported by the participant (e.g. an ornament, or a magazine / book), the relationship of the giver to the participant, and the reason the object is in purgatory suggested by the submissions (e.g. disliking the object, or conflicts over the value of an object between family members). These can be seen in columns F, G and H in the except from the analysis table in appendix 9a.

The second stage sought to interpret expressions of emotion connected to the objects by studying the participants written or verbal language, and / or their sketch. I also recorded where the participant reported keeping the object. These can be seen in columns I and J in appendix 9a. I identified and categorised themes as they arose, which I coded. Themes included how visible or accessible the object was in its location, and reasons for valuing it. The coded themes can be seen in columns L to AA. The list of codes can be seen in appendix 9a.

Objects in Purgatory paper of practice: Combining interview, sketching and exchange

Project aims

I ran a 2 hour participatory workshop incorporating sketching, making and exchange to investigate:

- Whether engaging participants in these activities can support deeper reflection on affective relationships to possessions
- How gift exchange builds value in an object
- How memories and emotions become connected to a material possession

I applied for and participated in the European Academy of Design conference 2013 “Crafting the Future”, in the “Power to the People” track convened by fashion design researchers Kate Fletcher and Otto von Busch. I saw an opportunity in the experimental hands-on format, intended to create a space for the practice-based knowledge and processes of designers within an academic conference. Fletcher and von Busch framed “Papers of Practice” as mixing “hands-on activities and discussion, centred on and emerging from the very act of doing”, to address the loss of “some of the explorative aspects of research” in paper presentations.

The track format allowed me to test a participatory making method, whilst interweaving relevant literature, and inviting discussion. I submitted a paper taking the form of a proposal for a workshop (see Keyte 2013b), incorporating a gift exchange, and employing drawing and making as dynamic methods for sharing narratives and making them visible. I also redeployed the notion of framing an artefact from the exhibition brooches described above, as a means of revealing

something usually hidden. Building on my experience of creating a live exchange into the participatory exhibition as a catalyst for reflection and thinking, I took an experimental approach to the workshop by creating a method structure encouraging participants to connect to each other by exchanging the stories of their objects. I made this a reciprocal process of sketching, making and sharing between participants working in pairs. I hoped that this would encourage deeper reflection, and that some connection may form to the made outcomes and between participants (drawing on Gauntlett 2011).

These activities built on the data collection methods from the Objects in Purgatory participatory exhibition (Keyte 2013a, 2015b) and learnt from the work of Cooper Marcus (1995) described in the section on sketching in the previous chapter. The data gathered through the Objects in Purgatory participatory exhibition had had breadth; my analysis had revealed a range of scenarios relating meanings, emotions and material identity (Keyte 2013c). I planned a longer timeframe for the workshop participation as well as a more involved activity, to encourage deeper reflection on the object and relationship, and more detailed insights.

Participants

There were 14 participants for the 2 hour workshop, who included the delegates in the conference strand, plus the strand convenors. Each participant ran their own hands-on research workshop, and we were all participants in each other's. All participants were designers and researchers with academic roles. Some were more experienced and established design researchers or lecturers, others were early on in their academic careers, and there were also doctoral and masters students, predominantly from Europe. They were a group interested in experimental methods, craft, and the politics of making and as such were a receptive audience familiar with processes drawing and making. Our workshop proposals were accepted through a peer review process and workshop descriptions were available from the beginning of the conference.

Process (see figure 2)

Stage 1

At the start of the workshop, I introduced some established context for gift exchange and value at the start, to prompt thinking (see workshop structure appendix 5a). I shared a booklet (appendix 5b) introducing participants to some examples from the Objects in Purgatory exhibition, to help provide inspiration and guide responses.

Stage 2

I then invited participants to work together in pairs. Each person was invited to share the story of a gift they had received and kept and to sketch it. The A5 sized sketch became the basis for recall, reflection and discussion with their partner (see figure 3 for an example).

Stage 3
Each participant was then invited to make a frame for their partner's sketch, in order to further communicate the important facets of the story connected with the object, using basic craft materials that I provided, including card, coloured paper, foam, tape, and acetate sheet (see example in figure 4). I provided prompt questions for participants to ask of their partner (see appendix 5c), to support deeper reflection and interpretation through making the frame. These questions were loosely thematically structured. At this stage, participants were effectively interviewing each other with guidance from me, and interpreting those answers through the frame making process, to try to bring some clarity to the dilemma associated with the gift.

By creating a simple frame to communicate the narrative associated with their partner's sketch, participants physically 'reframed' the dilemmas associated with the gifts – looking at a familiar item through a new lens (Keyte contributing author in von Busch (ed) 2014). During the workshop, I was present as researcher and workshop host, guiding the interviews, and offering structure and materials. I spent time with each pair, but otherwise wasn't present during each 'interview' process; I decentralised myself as researcher. I was able to observe how the process unfolded from a wider perspective.

Outcomes
The workshop went well and successfully engaged participants in active and supportive reflection. The sketches were simple annotated representations of the objects. The frames utilised the available materials for their properties, revealing and / or concealing parts of the object, for example using the acetate to place the sketched object in a glass box (see figure 5).

As a method of combining interview with a sketching activity, it was much more intimate than inviting contributions to a participatory exhibition. I observed more depth of consideration and connection between participants. I felt their responses took an empathetic dimension, as they "were supportive of one another in seeking out each other's stories and working out how to represent them in the frame" (Keyte contributing author in von Busch (ed) 2014). The structured reflection, sketching and making appeared to create space and opportunity to think about some of the complex social and practical aspects of the story of a burdensome possession, such as an inherited traditional quilt that took up space (figure 6 above). The rituals and practices of acquisition and accumulation, and dilemmas that were usually out of conscious thought, emerged through discussion.

Objects in Purgatory paper of practice

Stage 1

Introduce context and examples

Stage 2

Participants pair up.
Each person sketches a possession

Stage 3

Each participant frames their partners sketch

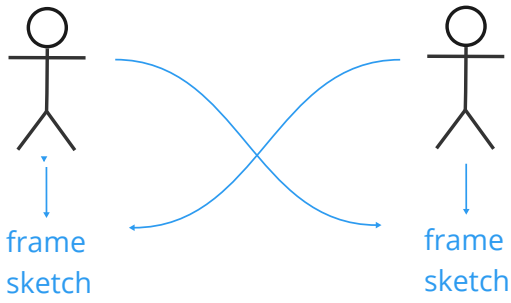


Figure 2 Objects in Purgatory participatory workshop process

Figure 3 Participant's sketch of "Fingerless gloves of guilt"

Figure 4 Sketch of “Fingerless gloves of guilt”, framed by partner

Figure 5 Participant's annotated sketch of a ring (left), framed in an acetate box representing glass (right)

Figure 6 Participant's sketch of an inherited quilt, that was both special and burdensome

My intention was to capture data from the conversations by asking participants to fill in the prompt sheets, and by taking photographs of the framed drawings, which can be seen in appendix 5d. I also made notes from my own fieldwork observations. The photographs make a rich and interesting data set, but in practice few participants completed the prompt sheets, and which unexpectedly limited my opportunity to understand how the participants interpreted their framed sketches. Interestingly, the experiment shifted the receiving of the narrative away from me as researcher, to another participant as the person who supportively listened and held the narrative as it was told. While I observed a great deal of empathy and connection, it was difficult to capture measurable outcomes. This may be because the prompt sheets I asked participants to complete didn't fit the nature of the embodied activity. Possibly building in a short video capture to the reflection at the end could have recorded short verbal explanations of the physical, material outcomes. This would have required reformatting the workshop to allow time for this but could help it to become an inventive data collection activity.

On reflection, the workshop suggested good potential for employing sketching and making to focus reflection on what the object meant to the individual. The available materials for making the frames offered a means of expressing meaning, by revealing and concealing the sketch in different ways. The materials, and participants' skill levels may have influenced their responses as they engaged imaginatively with the task. The examples of uncherished gifts I provided in the booklet may also have influenced participants' responses.

Antique washstand set case study: Semi structured interview

Project aims

I undertook a case study investigating:

- The factors influencing the development and transition of meanings in a possession over time.
- How perceived value and meaning can shape the emotional lifespan of a possession.

I undertook a semi-structured interview with the secretary of a small rural community run museum, about the lifetime of a Victorian washstand set as it transitioned from her possession and into the museum. I then wrote and published a paper for the International Conference on Design History and Studies, framing the narrative of the set within an examination of literature on how we invest personal, domestic possessions with meaning (Keyte 2014).

The opportunity for this project arose when I first encountered the Victorian jug, bowl and chamber pot set in the museum, during a visit with a group of design students. After visiting the museum toilet block and by chance finding the washstand set

displayed inside (see figure 7), I talked to the secretary of the museum board, a woman in her eighties who also volunteered in the museum, and started to get a sense of the informal provenance of the set. It had been a gift to her from a friend, which she had kept in various locations in her home, before creatively relocating it to the museum. The journey of the set straddled several years, and was punctuated by transitions in meaning, value and purpose. I felt that the participant's personal story of the washstand set held potential for investigating emotional lifespan and reaching a level of detail not possible in the Objects in Purgatory exhibition. I invited the museum board secretary to an interview.

The interview focused on the biography of the washstand set, thereby tracking an object's journey from the point that the person acquired it, to the point of dispossession. The purpose was to investigate how the meanings associated with the object transitioned during this period, to develop an understanding of emotional lifespan. The analysis of longer interviews collected through the Objects in Purgatory participatory exhibition revealed transitions in meaning over a longer period of time, suggesting that a more in-depth examination would be valuable (Keyte 2013c). I utlised semi-structured interview as a means of prompting the interviewee to recollect her experiences, feelings and decisions relating to the object over its time in her ownership.

Approach and process

I prepared a series of interview prompts to encourage the participant to tell the story of the set (see appendix 6), based on what we had discussed about the set during our chance conversation. These focused on the physical circumstances of the set as well as developing a sense of what it meant to the participant at different times, and inviting her to recall her decisions. I asked questions about the object's location, as this had emerged as a very important vehicle for identifying practices of keeping and building meaning in the data on uncherished gifts (Keyte 2013c). The interview took place over the telephone, and was audio recorded.

Data analysis

I transcribed the 40-minute interview in full and undertook a systematic analysis of the narrative concerning the life history of the Victorian washstand set. This involved an initial stage of detailed familiarisation with both the audio recording and transcript, followed by the identification and coding of factors that appeared to influence shifts in the object's meaning and value over time. These coded transitions were then visually mapped to trace changes in both meaning and location across the period of ownership (see Figure 8). Appendix 9c shows extracts from the transcript identified because they describe a transition point in the washstand's journey in the home of the participant, with coding in the right hand column.

Figure 7 Antique washstand set on display in the museum toilet

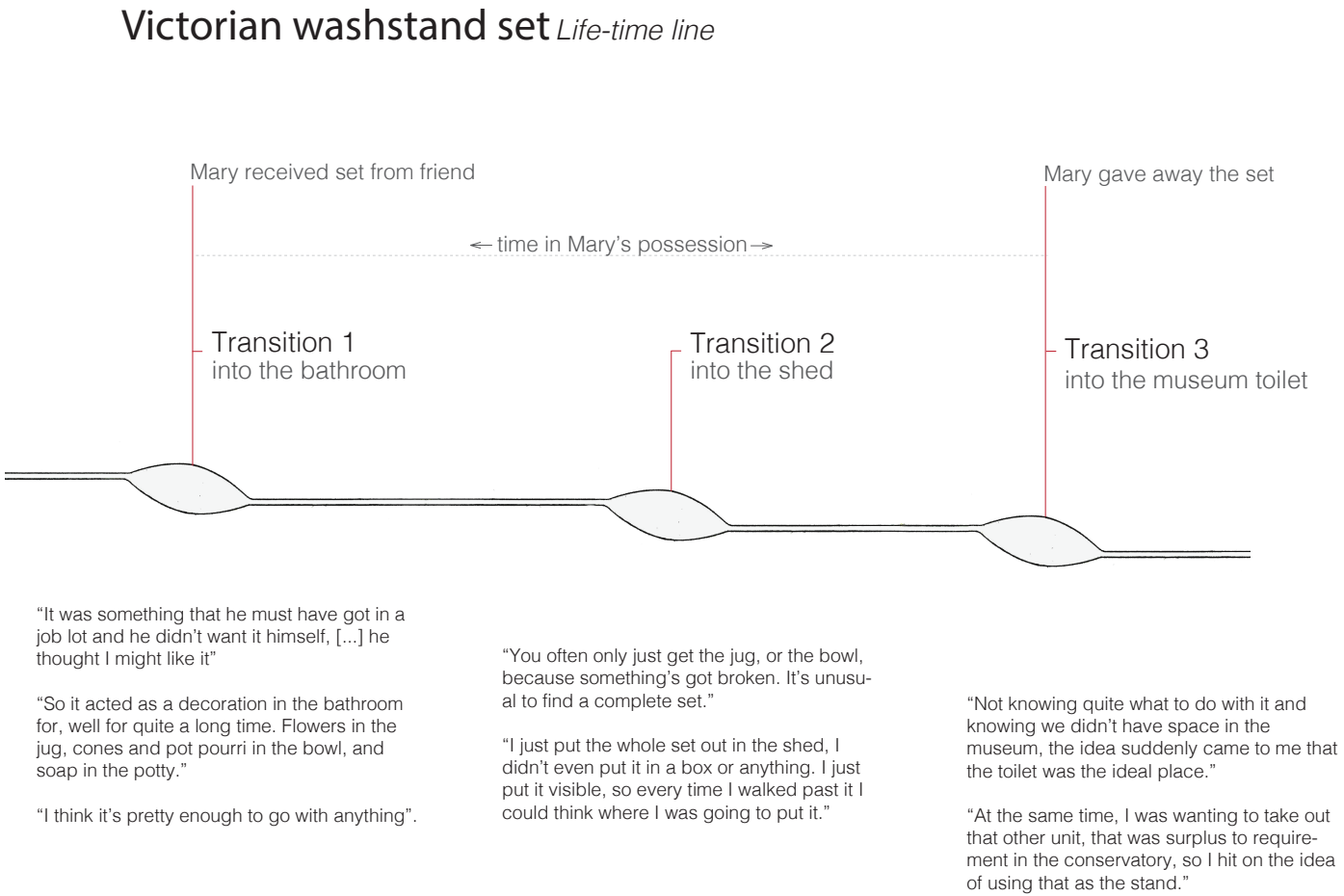


Figure 8 Plotting the transitions of meaning associated with the antique washstand set

Outcomes

As this was a straightforward semi-structured interview, it provided data that was more easily captured than that from the Objects in Purgatory paper of practice, although as it didn't incorporate hands-on methods for the participant it didn't surface the richer data of (for example) the Material Meaning interviews with designers. What the Victorian washstand set project did was establish a method for framing emotional lifespan by identifying transitions in meaning, and the material, spatial and human factors integral to them (see Keyte 2014).

Hardware Hopes: Semi-structured interview and participatory exhibition

Project aims

I created two data gathering activities that worked alongside each other, to investigate:

- Whether positive associated meanings can build in home computing devices and what factors influence this.
- Whether the material and visual language of a home computing device can influence how the person feels about it.
- Whether an object that quickly becomes functionally obsolete can have an extended emotional lifetime.

Hardware hopes was a project involving two data collection activities, through an artist's residency at Access Space, an open access digital arts space in Sheffield (April – July 2014), and a two-day participatory exhibition at Manchester Mini Maker Faire (July 2014). Through these activities I invited people to contribute the narratives of the computing devices they own and keep (e.g. laptops, desktop computers, smartphones, tablets), and asked them to consider how they felt about them. It led to a paper published at the Product Lifetimes and the Environment conference in 2015 (Keyte 2015a).

My aim in creating the Hardware Hopes project was to create a comparator dataset to uncherished gifts, and I sought opportunities for exploring this theme. The data on uncherished gifts had raised interesting scenarios for keeping possessions involving conflicting emotions and meanings (Keyte 2013c), and I wanted to see whether these dynamics only arise in a gifting context. Interesting literature emerging at the time in human computer interaction (HCI) highlighted digital artefacts as possessions, and integrated this with consideration of them as physical possessions key to identity building (Odom et al 2009, Petrelli 2010). There was also widespread concern in the design research community about the short lifespans of computing devices, made necessary by technological change and driven by fast consumption cycles. Another interesting line of enquiry was the visual and material identity of home computing devices, which for the most part have an ubiquitous aesthetic language, and arguably could be understood to be alienable objects. I set out to

investigate the messy reality of keeping digital hardware whose value is waning, and the factors influencing emotional lifespan.

I looked for organisations and opportunities that might relate to my aims. I approached Access Space with my project, and they offered me an artist's residency. During the same time period Maker Faires were growing in popularity, and I responded to a call for participation from the Manchester Maker Faire. Both opportunities were geographically close, and I felt they offered scope for my aims and exploratory approach. I conducted a series of 22 interviews through the Access Space residency. At Manchester Maker Faire I created a participatory exhibition through which I conducted 35 short interviews. Both activities gathered data on people's relationships to home computing devices they no longer used but kept, following a similar interview format. The communities in each activity were slightly different, as described below.

Access Space interviews

Artist residency

I approached my artist in residence role from an exploratory perspective, participating a range of creative activities initially. I conducted a series of semi-structured interviews with members of the Access Space community about devices that they owned but no longer used. I decided to do this because Access Space dealt directly with extending the lifetime of computing hardware and parts, through reuse and learning activities by a wide community of participants and visitors. I anticipated being able to gather responses from people with a range of experiences, attitudes and technical knowledge (from very little, to significant) concerning using and keeping computing hardware.

Access Space received regular donations of hardware items that are no longer wanted (functionally obsolescent) and used them to empower members through learning, reusing and adapting technology. The ethos was one of inclusivity, and the community encompassed artists, makers and musicians engaged in digital production, as well as socially excluded and unemployed people, visitors, learners and hardware donors. It was largely a creative and technophilic community.

Who I interviewed

I conducted semi-structured interviews with members of the Access Space community about devices that they owned but no longer used. I liaised with the Access Space creative director to agree my interview approach and share my ethics process. I was involved with a range of creative activities and encountered potential participants through spending time there. The interviews were audio recorded and transcribed, and some were accompanied by a photo or the physical device itself.

The community members who were willing to contribute often had an active and knowledgeable relationship with their devices – a 'technophilic' approach.

Participants tended to have a lot of experience, and to be politically aware, with critical attitudes to owning and using digital devices. I also interviewed less experienced members and visitors to events. Please see appendix 7a for a raw extract from the transcript of an interview with an expert user discussing the enjoyment he derives from continually upgrading and personalising his laptop.

I asked participants: When they acquired the device, where they kept it, how they felt about it, whether it had replaced any other devices, and how they used it. Depending on the opportunity for a longer discussion, I used follow-up questions to deepen answers to the above questions. Asking about where an item was kept, and whether it had replaced another device, helped get at the reasons people kept hardware they no longer used, and the affect within this. I also asked participants about their level of expertise in relation to computing and computers.

Hardware Hopes participatory exhibition

I ran a participatory exhibition to collect data, as it had been a successful method for scoping a wider range of artefact narratives and our relationships to them in the Objects in Purgatory project (Keyte 2013a, 2015b). I took an exhibitor space at the 2 day Manchester Mini Maker Faire 2014, which took place in Manchester's Museum of Science and Industry. A Maker Faire is a public event with a DIY ethos, open to makers and tech enthusiasts to share their projects in a like-minded community (Maker Faire 2023). I anticipated that there may be an audience receptive to reflecting on their relationships with their computing hardware. The audience was a mix of museum visitors and visitors to the faire itself. As researcher and creator of the exhibition, I engaged in it as curator and interviewer, with the support of one other person.

Exhibition curation

The success of the exhibition was dependent on involving passers-by who might not have been expecting to encounter it. I felt expectations for participation needed to be 'light', and the nature of the exhibition engaging. I intended it to feel open to contributions, so I tried to create a temporary and open identity. We had the freedom to shape the exhibition within the limits of the simple display structures and resources we had, including fold-away tables and posters. We improvised the display as we went, adding contributions as they were made (Figure 9).

I intended to have conversations exploring emotion and material, so I aimed to bring a material and visual identity to the theme of home computing devices and emotion. This was somewhat challenging as everyday computing devices vary little in form and material in general terms. I brought physical items of home computing hardware contributed by participants in my Access Space residency interviews, and I created display boxes to house and frame them to raise their visibility and try to imply value (see figures 10 and 11). They were accompanied by short written narratives based on

Figure 9 Hardware Hopes participatory exhibition at Manchester Maker Faire

Figure 10 Display of submitted artefacts in boxes to raise their visibility

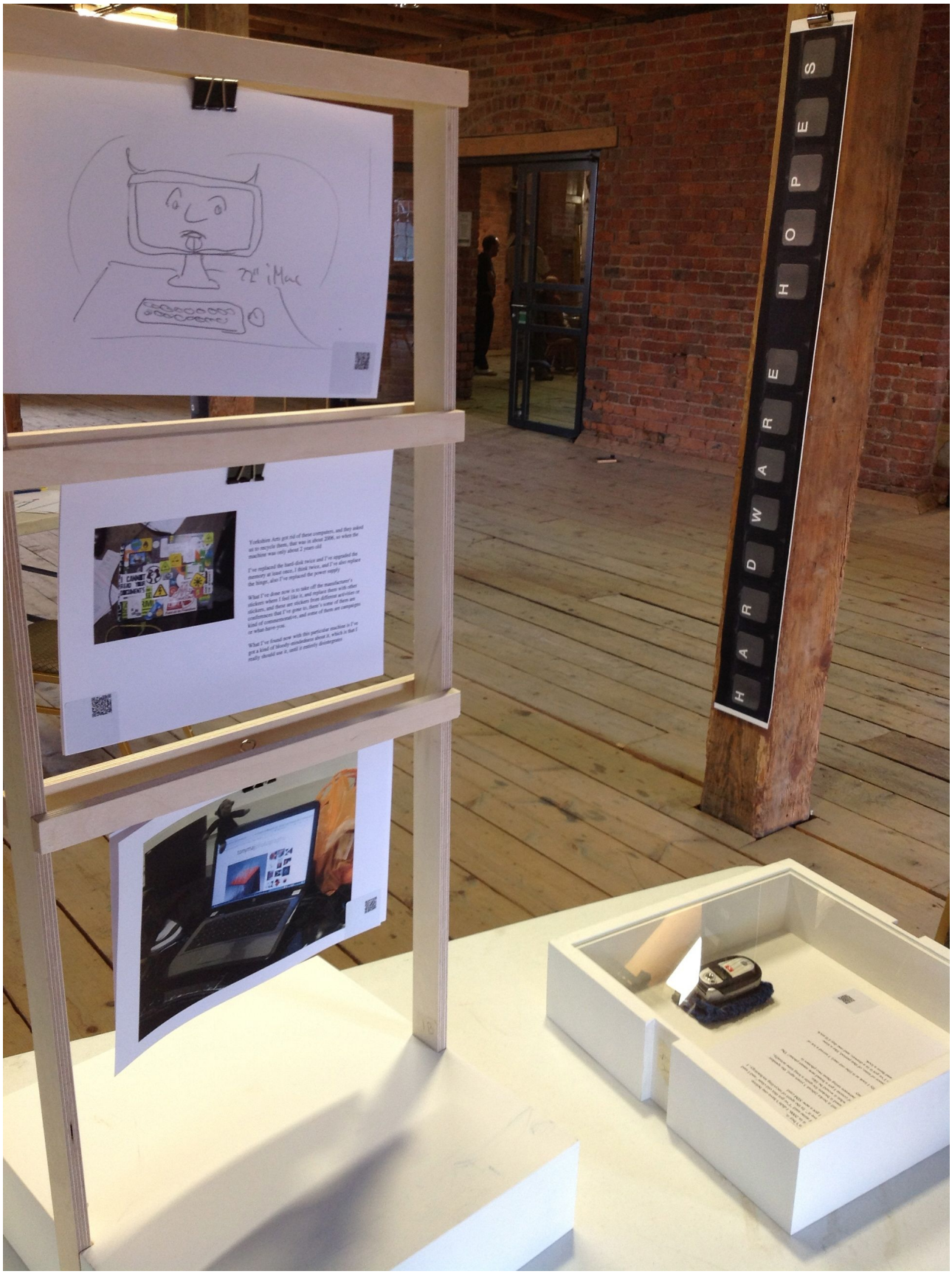


Figure 11 Display of submitted stories and artefacts

The stories shared by contributors. My intention was that they would provide provocation for visitors to encounter, to interpret and reflect on their own experiences.

Audience and interview

The audience to the Maker Faire and the science and industry museum that hosted it largely included families, hackers and makers, some of whom had active relationships to their devices. Our stand was amid an array of others on a route guiding visitors through the faire. In order to engage participants, I created playful visuals representing the hardware itself, which I printed as banners and posters. Myself and my assistant hand-wrote signs intended to initiate a discussion about emotional associations with artefacts, asking questions such as “Feel attached to your tablet?”, and “Frustrated with your laptop?”. I printed simple line drawings of computers with the idea that they could be sketched over or annotated, and intended that a drawing activity would encourage visitors to stop and talk.

We asked visitors when they acquired the device, where they kept it, and how they felt about it, using follow up questions as needed. Within the participatory exhibition there was a need to accommodate quickly given unpremeditated responses, therefore opening questions were kept brief and simple. Please see appendix 7a for a raw extract from the transcript of an interview with a participant sharing his anticipation waiting to collect a new smart phone.

Data analysis process

To analyse the data gathered through both Hardware Hopes activities, I catalogued the submitted artefacts, transcribed the audio data, and immersed myself in the transcripts to become very familiar with them. I used a spreadsheet to organise and analyse the data.

In doing this I adapted the approach to analysing the data gathered through the Objects in Purgatory exhibition, which learned from the data analysis methods of Csikszentmihalyi and Rochberg-Halton, described in the opening sections of this chapter. In this case the process was adapted for the more limited category of object the data collection had focused on: Home computing devices. The analysis process I employed varied slightly from Objects in Purgatory to reflect the more limited range of artefacts, and again identified expressions of emotion in relation to the object.

Firstly, I categorised the type of device, how long it had been kept, where it was kept, and the explanation the participant gave for keeping their device (see columns C-H in the analysis table in appendix 9). I then sought to identify where emotion emerged in the stories, either directly reported by the recipient or present in their language (column J). I identified, categorised and grouped themes as they arose, which I coded. Themes included users actively engaging with the device, for instance through repair, and the presence of transitions in value.

Outcomes
Through the residency I collected 22 interviews, ranging in length from 2 to approximately 40 minutes. The exhibition gathered a good range of 35 short interviews short audio narratives between 2 and 14 minutes long, so the data offered scope rather than a lot of detail. The data provided a perspective on computing artefacts as material possessions that builds on the approaches in the literature cited above (Odom et al 2009, Petrelli 2010). Collecting the emotional narratives of devices was challenging in practice, because participants seemed less ready to consider the possibility of an affective relationship to a device - thinking about them in this way seemed less 'natural'. Expectations of the utility value of computing devices is high, and this was often prioritised in participants' discussions with us. However, a range of feelings and attachments arose, described in Keyte (2015a).

The translation of the participatory exhibition method from uncherished gifts to home computing artefacts brought challenges to the effectiveness of the exhibition. In the Objects in Purgatory exhibition sketching had enabled expressions of emotion and captured valuable information on where the gift was kept. The switch to home computing devices changed the nature of the data collection. Inviting participants to sketch was less successful, and the emphasis became more weighted on audio narratives. It is possible this is influenced by the ubiquitous language of computing devices and their (usually) box like form – drawing a device is not necessarily engaging.

Creating visual materials was integral to the way I approached collecting data through this form of artistic production. The posters and handwritten signs would have influenced what participants contributed by prompting reflection along particular lines. The visitors who chose to contribute may have experienced the scenarios hinted at in the signage, and so been self-selecting in this respect. Limitations to the data were also drawn by the audiences to the exhibition, some of whom were hackers and makers with potentially active relationships to devices, although there were also museum visitors and families without specialist knowledge.

Material Meaning: semi-structured interview and sketching

I ran a series of interviews integrating a sketching activity with 10 industrial designers to investigate:

- Whether designers feel they can influence the meaning of a product to a user
- What factors might influence the build, ebb and flow of meaning associated with an object during the design process
- How meanings develop in objects, when designers are consumers of their own products
- Whether material and visual language can be holders or triggers of meaning, and designers' intentions for shaping these

The enquiry shifted at this stage, from focusing on artefacts as possessions, to the designing of artefacts for the home. This shift was a response to the earlier investigations into keeping practices and meaning, and sought to interrogate the potential for industrial designers to shape the meanings associated with home possessions. The industrial designer plays a constructive role in the creation of new artefacts, and is typically understood to give form and identity to a product, bringing creativity and skill to this activity (IDS 2023). Having observed the ways in which meanings can become associated with possessions, I set out to further investigate whether visual attributes and meaning are connected, and whether a designer is able to influence the meaning of a product to a user. I sought to discover whether industrial designers consider meaning making within their practices, and how meanings are determined and enacted.

I conducted 1:1 online semi-structured interviews with 10 industrial designers to discover how meanings might build through the creation of an object. Designers are agents in an object's "becoming" (Daston 2007) by giving form and visual identity to products (Buchanan 1992). It was important that all the designers were focused on designing physical products ('hard goods') for the home, for consistent research context. I wanted to find out whether they feel they can create products with meaning to a consumer, because my research had suggested that material and visual language plays a complex and sometimes indirect role in shaping meanings. In fact, the data analysis from the Objects in Purgatory exhibition suggested that positive meanings may not be connected with visual and material attributes (Keyte 2013c). I wanted to find out how meanings are determined and enacted through design practice.

I designed a semi-structured interview format that incorporated a sketching activity to support active reflection and revealing affect. In each interview, I asked the designer to tell me about a product they had designed, and a home possession. These areas of cultural activity are usually considered separately, but I wanted to consider them together and to be open to making connections between them. I also intended to allow what matters to the designers and what they see themselves doing in their professional role to surface.

Participant sample

Identifying participants for this project required a different approach to the projects above, which were designed to invite participation from an existing audience or community. I utilised my own networks to find industrial designers, and some were able to put me in touch with colleagues willing to be involved. All 10 designers graduated with a relevant UK design degree, and went into continuous careers as designers of physical products for mass production. All designers were focused on hard goods for the home, and several had very substantial experience of working as homeware designers throughout the UK retail sector (please the Designers Role

Information in table 3). Career length ranged from 5 to 25 years, and the sample included both junior and senior designers, 2 designers who have occupied management roles, and 2 who run their own studios with small teams. The benefit of this was a cross section of very experienced designers who are more deeply into their careers, and younger designers who are closer to their training. This broadened the scope of the data for comparative analysis.

There was some breadth in the modes of employment of the designers (see Designers' Role Information in table 3) encompassing 4 in-house designers (3 of whom were employed by high street retailers), 2 freelance designers working for suppliers to UK high street retailers, 2 working for small design consultancies, and 2 self-employed designers with their own businesses. A good range of employment modes were represented, covering both in in-house design teams, where a designer works for a single brand, to consultancy design teams focused on external clients, and self-employed designers working and collaborating across a range of projects.

Process

I structured the interviews to allow myself and the interviewee to talk and make connections in an exploratory way, to remain open to making links, and guide the reflections of the designer. This is visualised in the Interview Dialogue Phases Map in figure 12. My intention was to co-identify the practices or processes that may constitute meaning making, and arrive at a definition. As a researcher, this meant staying mindful of my aims and prompting the conversation around key considerations, such as material, interpretation to the consumer, links to memory, and factors shaping the process. The interviews were virtual, to work within the restrictions imposed during the COVID19 pandemic.

I designed the interview to incorporate 2 phases, the first inviting the participant to share the narrative of a product they had designed, and the second to sketch and explore a home possession. For this second phase, I asked the designer whether they possessed an object they had designed, and if not, whether they could identify a home possession connected with their design practice in some way. In doing so, I intended to bring practices of designing and practices of keeping into relation with each other, to create a method that was open to making connections between them. This was influenced by Kimbell's (2012) ideas about the relational nature of design practice, and designers' entanglement with material objects (discussed in chapter 2). I was especially interested in examining the potential for design and "after design" to be "mutually structuring" by paying attention to designers' experiences of objects. I wanted to drill down into practices of meaning making: Explicit and implicit, professional and personal.

Interview dialogue phases

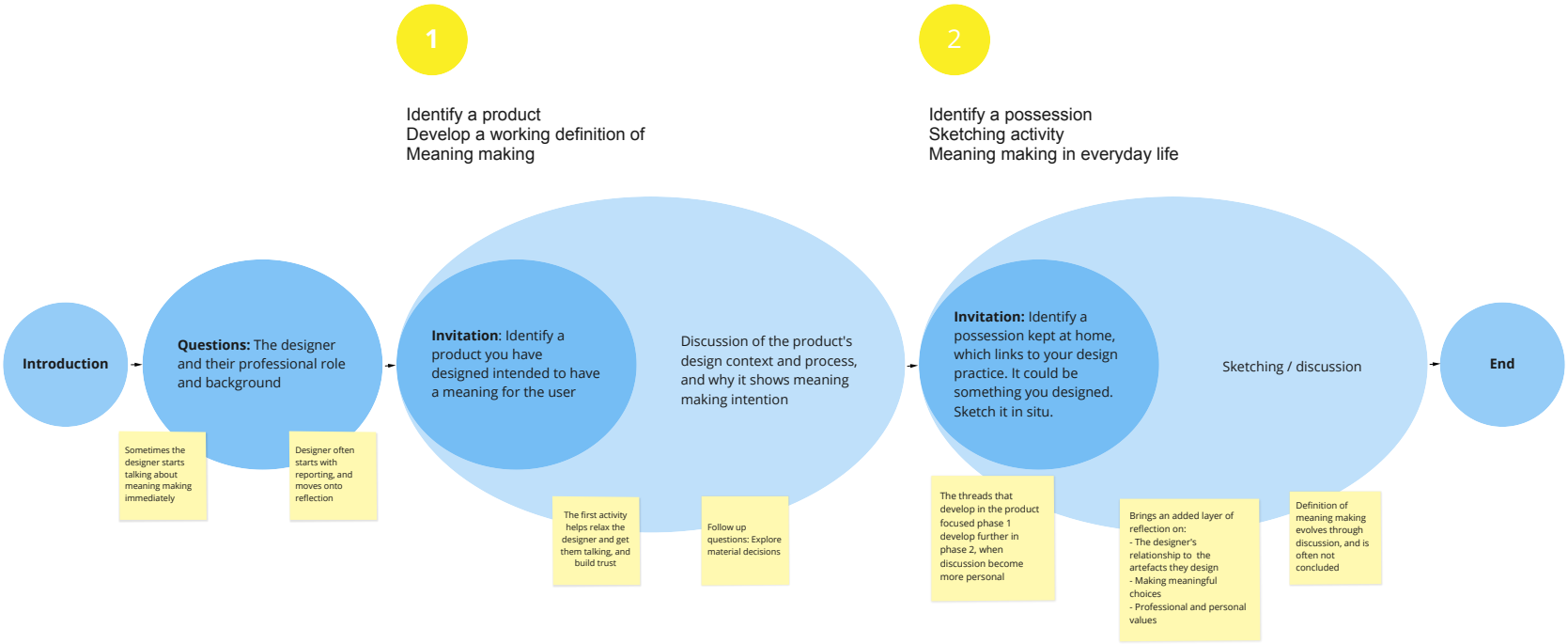


Figure 12 Interview dialogue phases (please see appendix 8a for a larger version)

Designers' role information

Name	Gender	Career length (years since graduating)	Employment type	Role	Employer / company description(s)
Callum	M	5	Employed, in-house	Senior Product Design Engineer within the New Products and Innovation Department	Technology innovation led compnany, designing and manufacturing premium household appliances
Rosie	F	13	Employed, consultancy connected with one retailer	Senior Industrial designer	Company developing brands and products for the home and garden, linked primarily to a major UK budget retailer
Adam	M	8	Employed, consultancy	Designer, working directly with creative director	Small company / studio, developing a wide variety of luxury homewares and furniture, and brand identities, for different clients
Charlie	M	8	Employed, in-house	Designer in Design Home Studio	Large UK high street retail company, owning and operating department stores and supermarkets
Alicia	F	20	Employed, in-house	Designer in Cook, Dine, Seasonal and Gifts Team Previously manager / team leader	Large UK high street retail company, owning and operating department stores and supermarkets
Richard	M	15	Freelance, and self employed	Freelance designer working for supplier Self employed designer-maker	Company primarily supplying lighting to a UK retailier
Josh	M	18	Self employed	Consultant designer, founder	Working with a wide range of UK high street retailers and manufacturers. Also developing own brand.
Darcy	F	22	Employed, in-house	Head of Design and Execution Leading design team, and how trends are executed in product offering	Large UK high street budget retailer, providing household and garden products
Millie	F	19	Freelance	Design consultant for homewares	Working for companies supplying major UK highstreet retailers
Dan	M	25	Self employed	Designer and company owner	Working with diverse manufacturers and brands, across lighting, kitchenware, home objects.

Table 3 Designers' role information

Ahead of the interview, I sent the designer an information sheet (see appendix 4b). The interviews started with straightforward questions on role information and professional background, including employment role, role in team or company, length of career, and the nature of their design training / education.

Phase 1

I asked the designer to identify a product they had had a significant role in designing, which embodied an intention to give something meaning or identity, and that had been released onto the market. I did this to frame a starting point that would make meaning making visible and tangible enough to

discuss. I started phase 1 with spoken guidance arising from my research, which prioritised shaping material identity as a means of constructing meaning. I shared a brief introduction to Krippendorff's (2005) definition of meaning making in industrial design which attached meaning to visual identity, user centred approaches, and meaning embedded in use. I had tested this successfully in 2 pilots, and used it as a point of departure to help ground the discussion, condense the start of the interview and keep it within acceptable time limits.

Phase 2

I invited the designer to sketch a possession that connected to their design practice, in situ where they keep it. I encouraged them to select a product they had designed, if they owned one. I Incorporated sketching to support reflection and surface the subtle affective dimensions of their experiences of the object (Knudsen and Sage 2015, Cooper Marcus 1995). While they sketched, I invited them to tell me about the possession, and the story of keeping it. Phase 2 created opportunities for the designers to make reflections on their practices as consumers and users of objects.

The interviews were designed to last 40 minutes, but in practice all but one lasted longer, the longest being 1 hour 45 minutes.

Material Meaning data analysis

The interviews were conducted during the COVID19 pandemic and needed to work within the imposed limitations. I captured the interview by asking the designer to use two devices e.g. a laptop and smartphone to video the designer, capturing their face and body language, and the sketching process (see figure 13). This enabled some of the synchronicity of face-to-face meetings. The interviews were transcribed and organised into a multi-modal table, described below, for analysis along with the visual data.

As discussed, to analyse my data on computing hardware and uncherished gifts, I adapted aspects of Csikszentmihalyi and Rochberg-Halton's (1981) approach to analysis. While this was very valuable, it relied on verbal reporting and I felt it lacked a means of allowing me to give full consideration to the visual nature of much of the collected data. As a designer occupied with the material and visual world I was trying to get a deeper richer understanding of the layers of meaning associated with material objects, but finding it difficult to foreground. Through my participation in the IASDR conference in 2021, I encountered an inventive method of analysis developed by Comi et al (2019) to assign visual data equal priority to verbal data.

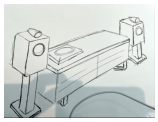
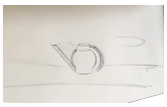
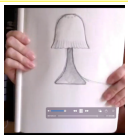
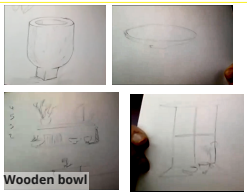
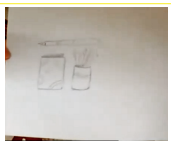
	Interview Length	Product	Reason given	Possession	Reason given
Callum	56 mins	Toaster	Making a heritage design compliant	 **High end speakers**	They are of a beautiful quality, and bought when he started earning, and which he aspired to. He likes that it is a technology that won't be quickly superseded.
Rosie	57 mins	Bird box	For home and on market, designed for specific users	 **Bird feeders**	It is a product that she really enjoyed designing, and is happy with it as a user and a designer.
Adam	51 mins	LCD screen and stand	Luxury and materiality	 **Chunk of storm fallen wood**	It connects to his professional occupation with material and process. He picked it up in the countryside because he is interested in material .
Charlie	1 hr 8 mins	Ornamental owls (gifts)	Interpreting gifts for couples through materials	 **Watering can**	It opened a new material and functional range of possibilities for his design practice. It was the first design for his employer. It is a marker of a positive point in his career.
Alicia	1 hr 4 mins	Dinner set	Middle of the road bestseller with a nuanced identity	 **Lamp**	She loves it. She likes the form, proportions, details, and its lovely glow. It is a product she is proud of and happy to share with other people.
Richard	1 hr 2 mins	Cloche lamp	Museum collaboration	 **Wooden bowl**	He values it because he made it and likes the form. He loves the imperfect quality of the wood. It holds a happy memory of place and childhood.
Josh	1 hr 45 mins	Nursery set	Adaptable, ritual, still selling	 **Chest of drawers**	It marked an important transition in his career, and he really likes it. He loves products that have a history.
Darcy	1 hr 5 mins	Lamp	Sculptural functionality	 **Eames chair**	It is worn, "battered", and she loves it. It is a product she and her husband aspired to and bought when they moved into their cottage, and had more income. She likes to buy products that have had a life and they have collected other designer classics.
Millie	39 mins	Vases	National heritage organisation collaboration rooted in nature and sustainability	 **Fountain pen**	The pen is precious because it was gifted to her by her best friends, and because it connects her with her thoughts, and allows her to think freely in work and personal life.
Dan	1 hr 23 mins	Clock	Building narratives	 **Lamp**	The lamp captured what he was trying to achieve in his work at the time, encapsulating narrative. It is also very dear to him because marks the height of his design career.

Table 4 Designers' choices of artefact

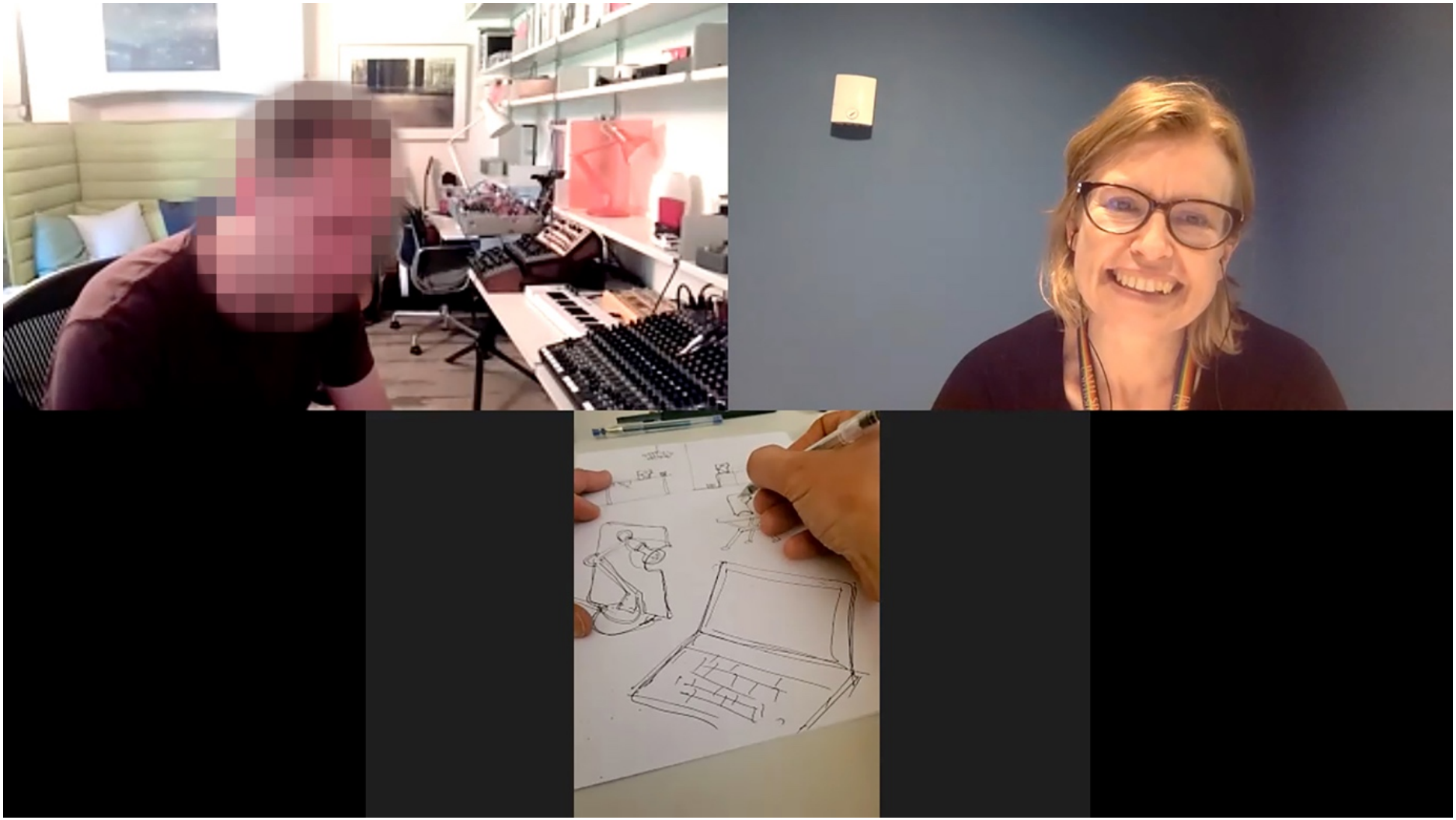


Figure 13 Designer (top left) sketching. Interviewer top right, sketch filmed on separate camera below

Comi et al (2019) examined the mediation of the material artefacts of design practice, such as sketches and technical drawings, in the construction of shared professional vision. They developed a multi-modal table to analyse visual data while observing meetings between architects and their clients. They used the multi-modal table to match data across multiple modes: the transcript, video, photographs and drawings. This helped them to resist "[assigning] analytical priority to verbal data" and "prematurely transform[ing] visual data into verbal data (e.g. coding)" as well as to access the richness of visual objects and the related "interconnected bodily, gestural, and verbal practices". This offered me a means of data analysis that could reliably surface and facilitate visual materials: video, sketching and photographs. The method enabled me to connect participants' body language to the verbal transcript, and to review the effectiveness of the sketching activity.

To organise the data into a multi-modal table, I formatted each interview transcript as a table, then added the following:

- Screen grabs of the video footage to capture the body language of the participant, particularly when the body language changed or seemed emphasise the transcript, as well as points at which the conversation plateaued into a consistent rhythm.
- Screen grabs of video footage to capture the development of the sketch.
- Images of products provided by the participants, at the points they are shared in the dialogue.

The multi-modal table allowed me to cross reference the transcript, the images of the products the designers identified, and their sketching activity (see sample in figure 14 below). I was in touch with these visuals while considering what the designers were reporting. The screengrabs formed a kind of annotation of the transcript – they enabled me to dwell in the interviews and immerse myself in the data set, because they showed me what was happening at particular points in the dialogue. They allowed me to see where body language and verbal expression combined to emphasise a point of particular significance, or (for example) the designer realising why they valued something in a certain way. In this respect it has given me an additional tool for getting richer detail. The excerpt in figure 14 shows the visuals organised into the table adjacent to the transcript of the verbal dialogue, so that they can be analysed together holistically. It is taken from a point in the dialogue where body language and verbal data connect.

I became very familiar with the data by watching the video recordings and visiting the multimodal tables repeatedly. I annotated the multimodal table to code thematically, focusing on definitions of meaning making that evolved through the conversation, and noticing how affect, and affective relationships to artefacts, may be present. Following my adaption of Comi et al's (2019) method, I made written accounts of how participants defined meaning making and how they responded to the interview method. The data analysis process also allowed me to better evaluate the success

of the method, observing how the definitions of meaning making unfolded, and noting how artefact choices and the interview stages influence the discussion.

Outcomes

Incorporating the sketching activity and focus on a possession created a deeper reflective space that in most interviews expanded the definitions of meaning making developed through the discussions of professional practice in phase 1. The phase 2 discussions changed the position the participants reflected from, and our dialogues revealed some of the more personal values within professional processes. I observed a gentle change of pace in the discussion and noticed several participants shifting position to a more relaxed posture, along with more informal language, more laughter, and more relaxed and active reflection. The designers also recollected more, and connected experiences, values and decisions, and interests that seemed to sit behind essential parts of professional process. Narratives of personal meaningfulness emerged as participants talked about products and careers choices that were meaningful to them. As phase 2 concluded, the participants reached a meta-level of reflection more holistically reflecting on designing itself as a profession, and on their routes into it.

Participants responded to the sketching activity in a range of ways. Some participants became very immersed, and actively recalled and reflected without prompting. The three participants most engaged with sketching used it actively for recall as well as detailed visual explanation, allowing us at times to understand each other without full verbal explanations (see table 4). Four designers engaged actively with the process, and intermittently sketched and reflected. Two designers engaged with the sketching in a more limited way but nevertheless there was a slight change of pace and reflection. One designer engaged in a more limited way, but I did not observe any discernible change in the dialogue and level of reflection. Interestingly, this was the one designer who joined me from their workplace rather than from home.

‘Meaning’ was not a familiar discussion term to most designers, which led to some very interesting and reflective conversations. Designers’ choices of products largely carried the dialogue about making meaning in design practice, as we unfolded the process of shaping a single product identity. (Please see table 4 to view the objects designers selected to discuss and sketch.) Our working definitions for creating visual identity and meaning evolved through each interview. Definitions were nuanced, largely unresolved, and in some cases embraced apparent contradictions.

The interviews invited designers to form and share their own insights, outside their company ethos. Interviewing participants outside work appeared to successfully encourage them to reflect from their own perspective and to consider their experiences and professional practices. All but one of the designers joined me from their workstations in their homes, as the interviews took place during the COVID19

pandemic period. Interestingly, this provided some situational specificity (Knudsen and Sage 2015) as participants were talking from the spaces where they were immersed in their thinking and doing as designers, whilst in the private space of home. Professional practices of designing, and personal practices of keeping things, converged in the same space.

Seven designers owned products they have designed. The three who had not kept their own products reflected more on who they are as a designer to work out which possessions they own that relate to their professional role. I hit an unexpected problem in 5 of the interviews when the possessions participants identified were in the room with them. In some cases this made the sketching activity less effective, because participants tended to look at and handle the object rather than sketch. I adjusted the focus of the sketching activity by encouraging participants to focus their sketching on where it had been kept. Some participants responded well to this. In several interviews, physically handling the object on and off throughout the conversation supported reflection.

Limitations

The small size of the sample limits the scope of the study and the potential to extrapolate findings across design activity and industry. However, the data is incredibly rich and has thrown up some very interesting findings and considerations, discussed in the Material Meaning article (Keyte planned). A larger sample size was beyond the scope of the study. I invited designers to report on their individual perspectives, experiences and practices, and my analysis relies on their accounts. This method isn't intended to capture the practices of a wider network of actors – for example, it doesn't have the same scope as a study observing design practice described in Comi (2019).

To support the participant in identifying a product embodying meaning I used Krippendorff's (2005) definition mentioned above. This guided participants' responses, and therefore will have impacted the data collected. An open question about what might constitute meaning making would invite different responses, but in my view the risk would potentially be a looser relationship to the research questions.

At the start of phase 1, I asked designers to identify a product they had designed that embodied an intention to create meaning, which I interpreted loosely as material identity. As a result, the products participants identified were the tangible outcomes of explicit efforts to create identity, but this may not typify their output. Some designers mentioned that other products wouldn't show the same level of intent to create meaning. One retail designer selected the sole product she believed truly embodied an intention to create meaning. Thus, the products selected could be seen as representing a kind of 'pinnacle' of meaning-making within the work of industrial designers focused on home goods. This is a limitation on making broader interpretations of the data across design activity or industry.

Restricted - Other

24:34	Designer	Yes.	
	Interviewer	**Feel free to talk out loud because I understand it might feel a bit abstract.**	
22:41	Designer	Yes. Umm / yes, I think the / the / I'm trying to think of / so / something that kind of relates to it really umm / PAUSE I suppose the interest / my previous role as well a lot of the time umm I almost saw myself as like a consultant to kind of Bodo. [Reflecting on how his role is different to an in-house designer - next couple of pages too] Shifting position, talk slowing pace	

Figure 14 Sample of multi-modal table

Critique and synthesis of the four projects

How the iterative nature of the four projects strengthened the research

I began this enquiry with the Objects in Purgatory participatory exhibition, which I created with a designer's instinct: experimentation, making, sketching and opportunism. Through the PhD, I translated those instincts into methods that are systematic, reflexive, and documentable. This changed the way I think about design process as not only about a process directed towards the creation of new artefacts, but also to knowledge production.

Approaching the study as a series of four iterative projects has enabled me to make a broad examination of the phenomena: Affective relationships to home possessions. Including different types of objects in the scope of the research has allowed comparisons across categories, which has led to the rich overall study findings discussed in Chapter 6. Taking an exploratory approach is integral to an iterative and opportunistic one, and I have been able to respond to analysis and evaluation within the research, to test and examine new ideas, in quite an agile way. This has led to meaningful development of method, and the deepening of my understanding of my subject matter, as a researcher.

There was a time gap between the first three projects and the fourth. Reflecting on the first three gave me an important opportunity to consider the need to bring the research more firmly into a design context, and the fourth project consequently increased the scope of the research through my interviewing the designers. Looking back, developing a clear, structured process of reflection on and evaluation of projects within an iterative approach, would be valuable. This could include the consideration of more informal experiences and insights that can indirectly inform the development of knowledge, such as the many dialogues with different participants I had beyond the telling of the object's story.

How my participatory methods worked best to access affect

Sketching

Sketching has played a critical role in developing participants' active reflection focused on what a possession means to them. For example, active engagement with sketching and making was effective in the Objects in Purgatory participatory workshop, and helped to surface dilemmas, rituals and practices of acquisition usually out of conscious thought. The sketches made space for the material qualities of the objects, such as an inherited hand-made quilt (see figure 6 above), or a piece of charcoal, to be considered as part of the story of the object. In the interviews with designers, the sketching activity created a deeper reflective space and helped build trust and extend participants' explanations. This was identifiable in the pace and nature of their language and body language: Their reflection became more relaxed

and active, connecting experiences, values and decisions. With designer participants who were more confident and skilled at drawing by hand, the sketches sometimes allowed me to understand them without detailed verbal explanations. Interestingly, narratives of personal meaningfulness came through this part of the interview, surfacing connections between the designer, the object, and their professional values (Keyte planned).

In comparison, there is perhaps less depth to the Washstand interview than there otherwise might have been had I integrated a hands-on participant experience. Sketching has proved to be a tool for additional reflection and depth, that can also slow down the 'telling', extending the interview. It has often helped to identify material qualities in relation to affect, and that could have enrichened the interview.

The influence of the objects within the method

Keeping the objects present whether physically, or via a sketch, has been very effective as a prompt to recall and reflection. The category of uncherished object in each project, in combination with the situation in which the data is gathered (e.g. exhibition, workshop, 1:1 interview) has influenced the insights that can be elicited, and needs to be a consideration in evaluating the success of my methods. For example, the Objects in Purgatory exhibition worked extremely well for capturing affect. This was influenced by the taboo nature of uncherished gifts – it made a space for expressing emotions that are not usually socially acceptable. The exhibition format worked less well with computing devices – as noted above this may be because they are more alienable in nature. There may be less stored emotion and sense of burden. Interestingly, the character and nature of the object can also influence its suitability for sketching, and consequently the more reflective thinking this can prompt. The more uniform and ubiquitous language of computing devices, perhaps coupled with their more alienable nature, made them challenging candidates for this method.

In the interviews with designers the objects played an interesting role and highlighted some tensions in participants' work and values. While participants working in retail felt there was little meaning present in the fast-moving products they designed, the examples they chose to discuss were necessarily meaningful in some way so that a tangible definition of meaning could be reached. This then led to discussion about the steps most were taking towards more sustainable and meaningful professional practices.

Describing location through sketching and talking

The focus on inviting participants to describe the location of their possessions through sketching and talking has been effective, because this reflection can uncover the role of everyday keeping practices in the development of meaning. In the case of the Victorian Washstand Set case study for example, paying attention to

changes in location revealed combinations of factors that impact transitions in meaning, including material and spatial language and human creativity.

It is important to note that the conversations and reflection facilitated by my approach prompted participants to consider reframing how they thought about their possession(s). I observed that by making participants relationships to artefacts visible, they were able to consider their attitudes to acquisition, keeping and accumulation.

How the focus on uncherished possessions expands existing theories of product emotional longevity

The focus on uncherished – rather than cherished - possessions is a real strength of the research. Studying the uncherished builds a picture of meaning as mutable and dynamic, waxing and waning. It can show that even when we might assume an object is meaningless, or we simply overlook it, there is still affect to observe. It raises a different set of possibilities and questions. Rather than asking why we might cherish an object, and seeing this as a route to longer product lifespans, we can instead ask why we might keep it. This more nuanced understanding can reveal more about how we are bound up in the material world, and more of the complexity and texture of our affective relationships with things.

My research contributes constructivist, qualitative methods that offer very different, situated knowledge about the factors that contribute to the perceived value and lifespan of a home possession, when compared to established approaches to the emotional longevity of products. What is perhaps more ambiguous about this knowledge is that it does not easily generate a list of recommendations for designers.

It has been interesting observing affect that is not necessarily on the surface and easy to capture. I have been mindful of the need to remain open and to ground my findings in the data. In my writing I have tried to use language carefully to interpret participants' affective relationships, for example when working on the washstand set interview where there was not a great deal of personal meaning evident.

How examining the intentions of designers can contribute to understanding emotional longevity

Interviewing designers about the products they have designed and own has been extremely interesting. It has brought practices of keeping into relation with practices of designing, and revealed layers of complexity in how meaning becomes constituted in an object and its physical qualities. These products were not explicitly uncherished in the way that the other selected objects were. However, most designers worked in the retail industry designing fast moving goods, and their interviews conveyed a strong sense of precariousness to the meaningfulness of the products they designed.

These interviews provided time and structure for a deeper look at how meaning may become constituted in an object. As meaning was an unfamiliar term to the participants, the process of co-identifying how it might be present in their work was exploratory and effective. Sketching actively supported remembering an object's biography, material identity and meaning, as well as detailed visual explanation allowing us at times to understand each other without full verbal explanations. As we drilled down into the objects' stories, it became evident that while visual and material language can be shaped with design intent and structure, personal meaningfulness can be interwoven indirectly into professional decision making. It is a method and topic that deserves further investigation to more deeply understand the complexity of designers entanglement with the material world and connected meanings.

Effectiveness of analysis methods

Part of the iterative nature of the enquiry has involved testing methods of analysis that I can use effectively with rich data, both visual and verbal, in order to surface affect and meeting.

In the Objects in Purgatory workshop I observed a depth of consideration, empathy and connection between participants, and I recorded in my field notes how this was evident in the sketching, making and talk. However in practice it was difficult to capture measurable outcomes as few participants completed the prompt sheets, and my opportunity to understand how the participants interpreted their framed sketches was limited. I reflected that a method of visual capture such as film could be a means of overcoming this issue.

In the case of the Objects in Purgatory participatory exhibition and Hardware hopes, I adapted the two-stage analysis process of Csikszentmihalyi and Rochberg-Halton. This was relevant as it had been designed to identify and categorise the meanings attached to home possessions in a significant study. In my own analysis this was adapted for the smaller scale of my data collection, and the type of objects I was investigating also shaped the coding and themes. Computing devices for example surfaced less reporting of emotion and description of visual or physical qualities, and themes of repair and active technological engagement arose.

The adaption of this method was effective as a reliable and systematic method for analysis, but particularly in the case of the Objects in Purgatory exhibition it didn't offer capacity for the rich visual data of the sketches and photographs to be directly considered. The way I analysed the data collected from the interviews with industrial designers brought together some of the successful facets of my prior method, and found solutions to the limitation I have noted. The interviews, incorporating hands-on methods for deep reflection, surfaced rich data that I was able to capture through both video and audio recording. I adapted Comi et al's use of a multimodal table to assign equal priority to visual and verbal data by aligning video stills and images shared by the designer with the transcript. By using this inventive method, I was able

connect participants' body language to the verbal transcript, and to review the effectiveness of the sketching activity. It proved a reliable means of surfacing affect in connection with the material world.

Aspects of meaning-making or emotional lifespan that remain underexamined
My approach has enabled breadth and scope, and some of my methods – particularly the participatory exhibitions – have allowed me to accumulate responses. It is important to note that each of the stories of home possessions I have gathered is a snapshot of affect in the here and now, or a reflection on the relationship with it over time made at a single point (e.g. in the case of the Victorian washstand set interview and interviews with designers). Perhaps what is missing or could be built on is a more longitudinal approach. There is the potential to capture affective relationships to uncherished possessions over time, and perhaps more robustly evaluate how participation can help to transition individuals' relationships to acquiring and accumulating home possessions.

I think there is an opportunity to learn from participatory co-design research with a more longitudinal focus rather than relying on a single participant encounter. In a special issue of the "Co-Design" journal, Saad-Sulonen et al (2018) made an analysis of participatory design studies that identified various implicit approaches to temporality, and recommended using structured approaches to participation over time. They offered 5 temporal lenses: the phasic, the emergent, the retrospective, the prospective, and the long term. There is the possibility of building on my study by creating a carefully sequenced series of participant interactions that build on one another and take into account previous engagement, potentially using a combination of the methods I have experimented with. There is the potential for this to offer deep qualitative insights into our dependence on physical home possessions, into raising self-awareness, and how individuals can transition their practices.

Another opportunity arising from my methods is the collection and analysis of more data on demographic and participant background, to form more overall study conclusions in relation to this. This could have allowed for deeper interrogation across the study, and perhaps my leanings towards the visual and material meant I was a little blind to this. It is also important to note that my work has focused on UK, Western contexts, with specific audiences. Carrying out investigations in other cultural, socioeconomic or generational contexts could reveal very different practices of keeping, discarding, or valuing possessions.

Chapter Summary

In this chapter I have explained and evaluated my methods, carried out within the four iterative data collection projects. I have sought to describe how my exploratory design thinking approach has led to a series of activities that together scoped and

examined uncherished home possessions. They led to findings that developed new understandings of emotional longevity, discussed in the papers and the next chapter.

My commitment to combining creative, hands-on experiences for participants with semi-structured interview has been central to my research activities. I have discussed how I incorporated sketching and making into the participant activities in 3 of the projects, and how this facilitated very reflective and at times immersive responses, and led to the collection of rich data when methods of capture worked well. By using sketching and making, and by recording visual data from online interviews I have been able to reveal the presence of meaning and affect in our relationships with objects that are not usually consciously thought about. Meaning and affect are fluid and ephemeral but bound up with the material world, and my research has shown that engaging participants in hands-on activities to reflect on objects can help to generate new understandings of how we build meaning through and with the material world. This type of enquiry is needed to form a deeper understanding of the layers of meaning associated with material objects.

There are a number of other identifiable facets to the method projects discussed above that made them effective and enabled me to answer my research questions. By keeping the objects themselves present in the research as a locus for reflective activity and discussion, and by asking participants to share where they are kept, I have been able to learn about how the participant feels about the object, and their keeping practices. I have also been able to give consideration to the material and visual qualities of the objects and their environments. I have discussed how the data I was able to gather varied depending on the activity and the type of object. Some categories of uncherished object are more likely to prompt affective responses than others – for example an unwanted gift can be connected to uncomfortable feelings that can go unexpressed, whereas a laptop computer may have less obvious emotional associations.

By inviting participants to talk through or sketch the biography of an object - in the Victorian washstand set interview and interviews with designers - I have been able to frame the emotional lifespan of an object by following its transitions in meaning and keeping location. In the case of interviewing designers about objects they have designed an own, I have been able to consider how meaning develops through the intermingled spheres of production and consumption, and surface some of the complexity of designers' entanglement with the material world.

Importantly, my methods have provided insight into the development and movement of meaning within the private spaces of the home. Attfield (2000) described the home as the "most intimate unit of the built environment". It is a space of cultural activity, and a repository for social relations and the self (Miller 2009). The material things within it don't reveal themselves as signifiers of the self or relationships – they have a "humility" (Miller 2008) that makes them harder for researchers to access. It is vital

to develop inventive methods that can uncover some of the complexity of the meanings we attach to objects in this culturally important space.

Chapter 6
Discussion of findings and conclusions

This chapter explains and discusses how my research has answered my overarching research question:

> What can the stories of keeping uncherished, everyday home possessions reveal about how their meanings develop – and how could this inform approaches to product emotional lifespan in design research?

My research activities have investigated the meanings associated with everyday home possessions, identifying influences on these meanings, and how they develop and change to create perceived value in an object.

This chapter is structured as four sections. The first two present a synthesis of the findings from across the data collection projects, drawing on discussions of findings in the published papers. I have approached this chapter by carrying out a thematic review considering the project findings in relation to each other. I have paid attention to the points at which the project findings intersect, and to those that bring pertinent discoveries to the to the overall study aims. I have also paid attention to whether the material and visual identity of a home possession can influence the meanings it comes to hold, and whether it is valued. In the discussions below, I have drawn on excerpts from participants' stories of home possessions to illustrate points. Table 5 below gives an overview of the findings from each data collection project, aligning the findings against the 5 research sub-aims.

The third section brings the study to a conclusion by discussing how the findings inform approaches to emotional lifespan in design research. I also reflect on how my theoretical and methodological positioning have shaped these contributions to knowledge.

The fourth section underlines my contributions to method in design research. I explain how the creative, embodied methods combined with interview have surfaced the affective dimensions of how we relate to our home possessions, and how this has established an approach to revealing the factors shaping the emotional lifespan of an object.

Project title and aim	Project specific research questions	Summary of Findings
Objects in Purgatory Why and how do we keep uncherished gifts?	• How gift exchange builds value in an object • How memories and emotions become connected to an uncherished material possession • Whether drawing, making and exchange can support deeper reflection on affective relationships to possessions	• Spaces in the home enable the recipient to strategically keep an uncherished gift while preventing it from intruding on a desired sense of self. • Objects were kept and even valued despite the uncomfortable feelings and dislike. • Positive associations, particularly in relation to the giver, are powerful enough for a troublesome gift to be kept. • The findings suggested a separation of visual identity and meaning, presenting a challenge to design. • The meanings associated with a gifts kept in the long term can change during their lifetime. • Methods combining interview and embodied activities can encourage reflection and surface stories, affect, rituals and practices. **(METHOD)** • The exchange of stories through sketching can be understood as an intimate and creative interviewing process. **(METHOD)** • Collecting data on the location of uncherished gifts showed the range and type of spaces where they are kept. **(METHOD)**
Antique washstand set case study How do the meanings of our possessions transition over time?	• The factors influencing the development and transition of meanings in a possession over time • • How perceived value and meaning can shape the emotional lifespan of a possession	• Identified transitions in meaning as a means of understanding the emotional lifespan of an object as a journey. • Identified situational factors beyond the emotions and interactions directly associated with the object. • Demonstrated how physical changes to home spaces, the material and visual language of the objects and spaces, and human practices of care and creativity interwove to gently change the way the set was kept. • Illustrated how different meanings intersect in one artefact, and how memory is deeply embedded in the material environment and evoked by our experiences of it.
Hardware Hopes Can home computing devices hold meaning, and what makes us keep them when they are out of date?	• Whether positive associated meanings can build in home computing devices and what factors influence this • Whether the material and visual language of a home computing device can influence how the person feels about it • Whether an object that quickly becomes functionally obsolete can have an extended emotional lifetime	• The complex functional nature of devices can mean our relationships with them are precarious when they go wrong, creating barriers to the build of positive meanings. • When a device malfunctions it can appear to have an agency of its own that can result in a sense of disempowerment • Developing the knowledge and skills to overcome obstacles can lead to more empowered relationships and learning. • Computing devices aren't usually thought about as material artefacts we can have an emotional connection to. • However, memories can build in hardware artefacts, sometimes in association with the data they contain. They can also be valued for how they might enable the user to work or communicate in the future, reflected in how the devices look and the functions they have. • Personalisation of the appearance can make computing devices less alienable. • Stakeholders in the design of home computing artefacts need to provide more opportunities for users to physically engage with their devices, so that they are enabled to take an active role in extending the product's lifetime.
Material Meaning Do designers feel they can shape the meaning of a product?	• Whether designers feel they can influence the meaning of a product to a user • What factors might influence the build, ebb and flow of meaning associated with an object during the design process • How meanings develop in objects, when designers are consumers of their own products • Whether material and visual language can be holders or triggers of meaning, and designers' intentions for shaping these	• Designers are networked into production structures, influenced by other stakeholders and driving factors which frame the designer's activities. • Cultures of production and consumption are characterised by speed, and in the view of the designer participants, this makes the shaping of more meaningful product identities precarious. • Revealed the presence of the individual designer within the design process. • The reflective sketching of products the designers had created and owned surfaced insights on how they draw on their personal experiences, memories of and relationships with objects to shape the products of the future. **(METHOD)** • Opened out some of the complexity of the movement of meaning by highlighting designers as cultural intermediaries, absorbing and creating cultural outputs. **(METHOD)**

Table 5 Summary of project findings as reported in papers (please see larger version in appendix 2e)

Contributions through published papers and articles

The published papers contain detailed discussions of project findings and conclusions and can be found in appendix 1. They should be read alongside this thesis for a full understanding of the research and the development of the enquiry.

An overview of the project findings is included in table 5, documenting the contributions each of these smaller studies have made to the enquiry.

My papers have been published in different areas of design research connected to the area of the study. I have made methodological contributions firstly in the Studies in Material Thinking journal (Keyte 2015b) based on my paper delivered at the first Research Through Design conference (Keyte 2013a), framing the creative use of artefacts, display, curation, and participant sketching and exchange to gather the stories of everyday home possessions. Both platforms took a pioneering approach to making creative methods in design research a subject of study. Secondly, I published in the Design Journal (Contributing author, von Busch (ed.) 2014) based on my workshop at the European Academy of Design conference (Keyte 2013b), framing the use and challenges of sketching, making and exchange integrated into an interview format to access deeper narratives of home possessions. Similarly, the conference strand I participated in took an innovative approach by recognising the important role of creative acts of making within design research.

I contributed findings to design research on the ways in which meanings become attributed to objects and influence their perceived value. Firstly, in a special issue of the Interiors Journal (Keyte 2013c) I published a detailed account of how the interior of the home and delineation of spaces and furniture, and our everyday practices of storage and display, shape the meaning of a home possession. Secondly, I published a paper in the 9th International Committee Design History and Design Studies conference proceedings (Keyte 2014) contributing a new perspective on the emotional lifespan of a possession, plotting the transitions in meaning of an object over its lifespan. It also further identified the way we live with uncherished objects and attribute meaning to them. Thirdly, I published a paper in the 1st Product Lifetimes and The Environment conference (2015a) making a contribution to lifetime thinking relating to computing hardware and why we keep devices when they are no longer useful. I shortly hope to publish an article in the Design and Culture journal (Keyte planned) sharing my findings on how industrial design process may help shape the meaning of an object, and on designers as consumers of their own products.

Chapter structure

I firstly discuss the key areas of perceived value my research has shown to be important, demonstrating how deeply embedded objects can be to our experiences, sense of self, and how we see our place in the world. The areas of perceived value are covered in three sections. These are: Gift exchange; memories evoked by the object; and associations with history. These subsections include discussion of how an object's meaning can be precarious.

I then examine the fundamental importance of everyday practices to the building of meaning, shown clearly in the findings. The meaning and value associated with an

object is not static, and practices are shown to be essential to forming and maintaining meaning and value. They can also be agents of a change in meaning, or tolerance of less palatable associations. Types of practice are identified, encompassing both everyday practices of keeping objects in the home, and the professional practices of designers situated within organisational settings.

The last sections bring the study to a conclusion, by considering the findings in relation to the emotional lifespan of home possessions as defined in design research, proposing how my research helps create new understandings**.** It identifies key overlapping areas of influence on the emotional lifespan of an object and explores the capacity for designers to create objects that will be valued by their owners and kept in the long term. It suggests that in fact an object doesn't need to be highly cherished to have a longer emotional lifespan.

Finally, I highlight my methodological contributions to design research by developing hands-on, creative methods to gather rich data on how people engage with their home possessions. I reiterate how integrating sketching, making, and semi-structured interviews fosters deeper reflection, enabling participants to uncover meanings and affective connections that are often hidden. This approach advances existing methods by placing emphasis on the material qualities of objects, revealing their entanglement with memory, identity, and emotional attachment. The findings offer methods for design researchers to access and explore the nuanced relationships people have with their everyday artefacts.

How objects become attributed with meaning through gift giving

This discussion chapter offers the opportunity to pick up on themes arising across the findings from the projects and examine these together, in depth. My foci for discussion are the values and practices that my findings have shown to be important to the build and flow of meaning in object, how these influence the emotional lifespans of objects, and how this can inform design research. The first theme I will explore is gift exchange, which has been central to the study from the start.

Gift exchange is deeply engrained and widespread within our culture, and through it we build and express relationships with other people. A gifted object becomes associated with the giver, and our relationship with them. While this has been well established by scholars (Mauss 1950, Csikszentmihalyi and Rochberg-Halton 1981, Belk 1988**,** Carrier 1991, 1993), my study shows lesser-studied scenarios arising from gift exchange where meanings and related emotions are identifiable. These include objects gifted through rituals such as the giving of birthday and Christmas presents which are problematic to the recipient, for example if they do not like it. They also include the more understated giving away of an object to someone who might value it, demonstrated in the Victorian washstand set case study (Keyte 2014). In this case, the set was given not as a ritual gift, but because it was no longer of use to the giver, who thought the recipient might take it. Later on, it was passed on to the

community museum. It illustrates a form of giving that may not quite fit the definitions of gift exchange explained by the above writers, but that is nevertheless worthy of consideration.

My research into uncherished gifts identified failures of intended meaning when a gift doesn't contribute positively to the self-perception of the recipient (2013a, 2013b, 2013c, 2015b). I showed how conflicting and uncomfortable feelings associated with an uncherished gift can make it a problematic object. My findings revealed that despite this, associations with memories and other people or a sense of obligation are powerful enough to compel someone to keep an object they don't like. (This is discussed in detail in Keyte 2013c). An example is the ceramic owl ornament wearing a mortar board hat submitted to the Objects in Purgatory exhibition (pictured in the sketch in figure 15 and discussed in Keyte 2013c), kept because it conjured up an image of the recipient's proud mum on graduation day despite the recipient feeling it was "tacky". The recipient expressed appreciation for the gift and the memories it held, but struggled with the failure of it to meet her taste. A scenario like this calls into question the significance of the visual identity to the meaningfulness of the object. I explored the relevance of the gift's intrinsic visual and material properties from different angles in Keyte (2013b) and Keyte (planned), discussed in the paragraphs below.

In Keyte (2013c) I also identified how a meaningful connection between recipient and giver can develop through the tangible investment of the giver in the gift. Pertinent examples that arose in the Objects in Purgatory data included the investment of time and energy from a giver who took a set of glasses on a transatlantic flight to bring them to the recipient, and a small ceramic pot handmade by the giver having been inspired by the recipient to join a craft class (Keyte 2013a). Perhaps in the latter example, the homemade gift has an inherent visual and material identity that a commodity does not, as discussed by Carrier (1993).

In Keyte (2013b) I discussed gifting practices identified by key scholars that help us to deal with the anonymity of commodities. Rituals like Santa and gift-wrapping separate gifts from their roots in commerce and make them special (Belk 1993, Searle-Chatterjee 1993). While this doesn't suggest there are specific qualities inherent to meaningful objects, it does suggest the appearance and perception of the object are important. Gifts often have "a luxurious or frivolous quality to distinguish them from everyday utilitarian objects" (Keyte 2013c).

It is interesting to see this characterisation of gifts reflected in their designing, described in Keyte (planned). Designer Charlie talked through his team's material choices and careful application of visual language to distinguish gifts from everyday utilitarian objects. They addressed this challenge by creating palettes of materials that hold a sense of luxury. For example, Charlie described marble as having a weight that people are drawn to, that makes it feel valuable and harder to throw

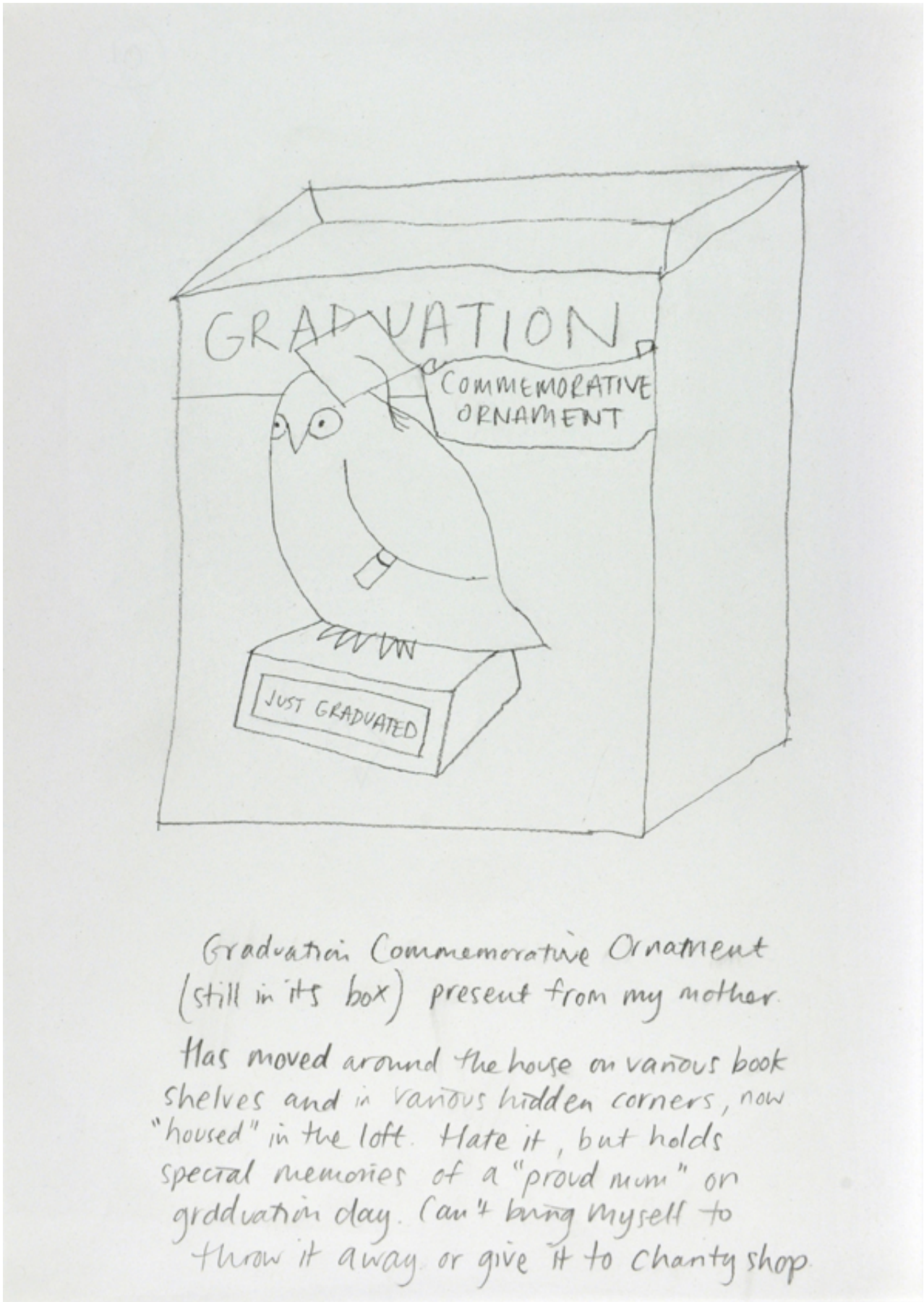


Figure 15 Objects in Purgatory participant's sketch of their ceramic owl ornament

away. He designed through a kind of visual metaphor of paired materials, creating nestling objects intended to be bought and gifted to young couples. Designing objects intended as valued gifts also carries risk however. It is not easy for Charlie's design team to identify the inherent qualities of a successful gift. Sales data identifies best-sellers but these seem arbitrary to the team, and to have no obvious purpose or meaning, although "anything with a face" seems to sell well (Keyte planned). They work hard to understand and anticipate the taste of both their intended customer and the eventual recipient, without really finding out how the visual identity of the product has been interpreted by either.

Overall the findings and literature show gift exchange to be a social practice that is fundamental to the build of value in many home possessions, through which objects acquire (sometimes mixed) meanings, and come to mediate relationships with other people. The angles I have taken offer alternative insights to those that can be gleaned from studying cherished objects. My findings demonstrate that the build and movement of meaning can in fact be precarious. Objects are created, acquired or given with good intentions for what they will mean to an audience, user, or recipient, but the meaning may not be interpreted as intended. The meaning one person sees in an object may be quite different to another. This may be symptomatic of the complexity of exchange in an industrial society, where the valuing of commodities is not consistent (Kopytoff 1986). Practices of adaption and keeping can help overcome these difficulties and are covered in the section on practices below.

Valuing possessions for their associations with the past

Associated memories

My collected data includes rich examples that bring to light the importance of memory to the relative meaningfulness of an object. These corroborate the work of Belk (1990) and McCracken (1988) who establish the essential role of objects in helping us maintain a sense of personal past, which in turn contributes positively to self-development and a sense of security. Below I describe how objects are often valued and kept because they evoke memories of other people, childhood, or remind us of important points of change in our pasts. Importantly, I also describe how an individual's response to an object is informed by their past experiences of the material world.

According to Miller (2008) we express our fit in the world and our relationships to other people through the "constellation" of objects we keep at home. It is perhaps not surprising that my findings revealed objects that are valued for the memories of other people they evoke**.** An example of an object that has become highly meaningful for the memories of another person it evokes is the carriage clock which became symbolic of the giver following his death, and its location in the home referred to by the participant as "a bit of a shrine" (see the photograph in figure 16 and discussed in Keyte 2013c). The death of the giver deepened the meaning and strengthened the

Figure 16 Gifted carriage clock on a shelf in the study

perceived value of the clock. Objects valued because they evoke memories of childhood are also deeply embedded in our lives. In Keyte (2022 and planned) I described how designer Rosie had kept and was using several bird feeders she had designed, in her own garden. As the story of these objects unfolded through the interview, she shared memories of her childhood garden. Her reflections “weaved between describing the garden, design intentions, linked memories of a childhood garden, and her role as a parent, building memories around [the bird feeder] with her young son.” (Keyte 2022).

The carriage clock and bird feeder provide us with examples of objects that are meaningful because they evoke memories, and hint at the deep embeddedness of memory in the material world. There are further participant submissions that illustrate how memories of past experiences of objects are integral to interactions with the material world in the present. As discussed in Keyte (2014), in “A la Recherche du Temps Perdu” (1992, written in 1909) Proust described in poetic detail how objects in the present can involuntarily evoke objects experienced in the past, and how remembering these objects can in turn trigger further additional associations (explored by Frayling 1999 and Belk 1990). In Proust’s story, the rich textural memories evoked by the taste of the madeleine given by the character’s aunt unlock further tangible memories of place and space (Belk 1990). This deep entanglement of memory with the material world was reflected in my interview with Mary, when she related the story of her Victorian washstand set and shared the memories associated with it (see Keyte 2014). While we were talking, she recollected using a washstand set on an overnight stay in Whitby as a teenager in the 1950s, as well as a washstand she inherited from her mother. By writing the playful description of the washstand set for the museum display (“This would have been your ensuite…”), she playfully and indirectly linked the museum visitors to these memories (see Keyte 2014 for detail). The label and her recollections linked the washstand set in the present, with personal experiences of washstand sets in the past.

A similar conversation unfolded when I interviewed homewares designer Richard. He asked to talk to me about an applewood bowl he had made in the early stages of starting his business designing and hand-making wooden interior products (depicted in figure 17 and discussed in Keyte (planned)). It was important to him because it was the starting point for a career transition into craft practice, and was correspondingly kept in a visible place on a curated set of shelves at home. As Richard and I talked it emerged that it was also important because the applewood he made it from came from his late grandmother’s garden. He reminisced about his childhood, when he lived in the same road as his grandmother, and where he climbed the apple tree. He then started to recall another shallow bowl with a square base, that he remembered noticing in his grandmother’s house shortly after her death, and which provided inspiration for the wooden bowl forms he is making now.

As in the conversation with Mary, Richard revealed how his past experience and memories of the material world shape his interactions with it in the present, including (in his case) the design and production of new objects. His encounter with the bowl in his grandmother's house, and the language of its form, helped shape the objects he later created. Another indicator of how integral memories are to the material world is the way objects such as Richard's grandmother's apple tree can become central to the self when they are part of formative experiences. Csikszentmihalyi and Rochberg-Halton (1981) discussed how from the start of life healthy self-development is shaped by the environment and culture we are born into. We learn the language and cues that make an object recognisable, and how to respond to them, and they in turn become absorbed into our lives.

Richard kept the applewood bowl on display, enabling intentional encounters with it, reminding him of what is meaningful to him. One reason we may keep a possession to support intentional recollection, is to help us shape our future selves by extending backwards in time. Belk (1990) used the term "time-marked" to describe objects valued because they remind us of important points of change in our lives. Time-marked objects are among the products other designer participants had designed and chose to keep (Keyte planned). While Dan kept his lights in part to remember a time of creative achievement and critical acclaim, Millie kept her nature inspired vases to put her back in touch with a meaningful design project and as a reminder of how she wants to re-shape her design career. Charlie too, kept his watering can as a reminder of the self-discovery that can come from taking risks in the design process. These examples are interesting for showing us how a possession can support intentional recollection to help us shape our future selves, by extending backwards and forwards in time through the material environment (Belk 1990). It seems especially pertinent that these homewares designers are keeping these objects to remind them of how they want to shape their creative direction and future material artefacts. It points at the entanglement of designers in the material environment.

The methods I developed, incorporating hands-on experiences for participants to reflect on the material world, enabled memories to be released from the private spaces of home. In the interviews and research activities memories were not immediately reported, but emerged through the discussion in relation to the objects the interviews and activities were focused on. It was interesting to observe, for example, how the memories came to Richard while handling the bowl during the interview. The examples above illustrate the complex embeddedness of material objects in our lives, and how memory is deeply integral to our actions and the shaping of our environments. It is interesting that the data unveils more informal, less visible links between designers' creative processes, and their experiences of the material world, that are not often considered in accounts of design process.

Figure 17 Video still of designer Richard holding his applewood bowl

Associations with history

Material possessions can also be valued for their associations with the past when they hold collective historical meaning. Objects such as the Victorian washstand set discussed above, or celebrated past designs such as an old Polaroid camera (arising in the home computing hardware data (Keyte 2015a)) can appear to link us to how it might have been to live in the past, often through a nostalgic lens (Belk 1990).

In the case of the washstand set, its provenance was not clear, and its antique value was not considered particularly high by its owner Mary, but its form and material communicated historical functions (washing) and the colour and surface pattern suggested its origin in the Victorian Era (see figure 7 in chapter 4). The material also played a role in the language of the set, as objects perceived to be fragile can develop value through the fact of their survival over time (Csikszentmihalyi and Rochberg-Halton 1981, Almquist and Lupton 2010). When encountering the set in her shed, Mary was reminded that it had remained intact and unbroken for a long time, and this informed the care she took to rehome it.

The efforts of homewares designers to bring historical associations to their products arose through the data from the interviews with designers, making it possible to infer generally understood associations between the language of history or heritage, and perceived value. Richard and Millie were each briefed to interpret the identity of specific national heritage institutions into retail product ranges. These were the result of collaborations between retail sector companies and the heritage organisations themselves, further implying the cultural currency of historical associations. Richard and Millie interpreted visual inspiration and incorporated material references from the heritage sites into their design processes toward manufacturable outcomes. For example, Richard picked up on the wood tones, cabinetry and display functions of the museum to design his cloche jar lights (described in Keyte planned). These examples illustrate an interesting transferal of shared cultural meanings, from national heritage artefacts and spaces into new objects destined for people's homes, though the skilled use of material language.

Another way in which a new product can take on associations of the past, is through an appearance of age and history. Designer Josh talked through his skilled shaping of form, material and detailing to create an aged identity in a mass-produced retail product, a chest of drawers (see figure 18). His design decisions included introducing a "4mm radius on all outside edges […] so it had a really nice soft sort of weathered feel" and using roughly sawn, raised grain New Zealand pine with laminations at different heights to suggest a narrative of use and craftsmanship It was a product he felt proud of designing, and that he bought for himself. I speculate that the language of craftsmanship and history may create a sense of perceived authenticity, making the product a less alienable commodity.

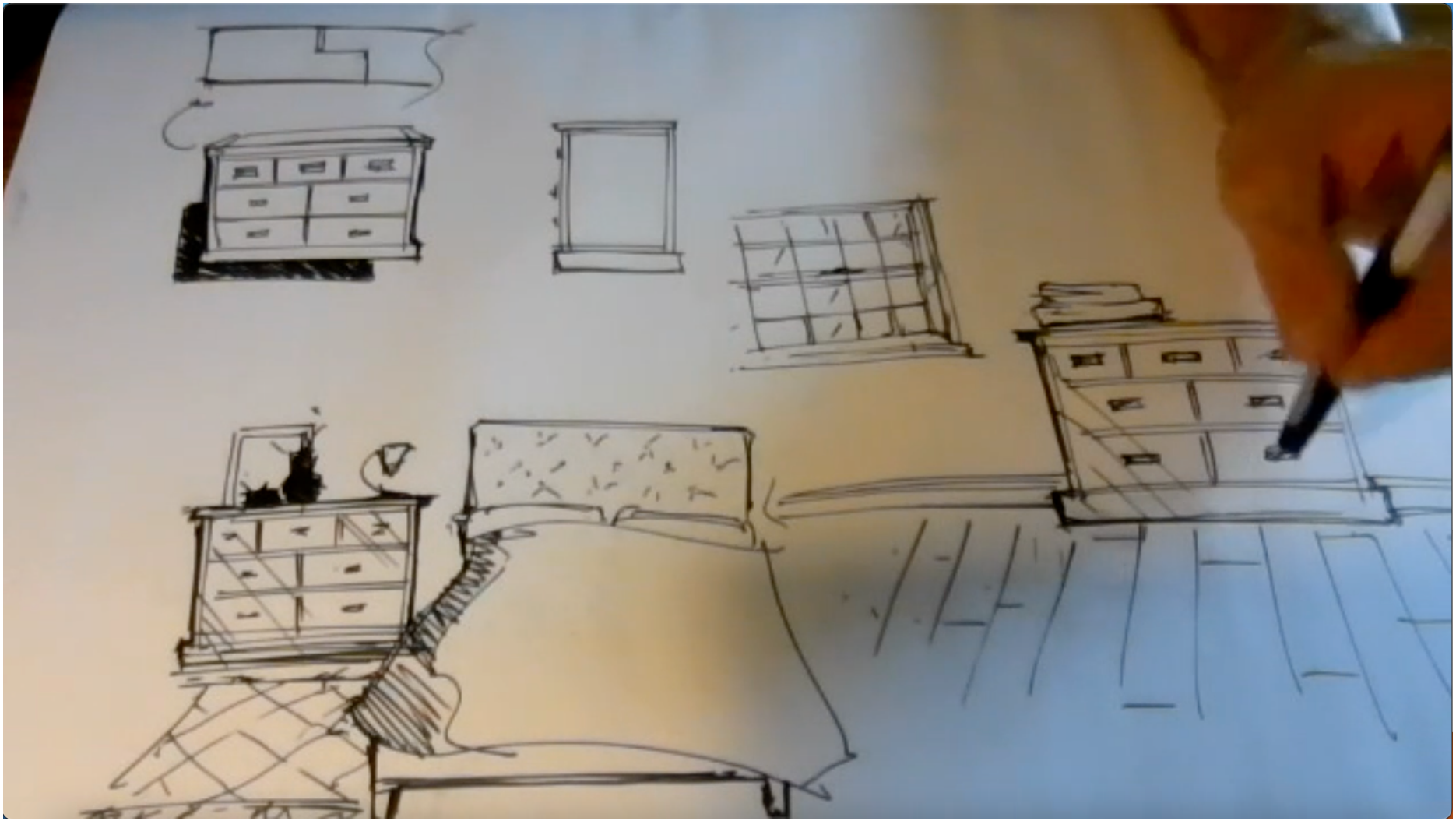


Figure 18 Designer Josh's sketch of the chest of drawers he designed

It is interesting that the chest of drawers bore the suggestion of time passed, of something that may even be older than ourselves, but yet was a newly created product outputted by the fast-moving retail industry, produced under pressure of time for consumers. In 1990 Belk described furniture as changing slowly and imperceptibly, slower than ourselves as humans, providing the security of the familiar. Every now and again we are reminded that an item is aging, when it wears and needs repair or a new coat of paint. Perhaps the chest of drawers holds something of the aura of an antique, something “warm and exotic” (Stewart 1984 discussed in Belk 1990) that can help mitigate the sterility of the new and modern. We seem to value the past, but the proliferation of consumer goods suggests that we want to be free from it at the same time, and able to transition our identities through the objects we own when we need to (Cohen 2006).

Another point arising may appear to contradict the indication that there is value in the appearance of age. The carriage clock in figure 19 and discussed in Keyte (2013c) was stored for a long period where it couldn’t be encountered, in part because its owners objected to its authenticity. It looked like an antique, but was in fact recently produced. Their discomfort about this may be explained by Belk (1990), who stated that the authenticity of objects connected to the past, and their presence during that period, is critical. From a design perspective, it presents an interesting question: Was the clock’s appearance unsuccessfully managed during the design processs?

The role of practices in forming and maintaining perceived value

The three previous sections have examined key categories of the perceived value of home possessions, arising in the data. This section focuses on how what we do with objects can develop meanings. The things that we do regularly in our homes – our everyday practices - are shown by my research to have a significant role in the building or sustaining of meaning over time, and can be agents of change or tolerance. Reckwitz (2002) described everyday practices as routinised bodily activities and interactions with material artefacts which form the fabric of everyday life**.** These everyday practices are usually unselfconscious and seem ‘natural’, because their origins are hidden from us by familiarity and social convention (Bourdieu 1971). The way that practices arise in the data is through accounts of the activities of keeping a material possession, or the processes of designing it. Peoples’ everyday practices of storage and display or adaption, for example, or designers’ professional practices of structuring trend information or evaluating the feel of a product, are fundamental to how meaning and perceived value are constituted in an object.

Figure 19 Carriage clock the recipient felt was inauthentic, displayed on the studio mantlepiece

Strategic practices of display and storage

In Keyte (2013c) I established the importance of spaces in the home to the development of meaning in home possessions and allowing people to tolerate objects whose meanings are uncomfortable. These findings were brought to light by the Objects in Purgatory exhibition, in which I asked each participant to draw or report the location of the gift in the home. This focus on location led to collecting data revealing how rooms and spaces within and around items of furniture set up expectations for certain practices.

Spaces of the home enable the strategic display or storage of objects so that a person can avoid uncomfortable or conflicting feelings and experiences associated with it (Keyte 2013c). For example, by concealing a troublesome possession a person can exercise some control it, thereby preventing an interaction that may destabilise the self-narrative (Gregson et al 2005). This is illustrated by the ceramic owl mentioned above (figure 15), about which its owner said “It’s still in its box, it’s currently living in the loft … It’s moved around the house, on various bookshelves, and in various hidden corners, anywhere where it can’t be seen. … I can’t put it on display, but it’s moved house with us various times.” In Keyte (2013c) I explained how peripheral rooms such as bedrooms, workshops, studies and attics, rather than social spaces such as living rooms, offer opportunities for concealment. For example, the carriage clock also mentioned above (figure 16) is displayed on the shelf in the office, but it is in a peripheral room where its visibility is limited.

Furniture also offers opportunities and embeds cues prompting these practices. Certain items have remained largely unchanged for centuries in terms of form and use, and come with long understood expectations. Furniture also delineates the space within a room, creating peripheral zones and undesignated spaces in and around it that afford keeping objects which are troublesome, or whose value is not yet clear. An example is the computer game in figure 20, kept in the gap between the bedside cabinet and the wall. My findings build a more nuanced view of established explanations of the display of selected objects as an outward projection of self (Bronner 1989), and illustrate the home as a site for the spatial organisation of matter and meaning (Miller 2008).

Keyte (2014) brings another perspective to understanding how spaces and everyday practices can contribute to the perceived value in a home possession: Objects can play a role in making the home environment a pleasant place to dwell**.** The washstand set is interesting because it wasn’t especially meaningful to Mary, and nor did it hold uncomfortable meanings, but displayed with soaps, dried flowers and potpourri, it had decorative value. As discussed in detail by Pink (2004), everyday unselfconscious practices of home decoration and housework create a sensory environment that can support positive experiences and self-expression. These practices are integral to everyday life and not easily made visible, but they can show

how an object can be valued and kept for how it looks, rather than deeper more personal meanings.

There are identifiable ways in which the language of objects and the spaces of the home set up expectations for decorative practices, illustrated by the story of the washstand set. The visual language of the set and its material (described above in the section on associations with history) influenced Mary's keeping practices**.** It has a decorative surface pattern that suggests display and visibility, rather than utility. The physical forms of the jug, wash bowl, soap dish and chamber pot indicate their historical purpose for washing and this influenced Mary's decision to keep the set in her bathroom, filled with fragrant objects. Her creative actions relocating the set were also guided by the spaces of the home and the way that they are delineated for certain activities: The bathroom, the shed, and the museum toilet. While the set was not especially meaningful to her, it performed a role in creating a pleasant and meaningful home environment.

Repurposing, adapting and maintaining objects to reflect self-identity is another means of enabling us to keep and live with commodities that otherwise fail to express our self-identity, is by physically adapting them. This could for example involve an act of hacking, remaking or modification. These are practices of self-investment that change the perceived value of a possession to the owner, illustrated by the following examples.

In Keyte (2013b) I discussed a submission to the Objects in Purgatory exhibition. The sketch submitted illustrates how a participant modified a shawl that she doesn't like, by cutting the decorative tassels off it and attaching these to her shelf, transforming it into an interior decoration (see figure 21). In Keyte (2015a) two similarly motivated acts of customisation are noted. One participant in Hardware Hopes adapted their "stupid phone" (see figure 22) with a strip of coloured fabric that allowed her to wear it around her neck, while another covered their PC laptop in stickers, explicitly changing its visual identity (see figure 23). In both cases the participants attempted to resist expectations of device use, and the unwanted infringement of the device on their self-image**.** This would seem to help overcome the alienable nature of devices, and the participants spoke about resisting the image a device can carry. Computing devices are highly charged in their cultural meanings – there are expectations that come with them as mediators of technology (Sudjic 2009).

Figure 20 Participant sketch of a computer game kept next to the bedside cabinet

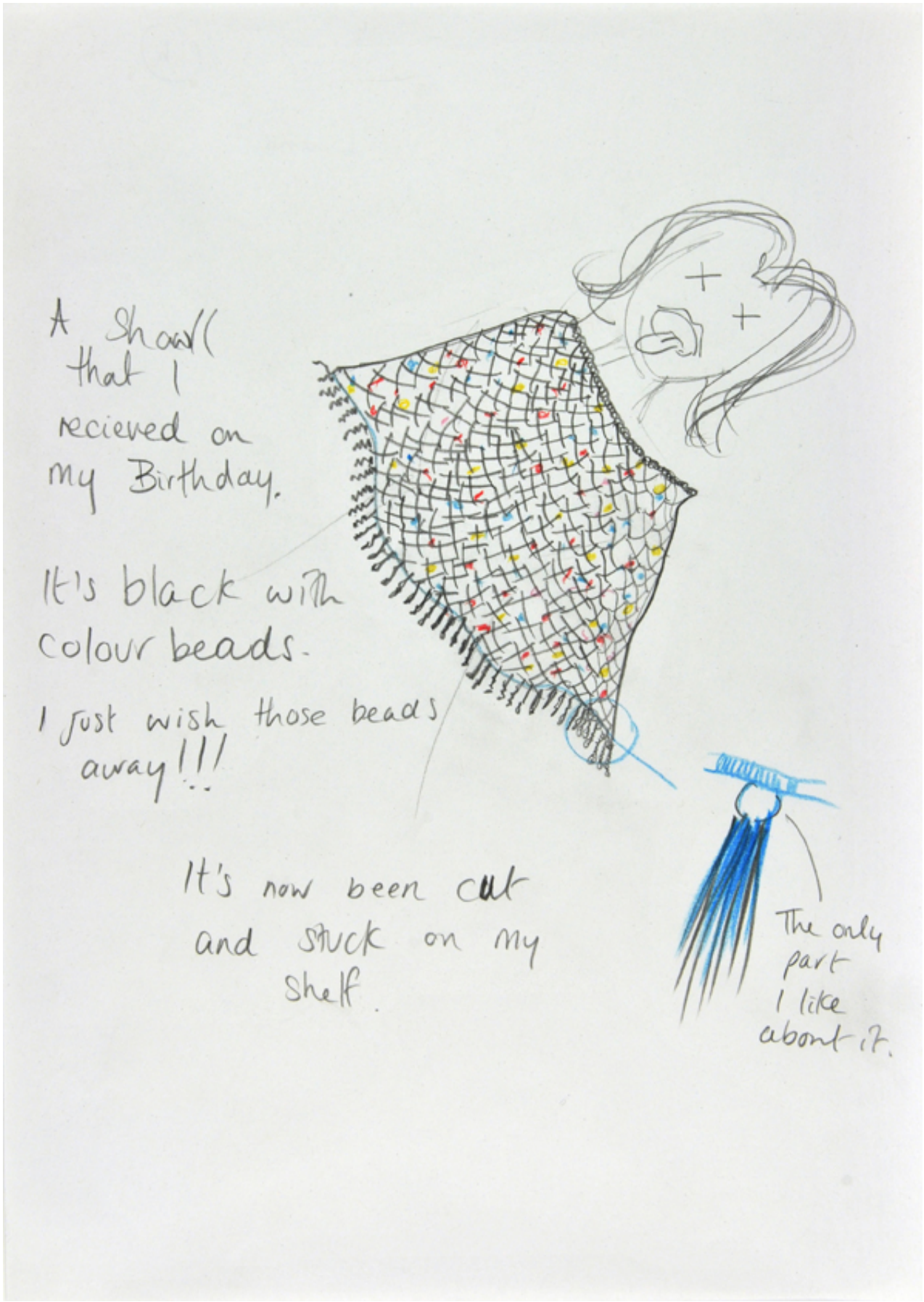


Figure 21 Sketch of shawl recipient had adapted

Figure 22 Hardware Hopes participant's "stupid phone" on a strip of coloured fabric

Figure 23 Participant's laptop coninually personalised with stickers

Another way in which everyday practices can build meaning in an object is through regular hands-on maintenance. An interesting example arises in the Hardware Hopes data (Keyte 2015a) in which the participant's identity as both a father and son is bound up in continually upgrading his own PC desktop. In doing so he keeps the components he takes out of his own computer to upgrade his mother's, and uses the opportunity to teach his young son about how computers work. Through these activities he is prolonging the utility value of the computer, but it isn't a straightforward instance of extending physical lifespan. He is also developing skills, connecting to his family, and realising his role as father and son through meaningful maintenance.

There is meaning and emotion in the process of the interactions with the computer components, providing an example of what Pink (2004) describes as the performance of emotional narratives through everyday home practices. The fact that the computer is designed to be upgraded, and the participant being skilled to do so, means that it can become more closely allied to self (Belk 1988), and kept and maintained in the long term. As noted in Keyte (2015a), negative emotion can arise from a relationship with a 'closed' computing device that the user does not feel empowered to repair.

How practices of designing can contribute to meaning

One of my study aims is to find out whether design practice can contribute to the possible meaning of an object. In writing Keyte (planned) I discovered how industrial design practice can encourage or nudge intended meanings through explicit professional processes of shaping the identity of an object, subtly influenced by the designer's relationships to their own possessions.

The designers gave accounts of routinised design activities which contribute to a product's visual and material characteristics, that are well understood components of design practice. The way that these differ from everyday practices is in how they are situated within an organisational setting and learned through formal training (Nicolini 2012, Shove et al 2007). One example is the systematic application of trend research into the design process to make sure products are culturally current and desirable. This generates visuals of existing materials, objects, environments and lifestyle indicators, aspects of which become embedded in new products. Another example is the practice of prototyping within the design process. Designers with the opportunity to produce a prototype can evaluate the look and feel of the proposed product through their own senses, imaginatively anticipating their user's interaction with the product. Rosie, for example, made lo-fi prototypes that she could test with colleagues in the studio, informing the decisions she made about form and colour (Keyte planned).

Importantly, this research project also revealed designers' practices of keeping their own home possessions in relation to their professional work. As explained

thoughtfully by Marina (2020) designers are also consumers but this is rarely considered in accounts of design practice. In Keyte (planned) my discussions explored where these spheres of practice intersect. I wrote about designer Rosie's reflection on the bird feeders she designed, owns and uses, and the different perspective she feels being the user gives her. As described above in the section on memories evoked by objects, designing and using the bird feeders connected her to a love of nature and childhood experiences, and through interactions over time built new personal and family meanings. Dan is another designer who kept and lived with products he designed. He experimented with the use of his lamps in different settings, creating intentional encounters by keeping them in different locations in the home, to make new connections and develop new understandings. He actively sought to feed this experience into later products (Keyte planned).

Design may contribute to the meaning that builds in an object when the designer is attuned to the everyday practices of users (other than through their own experience). An example of this is Josh's design of the nursery cot, drawers and nappy changing station, designed to physically adapt to the needs of the growing child. Josh's intention was that the set would become meaningful through its embeddedness in daily changing and bedtime rituals, building history with its users. In shaping the visual identity of the set, he decided to apply more traditional visual language to encourage longer use by avoiding it going out of fashion (Keyte planned).

Contributions to knowledge: What influences emotional lifespan, and can it be designed?

My overarching research question frames my intention to develop new ways of understanding the emotional lifespan of products in design research, by exploring how the meanings of everyday home possessions develop. My research activities have built up a rich picture of interrelated factors and circumstances that influence the development of meanings associated with home possessions. It has also shown that meaning, in all but the most highly cherished objects, changes, develops and wains, and has identified what might compel us to keep an object in the long term. It challenges the often-made assumption in design research literature that meaningfulness is necessary to keeping and valuing something, and that strong emotional attachment is a key factor in an enduring relationship with an object. My findings have identified 4 key overlapping areas of influence on the emotional lifespan of an object, listed and explained below.

1. **An object doesn't need to be cherished to be kept**

   My study has identified key ways in which keeping an object in the long term doesn't necessarily correlate with high, consistent perceived value and meaningfulness. The discussion above, supported by the publications, describes how objects can hold conflicting meanings or be disliked, but still kept for their associations with other people, or out of a sense of obligation.

Objects can also be kept and gently valued for their decorative potential - they may not be very meaningful in themselves, but can contribute to a meaningful pleasant environment. I recommend further study of objects with precarious or ambiguous value, and that are not typically associated with the build of stable meanings or emotional attachments. This approach can unveil the complex factors influencing decisions to keep or discard possessions, thus providing insights into practices of keeping, and emotional longevity. The study has shown that these artefacts are valuable for what they can tell us about emotion lifespan.

2. Practices of keeping are integral to the development of meaning

The ways in which an object acquires and sustains meaning goes beyond the object itself, and this is essential to understanding emotional lifespan. Practices of keeping have been shown to be constituent to the build of meaning: Acts of curation, display or storage, home décor activities, and practices of physical adaptation are integral to an object's evolving value and its connection to the user, as demonstrated above. As illustrated by Josh's nursery set above, designers can be attuned to their users' everyday practices. Opening design research approaches to deprioritising the object and giving greater consideration of human practices can promote richer understandings of emotional lifespan.

3. The material language of the home environment has agency

The home environment has agency in enabling and prompting keeping practices. The visual and material language embedded in rooms, furniture and objects sets up expectations for how we should curate, display and store our possessions. Rooms and furniture also delineate space creating opportunities for strategically keeping objects. This creates a scenario where objects can be kept in the long term, and in some cases create opportunities for value to change and build (e.g. both carriage clocks discussed above and in Keyte (2013c), and the Victorian washstand set). The home forms the backdrop for practices of keeping and emotional longevity, and its material and spatial nature is an important question for design. My findings show that taking an approach to method that deliberately invites participants to report on the location of the object is an effective means of discovering the relationship between meaning making and practices of keeping, enabled by the spaces of the home.

4. Empowered relationships and long term value

A way that value can be altered or maintained is through creative or skilled human acts of adapting or maintaining an object, depending on the nature of the object and skill of the person. Examples are the laptop continuously upgraded and stickers added (figure 23) or the shawl shown above in figure 21. In Keyte (2015a) I noted that objects need to be designed so that they are

> ‘open’ to being repaired and adapted, and that in the case of computing devices, skills and learning lead to a more empowered relationship and long-term valuing.

My study has shown how the long-term perceived value of an object is not simply inherent to its appearance, but to its journey through time and space. In Keyte (2014) I framed the emotional lifespan of an object as a journey punctuated by transitions in meaning (please see figure 8 in Chapter 4). Examining these transitions enabled me to identify the factors that coincided to affect a change in meaning**:** the home spaces available and the opportunities they offered to Mary; the visual and material language of the washstand set and the responses it prompted; and human care and creativity bound up in practices of decoration and keeping. While design research typically focuses on the object, and the social sciences focus on the social dynamics of keeping objects, framing emotional lifespan in this way has meant they can be considered together. The social processes that create value in an object can be considered alongside the material and visual identity of the object and home environment. This can help build understanding of an object’s emotional lifespan from an alternative perspective. As stated in Keyte (2014), “This could be a valuable means for designers to get at a richer set of understandings of the relationship between material and meaning”.

The challenge for design that can be seen in the findings, is that the development of meaning is individual and nuanced, and deeply rooted. Our formative experiences in the material world are highly personal and shape our present and future interactions with objects. The same object deeply cherished by one person for memories of other people, could have precarious value to another. Part of this complexity is our relationship to time, expressed through the home environment and explored by Attfield (2000). While we often value the suggestion of time passed in an object, we also want to be free from the past to express and develop individual identity in the present. Long standing cultural references become embedded into fast moving goods, but we also need objects to authentically evoke moments in our personal pasts. The challenges of creating lasting meaning in mass produced commodities are pertinent and critical.

Designers are agents in defining the objects that we select, reject, accumulate and display, to structure our personal systems of understanding our place in the world. The designers interviewed were skilled in creating visually appealing object language and shaping interactions, to create desirable and saleable products. It is possible to design in semantic language targeted at a user group (Krippendorff 2005, Sudjic 2009) but a one size fits all approach has limitations, and there is a risk that the intended meaning won’t transfer to the user. As Tonkinwise (2011) suggested, the success of a product identity may depend on the cultural placing of the designer in relation to the user, in mutual taste regimes.

My methods have produced situated, interpretive knowledge of our affective relationships with everyday possessions and surfaced some of the complexity and texture of our affective relationships with things. Perhaps the challenge of this is that it is not easy to extrapolate recommendations to fold into design practice, to support designing for emotional longevity. However, there are three points that arise from the findings in relation to future design practice:

1. Firstly, the possibility that during the design process the designer could pay attention to the material environment a product may be kept in, its visual language, and the user's potential keeping practices in the long term. This implies a more holistic view of user interactions, and a shift beyond the current strong systemic focus on point of sale.

2. Secondly, proximity of the designer to the user is important, for the designer to imaginatively enter the life world of the user. This isn't necessarily easy to achieve for an individual designer, as their place in industry and current production systems will define limitations – the interviews with designers suggested a distance between them and their users' processes of absorbing their products into their lives, except when they were the consumers of their own products.

3. Thirdly, when users invest energy and skill into their possessions, they keep them for longer and adapt them when they need to. Designing products for repair and adaption is an obvious consideration. Thinking on a larger scale, practices such as co-design, and developing local production systems that embed designers may provide some of the solutions to the systemic problems that come through my study.

Methodological contributions

The creative research methods I have developed have been critical to my enquiry, producing insights into how we live with our home possessions. The home is an important site of cultural activity, and because it is private, it is harder to see and access. It is where people express and develop their identities, sense of self, and where relationships between people play out, supported by a network of spaces and possessions. Inventive methods can help to access the meanings that develop in this cultural space.

My study contributes to a methodological focus in design research and the social sciences on how we emotionally engage with home possessions and the products of design, in the following 7 novel ways:

1. **Hands-on experiences for participants to surface meaning and affect**

I have created qualitative methods incorporating hands-on activities for participants, to generate original insights. My methods build on previous studies focused on collecting the personal narratives of home artefacts (Hurdley 2013, Braithwaite 2021, Cooper Marcus 1995) by furthering the hands-on engagement for participants to access affect. The combination of participatory sketching and making integrated with semi-structured interview, has been critical to the effectiveness of the methods by fostering active reflection on the meaning of possessions. Sketching and making allows for the expression of gentle or less obvious affect, and combined with talking can help enable dilemmas, rituals and practices of acquisition usually out of conscious thought to surface. This approach makes a valuable contribution to participatory design, in how it helps express latent needs and ideas, and surfaces different considerations within the realm of design that can expose tension and complexity in our relationships with objects.

A challenge that any further studies should consider, is that affect arises differently in relation to different types of object, and not all lend themselves to sketching.

2. **Focusing on uncherished possessions, rather than cherished, to offer new understandings of emotional longevity in products**
   Importantly, my study differs from others in the field in its focus on uncherished possessions. Studying the uncherished builds a more informative picture of meaning as mutable and dynamic, waxing and waning. It can show that even when we might assume an object is meaningless, or we simply overlook it, there is still affect to observe. It raises a different set of possibilities and questions to studying objects that are meaningful and securely valued. Asking why we might keep something rather than treasure it leads to a more nuanced understanding, and can reveal more about how we are bound up in the material world.

3. **Paying attention to location and the material environment**
   The focus on inviting participants to describe the location of their possessions through sketching and talking has been effective, because this reflection can uncover the role of everyday keeping practices in the development of meaning. It can also help identify the role of material and spatial language in everyday practices and meaning making.

4. **Keeping the objects themselves in focus**
   Meaning and affect are fluid and ephemeral, but bound up with the material world, and thus reflective engagement with material things can help access affective connections. Retaining objects either physically, through photographs, or by sketching from memory can evoke the textures, complexities, and practices associated with keeping them in the home. Having

physical objects or representations of them to hand has helped to prompt memory and expression of feelings, and sketching has allowed the material qualities of the objects to be considered as part of their stories. This approach supports a deeper exploration of how materiality influences meaning-making practices in everyday life.

5. **Providing participants with opportunities to rethink their relationships with possessions**
   It is important to note that the conversations and reflection facilitated by my approach prompted participants to consider reframing how they thought about their possession(s). I observed that by making participants relationships to artefacts visible, they were able to consider their attitudes to acquisition, keeping and accumulation. There is a lot of potential for further studies to support transition to more sustainable economies.

6. **Interviewing designers as consumers of their own products**
   I have developed a framework for interviewing designers about products they design and own (Keyte planned), contributing to the approaches taken Kimbell (2012) and Comi (2019) critically considering the situated practices of the designer. Talking to designers about artefacts they design and own brings practices keeping into relation with practices of designing, to reveal layers of complexity in how meaning becomes constituted in an object and its physical qualities. While visual and material language can be shaped with design intent and structure, personal meaningfulness is interwoven indirectly into professional decision making. As consumers of their own products, designers have the opportunity to critically reflect on artefacts through keeping and use, and this feeds a continuous dialogue with the material world. In this way they have direct insight into the emotional longevity of a product. This is an approach that should be further developed to more deeply understand the relationships between consumption and design.

7. **Inventive method of analysis that prioritise visual as well as audio data**
   Building on the use of a multi-modal table by Comi et al (2019) I was able to reliably capture both visual and audio data, and assign equal priority to both in analysis. Aligning video stills and images with the transcript is a basis for analysing rich, layered data and surfacing affect in connection with the material world. For example by using this inventive method, I was able connect participants' body language to the verbal transcript, and to review the effectiveness of the sketching activity.

Through this study I have asked what the stories of keeping uncherished, everyday home possessions can reveal about how their meanings develop, and how could this inform design approaches to product emotional lifespan. I hope I have laid out some of the complexity of our affective relationships to home possessions, and the

importance of developing inventive methods that can uncover the meanings we attach to objects in the culturally significant space of the home. These methodological approaches can generate rich qualitative data to contribute to understandings of our dependence on material things, and help us transition to more sustainable practices and systems.

References

Alexander, C. (1964). *Notes on the synthesis of form* Harvard University Press.

Almquist, J., & Lupton, J. (2010). Affording meaning: Design-oriented research from the humanities and social sciences. *Design Issues, 26*(1), 3–14.

Appadurai, A. (1986). In Appadurai A. (Ed.), *The social life of things: Commodities in cultural perspective*. Cambridge: Cambridge University Press.

Attfield, J. (2000). *Wild things: The material culture of everyday life*. Oxford: Berg Publishers.

Bachelard, G. (1994). *The poetics of space'*. Boston, MA: Beacon Press.

Bakker, C., den Hollander, M., van Hinte, E., & Zijlstra, E. (2019). *Products that last: Product design for circular business models* BIS Publishers.

Battarbee, K., Mattelmäki, & T. (2004). Meaningful product relationships. In D. McDonnaugh, P. Hekkert, J. van Erp & D. Gyi (Eds.), *Design and emotion* (pp. 337–341)

Bayazit, N. (2004). Investigating design: A review of forty years of design research. *Design Issues, 20*(1), 16–29.

BBC. (2024). Public contributes to 'things exhibition'. Retrieved from https://www.bbc.co.uk/news/av/entertainment-arts-11570793

Belk, R. (1988). Possessions and the extended self. *The Journal of Consumer Research, 15*(2), 139–168.

Belk, R. (2017) Sharing, materialism and design for sustainability. In &. Chapman, J. (Ed.), *The Routledge handbook of sustainable product design*. London: Routledge.

Belk, R. (1984). Three scales to measure constructs related to materialism: Reliability, validity, and relationships to measures of happiness. *Advances in Consumer Research, 7*(00), 291–297.

Belk, R. (1990). The role of possessions in constructing and maintaining a sense of past.*17*, 669–675.

Belk, R. (1993). Materialism and the making of the modern American Christmas. In D. Miller (Ed.), *Unwrapping Christmas* (pp. 75–104). Oxford: Clarendon.

Belk, R. (2002). *Some reflections on 'possessions and the extended self'* The Association for Consumer Research newsletter

Boradkar, P. (2010). *Designing things: A critical introduction to the culture of objects* . Oxford: Berg Publishers.

Bourdieu, P. (2010). *Distinction: A social critique of the judgement of taste* (R. Nice Trans.). London: Routledge.

Braithwaite, N. (2021). These shoes were made for talking: Documenting identity through the lens of footwear. *The International Journal of the Image, 12*(2), 45–64.

Brinkmann, S. (2014). Unstructured and semi structured interviewing. In P. Leavy (Ed.), *Oxford handbook of qualitative research*. Oxford: Oxford University Press.

Bronner, S. J. (1989). *Consuming visions: Accumulation and display of goods in america, 1880-1920*. Norton: The Henry Francis Du Pont Wintherthur Museum.

Buchanan, R. (1992). Wicked problems in design thinking. *Design Issues, 8*(2), 5–21.

Buchanan, R., & Margolin, V. (2010). *Discovering design explorations in design studies*. Chicago: University of Chicago Press.

Buchenau, &., Marion and, Fulton Suri, &., & Jane. (2000). Experience prototyping. Paper presented at the *DIS '00: Proceedings of the 3rd Conference on Designing Interactive Systems: Processes, Practices, Methods, and Techniques,* 424–433.

Burns, B. (2010). Reevaluating obsolescence and planning for it. In T. Cooper (Ed.), *Longer lasting products: Alternatives to the throwaway society*. Farnham: Gower.

Carrier, J. (1991). Gifts, commodities, and social relations: A Maussian view of exchange. *Sociological Forum, 6*(1), 119–136.

Carrier, J. (1993). The rituals of Christmas giving. In D. Miller (Ed.), *Unwrapping Christmas* (pp. 55–74). Oxford: Clarendon Press.

Ceschin, F. a. G., Idil. (2019). *Design for sustainability*. London: Routledge.

Chapman, J. (2005). *Emotionally durable design : Objects, experiences and empathy*. London: Routledge.

Chapman, J. (2010). Subject/object relationships and emotionally durable design. In T. Cooper (Ed.), *Longer lasting products: Alternatives to the throwaway society* (pp. 61–76). Farnham: Gower.

Cieraad, I. (Ed.). (1999). *At home: An anthropology of domestic space*. New York: Syracuse University Press.

Cohen, D. (2006). *Household gods: The British and their possessions.* Yale University Press.

Comi, A., Jaradat, S., & Whyte, J. (2019). Constructing shared professional vision in design work: The role of visual objects and their material mediation. *Design Studies, 64*, 90–123.

Cooper Marcus, C. (1995). *House as a mirror of self: Exploring the deeper meaning of home*. Berkeley: Conari Press.

Cooper, T. (2010). *Longer lasting products: alternatives to the throwaway society* Gower.

Crewe, L., Gregson, N., & Metcalfe, A. (2005). Identity, mobility and the throwaway society.

Cross, N. (2006). *Designerly ways of knowing*. London: Springer.

Cross, N. (2011). *Design thinking: Understanding how designers think and work* (1st ed.). London: Berg Publishers.

Csikszentmihalyi, M., & Halton, E. (1981). *The meaning of things: Domestic symbols and the self.* Cambridge University Press.

Daston, L. (2007). Introduction: Speechless. In L. Daston (Ed.), *Things that talk: Object lessons from art and science* . New York: Zone Books.

Denicolo, P., Long, T., & Bradley-Cole, K. (2016). *Constructivist approaches and research methods: A practical guide to exploring personal meanings*. London: Sage.

Desmet, P. M. A., & Hekkert, P. (2009). Special issue editorial: Design and emotion. *International Journal of Design, 3*(2), 1–6.

Desmet, P. M. A., Pohlmeyer, A. E., & Forlizzi, J. (2013). Special issue editorial: Design for subjective well-being. *International Journal of Design, 7*(3), 1–3.

Donald, S. a. W., Glen. (1992). Kinds of seeing and their function in designing. *Design Studies, 13*(2)

Dorst, K. (Ed.). (2017). *Notes on design how creative practice works*. Amsterdam: BIS Publishers.

Dorst, K., & Cross, N. (2001). Creativity in the design process: Co-evolution of problem–solution. *Design Studies, 22*(5)

Edwards, E. (1999). Photographs as objects of memory. *Material memories: Design and evocation*. Oxford, UK and New York, US: Berg.

Ehn, P. (2008). Participation in design things. Paper presented at the *Tenth Anniversary Conference on Participatory Design 2008,* pp. 92–101.

Evans, &., Siân, & Cooper, T. (2010). Consumer influences on product lifespans. In T. Cooper (Ed.), *Longer lasting products: Alternatives to the throwaway society* . Farnham: Gower.

Ewenstein, B., & Whyte, J. K. (2007). Visual representations as ‘artefacts of knowing’. *Building Research & Information, 1*(35), 81–89.

Findeli, A., Brouillet, D., Martin, S., Moineau, C., & Tarrago, R. (2008). Research through design and transdisciplinarity: A tentative contribution to the methodology of design research. Paper presented at the

Fuad-Luke, A. (2010). Adjusting our metabolism: Slowness and nourishing rituals of delay in anticipation of a post-consumer age. In T. Cooper (Ed.), *Longer lasting products: Alternatives to the throwaway society*. London: Routledge.

Gauntlett, D. (2007). *Creative explorations: New approaches to identities and audiences*. Abingdon: Routledge.

Gauntlett, D. (2011). *Making is connecting: The social meaning of creativity, from DIY and knitting to YouTube and web 2.0*. Cambridge: Polity.

Gonzalez, J. A. (1995). Autotopographies. In A. Gordon, & M. Ryan (Eds.), *Prosthetic territories: Politics and hypertechnologies*. Boulder, Colorado, US and Oxford, UK: Westview Press.

Graves, J. (2012). *The secret lives of objects*. Victoria, Canada: Trafford.

Gregson, N., Metcalfe, A., & Crewe, L. (2005). Identity, mobility and the throwaway society. *Environment and Planning D: Society and Space, 25*(4), 682–700.

Gullestad, M. (1993). Home decoration as popular culture. constructing homes, genders and classes in Norway. In T. de Valle (Ed.), *Gendered anthropology*. London: Routledge.

Haug, A. (2019). Psychologically durable design – definitions and approaches. *The Design Journal, 22*(2)

Hoskins, J. (1998). *Biographical objects: How things tell the stories of peoples' lives.* Routledge.

Hurdley, R. (2013). *Home, materiality, memory and belonging: Keeping culture* Palgrave Macmillan.

Jornet, A., & Steier, R. (2015). The matter of space: Bodily performances and the emergence of boundary objects during multidisciplinary design meetings. *Mind, Culture and Activity, 22*(2), 129–151.

Keyte, J. (2013a). Campaign badges: Creating meaning through making. Paper presented at the *Praxis and Poetics: Research through Design 2013 Conference*

Keyte, J. (2013b). Making, gifting and connecting. Paper presented at the *Crafting the Future: 10th European Academy of Design Conference*

Keyte, J. (2013c). Objects in purgatory: How we live with uncherished gifts. *Interiors, 4*(3)

Keyte, J. (2014). The alternative history of a Victorian washstand set. Paper presented at the *Tradition, Transition, Trajectories: Major Or Minor Influences? 9th International Committee Design History and Design Studies*

Keyte, J. (2015a). Hardware hopes: Examining emotional connections to computers through creative story telling. Paper presented at the 1st *Product Lifetimes and the Environment conference*

Keyte, J. (2015b). Objects in purgatory brooch exchange: Storytelling artefacts as agents for audience engagement. *Studies in Material Thinking, 13*

Keyte, J. (2022). Material meaning: Investigating how meaning is organised and interpreted in industrial design practice. Paper presented at the *9th Congress of the International Association of Societies of Design Research*

Kimbell, L. (2011). Rethinking design thinking: Part I. *Design and Culture, 3*(3), 285–306.

Kimbell, L. (2012). Rethinking design thinking: Part II. *Design and Culture, 4*(2), 129–148.

Knudsen, B. T. a. S., Carsten. (2015). *Affective methodologies: Developing cultural research strategies for the study of affect* Palgrave Macmillan.

Kopytoff, I. (1986). The cultural biography of things: Commoditization as process. In A. Appadurai (Ed.), *The social life of things* (pp. 64–94). Cambridge: Cambridge University Press.

Kowaslki, M. C., & Yoon, J.I love it, i'll never use it:
Exploring factors of product attachment and their effects on sustainable product usage behaviors. *International Journal of Design, 16*(3), 37–57.

Krippendorff, K. (2005). *The semantic turn: A new foundation for design*. Boca Raton: CRC Press.

Kwint, M. (1999). Introduction: The physical past. In M. Kwint, C. Breward & J. Aynsley (Eds.), *Material memories: Design and evocation*. Oxford: Berg.

Ladik, D. M., Carrillat, F. A., Tadajewsk, M. (2015). Belk's (1988) "possessions and the extended self" revisited. *Journal of Historical Research in Marketing, 7*(2), 184–207. doi:10.1108/JHRM-06-2014-0018

Lawson, B., & Dorst, K. (2009). *Design expertise*. London: Routledge.

Maker Faire. (2023). Welcome to maker faire. Retrieved from https://makerfaire.com/

Marshall, A. (2023). When relationships fail, this museum keeps the stuff left behind. Retrieved from https://www.nytimes.com/2023/02/14/arts/design/museum-of-broken-relationships.html

Marzano, M. (2012). Informed consent. In J. F. Gubrium, J. A. Holstein & Marvasti, Amir B., McKinney, Karyn D. (Eds.), *The SAGE handbook of interview research: The complexity of the craft (second edition)* (pp. 433–456). Thousand Oaks, California; London: Sage.

Mauss, M. (1950). *The gift: The form and reason for exchange in archaic societies* (W. D. Halls Trans.). London: Routledge.

McCracken, G. (2005). Homeyness. In G. McCracken (Ed.), *Culture and consumption V. 2: Markets, meaning, and brand management* (pp. 22–47) Indiana University Press.

McDonagh, D., & Thomas, J. (2011). Special issue: Design and empathy. *The Design Journal, 4*(2)

Menezes, A., & Lawson, B. (2006). How designers perceive sketches. *Design Studies, 27*(5), 571–585.

Miller, D. (2008). *The comfort of things* Polity Press.

Miller, D. (1987). *Material culture and mass consumption*. Oxford: Blackwell.

Miller, D. (Ed.). (1998). *Material cultures*. London: Routledge.

Miller, D. (Ed.). (2001). *Home possessions: Material culture behind closed doors*. Oxford: Berg.

Miller, D. (2005a). Introduction. In S. a. M. Küchler D (Ed.), *Clothing as material culture* (pp. 1–19). Oxford: Berg Publishers.

Miller, D. (2005b). Materiality: An introduction. In D. Miller (Ed.), *Materiality* (pp. 1–50). Durham: Duke University Press.

Miller, D., & Parrott, F. (2009). Loss and material culture in south london. *Journal of the Royal Anthropological Institute, 3*(15), 502–519.

Mugge, R., J. P. L. Schoormans, and H. N. J. Schifferstein. (2005). Design strategies to postpone consumers' product replacement: The value of a strong person-product relationship. *The Design Journal, 8*(2), 38–48.

Niedderer, K., Biggs, M. A. R., & Ferris, M. (2006). The research exhibition: Context, interpretation, and knowledge creation. Paper presented at the *Wonderground – DRS International Conference 2006*

Norman, D. A. (2004). *Emotional design: Why we love (or hate) everyday things*. New York: Basic Books.

Odom, W., Pierce, J., Stolterman, E., & Blevis, E. (2009). Understanding why we preserve some things and discard others in the context of interaction design. Paper presented at the *Proceedings of SIGCHI Conference on Human Factors in Computing Systems*

Packard, V. (1960). *The waste makers*.

Petrelli, D., & Whittaker, S. (2010). *Family memories in the home: Contrasting physical and digital mementos Journal of Personal and Ubiquitous Computing, 14*(2)

Pink, S. (2004). *Home truths: Gender, domestic objects and everyday life*. Oxford: Berg.

Product lifetimes and the environment. Retrieved from https://www.plateconference.org/

Proust, M. (1992). *In search of lost time: Vol 1, Swann's way* (Moncrieff, S. & Kilmartin, T. Trans.). London: Chatto and Windus.

Reckwitz, A. (2002). Towards a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory, 2*(5), 243–63.

Saad-Sulonen, J., Eriksson, E., Halskov, K., Karasti, H., Vines, J. (2018). Unfolding participation over time: Temporal lenses in participatory design. *CoDesign, 14*(1), 4–16.

Sanders, Elizabeth B. -N. and Stappers, Pieter Jan. (2008). Co-creation and the new landscapes of design. *CoDesign, 4*(1), 5–18.

Sartre, J. (1943). *Being and nothingness: A phenomenological essay on ontology*. New York: Philosophical Library.

Schatzki, T. R. &. (2001). Practice theory. In K. Schatzki, K. Knorr Cetina & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 10–23). London: Routledge.

Schifferstein, H., & Zwartkruis-Pelgrim, E. (2008). Consumer-product attachment: Measurement and design implications. *International Journal of Design, 2*(3), 1–13.

Schifferstein, H. N. J., Mugge, R., & Hekkert, P. (2004). Designing consumer-product attachment. In McDonnaugh, D., Hekkert P.P., van Erp, J. & Gyi, D. (Eds.), *Design and emotion: The experience of everyday things* (pp. 337–341). London: Taylor and Francis.

Schifferstein, H., Mugge, R., & Hekkert, P. (2004). Designing consumer-product attachment. In D. McDonnaugh, P. Hekkert, J. van Erp & J. Gyi (Eds.), *Design and emotion: The experience of everyday things* (pp. 378–383). London and New York: Taylor and Francis.

Schön, D. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Searle-Chatterjee, M. (1993). Christmas cards and the construction of social relations in Britain today. In D. Miller (Ed.), (pp. 176–192). Oxford: Clarendon.

Shove, Elizabeth, Watson, M., & Ingram, J. (2007). *The design of everyday life* (1st ed.). Oxford: Bloomsbury Publishing.

Simonsen, J. & Robertson, T. (Eds.). (2013). *Routledge international handbook of participatory design*. London and New York: Routledge.

Spinuzzi, C. (2005). The methodology of participatory design. *Technical Communication, 52*(2)

Staszowski, E., & Dilnot, C. Radical thinkers in design. Retrieved from https://www.bloomsbury.com/uk/series/radical-thinkers-in-design/

Sudjic, D. (2009). *The language of things*. London: Penguin books.

The Industrial Design Society of America. What is industrial design? Retrieved from https://www.idsa.org/about-idsa/advocacy/what-industrial-design/

Thorpe, A. (2010). Design's role in sustainable consumption *Design issues 26*(2), 3–16.

Tonkinwise, C. (2011). A taste for practices: Unrepressing style in design thinking. *Design Studies, 32*

Trivers, R. L. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology, 46*(4), 35–39.

Turkle, S. (Ed.). (2011). *Evocative objects: Things we think with*. Cambridge, Massachusetts: The MIT Press.

Valentine, L. (2019). Editorial: Be careful what you fuel for. *The Design Journal, 22*(2), 121–124.

Van Hinte, E. (1997). *Eternally yours: Visions on product endurance*. Rotterdam: 010 Publishers.

Van Hinte, E. (Ed.). (2004). *Eternally yours time in design: Product value sustenance* (P. Verbeek Trans.). Rotterdam: 010 Publishers.

Van Nes, N. (2005). Influencing product lifetime through product design. *Business Strategy and the Environment, 4*(5), 286–99.

Verbeek, P., & Kockelkoren, P. (1998). The things that matter. *Design Issues, 14*(3), 28–42.

Von Busch, Otto (Editor), Twigger Holroyd, A., Keyte, J., Choi Yin, S., Ginsburg, H., Earley, R. & Hansson, H. (2014). Knowledge in the making: The 'power to the people' workshop track at Crafting the Future. *The Design Journal, 17*(3)

Wilson, K. (2024). Keith wilson selected projects. Retrieved from https://keithwilsonstudio.com/category/exhibitions/

Yandell, J. (1995). Foreword. In C. Cooper Marcus (Ed.), *House as a mirror of self: Exploring the deeper meaning of home* . Berkeley: Conari Press.