THE PRACTICE OF MENDING, CARING-THROUGH-USE: A STRATEGY FOR CLOTHING LONGEVITY

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ABSTRACT

This research focuses on mending as an alternative route towards longevity within a sustainability agenda. Mending can be seen as a resourceful method used to maintain clothes in working order by repairing damaged areas of a garment in order to keep it in use. Such an item may mean delaying the acquisition of replacement garments and lead to a reduction in resource consumption (Fletcher, 2008; Laitala, 2010; WRAP 2012; Laitala, 2015; Fletcher, 2016). Recognition that increasing the longevity of clothing could have the largest environmental impact in a garment's life cycle (WRAP, 2012), has stimulated a recent surge in mending research by academics within fashion and the social sciences (Gwilt, 2014; Middleton, 2014; Harvey, 2015; McLaren et al, 2016; Durrani, 2018c; Laitala, 2018).

This research proposes that the practice of extending and intensifying the use phase of a garment through mending could increase the resourcefulness of fashion expression. The act of mending can instigate the learning of new skills, building competencies which could potentially assist users to engage with garments differently.

To support this theory, a preliminary longitudinal study of four non-mending, self-selected women from the London Borough of Islington occurred which generated multi-layered findings about the practices and ideas of mending. Data was collected by facilitating 'Wear > Craft > Mend' workshops where mending interventions were taught and practiced to repair participants' existing garments. Wardrobe interviews were conducted before and after the workshops had taken place. Wrap-up interviews occurred five years later, to determine if mending was still practiced.

To complement and further triangulate the findings of the preliminary study a larger UK based, predominantly quantitative survey, was completed, which developed themes found within the initial research. The aim was to gain a better understanding of the public's attitudes to extending the life of clothes, what mending means to them and their motivations and barriers to performing mending.

The research identified different levels of mending: *basic,* which blurs with wardrobe maintenance and care routines; *general* and *specific,* which are more complex these involve an intricate web of behaviours and emotional drivers which were identified in the findings. The conclusions are summarised in a simplified circle of mending diagram, a map of the contemporary mending process that build on academic findings and a list of recommendations. The study provides new insights about categorising strata of mending activity strata to aid research and a behavioural map of mending.

Key Words: caring-through-use, longevity, mending practices and sustainability.

397 words.

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Chapter 1

INTRODUCTION

Reflexive Statement

Context

Definitions of Key Terms

Research Question

Aims and Objectives

Methodologies

Structure of Thesis

1 Introduction

This chapter introduces the thesis, outlines the context, aims and objectives, provides an overview of the methodologies used and an outline of the thesis structure.

1.1 Reflexive Statement

Before the context is mapped out, it is important to understand my position and life experiences as the researcher. These steered, sometimes entangling me along the mending journey. I am at heart a practitioner, who spent many years designing womenswear within the fashion industry. My experience of the industry, of disinterest in sustainability measures and the business as usual stance led me to focus on other avenues to implement change. In consequence I became involved with one of the original sewing cafés, The Sweatshop Paris in 2010[1] whilst studying an MA in Fashion and the Environment at London College of Fashion. In my MA I focused on longevity, aiming to create garments with enduring lives, evolving with the wearer. The outcome was a garment that contained the blueprints for transformation into five other pieces. With the final piece using layering to hide expected mends. My focus developed and I became involved in OttoVon Busch's community repair project, to visibly mend a moth-eaten red coat (2011:cover & p3). In consequence I delved into the field of mending and diarised my mends. My current research (spanning the years: 2012-2019) springs from these experiences and like a garment in my mending pile, was put aside as family life got in the way, to be returned to with renewed vigour and objectivity. Over this extended research period, the literature surrounding repair has grown and developed, therefore the thesis aims not only to examine the literature but also to illustrate the evolving field of academic research into mending, enabling better understanding of my investigation and where it sits.

[1] Customers could hire a sewing machine by the hour, have a coffee or participate in a workshop. These were tailored to the individual and often taught the art of replacing zips, patching, refitting or even pattern cutting and making a replica of a much loved and valued garment.

1.2 Context

Mending sits with a raft of other terms that detail the alteration of clothes and possessions to keep them in use, such as repair, customising, altering, renovations, renewal and up-cycling. The dictionary definition of the verb mend is 'to repair something that is broken or damaged' by making the object whole again (Cambridge, 2018; Collins, 2018). However, the Collins dictionary also argues that 'repair' (with a corresponding definition) is favoured with complex objects, such as cars and radios (2018). Middleton agrees stating that: "Repair' is the more common, more generic and more gender-neutral term for mending practices across all fields.' (in Fletcher & Tham, 2014:264). Mending instead usually infers textile work done predominantly by non-professional females (ibid; see: 2.4 for further discussion).

Mending a garment that has worn through use is often achieved with few tools or materials, often only a needle and thread is required to be able to re-sew a button, repair a tear, or hole to make it useable again (Fletcher 2012b, Middleton, 2014). As few resources are required to mend clothes it has meant that a large proportion of repairs are performed in the home environment (Gwilt, 2014). Research has shown that increasing the longevity of a garment, through actions such as mending reduces the resource impact on the environment (WRAP, 2012). Hopefully extending a garment's life will prevent replacement purchases so reducing valuable resource use. However, mending a garment in western societies has become rare the reasons are detailed in the literature review (see chapter 2). Consequentially this thesis sets out to examine how mending uptake can be increased.

1.3 Definitions of Key Terms

Attachment: or connections between wearers and their garments.

Care/Caring: Looking after, respecting and nurturing

Longevity: long life; increasing the use-phase of a garment.

Mending: the repair, renewal and re-crafting of a worn or damaged garment through, transforming and adapting clothing into a useable state and enabling the item to extend its lifespan.

Optimal lifespans: Through careful use, mending, repair and transforming to keep its relevance to the wearer, enabling long garment lifespans and intensive use.

Participant: a volunteer who participated in the preliminary study, wardrobe interviews and mending workshops.

Respondent: a UK resident who responded and completed the on-line mending survey.

User and Wearer: of clothing products. These terms are used interchangeably throughout the thesis.

1.4 Research Questions

Mending has been identified as a route for users to positively influence the longevity of their clothes (see 2.3), giving rise to the following research questions:

1. **Could introducing the practice of mending to non-menders make mending more valued and help support more durable use practices for clothes?**
2. **Would gaining an insight into the attitudes towards mending in the UK build deeper understandings of its worth?**

To investigate this question, the following aims and objectives were identified:

1.4.1 Aims

- **1: -** To discover if mending interventions, specifically mending workshops can motivate non-menders to become more likely to mend clothes and form part of their wardrobe maintenance and care habits.
- **2: -** To gain a better understanding of the UK public's attitudes to extending the life of clothes, what mending means to them.
- **1 & 2: -** To identify how mending can be encouraged to become a regular and acceptable method for users to value their clothes.

1.4.2 Objectives: -

- To research mending techniques and develop a mending syllabus to introduce mending practices within practical mending workshops and steer them.
- To determine how mending workshops shaped participants values and care habits towards mending.
- To examine, breakdown and map the attributes (elements) required at each stage of the mending process.
- To understand the motivations and barriers to mending garments and discover how motivations can be encouraged and barriers reduced (including feelings of wellbeing before during and after the process).
- To develop a list of recommendations that actively encourages users to value their clothes through mending, for dissemination within the fashion industry and potentially wider consumers.

1.5 Methodologies

To investigate the aims and objectives a qualitative study and a quantitative survey were identified as the best approach. The qualitative study observed a small number of non-mending participants from the London Borough of Islington, initially through wardrobe interviews to understand their attitudes towards clothing and their maintenance and care practices to extend a garment's life. Then a series of mending workshops called Wear > Craft > Mend were organised to facilitate the mending process. Secondary interviews followed up the initial ones to understand the participants' reflections on mending, the workshops and if there were any changes in their attitudes towards their clothes, especially in respect to extending their longevity. Through the data analysis emerging themes were identified about the qualities of a garment and the attributes the mender needed to repair a garment.

These emerging themes were used as a framework for a larger UK wide mending survey. The culmination of the research's findings (survey and the preliminary study) led to the following conclusions:

- Mending can be broken down into levels of mending, basic, general and specific (see 6.3).
- A simplified mending circle – detailing the overarching attributes and processes involved (see 6.4).
- A behavioural map of the mending process was developed (see 6.6).
- A list of recommendations to encourage the uptake of mending (see 6.8).

1.6 Structure of Thesis

The thesis is structured to demonstrate the gaps in knowledge surrounding mending practices. It discusses how the research set out to uncover these gaps and build on recent findings, through qualitative and then quantitative research. The data from the two methods were then analysed and the findings discussed separately and then combined, as seen below:

Chapter 1: introduces the thesis, locating my (the researcher's) position, framing the research questions and outlining the methodology.

Chapter 2: presents the literature review, by discussing the literature surrounding mending and longevity.

Chapter 3: presents the methodology, first discussing the theoretical context, then the research design and finally the method.

Chapter 4: presents the Wear > Craft > Mend study findings and the developing themes

Chapter 5: survey, the analysis and presents the initial findings

Chapter 6: details the cross-study findings, conclusions, contributions to knowledge, limitations of the research and avenues for further research.

Chapter 2

LITERATURE REVIEW

Historical Context

Sustainability

Mending Within the Domestic Space

Design Strategies

Mending as a Tool for Longevity

Extending the Remit of Mending

2 Literature Review

The literature review introduces the research in the field of mending clothes, starting with the key investigators who have influenced, supported, helped verify or challenged this thesis. Subsequently a historical context is discussed leading to a broader understanding of where mending sits within sustainability. A discussion into mending within the domestic space follows, then strategies for design, culminating in extending the remit of mending and how it is explored currently through grass roots activism, artists, researchers and industry.

2.1 Introduction

Mending can be considered a natural response to a damaged garment. Clothes are often damaged through repeated wear at stress points in the fabric and the seams (construction), or through misuse and accidents such as tearing a jacket on a briar. An example of damage through wear is the knees on a pair of jeans, where repeated bending and kneeling over time wear the fabric threadbare until eventually holes form. To solve the problem of a hole two approaches are typical; patching, (using a piece of fabric to cover the hole – this tends to be used more frequently on woven garments) and darning using thread to weave new fabric through stitches to cover the hole (The Ministry of Information, 2007). This can be a repetitive process, requiring the mender to concentrate on the task in hand, where the quality of the repair is often related to their capability. Mending on face value is often a simple quick procedure to keep clothing in use, yet the process and use of mended clothing is systemically entrenched within our social world (Fletcher, 2012b). This thesis will delve into emotional and material relationships with clothes; the barriers, motivations and triggers to mending and mending practice.

2.1.1 Key Research

The diagram (Figure 1) highlights the most influential and relevant researchers to this study. They are particularly powerful in the arena of mending, and are making interesting and positive contributions to repair and interrelated clothing research. As can be seen some of these researchers have performed or continue to perform complementary research projects that overlap with this thesis (my research is in indigo). These are used to support (sometimes retrospectively) the grounds for research.

MARIUM DURRANI

Durrani, a doctoral candidate at Aalto University in Finland, has published four papers within the mending arena (2017; 2018a; 2018b; 2018c). Her research contains some parallels to this thesis such as using mending workshops. However, there are significant differences in the implementation of the research, the main was Durrani observing existing mending workshops in Finland and New Zealand, while I facilitated and created: Wear > Craft > Mend workshops in the UK (Durrani, a & b 2018; Towers, in Fletcher & Kleppe ed's, 2017). One discovery was the four types of menders (see: 2.7.1).

KATE FLETCHER

Fletcher is a researcher, author, consultant and design activist (from website biography 2018) and is Professor of Sustainability, Design and Fashion at the Centre for Sustainable Fashion, University of the Arts London. She is a prodigious innovator in her field, whose books are seminal accounts of the sustainable fashion debate (such as: 2008; 2012) and can be used to see how sustainable thinking has evolved over time. Fletcher's more recent research is rooted in nature and nested local systems.

ALISON GWILT

Gwilt is a fashion design academic and researcher at Sheffield Hallam University: reader in Fashion and Sustainability. Since 2008 Gwilt has produced many journal publications, exhibitions and books[2]. In 2013 (over the same period as my preliminary fieldwork (see timeline Figure 1) an ongoing interdisciplinary research project led by Gwilt, entitled: 'Make, Do and Mend' commenced (2015). This project questions what people know and do regarding clothing repair and how to

[2] including: 'Shaping Sustainable Fashion: Changing the Way We Make and Use Clothes' (co-authoring in 2011) and 'Fashion design for living' (ed, 2014).

encourage engagement in mending. Therefore, Gwilt's research into mending corresponds to the thesis's timeline; complementing and helping to verify findings.

Is a senior researcher at SIFO (the department for Technology and Sustainability at the Consumption Research Norway). Laitala has written 53 papers since 2004 into clothing use and disposal habits and the environmental implications, using predominantly quantitative research. Laitala's recent research focus has been on clothing longevity (2010; 2012; 2015) and in her most recent paper, on mending (2018). Her research tends to be large-scale surveys including the textile analysis of unwanted clothing making huge contributions to understanding use and end of use practices in Norway. Consequentially she has an enormous body of primary research, unparalleled in fieldwork and testing.

Middleton is a researcher, mending activist and a founder of the group: Mend*RS (Collins, B., Middleton, J & Salvia, G, 2011). During her doctoral research (2008) Middleton pledged to stop consuming clothing and live with what she had. She performed pop up mending workshops 'The Sock Exchange' in 2011 (Future menders (2019). Also, the Mend*RS group held an inaugural mending symposium in 2012. Her influential chapter 'Mending' in the 'Routledge Handbook of Sustainability and Fashion' (Fletcher & Tham ed's, 2014) has been pivotal in shaping mending research.

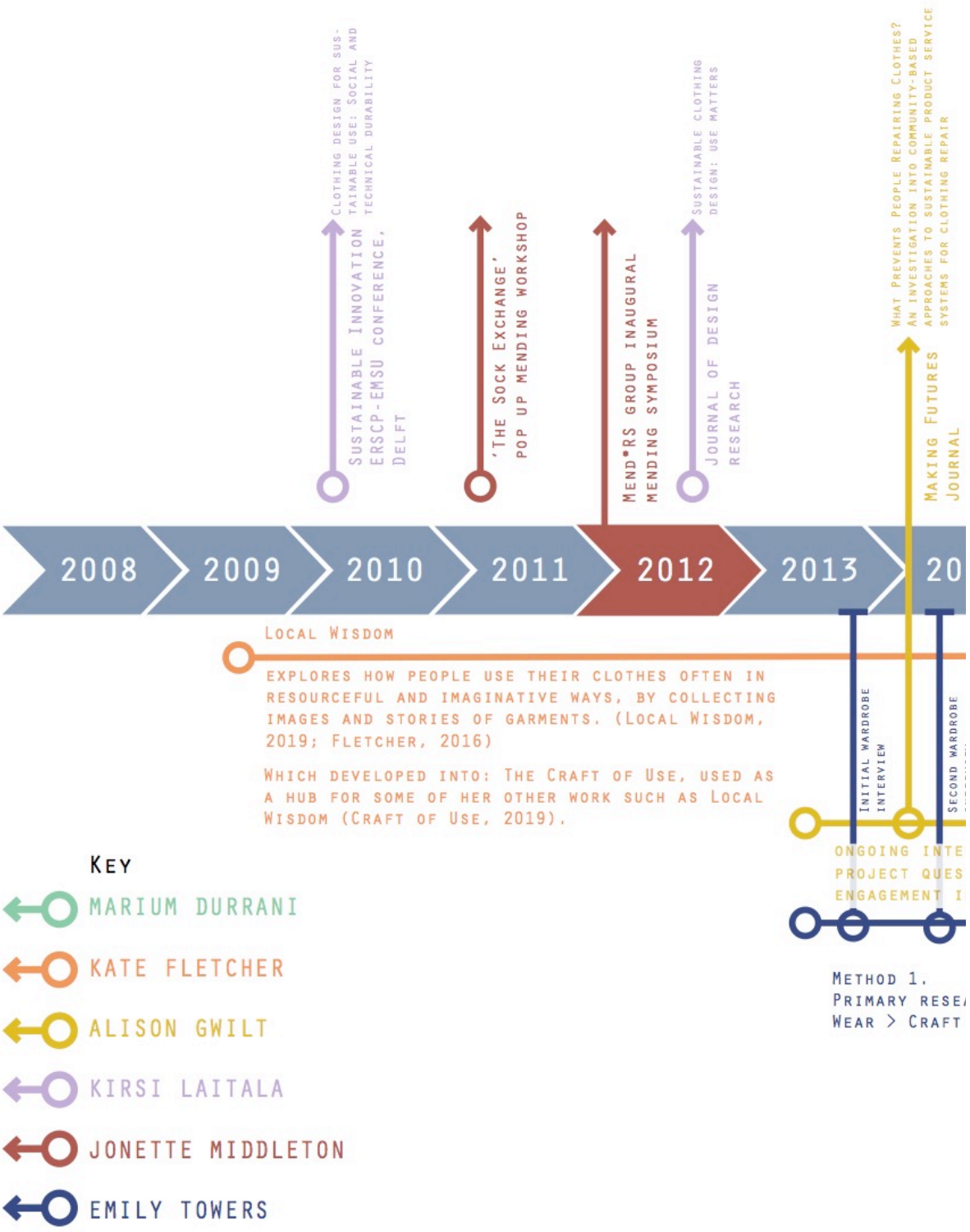
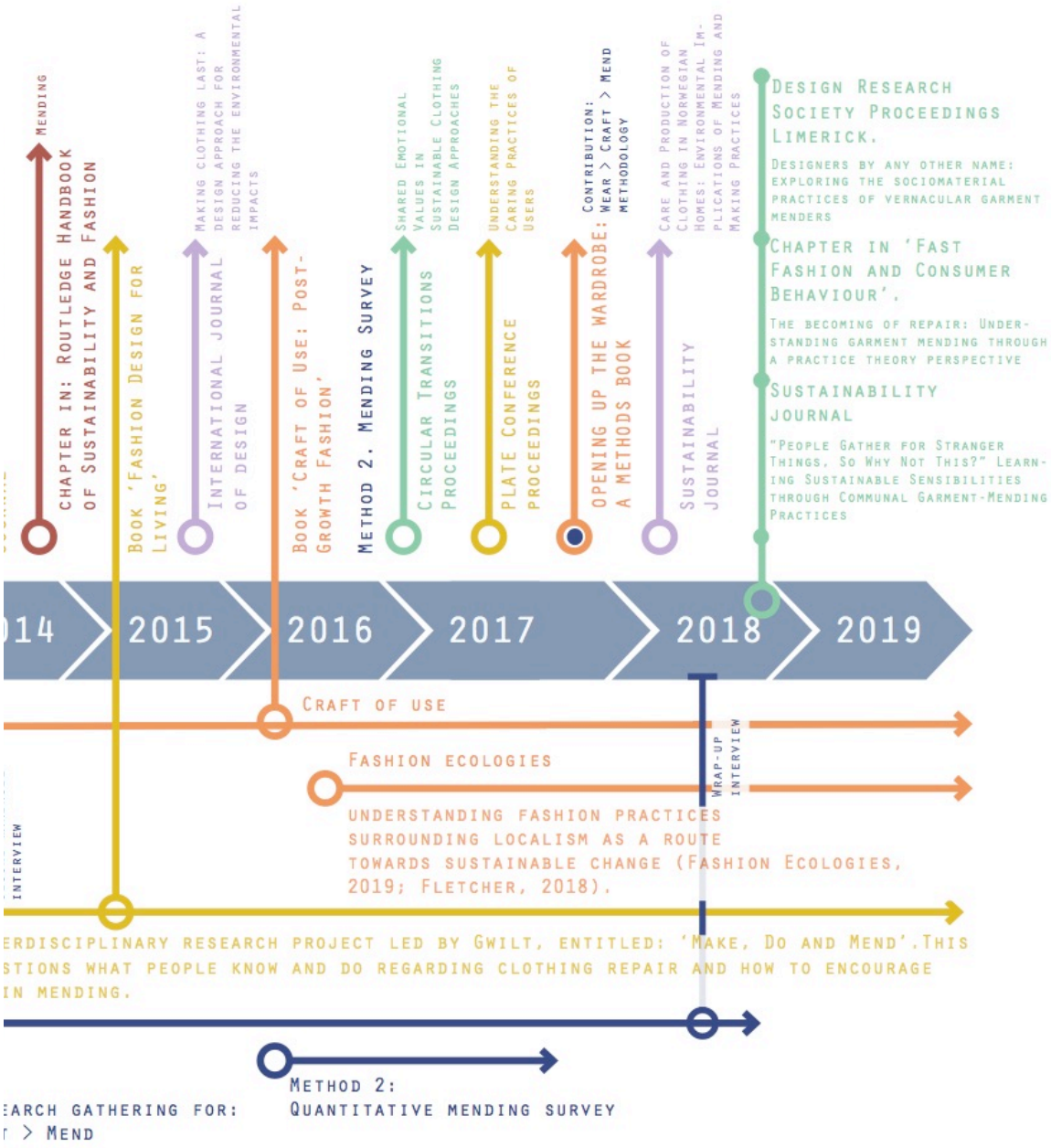


Figure 1. Timeline of significant research 2019


MENDING
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BOOK 'FASHION DESIGN FOR LIVING'
MAKING CLOTHING LAST: A DESIGN APPROACH FOR REDUCING THE ENVIRONMENTAL IMPACTS
INTERNATIONAL JOURNAL OF DESIGN
BOOK 'CRAFT OF USE: POST-GROWTH FASHION'
METHOD 2. MENDING SURVEY
SHARED EMOTIONAL VALUES IN SUSTAINABLE CLOTHING DESIGN APPROACHES
CIRCULAR TRANSITIONS PROCEEDINGS
UNDERSTANDING THE CARING PRACTICES OF USERS
PLATE CONFERENCE PROCEEDINGS
CONTRIBUTION: WEAR > CRAFT > MEND METHODOLOGY
OPENING UP THE WARDROBE: A METHODS BOOK
CARE AND PRODUCTION OF CLOTHING IN NORWEGIAN HOMES: ENVIRONMENTAL IMPLICATIONS OF MENDING AND MAKING PRACTICES
SUSTAINABILITY JOURNAL
DESIGN RESEARCH SOCIETY PROCEEDINGS LIMERICK.
DESIGNERS BY ANY OTHER NAME: EXPLORING THE SOCIOMATERIAL PRACTICES OF VERNACULAR GARMENT MENDERS
CHAPTER IN 'FAST FASHION AND CONSUMER BEHAVIOUR'.
THE BECOMING OF REPAIR: UNDERSTANDING GARMENT MENDING THROUGH A PRACTICE THEORY PERSPECTIVE
SUSTAINABILITY JOURNAL
"PEOPLE GATHER FOR STRANGER THINGS, SO WHY NOT THIS?" LEARNING SUSTAINABLE SENSIBILITIES THROUGH COMMUNAL GARMENT-MENDING PRACTICES
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2015
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CRAFT OF USE
FASHION ECOLOGIES
WRAP-UP INTERVIEW
UNDERSTANDING FASHION PRACTICES SURROUNDING LOCALISM AS A ROUTE TOWARDS SUSTAINABLE CHANGE (FASHION ECOLOGIES, 2019; FLETCHER, 2018).
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IN MENDING.
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2.2 Historical Context

2.2.1 Necessity

Historically people often had few belongings and what they did have were treasured. In terms of clothing, fabric and garments were highly valued, often bartered and left in wills (Gwilt & Rissanen (ed's) (2011). Materials were expensive whilst the labour (including sewing and dressmaking skills) was cheap and plentiful. Subsequently clothing was carefully mended, repaired and transformed both at home and in an industry context, and often passed through generations (Gwilt, 2014). An example of this is a pair of sailor's slops[3] dated from around 1600-1640. The garment has been repeatedly repaired, probably by the wearer, during sea voyages with whatever materials he had to hand, using threads and fabrics of different colours, textures and weights to maintain their usability (The London Museum, 2013).

The amount of dressmaking, repairing and remodelling performed historically at home is unclear, however historic pieces of clothing act as visual narratives detailing wear and repair. Garments that have survived are unlikely to be in pristine condition and they tend to have been extensively repaired and/or remodelled (see appendix: 8.5 London Museum 2013, Bath Fashion Museum 2013)[4]. 'Alteration dramatically lengthened the life of valuable garments by renewing their novelty', hence clothing was transformed, by all strata of society (Fernandez in Burman 1999:151).

Figure 2. Purple stocking 622, Bath Fashion museum. (1920-1929).

[3] naval term for trousers

[4] however, although it is often possible to determine the wearer/s of the garment it is difficult to determine who would have performed the mending.

Although industrialisation in the late 18th Century[5] enabled the mass production of cloth, lowering costs and increasing their availability, the act of making a garment was still performed by hand. Clothing continued to cost more than the labour used to extend its life. Thus, garments were continuously repaired[6] (Figure 2) as part of the domestic routine (Gwilt 2014). Burman states that mending and home dressmaking embraces 'a rich spectrum of cultural, social and economic practices' (1999:1). The introduction of the sewing machine into the household in the late nineteenth century[7] 'brought the Industrial Revolution into the home, heralding changes in women's economic roles and the meaning of consumer goods' (Fernandez in Burman 1999:157). Industrial manufacturing practices developed ready-to-wear clothing in the 1920s, which could be bought ready made in standardised sizes. While ready-made clothing gained in popularity there is evidence 'to suggest that women also sewed at home to guarantee themselves better and longer-lasting garments' (ibid). However, Burman acknowledges it is very difficult to verify and quantify the amount of dressmaking and mending performed at home or a dressmaker's, contributing to a lack of figures detailing how much dressmaking and mending occurred (ibid). The inherent hidden nature of mending often performed at home, undocumented and the aspiration for invisible mends makes it difficult to reliably measure changes in mending practice. However once mass-produced clothes were widely accepted; the decrease in value and cost of clothing, eventually made mending less likely.

2.2.2 Frugality

The Second World War (1939-1945) and the few years immediately after was a period of great austerity. With industry focused on war related production, the Government needed to promote self-reliance especially as clothing was becoming extremely scarce and there was not enough to fulfil the rationing. 'One of the key ways the BoT[8] saw of doing this was to encourage all women in the traditional task of sewing' (Reynolds in Burman 1999:327). Hence the slogan embodying the frugality of mending: 'Make-do and Mend' was coined, and was 'widely promoted as an important part of the war effort and a duty to be carried out by every woman' (Reynolds in Burman 1999:330). Pamphlets detailing mending, darning, refreshing and transforming old clothes were readily available. In fact, demand for 'Make-do and Mend' sewing classes was immense and by 1943

[5] Predominantly the development of mechanising the production of cloth and spinning with the innovations of Richard Arkwright's water frame (1769) and the Spinning Jenny (1764).

[6] restyled and often lasted over generations being altered for each new body size, until they were ultimately used as rags.

[7] 'By the 1930's a sewing machine was a familiar item in many working class homes. (Wilson and Taylor 1989:95).

[8] Standing for: British government organization to promote trade and industry during the war.

the Department of Education was running 12,000 classes (Reynolds in Burman 1999). Gwilt explains further: 'during this period being resourceful was perceived as a civic duty, therefore mending clothing was considered a responsible action that benefitted the nation.' (2014:4).

To help initiate a consumer boom after the Great Depression[9] and the Second World War, the concept of planned obsolescence (items that are built to fail after a specific use period), arose, encouraging a loss of quality (Cooper 2010). This drove demand and encouraged consumers to buy more, more frequently. After years of austerity and stimulated by governments and industry, consumers were primed to embrace a new relationship with clothes, fed up as they were with the drudgery of clothing maintenance (Hackney in Burman 1999:89). An apparently insatiable appetite developed for affordable mass-produced products (Walker, 2006). Consequently, in clothing 'the emphasis on product care and maintenance has become less important' (Gwilt, 2017:1). Accordingly, the necessities of mending have all but disappeared in mainstream culture, subsequently mending is associated with poverty (McLaren, 2015. Durrani, 2018a)

2.2.3 Maintenance

Historically mending was performed not only to maintain the wear ability of the garment, increasing its lifespan but also to sustain a decent standard of dress, 'crucial to keeping up appearances and to sustaining all the possibilities inherent in the notion of respectability' (Burman 1999:11). Mending clothing therefore was a necessary practice in visibly underpinning the family's social standing (Burman 1999:11). Inferring that because clothing is understood to be a visual demonstration of our adherence to social norms and offers a self-selected window into identity, mending also needed to follow these models of decency. This is the traditional European manner of repair and renewal, where the mend is performed solely to maintain the garments use and is often concealed; inconspicuous; not changing the general appearance. The repair is as indistinguishable as the mender's sewing capability. Therefore, if the conventional understanding of mending is adhered to, customisation (to modify, which often alters the garments appearance) can be seen as a distinct method. These distinctions can easily become blurred if mending is practiced using traditions from other countries.

In Japan for instance, different aesthetics apply, as seen in the two traditional mending techniques: Sashiko (mending using scrap cloth) and Kintsugi repair (on pottery using molten gold) are visibly repaired. For the former, Fishermen repeatedly repaired their garments using scrap cloth that they had bartered from the sale of their catch. This cloth was often placed on top of holes and patched

[9] From 1929 after the stock market crash in America.

using decorative Sashiko embroidery designs with a basic running stitch. The subsequent result, often of repeated repairs over numerous years creates an exquisite mended and modified garment. Another repair process developed in Japan, Kintsugi (golden repair) is an ancient method of highlighting the repair, exemplifying that the transformation of a broken object, its imperfections can be more beautiful than the original, through the adornment of gold (Juma, A 2016). Thus, both Sashiko and Kintsugi repairs offer a visible outcome and philosophical argument to mending as a celebration that cannot be bounded by the traditional understanding of mending in Europe. Becoming visible narratives of a user's life. The boundary of mending has been kept intentionally blurred to allow beliefs surrounding mending, like Sashiko and Kintsugi to be explored.

2.2.4 Summary

1. Pre-industrial revolution. Historically mending tended to be performed for; necessity, frugality and maintenance; to maintain a standard of dress.

- 1764 Spinning Jenny.
- 1769 The Arkwright machine heralded the industrial revolution; drastically reducing the time-consuming process of making cloth. However, the construction of garments remained time consuming and localised. Therefore, garments continue to be treasured, mended and altered to maintain use.
- The late 1800's saw the introduction of the domestic sewing machine, transforming the domestic sewing of garment construction and mending.
- 1920's saw the introduction of ready-to-wear manufactured clothes which slowly challenged the status quo of domestic and local dressmaking production. By becoming easier, quicker and cheaper to purchase readymade.
- 1939-1945 – The Second World War halted mending's slide towards obscurity, as widespread mending of clothes was encouraged in the nation's interests.
- 1950's saw a consumer boom, after years of austerity. Consumers developed an insatiable appetite for the ready-made. Planned obsolescence became adopted, encouraging a loss of quality.

2. When ready-made-clothing became fully adopted as the social norm, local dressmaking skills were no longer as valued and mending became associated with poverty.

3. Mending within western Europe tended to be hidden, used to maintain the original form of the garment as much as possible. However other cultures such as Japan have a strong tradition of celebrating the repair such as: Sashiko mending on textiles and Kintsugi repair on pottery.

2.3 Sustainability

To contextualise, this thesis is written and researched with a Western viewpoint and within a sustainability framework.

A significant factor driving environmental challenges like the, climate crisis[10] and loss of biodiversity is human activity and excessive resource use (Grooten & Almond, ed's, 2018; WWF, 2018). Society continues to be motivated by the logic of growth[11] which drives the production and consumption of material objects. This insatiable appetite for "stuff" means that people consume considerably more resources than the planet can replenish (earth overshoot day, 2018).[12] It is imperative therefore that global (particularly in the West) impact and resource use is reduced significantly to prevent runaway and catastrophic climate heating (IPCC, 2018; SRC, 2018; Grooten & Almond, 2018). If people fail to address these issues and change their ways of living significantly, life on earth will change dramatically, hence everyone is in a unique situation:

> *'We are the first generation that has a clear picture of the value of nature and our impact on it. We may be the last that can take action to reverse this trend. (Grooten & Almond, 2018:8)'.*

One way of doing this would be to reduce the acquisition of new products, and increase the useful life of existing items. Therefore, never has it been more pertinent to understand clothing behaviour.

Clothing's impact on excessive resource use has been well documented (Siegle, 2011; Cline, 2012; Fletcher, 2012b; Laitala, 2014; Papaneck, 1995; etcetera). Bombarded with literature and images promoting products to satisfy their wants and desires (Gwilt, 2017), purchases are often made without a conscious cognitive process to determine the need of the garment; rather items are bought on a whim for personal gratification (Lindstrom 2008; Ehrenfeld, 2008; Jackson in Cooper 2010). This thirst for new has been driven by system changes, which in the fashion industry resulted in the notion of 'fast fashion', and often short-term and consumption-based engagement with clothing (Siegle, 2011; Black, 2012).

[10] Part of the lexicon adopted be the Guardian to be more specific about the environmental challenge's humans face (Carrington, 2019)

[11] Predominantly measured by GDP, Gross Domestic Product.

[12] This denotes that August the 1st 2018 was earths overshoot day. On this date all the resources that the planet could replenish had been used (Global footwork Network, 2018)

Through this cycle of consumption, a user's understanding of clothing's material value seems to be damaged. Fletcher suggests our connectedness, 'the countless interrelationships that link material, socio-cultural and economic systems with nature' (2012b:143) have faded, along with the knowledge of determining good quality over bad (Cline, 2012). What is needed is a more mindful, thoughtful approach (becoming active participants) to consumption, use and the domestic practice of clothes maintenance. Of slowing the purchase, use then dispose cycle, not rejecting consumption as stopping acquisition of clothing may affect our comfort as described by Kotlowitz: 'Simplicity is a double-edged sword... living with either too little or too much will diminish our capacity to realise our potentials.' (in Jackson, 2006:152).

Scientists, and researchers believe that to live within planetary boundaries paradigm shifts throughout the system are necessary (SRC, 2018). One option mooted within industry towards sustainability is to change the traditional linear system[13] by making a closed loop. In which the resources used and materials of the discarded product become the materials used within manufacturing to produce new garments advocated by McDonough & Braungart using a 'cradle to cradle' approach (2002) and the Ellen MacArthur foundation's 'circular economy' (2017). The MacArthur Foundation's principles are to: 'design out waste and pollution, keep products and materials in use and regenerate natural systems' (ibid). So, maintaining use and extending the useful life of clothing are significant values for designing circularity in clothing (ibid; The Great Recovery Report 2016). However, industry seems incapable of limiting production and there seems to be no legislation in place to implement a reduction of output pre-use (Grose, 2013). This is an area of significant interest for sustainability measures. WRAP declares that extending the life of clothes reduces the energy requirements of producing new garments and delays disposal into recycling streams[14] (The Great Recovery Report 2016; WRAP, 2017). This is important because although there has been a huge reduction in post-use clothing going to landfill to less than 10% (WRAP, 2017), only 1% is properly recycled into another garment (MacArthur, 2018).

Consequently, the use phase is an important avenue to challenge overconsumption publicly and an area that everyone can make a difference[15]. A method for garment life extension that is achievable, even with few skills and materials by the user, is mending.

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[13] Where simplistically; materials and energy enter the manufacturing process, finished garments are then bought, used and discarded into waste streams.

[14] as it maintains the embodied energy of the resources used and prevents further energy and resource use in the process of producing a new garment from discarded items returning the garment to fibres, then cloth etc. which would use more energy and materials.

[15] while industry and government concentrate on developing sustainable futures shifting towards the circular economy

2.3.1 Summary

- Humans have reached a tipping point where paradigm shifts in current ways of life are required to maintain a safe operating sphere within the planetary boundaries (SRC, 2018).
- To reduce humans' impact on the planet a huge reduction in resource use is required. Two strategies are needed:
  - to reduce the resource use in the first place, through slowing down acquisition rates
  - to extend the use phase of existing products by increasing their longevity.
- In terms of clothing:
  - People in the West are acquiring clothing more frequently than ever before.
  - Industry sustainability measures and government legislation are not tackling product quantity and are still working within growth systems.
  - Increasing product longevity is something that can be increased by the user (as well as within industry, design and manufacturing processes).
  - One of these processes that is accessible and achievable for users is to mending.

2.4 Mending Within the Domestic Space

Within material culture studies, interactions with clothing are often determined by notions of value, intertwined with current sociological norms in consumerism (Woodward 2007). Our everyday domestic consumption of clothing has become focused on acquisition rather than the 'practicalities of use' (Shove 2003:11). Consequently, the bulk of literature regarding 'clothing consumption concentrates on the acquisition phase' (Laitala, 2015:94). However, the 'use' stage is experiencing increased attention both in relation to life-expansion and re-use of clothing (Fletcher, 2012a; Goworek et al., 2013; Laitala, 2015). WRAP's[16] report: 'Design for Longevity' which details this 'as

[16] The Waste and Resources Action Programme

the single largest opportunity to reduce the carbon, water and waste footprints of clothing in the UK' (2013:3). Since the report has been published a plethora of research and literature has occurred exploring the notions of longevity in respect to use (McLaren, et all, 2016; Connor-Crabb, 2017; Whitson-Smith 2018). These can be broken down into two main starting points: social; the practices, customs and rituals (Gwilt, 2017; Durrani, 2018c; Fletcher, 2016, Twigger-Holroyd, 2013) and physical; using the material goods to inform (often measuring clothing disposal to gain insight of use) (Cluver, 2008; Laitala, 2010; & 2011, Laitala 2015; Laitala 2018). The findings are giving greater insight into our complex consumption patterns and how each stage influences the other; determining the garments lifespan (ibid, 2015).

2.4.1 Acquisition

'with the advance of consumerism, what was once an invisible practice is now a practically non-existent one, as replacement is the new repair.' (Middleton, 2014:268)

The quantity of clothes purchased each year in the UK has escalated[17] (WRAP 2013), due in part to the influx of cheap fashion garments. This low cost of clothing often results in decreases of quality (material and construction) and durability, which affects both the longevity of the garment and the possibilities for a second life. As a result, clothing quality is now often measured in the amount of washes performed before falling apart (Cline 2012:118).

To calculate the environmental impact of a garment's lifecycle from cradle to grave, Life Cycle Assessment (LCA) analysis is used. Documented evidence from LCA's suggests that the most environmentally damaging period tends to be the use phase[18] (Alwood et al, 2006; Fletcher 2012b; Laitala, 2010; Gwilt 2015). This is dependent on the type of garment, how often and how it is washed. This period is therefore a difficult area to predict, one that is built on ritual and social norms rather than cleanliness as a trigger (Shove 2003). Encouraging an extended use phase of a garment should reduce the resources needed for replacements, as fewer garments would pass through the cycle, lessening the impact of our resource depletion; increasing sustainability[19] (Fletcher 2008, Laitala 2010, WRAP 2012). Moreover, WRAP advocates that prolonging the use phase of a garment by nine months will reduce the resources used in clothing considerably (2013). Encouraging longer lives of garments may have an impact on mending, possibly negating its

[17] citizens purchase on average 27 garments each a year

[18] due to the energy and chemicals used to maintain regularly washed clothes

[19] WRAP suggests that resource savings of £5 billion a year could be made within the supply, laundry and disposal of clothing (2012).

purpose, as increased garment lifespans do not necessarily equate to the wearer reducing the flow of garments into their wardrobe.

2.4.2 Use

At the start of my research the use of garments was an area that had not been as thoroughly researched; researchers had little understanding of post purchase behaviour (Shove 2003, Fletcher 2014). Data was not as readily available for use (often involving interviews and qualitative data), compared to purchase and disposal[20]. However, wardrobe studies have blossomed within the last few years (see 3.2.6; Whitson-Smith, 2018; Laitala, 2010 & 2015, Woodward 2007, Cluver 2008; Fletcher & Klepp, 2017).

2.4.3 Disposal

As cheap fast fashion items penetrated our consumption habits, clothing was no longer expected to last. This is due to many factors such as; price, the ephemeral expectations of fashion, quality, new clothing stock in store and cultural or societal norms. Consequently, the cost of replacing a garment has dropped to such an extent that the cost-benefit ratio[21] for general care including mending a garment appears uneconomic. The decision to repair a garment is often down to the wearer's level of sewing skills. However, Laitala discovered from a survey based in Norway that the majority of respondents had performed some form of repair work to a garment (73% had sewn on a button). 22 per cent of these respondents stated they would use their clothes for longer if their repair skills were better and 61 per cent would wear their clothes longer if they were better quality (Laitala & Boks 2012:130). This suggests that wear and tear are significant reasons for the disposal of textiles which corresponds to studies where 50% (Norway) and 46% (UK) of the respondents cited 'wear and tear' as the main reason for disposal (Klepp 2001, WRAP 2012, Smith 2013). Three of the main reasons for disposing of clothing are: Functionality, Quality, and care (or failure in maintenance), whilst the fourth: symbolic obsolescence, is tangled in our ever-changing notion of self[22] (WRAP,

[20] quantitative data is easier to collect

[21] The price of our time or a tailor to repair the garment versus a replacement garment.

[22] Contemporary consumer lifestyles have been shaped intrinsically by the development of the consumer in the 1950's. People's notion of self has become inseparable to objects that they surround themselves with, symbols of who they are, and what they want to become. As they evolve these objects are left behind, unable to change, becoming snapshots of their lives. (Chapman in Cooper 2010). Identity

2013; Laitala, 2015). Although 'care' is the most pertinent category for mending, all three reasons could benefit from repair depending on the purpose of disposal. In a more recent study examining the disposal motivations for 620 items based in Norway Laitala discovered that 40% had 'changes in garments' (incorporating garments in need of repair) as their reason for disposal corroborating in part with the previous studies (ibid:98). Additionally, this study discovered that 13% of the garments had a hole or tear which simple mending techniques could have been used to extend their lives (ibid). 'The data has shown that especially clothing fit and durability are more significant disposal reasons than previously thought, as fashion has traditionally been emphasized more.' (ibid:105). The majority of clothing (90%) is in a wearable state when disposed of, therefore before the end of its useful life (Fletcher and Grose, 2012:85). This suggests that there may be confusion surrounding the point at which a garment is no longer wearable. Additionally, that although there are three physical categories for disposal; function, quality and care (all three areas can be used within the term 'wear and tear') symbolic obsolescence or the social reasoning may carry more weight.

It can be seen in Laitala's research that a proportion of garments disposed of could be repaired to increase their use phase (2015). She suggests that changes in design and production might reduce these issues (ibid:102). WRAP also believe that design can have substantial impact on a garment's longevity (2013). Although this could lead to more durable garments, wear and tear will still eventually appear highlighting the need for mending to play a part in longevity strategies. The next section will tackle the issues and barriers surrounding mending.

2.4.4 Clothing Practices

Historically the purpose of mending and alteration was to maintain standards of dress and decency within society (Burman 1999:11). However, in contemporary society, the social norm has become to worship the new and not to revere the old. The ensuing discussion will explore the principal barriers to mending;

2.4.4.1 Absence of a Duty of Care

It is widely recognised that the treatment of a garment, including repair impacts its lifespan (Chapman 2005; Cox et al., 2013; Gwilt 2017). Gwilt argues that as users, people have;

construction through the consumption of fashion products has developed into a method of visualising a persons desired self, tied up with their views of self internally and externally (Chapman in Cooper 2010).

> *'a duty of care to engage with appropriate care and maintenance practices that are known to help retain' and extend 'the functionality of products […] throughout their lifecycle.' (ibid:3, Gwilt, 2014).*

This obligation is unlikely to be considered with fashionable pieces, as they are likely to be replaced before any visible signs of wear (idem, 2017). Thus, respect for these garments[23] is diminished; to mend is no longer a valued attribute within these regimes. In a pilot study: 'Caring for Places and Things' Gwilt found that people tend to use existing practices of care (self-taught or knowledge and behaviours passed down from family) and may not follow manufacturers advice for clothing (ibid; Shove, 2003). Gwilt discovered that 'caring practices' for the extension and preservation of garments were related to cleanliness (2017). Although part of the arsenal for care and maintenance practices of clothing, mending is practiced on an ad hoc, irregular basis if at all (idem, 2014) and its 'caring' properties were therefore overlooked. Perhaps as Middleton suggests mending should be situated:

> *'between laundering, a regular practice of maintenance, and alteration, transformation and reuse, which are irregular practices to increase wearability and extend clothing life cycles on both the material and immaterial level.' (2014:264)*

She advocates that the distinction between these practices and mending should be intentionally blurred, so that the mender can explore myriad techniques in the process of crafting unique solutions (ibid). Echoing the mending definition used for this thesis.

Maintenance, the repair of clothing, has decreased within households due to a 'long-term shift from a limited number of durable possessions to a large number of less valuable items' (Skov 2011:9). Consequentially an increase in domestic rituals involved in the routine activities of washing (often automated) has occurred, leading to a reduction in available free time for other activities such as mending (ibid). Therefore time (or the lack of it), could be considered another barrier to clothing longevity as only basic maintenance rituals are performed to keep clothes in working order. These individual rituals include: wearing, laundering, drying, storing and disposal (Gwilt, 2014; Rigby, 2016). Gwilt suggests that; 'in many cases, independent of any established care routine, they [garments] are often discarded too quickly before repair or alteration possibilities are considered.' (2014:3). Users are no longer spending the time necessary to notice and then build up familiarity with clothing through repair. Instead they are striving to live in a 'Hotel civilisation' one that is

[23] and in consequence the material and human resources used during design and manufacturer

'obsessed with comfort, convenience, contentment' (West in Silver, 2006). Where the intricacies of life (the mess and the mundane drudgery) are hidden or non-existent, care and maintenance rituals are kept to a minimum (Von Busch, in Fletcher & Tham 2014). This indicates that 'time' is not just a physiological barrier to mending, but also psychological, one that does not fit with the notion of 'convenience'. A view that is echoed by Middleton: 'I contend that the real obstacles are psychological and systemic in nature.' (2014:263). Consequently, the excuse, 'lack of time' should in fact be considered deceptive, one that is as tied up with social beliefs as time management.

2.4.4.2 Mending Drudgery

Mending is something that traditionally occurred behind closed doors, hidden from view, an invisible process to maintain respectable, serviceable clothes (Fisher et al., 2008; Middleton, 2014). One that is, 'Tedious, and thankless. Traditional mending is an emotional labour whose burdens and shames have been kept extraordinarily silent.' (Middleton, 2014:268), a domain held by women within the household, encompassing the soft textile arts (Burman, 1999; Spelman, 2002; McVeigh, 2012).

Mending tasks slowly disappeared, Lewis identified that: 'at some point during the post-war years the wages women could command crossed a certain threshold leading them to conclude that their domestic duties were an uneconomic use of their time.' (1984:218). Instead Middleton uses the analogy of the weight shifting 'from the mending basket to the shopping basket'. (2014:268). The chores are still there but the shopping basket is imbued with the enticing ideals of freedom and pleasure in contrast to the hidden and repetitive nature of mending. In part this gendering of sewing has led to gaps in technical skills being passed down as the rejection of mending was seen to be feminist liberation, or more likely apathy (ibid).

As the practice of mending declined the social stigma and shame surrounding mending and the mended garment magnified (ibid). These widespread negative connotations have meant that obviously mended garments were an emblem of poverty (McLaren, 2015. Durrani, 2018a). Repaired items, instead of advocating resourcefulness, or respectability are seen to symbolise hardship, or be associated with alternative communities separate from mainstream culture. Consequently it is no surprise that Gwilt's research discovered that people want to preserve the garment in its original state therefore repairs tend to be hidden (2017). These deeply rooted beliefs (developed over approximately the last hundred years) surrounding mending may be difficult to break free from completely, or even return to. Perhaps a new philosophy should emerge to dispel the negative connotations and engender the positive. This question is explored further in (section 2.7), to piece together a more appropriate philosophy of mending.

2.4.4.3 Declining Competencies

Fashion is an industry that thrives on change, novelty, individual and collective identity (Woodward 2007, Fletcher 2008). Yet users have become passive consumers of clothing due to consumerism's dominance over fashion provision in recent years. Leading to the loss of technical ability, knowledge and motivation handed down through generations, necessary for the maintenance and repair of garments (Gwilt, 2017). The practice of mending has largely disappeared and is amplified by the profusion of cheap products that remove the incentive to maintain and repair, making the skills redundant. (Cooper, 2010; WRAP, 2013). Garments are no longer valued possessions to be looked after and maintained, in the domestic space or by professionals (Gwilt, 2017). Once a familiar feature on the British high-street repair services are also often being marginalised due to decreasing demand and cost (Middleton, 2014; Gwilt 2014). Therefore, the craft and sewing skills necessary to mend are disappearing through loss of necessity, education and time. Gwilt discovered that: '[a]side from sewing on buttons or stitching up hems there is little evidence of repair work being undertaken as a normal, regular activity within a household.' (ibid:2). Laitala discovered that over a six-year period, there had been a reduction in mending practices[24] (including activities such as re-sewing a button) (2018:8).

Sennett believes that: 'Repair is a neglected, poorly understood, but all-important aspect of technical craftsmanship.' (2008:199). Implying people may no longer understand how to maintain or care for their clothes. These skills and domestic rituals that are disappearing imbue value into clothes. They help us to preserve connections with them (Gregson & Crewe 2003), suggesting that a garment you have repaired has increasing significance to the wearer. Crawford agrees arguing that: 'The Craftsman is proud of what he has made, and cherishes it' (2009:17). This philosophy implies that understanding the processes involved in garment construction would increase the value of items from the wearer's perspective. However, the tacit knowledge that a craftsperson has, is very different to the skills needed for everyday dressmaking, maintenance and repair in the home. In fact Twigger-Holroyd found that people often do not like or wear garments that they have made, as they are aware of the faults within (2013). To overcome these concerns with homemade garments, Twigger-Holroyd used mass manufactured garments as a starting point to reknit[25] portions (ibid).

Durrani has observed mending workshops and offers insights into these mending practices, discovering the 'importance of and the need for supporting informal learning platforms aiding transitions in user practices towards pro-environmental routes.' (2018a:2). She doubts that media campaigns, reintroducing sewing skills into the school national curriculum and easy access to online

[24] a majority of the respondents had reportedly performed some mending tasks

[25] or stitch-hack as she referred to the technique

video tutorials, would ensure an uptake of mending practices (ibid). To warrant a widespread proliferation of mending the connotations of drudgery, gendered domestic roles and the social stigma surrounding the outcome, need to disappear and the overall quality of clothes to be repaired needs to be increased.

2.4.5 Summary

- The practice of mending has reduced in recent history, but there is little evidence to suggest exactly by how much (Laitala, 2018). Mending is a gendered process typically performed behind closed doors, in the domestic sphere.
- Clothing practices have changed directly affected by the prevalence of cheap goods.
- Many factors have decreased the prevalence of mending including industry practices such as 'fast fashion' and social stigma (e.g. drudgery, gender and poverty).
- Knowledge, often traditionally passed down through generations, is being lost
- Readily available cheap low-quality goods have caused a profound lack of care for garments

2.4.6 Conclusion

The notion of mending is something that is currently seldom practiced due to a multitude of psychological and material factors predominantly driven by our escalating relationship with low-cost poor-quality goods. This is confirmed by research developing predominantly within the UK and Scandinavia that 'practical, social, socioeconomic, systemic and psychological barriers' (McLaren 2015:1) inhibit even simple repairs (e.g. Goworek et al., 2012; Laitala & Boks, 2012; Fletcher, 2013; Armstrong et al., 2014: Middleton, 2014; Cooper et al. 2014; Gwilt, 2015: McLaren 2015). People do not mend because there is nothing to mend and no need to, or as Middleton's obstacles to mending: consumerism has driven repair obsolete and fast fashion is not worth considering mending (2014:266-267). The barriers to mending are deeply entwined in our consumption habits, identity creation, social norms and intimate wardrobe behaviours. Although significant hurdles to mending are; time, skill and cost (Fisher et al., 2008; Gibson and Stanes, 2011), these could arguably be only superficial arguments to the root cause of mending inertia.

Middleton contends that:

> *'Many basic mends require but a needle and thread. It is not about time. Iron-on patches, strips and bonding powders make some mending jobs almost instant. It is not about skill. Mending has, perhaps, the lowest entry level of all crafts and is based on improvisation. Lack of skill, time and cost are the reasons most commonly cited for the demise of mending and, granted, these obstacles loom large at the very contemplation of repair.' (2014:263).*

Perhaps awareness (of mending or to mend) is significant. Mending is often invisible, within both the act of mending and the outcome, therefore the process could often be overlooked, or not even considered. Unless you have some familiarity with time saving mending devices or been in a local craft or sewing shop these mends are unlikely to be performed as the tacit knowledge required is unknown and unfamiliar.

The barriers to mending practice explored by the review so far seem to be a complex interplay between:

- the documented easy to explain quantifiable or explicit obstacles (practical and socioeconomic)
- and the intangible crux (social, systemic and psychological) inhibiting repair (McLaren, 2015).

As can be seen in the tables below illustrating the key barriers to mending uncovered in the literature (see Table 1 & Table 2).

Quantifiable explicit obstacles:

Practical (Processes)	**Skill:** loss of technical knowledge handed down by generations and in education
	Time (material): - increased quantities of clothing in our wardrobes mean that the time allotted to care rituals in households are taken up with laundry, drying, ironing folding and storing. Also, the threshold to wash garments has become much lower and the act of washing automated so less time consuming/less physical. Mending is no longer part of a routine activity.
Socioeconomic (Value)	**Necessity:** Consumerism and fast fashion have nullified the need for mending.
	Value: Availability of cheap poor-quality clothing. – fashion cycles
	Cost: The price of repair is often viewed as high in relation to a replacement (both by a mending professional in a repair shop or the time spent at home by the user)
	Time (economic): free time is valued so is often evaluated as a cost.
	Quality: Why repair something that is not durable?

Table 1. Quantifiable explicit obstacles to mending

The Intangible crux of mending obstacles:

Social (Community)	**Beliefs:** Social norms – expected patterns of behaviour within social groups, mending is not part of these patterns therefore is not done.
Systemic (Universal)	**Awareness:** that because mending historically was preformed behind closed doors, hidden from view and garments tend to rarely be mended, the prompt, or consideration to mend no longer exists
Psychological (Emotional/ Identity)	**Time (Psychological): -** the time required to repair an item of clothing is often very small therefore the perceived act of mending differs greatly to the actual practice. Acquiring a replacement would probably take longer than the repair, however acquisition is considered to be a leisure activity whereas mending embodies 'gender associated drudgery'.
	Value: mending is not considered of value to the construction of self, in fact it is probably seen as embodying negative connotations.
	Identity: Clothing embodiment/ construction of Self – notions of who someone is. That mending and mended garments are often perceived to contain negative connotations such as poverty or alternative lifestyles.

Table 2. The intangible crux of mending obstacles.

2.5 Design Strategies

Extending the life of clothing has a positive environmental impact if fewer resources are used (WRAP, 2012). WRAP suggests that interventions to best influence the length of life of clothing are found in the design and production of a garment (2013). However, although designers can produce products with greatly reduced environmental impact (Design Council 2002:19), this does not mean that users will maintain or reduce their existing use patterns.

	Implemented by
lengthening the life-spans of products by increasing inherent durability	design and industry
changing user behaviours	User, grassroots
encouraging societal changes	top-down; such as governmental legislation and incentives.

Table 3. Suggested solutions to change user's consumption behaviours (Cooper, 2010:8).

In order to address the important question of use patterns and user behaviour on the overall success of product life extension solutions, the strategies employed by design and industry need to recognise the importance of users and become facilitators for longevity (Cooper, 2010; Table 3). Cooper advocates that implementing these measures could slow the rate of raw materials converted into products and the rate they are 'used up'; essentially slowing resource use, a process termed 'slow consumption' (2010:13). Or when applied to clothing; 'slow fashion' a term derived from the slow food movement to stimulate interest in the quality and culture of food (Fletcher and Vittersø 2018). Which could see a shift to products that are crafted by skilled makers and users rather than produced in highly automated factories.

Mending is part of such a shift. This review has already shown user behaviours are directly related to industry practices. Now the thesis will focus on products, and how design strategies affect the continued longevity of clothing.

Physical durability	**the garment has been manufactured to last, to endure 'over a lengthy period under normal conditions of use without excessive expenditure on maintenance or repair' (Cooper 1994b:5).**
Emotional durability	**the wearer develops an emotional attachment to the product encouraging the longevity of the garment (Chapman, 2005:120).**

Table 4. Physical and emotional durability

Design for physical and emotional durability (Table 4, predominantly used in product design) can be a basis for sustainable design strategies 'the material side is needed as a starting point, but product attachment is needed for the user to keep on using and taking care of the garment.' (Laitala, 2015:94-5). Both strategies are troubled by the fickle user who may not wear or 'lack the desire to keep' the durable item, instead it could unintentionally lead to increases in accumulation and storing (Chapman 2010:61–62; Cooper 2010). Emotional durability will now be discussed further.

2.5.1 Emotional durability

What 'emotionally durable design' offers are garments that endure not because of the piece's physical durability but because of the psychological significance and emotional attachment between a user and a piece (Chapman, 2005 & 2015, Chapman in Moran, 2014:162, Haines-Gadd, 2018:2). Chapman suggests that '5 elements'[28], can be used to help achieve longer lifetimes, accumulating 'character and value through time.' (in Moran, 2014:165&6) Haines-Gadd developed the 5 elements model to form; the 'Emotional Durability Design Nine' (Table 5, Haines-Gadd, 2018:11&12).

relationships	**Forming positive connections between user and garment.**
narratives	The shared story between garment and user.
identity	Encouraging self-expression such as; personalisation and customisation.
imagination	Feelings of enjoyment or 'creating a little magic'.
conversations	The interaction between user and garment.
consciousness	The quirks of a product that suggest its 'own character'.
integrity	'honest and authentic' garments designed for repair.
materiality	Items designed to age well, develop patina
evolvability	Designed to adapt, possible multiple lifetimes

Table 5. Design factors of the 'Emotional Durability Design Nine' Framework (Haines-Gadd, 2018:11-14).

These themes are 'design factors' that can encourage users' behaviours towards longevity (Haines-Gadd, 2018:12). The factors most relevant to the thesis are:

- In green: - narratives and relationships – why items are kept in use (see below & p37)
- In gold: - integrity and evolvability – mending these valued items (p36).

[28] narrative (shared experiences), consciousness (viewed as autonomous products), attachment, fiction (not just physical connections) and surface (patina) (Chapman in Moran 2014:165 & 6).

Chapman suggests that emotionally durable objects (denim items such as jeans are a commonly cited example) can possess 'meanings which evolve and grow with the users, ensuring that subject and object grow together' (Chapman in Cooper 2010:70). Whereas 'failed relationships' could be due to the user changing, whilst the garment remains the same (Chapman, 2005; Connor-Crabb, 2016). This suggests a tension between traditional mending practice: of envisaging to maintain the garment in its original state and developing attachments towards the garment.

While Chapman acknowledges that 'designers cannot craft an experience but only the conditions or levers that might lead to an intended experience' (2010:65). Implicating that however meticulously the garment is designed and made to engender attachment, ultimately it is the individual, the user, who determines the fate of the object. This is corroborated by Fletcher: her 'Local Wisdom' project discovered that within practices of use, durability was an outcome rather than the goal (2012a). Emotional connections can also be detrimental to garment use as they can signify a specific moment when wearing would destroy the memory, or the essence of the person (including smell) associated with it (Gregson & Crewe 2003, Towers 2011). Therefore, a fine balance is to be drawn between the amount of attachment that encourages usage, as emotional bonds can be sentimentalising (Middleton, 2014).

Another concern is that the creation of an emotional attachment is often idiosyncratic, it is difficult to determine what items the wearer may form an attachment with (Chapman, 2009). Such garments tend to be default pieces, ones that you feel comfortable wearing, and that encapsulate your identity (Woodward 2007). Therefore, I suggest that developing connections towards clothing on a personal, piece-by-piece basis, nurturing items as appropriate through mending and alteration could help to optimise lifespans at the individual level.

2.5.1.1 Summary

- Emotional durable design is a method of considering many factors at the design and production stage to try and encourage longer use stages.
- Emotional durability is a possible tool to help engender longer lives but it relies on a personal bond forming between the garment and the user, something that is difficult to predict at design stages. Or is an unintended outcome at any stage in the lifespan of a garment.
- The emotional value of a garment is fluid changing over time and can affect the frequency of use.
- Ideally to encourage extended use wearers should value their garments but not cherish them to such an extent as not to wear them.

2.5.2 Longevity

This research uses interventions on existing clothes, an area where little investigation has been done into the effects of increasing the durability of garments (Fletcher 2012b). To clarify this study is not focused on durable products rather how increasing the durability of existing garments affects the wearers connection to clothing, hopefully increasing the useful life.

These limitations show that to engender longer and more intensive use, targeting longevity instead of durability may be more advantageous and accessible for the user. The impact of the designer, then the user, on longevity will be discussed:

2.5.2.1 Designs Impact on Longevity

Design for longevity incorporates many complex considerations. Included are; design purpose, product properties, use behaviours, society and culture. Although the designer makes a meaningful contribution towards the interplay of use little is known about the practice of design for longevity's effect on use practices (Connor-Crabb, 2016). Therefore, it is important to deviate from a traditional designer and product user relationship of creating clothing to a more vibrant and diverse system (ibid). Before this is addressed aspects of longevity where a designer can make an impact are discussed:

Material Qualities

Design for durability is an important aspect since the durability (its quality in terms of materials and manufacturing processes of construction), can affect the products useful life (Gwilt 2017). Quality in terms of durability is easy to measure however users perceive quality to include factors such as price, brand, composition and touch (or how it handles). These elements are assessed along with aesthetic, intrinsic and extrinsic qualities to gauge an individual quality level (Laitala, 2015). Each factor is subjective and related to the wearer's core principles, experiences and beliefs. For one person a specific t-shirt might be considered 'good' quality whereas for another it might be inferior. According to Austgulen; users perceived that price, quality and clothing durability as important purchase factors compared to environmental concerns (2013:4). Many of the respondents felt that the acquisition of fewer clothes and repair of clothing is preferable to buying eco products or better laundry habits (ibid:3)[31]. Showing that a reduction in acquisition for environmental concerns is broadly acknowledged. Yet an inertia for changing the status quo illustrates how strong the cultural

[31] A survey conducted in five European countries on 'Consumers' attitudes towards Eco-labels' including England of approximately 1000 respondents in each country (Austgulen, 2013).

and societal pressures for consumption of clothing is.

Fit for Function

The relationship between durable and functional is explicit; there is no point having durable clothing if it is not functional and fit for purpose. However:

> *'[T]he value that is placed on the durability, and the functionality of a product can be different. While functionality plays a critical role during use, durability [⋯] may prove to be a less important consideration.' (Gwilt, 2017:2).*

This is in part due to users finding garments last as long as they are expected to (ibid), expectations that are often more relevant to the cultural norms than the garment itself. Therefore, how do wearers keep the garment in use with truncated expectancy especially as evidence shows that the functional needs of a garment change over time? Consequentially there is a need to offer the ability to change clothes, to enable a continued 'functional service' to extend lifespan via: domestic mending, through high-street repair services and industry (Cox et al., 2013).

From Closed Systems to Repair-ability

Historically clothes were repeatedly repaired, amended to fit the changing body of the user or users, or reconstructed to adhere to changing trends. Gwilt explains: 'designed and developed especially to accommodate later repair and alterations' (2014:3). Detachable areas allowed for ease of maintenance and repair (such as removable bodice sleeves and shirt collars – original forms of modular garments). Large seams allowed for areas where fabric could be appropriated for a patch, or the thread taken to intricately weave new portions of fabric over holes and tears. Garments were 'open' in nature allowing the process of mending. As industrialisation, consumerism and fast fashion began to dominate to reduce wastage and create greater efficiency in the manufacturing process the open nature of garment construction slowly disappeared. Ready to wear clothing meant the user no longer made or fitted their garments, so subtle changes probably went unnoticed, such as: selvedge depth, or trouser waistbands were no longer easily adjusted. Garments (especially fast fashion) are seen as complete or 'closed'; inaccessible for tinkering, recognised only in their finished structure, upholding the belief that clothes are expected to retain their 'newness' (original, undisturbed state) (Fletcher, 2008:187; Rissanen, 2011:129; Middleton, 2014). There is no wonder therefore that mending practice is negligible when societal norms, material goods and consumption practices are against the process. To counter this Rissanen suggests that clothes should have in-built

straightforwardness of repair, designed for disassembly[32], guiding wearers to mend them themselves or use local facilities in collaboration to extend their longevity (2011; Connor-Crabb, 2016). As people change over time, should designers be encouraged to design in 'openness' to facilitate repair and other scenarios (including: adaptability, modular, multifunctional, changing shape, trans-seasonal and trans-functional) allowing 're-shaping' to evolve with the wearer? (Shove, 2007; Durrani, 2018b)

Whereas Gwilt believes that there is 'a potential to improve signposting to after-care service and repair' (2017:8), her studies have shown that a user's competency for repair is often derived from family members and developing this knowledge takes time and dedication. Therefore, the signposting could be used as an interim before general mending uptake. Also important are pouches of spare components and scraps of fabric or yarn at point of sale, to encourage the perception that the garment is worth mending.

2.5.2.2 User Behaviour's Impact on Longevity

As has been discussed, behaviour is a key obstacle to mending. Many people are normalised to disposability and do not want to leave the perceived culture of 'convenience, comfort and pleasure'. Therefore how can longer lifespans be encouraged, when they may involve a greater input into the everyday care and maintenance rituals? – the emotional value of clothing has already been discussed (see p **Error! Bookmark not defined.**) and Gwilt has already argued for the notion of 'care' (see p 25) but how care fit with clothing longevity?

Emotional Value

The literature on emotional attachment and engagement of clothing use is expanding (Laitala, 2015; Gwilt, 2017; Fletcher, 2016; Connor-Crabb, Niinimäki & Koskinen, 2011; Niinimäki & Armstrong, 2013; Armstrong, 2016 and others). It advocates that emotional attachment is a potential pathway towards extending garment lifespans. Gwilt advises that it is difficult to determine how frequently items are used (2017). Whereas Laitala's research points to the emotional value of a garment as a fluid process, where favourite pieces progress through different phases of attachment: often frequent use occurs at the beginning of the relationship, corresponding to user satisfaction (2015). Then over time the frequency of wear often diminishes as the attachment rises; the longer garments are used the greater likelihood connections or memories form to events, places and people (ibid). Attachments have been revealed as complex, multi layered factors shaped by memories and

[32] Products that can be effortlessly reduced to components, and then can be separated into their individual pieces. A method 'where the designer ensures that the constituent materials can be reclaimed for reuse at the end of the product's life' (Sherburne in Blackburn 2009:19).

associations within personal and emotional ideals, in addition to identity construction (Niinimäki and Koskinen, 2011). These highly valued longstanding items can become unworn mementos stowed away (Niinimäki & Armstrong, 2013; Laitala, 2015). This suggests that there is a finite period where attachment is a positive attribute to clothing use. This phase, as with our wardrobe routines, is individual and complex. Therefore, the challenge is how to prevent the formation of keepsakes to maintain and extend use within specific degrees of attachment. To increase longevity, clothing should remain within the realms of frequent use, between items that are of little intrinsic value; uncared for, forgotten, and items held with such esteem they have become relics. Could mending offer a solution to maintain garments within these boundaries? Expansion of the bond between garment and user could form a nurturing, caring relationship instead (Niinimäki 2015).

Care

The care practices of the user greatly affect the lifespan of the garment. Unlike emotional attachment, values that ebb and flow through interaction, Gwilt states that "caring' involves action.' (2017:4), a process of looking after possessions. Walker suggests that items that have engendered attachment in turn become 'worthy of our care' (Walker, 2006:49), therefore the motivation to care in this sense requires a garment to be valued; however, can the banal unloved frequently used sock provoke a similar response (Gwilt, 2017)? The encouragement of care, and in consequence mending practices of cherished garments could beget a practice of a care mentality that encompasses all items.

Within the practice of nursing Jean Watson coined the term *'carative'* and recommended *'10 carative factors'* within caring for patients (Watson, 1985:7), while Blustein described four approaches of care, which Shaw identified as: affection (attachment), responsibility, commitment and benevolence (Blustein, 1991; Shaw, 2015:255). Choi suggests that these methods can be transposed onto products becoming 'attributes' to understanding or enabling 'care-giving behaviour.' (in PLATE 2017:84). Therefore responsibility, commitment and benevolence as well as attachment are areas that could be researched further within engendering garment longevity. Niinimäki agrees suggesting that emotions are significant in the process of commitment (2011). However, it could be argued that the dominance of fast fashion systems with inherent disposability (of clothes) negate these attributes. In consequence the affection of a garment is the most pertinent, to be used as a springboard to rebuild the other forms of caring towards clothing. Hence it is:

> *'through "good" design there is an opportunity to establish an emotional bond or attachment between user and product that together with associated practices of care can help sustain and extend product lifetimes' (Gwilt, 2017:1)*

2.5.3 Summary

- Design and the fashion industry are important facilitators for clothing practices. Although durable well-designed products can be designed and made, this does not automatically engage the user to the product or prevent further purchases.
- Ultimately the users decide how they care for their clothes, they determine the period and intensity of use.
- Design strategies applicable for mending include: slow fashion, durability, fit for function and repair-ability. The level of impact will be blurred due to the unpredictable nature of the consumer and will take time to implement.
- Therefore, addressing the user and the factors that evoke emotional, caring and nurturing behaviour, on existing products could have greater and more instant impact over reducing resource use and engendering behaviour change.
- Although the design affects the style, fit and quality of the garment it is the user who ultimately decides whether to mend the garment. Therefore, design and use are interlinked and perhaps the designer should consider themselves as facilitators for use.
- Mending is consequentially an important factor within the transition towards sustainable futures.

2.6 Mending as a Tool for Longevity

Design can make improvements to clothing to affect the durability, quality, function, and repair-ability. These steps may increase the likelihood that individual owners will instigate mending practices to increase longevity. However greater understanding of wearers' behaviours and use of clothing is essential (its contexts, the routines, social norms and values (Laitala, 2015), to design or expand existing systems of clothing longevity to prevent more durable clothes suffering unnecessary short lives. This section discusses how mending can be used as a tool to facilitate collaborations between industry and user.

Unlike food and pharmaceuticals, clothing rarely includes expected lifespan information, leaving the decision to the consumer to evaluate the use period, who often uses indicators such as price or brand that do not reflect the durability of a product (Laitala & Klepp, 2013). In fact, establishing the lifetime of an item may be difficult for users (Cox et al., 2013). From Laitala's research into clothing use through disposal habits, she has described 'four essential design aspects emerge for expanding clothing lifespans.' (Laitala, 2015:104). These are:

- improved technical quality (promoting durability),
- silhouette design (improving user satisfaction through better fit, design and versatility),
- services (garment maintenance),
- systems design (to improve or create communication systems between, design, production use and disposal e.g. environmental labelling such as carbon or life expectancy) (ibid).

The first two aspects are design based and are easy to implement through current design processes. Arguably the third aspect is the most essential to implement, users needing to act, changing their use behaviours and using clothes with greater care and awareness. In fact, they need to become active users, facilitating and implementing Fletcher's notion of the 'Craft of Use' (2012a).

Design, especially good design, although an important attribute in the initial acquisition process, does not necessarily correlate with longevity. Fletcher documented clothing longevity in the 'Local Wisdom' project discovering that a garment's life was not extended deliberately because of the initial design, but rather becoming so in inadvertent ways (2012). Laitala's findings concurred: a respondent had an often-worn item which the wearer had never been happy with for over sixteen years (2015). It was a purely functional piece of clothing (dressing gown) that the wearer had no alternative to wear, without emotional attachment.

Gregson and Crewe consider that researchers have little insight into our understanding of wearers' emotional connections to wearer-garment relationships and how they evolve over time (2003:145). Fletcher and Laitala agreed that there is little understanding of what people do with their clothes (2014; 2015:95). Although research in this area is steadily growing (Fletcher, 2014; Middleton, 2014; Laitala, 2015 & 2018; Connor-Crabb, 2016 & others). The data often relates to one aspect such as connections to lifespan, use or disposal practices. A much deeper understanding is needed and approached at all angles to find possible, achievable and scalable paradigm shifts in behaviours.

Fletcher contends that the fashion industry, although making small steps towards addressing sustainability concerns, by reducing the impact of each garment in the manufacturing process, needs to amplify and adapt these changes. The benefits per garment are lost when industry is in tandem escalating production and sales (Fletcher and Tham, 2014; Cooper, 2013; Connor-Crabb, 2016; see 2.3). Industry seems stuck in its current model (driven by profit) and needs the 'consumer' or rather 'user' to act showing how relationships with clothing and products should

change. However, there is little documented work available covering this remit (Connor-Crabb 2016) other than research offering suggestions to adopt in design and manufacture (Gwilt, 2014; Laitala, 2015), or for users to adapt (Fletcher, 2014). Consequentially the use of a garment is considered separate, removed from product origination.

There are however, examples of products that at a grassroots level have slowed the 'make-take-waste paradigm' (Durrani, 2018a:1). Consider the smart phone[33] where, incremental improvements have narrowed between models, high costs, personalisation and intimate data stored (such as photos, messages) have slowed upgrade rates dramatically (Arthur 2017). Purchasers often opt for refurbished or older models (Bonnington, 2018), using them for longer and replacing only when broken.[34]

What motivations could affect a similar change in clothing use? Rissanen suggests 'a shift from sustainable design to design for sustainability. Calling for design that fosters more sustainable lifestyles instead of 'sustainable' products.' (in Gwilt & Rissanen 2011:127). Moving towards more sustainable garment use practices such as mending are recognised as supporting clothing longevity (König, 2013; Fletcher, 2014; Gwilt, 2014; Middleton, 2014; Laitala, 2015; Mclaren, 2015; Durrani, 2018a). Mending (an easily accessible often overlooked tool), is a positive method of extending a damaged garments life. In consequence repair and its relevance towards policy is becoming recognised in the UK (WRAP, 2013; Middleton, 2014; Ellen MacArthur Foundation, 2018), while in Sweden the government identifying consumer culture as a barrier to mending has cut VAT (Value Added Tax) on repair as an incentive towards mending (Orange, 2016).

Therefore mending, a practice traditionally performed at home by the user or a family member, could be a key area for the fashion industry and users to work together in the transition to form more sustainable futures (Durrani, 2017). This is an ideal entry point for collaboration between designers or fashion industry professionals to mix with users and form new beginnings around the boundaries of wear.

Research into 'grassroots' or 'user' focused understanding of longevity through mending has grown with the literature having expanded over the last few years. The methods used tend to be workshop based, challenging the myth that mending is an invisible act. Examples are: Durrani who investigates existing workshops or mending groups (2018b), Terzioğlu conducted four Do-Fix workshops that were not limited to textiles and detailed the phases of the repair experience (2017:409 see 3.3.2.3), Gwilt (2014; see 2.7), Middleton used public engagement the Sock Exchange

[33] To point out: distinctions between smart phones and clothing are that whilst innovations to smart phones have slowed clothing is ephemeral

[34] The inherently closed nature of smartphones means that other than replacing damaged screens, or batteries scant other repairs occur.

(2011) and for 'pop-up' (McLaren, 2015; see 2.7).[35] Projects such as Community Repair (Von Busch, 2011) and Local Wisdom which explores the Craft of use (Fletcher 2016), examine use practices within our homes and community. While others use their own practice, to address these issues: Middleton and her 'zero consumption Pledge in 2008' (2014:262) and Harvey with the department of Repair (2015).

This research is expanding our understanding of the complexities of mending by documenting both crafts of use that may have elements of mending (Fletcher, 2016) and existing mending practices (Durrani, 2018b) or facilitating mending (Middleton, 2011, Von Busch, 2011; Gwilt, 2014; and McLaren, 2015). Through this literature review a more comprehensive picture is forming of the delicate interplay between the barriers[36] and motivations[37] to mend clothing and its future ramifications, mostly with a slant towards design and industry. In terms of the mending process Durrani's observations of existing mending workshops led to an overview of 'the process of mending', examining the repair being performed as a design process (2018b:1743). Even though behavioural attributes and the mending process are intrinsically interlinked, the literature suggests that they tend to be researched separately. This merits further understanding to form a behavioural map detailing the motivations and barriers, surrounding the mending process. Further investigation might recognise the complex relationship of varying attributes (as often these can be both positive; motivations and negative; barriers). Also, although the literature suggests possible scenarios towards increasing mending uptake, there is scant research into how to foster and extend mending habits. The exception is Durrani who suggests the use of 'practice-theory' (2018c) as an approach to alter practices, Woodward reasoned that practice-theory is a useful tool towards understanding sustainable clothing practices (see 3.1.2; 2014).

2.6.1 Summary

- The lifespan of clothing is not explicit. It depends on the user
- Garments with long, extensively used lives often occur unintentionally
- Mending could be an opportunity for users and industry to collaborate towards longevity

[35] Focus groups, (McLaren 2016), clothing diaries (Towers, 2011; McLaren 2016) and surveys (Gwilt, 2014) are used as auxiliary support to the findings.

[36] as discussed in mending within the domestic space.

[37] as discussed in this section and the next; durability as a strategy for sustainability & extending the remit of mending

- Legislation by UK Government through tax incentives could increase mending
- User focused and grass roots mending research is burgeoning yet the findings are often slanted towards design and industry.

2.7 Extending the Remit of Mending

Having discussed the literature around the barriers to mending, its historical context and where design is addressing longevity, a discussion of the literature surrounding the incentives and how the notions of mending practice are shifting follows.

Fletcher believes that, sustainability is profoundly shaped by clothing use practices, a growing area of research (2016; Laitala 2015; McLaren, et al. 2016, Whitson-Smith 2018). Their work suggests that users need to start taking responsibility for their actions as consumers, taking an alternative path as a counterbalance to the dominant field of consumer fashion, to become active-users. Within Fletcher's 'Local Wisdom project,' 'The Craft of Use' promotes 'good' use practices (2014) by documenting how volunteers have developed connections with specific garments that engendered 'good' use practices including mending. These adopt sustainable behaviours such as intensifying and increasing the use-phase (shared-use), or reducing a garment's impact (never washing) (ibid; 2016). Another example is Holroyd[38] who re-knits garments and adds treatments or stitch-hacks to add agency and engagement with clothing, maintaining relevance for the wearer (2014). Both sets of research document how practices such as mending expose the patina of life, personalising garments, which become forms of ownership rituals (Gregson & Crewe 2003). These practices weave connections towards the garment, ideally increasing the likelihood of use. Nevertheless, there is little documented evidence (other than Fletcher 2014 and Holroyd 2013) into how clothing interventions, such as mending practices, affect our connections with garments. Other studies have been based more on understanding the barriers and motivations such as: Gwilt's 'Make do and Mend' (to discover what people think and know about mending, the differences between non-menders and amateurs repaired outcomes and how they approached, and performed the mends (2014))[39], and McLaren and McLauchlan who initiated a group of 'Love Your Clothes' pop-up participatory mending (demonstrating predominantly darning and embroidery techniques to

[38] founder of the 'slow fashion' label Keep and Share.

[39] A second study; 'Caring for Places and Things' developed better understandings about how people care for their clothes (Gwilt, et all, 2015).

increase clothing longevity) events in Scotland (2015). A further study looked at understanding consumers' attitudes to longevity through focus groups and clothing diaries to understand the factors behind their routines (McLaren, et all, 2016). Connor-Crabb developed a 'prism of philosophical foundations towards clothing longevity' for designers within industry (2017). These separate studies indicate possible routes towards increasing longevity but do not investigate these ideas further, suggesting that interventions such as mending workshops could build on these findings.

As covered in the earlier sections mending has lost its foundation as a necessity to keep clothes in use and maintain appropriate levels of dress. The majority of damaged clothing tends to be discarded rather than mended. However, mending in some strata of society especially within craft communities, online and offline, is undergoing renewed interest 'in the creative potential of mending or altering garments' (Gwilt, 2014:2). Repairing has become a distinctive lifestyle choice, one that takes time and care, in contrast to our time-poor capitalist society. A resurgence of mending has occurred in part due to economic austerity measures,[40] fed by a nostalgic notion of 'make do and mend' and its inherent frugality (WW2 slogan, 1939-1945) (Lewis-Hammond, 2014) and for sustainability issues (reducing clothing's impact on natural resources) (WRAP, 2013). The 'mending' movement is being cultivated through Repair Cafés (such as: Repair Cafes 2018; Restart, 2018; Bristol mending circle, 2018), online communities (iFixit, 2018; the Good wardrobe, 2014), and academic research (Twigger Holroyd, 2013; Gwilt, 2014; Middleton in Fletcher and Tham, 2014; Connor-Crabb, 2017; McLaren, 2015; Durrani, 2017; & 2018; Craft of use, Fletcher, 2016; Fletcher, 2018; Laitala, 2015; Harvey, 2015; Terzioğlu, 2017). In consequence to this renewed interest in mending copious craft books, online tutorials and manuals have appeared, filling the knowledge gap, passing on, showing, or illustrating techniques and know-how, that would have been handed down over generations. These range from 'how-to guides' offering basic repairs for beginners to detailed manuals for complex sophisticated mends (Midddleton in Fletcher & Tham, 2014; Guardian how to mend series, 2014; iFixit, 2018; the good wardrobe, 2014; Ministry of Information, 2007). Some are encyclopaedias covering sewing and mending skills, to be used as initial guides to offer inspiration and support. Others offer an ethos, a different way of thinking and doing, not confined to mending such as Von Busch who released an open-source how to repair booklet and Twigger-Holroyd (who shares detailed instructions for three 'reknit' techniques on her website), reknit revolution, and artists such as Celia Pym (2008, 2017, Pym, 2017:564).

Mending is an inclusive fashion activity towards longevity for everybody, from Wonder Webbed trouser hems to intricate visible statements whose standards and expectations differ in line with the

[40] UK government introduced austerity in 2008

skill, aesthetic capabilities, and style of the mender (Middleton, 2014). Middleton in her research[43] discovered two distinct types of menders 'the remains of traditional practices, and the emergence of what I shall term 'new mending" (ibid:265). Traditional practices, to aspire to maintain garment's original state, include:

- **domestic**, performed in the home,
- **local**; repair shops or tailors on the high-street which are often part or linked to dry-cleaners and
- **industry**; retailers (traditional) who provide repair services for specialist or high-end clothing (such as Burberry, …)

Gwilt's findings adhere to this group:

> *'Historically, wearing repaired clothing was a signifier of financial hardship, and this idea continues to have an influence in contemporary society where one of the challenges to overcome is encouraging people to wear garments that have been repaired, particularly if the repair is visible. For many people it is still socially unacceptable to wear visibly repaired clothing.' (2014:5).*

While new mending is rooted in the visible, celebrating the pride, satisfaction and aesthetics of mending, a statement entrenched in ecological, social or, political belief (Middleton, 2014). In a counterargument to Gwilt, Middleton contests that:

> *'They [menders] are beyond the stigma of shame, because, frankly, in this age of overconsumption, no one needs to mend anything anymore. Pleasure overshadows necessity. The ability to repair redefines prosperity and can increase social status. The pauper is he or she who lacks the intelligence and imagination to repair.' (2014:267).*

To understand Middleton's 'new mender' the same categories: domestic, local and industry are explored in more detail;

- **Domestic (often singular)**, performed in the home (including as a leisure activity).

[43] her interest was not constrained to clothing

Mending's connotations with servitude or as Von Busch described 'power over' societies; specifically men's power and control over women and their domestic space and duties (at GFC, 2018). This has been inverted and is instead seen as a 'liberating feminist action' where the power model becomes one of agency, the power 'to do' (Middleton, 2014:265). The care and maintenance rituals surrounding our clothing is imbued with action and is consequently a method of empowerment stitching dissent against the dominant consumer culture and a tool in the armoury of 'politics of the 'new domesticity'' (Middleton, 2014:265, Fletcher and Grose, 2012). The ebbs and flows within our wardrobes become delineated[45] forming their own eddies where garments are repeatedly repaired, shared, swapped.

〈 **Local (community, grass-roots)**;

'rooted in the recent revival of sewing, knitting and crafting, the resurgence of the 'make do and mend' mentality, and, beyond fashion, in the fervent fixer community that has developed out of hacker and maker culture, ad hocism and craftivism' (Middleton, 2014:265).

To use Von Busch's power model the local implies a 'power with' or an alliance (at GFC, 2018) that the group (and the creation of the sum of the work) is greater than the individual. These online and offline communities such as repair cafés and mending workshops offer a relaxed environment where you can mend clothing as part of a group (Bristol mending circle, 2018).

Mending is no longer a practice to be performed solely at home. Mending groups[46] (online and offline communities) have sprung up, café couture shops offer workshops and skilled tuition to help educate interested individuals into the craft of caring and making[47]. These sewing workshops often offer mending classes along with basic sewing skills. One of the forerunners, the Sweat Shop Paris 2010-2012 offered both classes and pay per hour use of industrial machines (Davies, 2010). The café fostered active tinkering, engagement and enjoyment of and with textiles with new recruits often becoming regulars (Towers: experience as volunteer and book contributor 2010-2011). Significant Seams, another example in Walthamstow, London uses the practice of sewing to foster 'individual and

[45] no longer a simple acquisition, use and store then discard paradigm

[46] often not specifically textile orientated

[47] Fabrications; Hackney, The sewing café etc.

collective well-being' (2014).

- **Industry (large-scale, global);** Denim and outdoor brands tend to be the pioneers in this area. Kings of Indigo jeans, come with a repair kit, they have repair pop-up events and take back discarded garments for remanufacturing or recycling (K.O.I., 2018). Others, such as Nudie jeans offer free repairs for life and Patagonia has repair and care guides on their website with tour dates for their 'worn wear' tour, offering free repairs on the road (Patagonia, 2018; Nudie, 2018). While typically men's clothing brands such as Barbour offer reproofing and repair services at a cost (Barbour, 2018). These services are not always advertised and must be discovered, within their websites.

2.7.1 The Practice of Mending

Through Durrani's research into regular mending workshops and the people who attended in both Finland and New Zealand four types of menders were identified:

- restorers (capably performing hidden repairs),
- re-doers (visible often experimental repairs made with varying levels of competence),
- recruits (beginners with desire to learn)
- and the reluctants (hesitant to perform repairs themselves due to fear of spoiling garments, however often envisaging particular methods for repair through delegation) (2018b).

Gwilt's findings echoed these, that often the more creative mends were performed by novices and discovered that although 82 per cent of her survey respondents preferred hidden (or invisible) repairs (and the workshop attendees verbally confirmed this), their finished repairs tended to be visible (2014). This suggests that on the whole menders aspire to maintain the original appearance of the garment if they have the skills to facilitate this and when given free reign and access to creative inspiration, a variety of resources and technical guides unique visible solutions can occur. These everyday creations and improvisations to keep clothing in use 'are not always exceptional or loud but can also be found in the mundane, the subtle, the hidden, and the ordinary.' (Durrani, 2018b:15).

As one of Fletcher's research participants stated in the Local Wisdom project: 'Mending is minding' (2016:247): to be able to mend we need to contemplate, diagnose the problem, then work out how to solve it exploring with the sense of touch as much as with the eye;

> *'It works with a similar mechanism of influence as mindfulness and its attention to the present-moment, to savouring experience, which in*

turn reduces desire for external pleasures that depend on money and material goods.' (Fletcher, 2016:257)

In a society where we rarely create or produce things with tangible results, the act of sewing and mending can be a positive process (Crawford 2009), however Grose stipulates that these links, between making (or mending) and wellbeing are little documented (2013:54). Yet Helvenston found that mending provides a challenge that develops into a sense of achievement when accompanied with successful evidence of positive outcomes (in Burman 1999). The repetitive act of sewing also has a meditative quality and benefits the sewer; these benefits include cognitive, emotional and social wellbeing (Newberg 2011, Burt & Atkinson 2011). This combined with a reduction of consumption could increase our personal wellbeing suggesting as Jackson's 'double dividend' of benefits for both ecology and individuals (Connor-Crabb, 2017; Fletcher, 2016; Jackson, 2005). Middleton concurs stating that mending is a process that allows us to fit within our planetary boundaries 'of the material world and restores relations of care in the social world.' (2014:270). Therefore, the practice of mending has the potential not only to increase our wellbeing and our connectivity to garments but to our environment as well.

2.7.2 Practice Review

This review has exposed that mending is not practiced solely for the repair and maintenance of clothing, it is also a method used by artists, Textiles practitioners, researchers and craftspeople and mending or activist groups (see Table 6). The distinction between artists and craftspeople is often blurred as artists often offer mending tutorials alongside textile practitioners (Pym, 2020; at Loop, Raystitch and STORE School), and textile practitioners exhibit their work (Tom of Holland, 2020) or they form groups such as the mending collective founded in 2017 (Doreian, 2019). Often menders' favour either knitwear (Pym, 2017; Tom of Holland, 2014; Holroyd, 2017) or woven textiles (Hankaniemi, 2019 Geglio, 2019; Doreian 2019; & Comeau, 2020). However, textile practitioners on the whole repair items to be worn and artists mend to exhibit. Menders tend to have a lightness of touch a sensitivity with the material culminating in considered outcomes, examples will now be reviewed.

Artists	**Celia Pym, 2008, 2017 & 2017; Hannah Streefkerk, 2018; Merill Comeau, 2020; Heidi Hankaniemi, 2019, Helen Geglio 2019, & Leeza Doreian, 2019.**
Textiles practitioners, researchers and craftspeople	Tom of Holland, 2014; Holroyd, 2017; Bridget Harvey, 2015; Kate Sekules, 2020.
Mending or activist groups	Restart, 2018; Repair café, 2018

Table 6. Examples of practitioners who mend as part of their practice.

Mending is becoming more prominent within the art community with stand-alone repair exhibitions such as Somerset House's 'Boro: Threads of life' (Reece, 2014), 'To Do • A Mending Project'. Where the public was invited to mend (MCASD 2019) and 'Repair and Design Futures' (RISD Museum, 2018-2019). Other exhibitions include the 'Don't feed the Monster' questioned the environmental impact of the clothing industry, at Galleri 15 Moss, Norway (October – January 2019-2020) included work from Annemor Sundbø, Celia Pym and Tom van Deijnen/ Tom of Holland (Galleri, 2020). Also the V & A's 'Fashioned from Nature' Exhibition included a piece by academic and activist Bridget Harvey (2018-2019).

Pym is perhaps the most literal artist who mends, she repairs items of clothing chiefly by darning knitwear into wearable states, an example is a sweater from Annemor Sundbø's ragpile[56] which visibly details what was missing, she is interested in the storytelling properties of the garment and adding to them by mending (2008, 2017, 2017:564). Her work has been exhibited predominantly in Europe, Japan and the USA for almost twenty years. Whilst other artists such as Heidi Hankaniemi (Ingram, 2019) and Helen Geglio (2019) for example use woven textiles to form pieces of art removed from their original purpose often offering hints of what some of the components might have been. Hankaniemi, like Pym is fascinated by narrative restoring value to unused textiles (Finnish born she lives in New York and has exhibited in Europe and America and has featured in many publications. Ingram, 2019). Geglio, uses domestic textiles often in Boro technique to create hand embroidered pieces layered, appliqued and quilted (USA based, her works have been exhibited throughout the USA for over seven years. 2019).

Mending is not always constrained to textiles as Hannah Streefkerk (from the Netherlands, 2018 & 2019) work demonstrates (Hankaniemi also has performed a series of actions entitled 'Fixhabit' in New York, 2020). Streefkerk uses traditional mending techniques; darning, patching, blanket stitch within nature to repair such as her mended traces work in 2018 where drill holes were repaired by

[56] a huge collection of knitwear salvaged from her Norwegian shoddy factory (Pym, 2017)

red rope. Time and its effects; including the fragility of nature, our responsibility to protect nature and lesson environmental impacts, for Streefkerk is dominant in her recent work, highlighted by her choice of intervention, a time-consuming intricate method to mend. Her work holds similarities to British artist Andy Goldsworthy who creates time-based site-specific instillations using nature (2007).

Tom of Holland (Dutch, Brighton UK based) is a textiles practitioner who scripts a detailed 'visible mending program' online blog predominantly in knitwear, exquisitely repairing and adding to the garment's narrative. He mends to commission, runs visible mending workshops and volunteers at the Repair Café Brighton (2014;). Sanae Kido runs similar 'textile surgeries' and Noguchi visible mending workshops in London (2020) both work with knit and wovens, whilst Holroyd[57] (Nottingham, UK Based) provides resources to reknit garments online (2017; see 2.7.3 for visible mending).

Mending practice is often performed in groups, an example is Essex Road[59], where there are two sewing shops. Ray-Stitch which offers all the necessary materials, tools and accessories along with sewing classes and repair courses[60] (Ray-Stitch, 2018), and Sew Over It[61], offers sewing and pattern cutting classes (2018). Sewing classes are offered country wide often in fabric shops, FE colleges and Women's Institute meetings (WI). These shops, courses and workshops although not specifically aimed at repair offer the facility to gain sewing skills that engender repair, with some gaining the cachet of 'cool' being part of the 'DIY ethic', 'maker movement' and 'fixer-movement' (Charter & Keiller, 2014; Charter, 2018). Expanding on people's thirst to make and as a reaction to people being unable to store large items that are hardly used, the 'Library of Things' in West Norwood London came into being[62]. It allows anyone to borrow tools from sewing machines to drills, and offers regular events such as repair parties within a sharing community, hopefully inspiring people to 'do' (Library of Things, 2018).

The larger repair groups such as the Repair Café International Foundation (RCIF) (Founded in 2012 in the Netherlands) and Restart (founded in 2013 in London) provide a global network of mending groups not limited to clothing (for example electronics). Skills are shared and volunteers teach people how to repair almost anything transportable (Repair Café, 2018; Restart, 2018). A global repair café survey discovered that clothing was the fifth most common item brought in for repair[63] (Charter 2018). They are often social enterprises such as, The Brighton Repair café (part of

[57] Designer, Maker, Researcher and educator.
[59] in Islington, London
[60] their online shop was founded in 2008 and the initial shop 2011 (number 99) with a recent move to a bigger premises in 2017 (number 66)
[61] created in 2011 and moved to 319 Essex Road in 2017
[62] in 2014 based on lending libraries in Berlin and Toronto (Library of Things 2018).
[63] with a kitchen appliance being the most common

the repair café network), 'a community of people learning how to repair their things [not specifically clothing] rather than dispose of them.' (2014). Alongside these networked communities are stand-alone workshops such as the mending circle based in Bristol at the Bristol Textile Quarter, which they market as an opportunity to network, seek support or collaboration, suggesting a coming together of likeminded makers (2018). Another example is Golden Joinery (started in 2006[64] (Sweerts, 2014), using the ancient form of Japanese Kintsgui to mend something by exquisitely highlighting the item's faults and displaying the passage of time (Von Busch, 2016; Golden Joinery, 2018). They offer collaborations in which participants repair their much-loved pieces with gold to 'celebrate imperfection', personalising and adding value through the narratives stitched to make truly unique garments. The finished articles are photographed and become part of the Golden Joinery portfolio.

Alongside the physical development of repair and making cafés, the Internet has seen a proliferation of websites that offer advice, and demonstrations on how to preform repairs. 'The Good Wardrobe' founded by Zoe Robinson, an 'online style-sharing community hub [which offers] services that prolong the life of your wardrobe' (2014). iFixit is also an online platform[65], that offers repair guides to a multitude of products (there are 245 for clothing), encouraging collaboration to upload your own 'iFixits' and the opportunity to purchase tools and accessories required for mending practice (2018). Their manifesto (originated in 2010) has a provocative tagline: 'if you can't fix it you don't own it' insinuating that if you do not understand how a product works, or its make-up you cannot possess it (ibid). Obby, an online teaching forum based in London launched in 2016, offers over 1000 workshops and classes within London on diverse subjects, building a learning community to inspire and support others (Obby, 2018). Here a multitude of sewing classes (not specifically geared at repair) are offered. One such is 'clone your clothes' by the Fashion Box, who also offer freestyle sewing alterations and repair classes on their website (the Fashion Box, 2018). Through these spaces repair seems to be flourishing however little data has been collected to see whether these workshops have any effect on the participant's relationship to clothing.

2.7.3 Aesthetic Review

Mending historically was undertaken to be inconspicuous, to maintain acceptable levels of dress, however well-worn garments over the centuries have been visibly patched and repaired (see 2.2.1). The level of visibility was determined by the competence of the mender and materials to hand (see

[64] in the Netherlands by Margreet Sweerts and Saskia van Drimmelen.
[65] in 2003 by Kyle Wiens and Luke Soules in their university dorm in California tried to repair an iBook and iFixit was born (2018)

2.2.1). Historical examples in comparison to contemporary visible mending highlight the development from hidden (to maintain and keep in use according to the standards of the time) towards a purposeful visible nature (such as contrast threads, fabrics), of adding to the garment's narrative.

Visible mending can be as simple as darning a hole in a jumper with a contrast thread to elaborate embroideries, applique and reknitting to repair damage. These mends can be subtle or conspicuous becoming the focal aesthetic of the garment. As visible mending has become more mainstream, newspapers such as the, New York Times, The Guardian, and the Financial Times have heralded the return to mending (Kurutz, 2020; Lewis-Hammond, 2014; Helbig, 2018; Sawa, 2020; Finnigan, 2020).

Contemporary mending, especially visible mending is undertaken for different reasons from the past (Connor-Crabb, 2016). In fact, Middleton contends that mending is a form of activism: 'To reveal is to make political.' (Middleton, 2014:268). A notable use of clothing as a political statement is the slogan t-shirt (devised by Katharine Hamnett in 1984)[66], which provoked conversations – something that visible mending (an aesthetic proclamation of the wearer's beliefs) however subtle – can engender too. Therefore, I suggest that visible mending is a quiet rebellion against fast fashion, towards longevity and post-growth sustainable economies, or as Sarah Corbett coined the phrase 'the art of gentle protest' (2017).

Punk is a noisier counterpoint to visible mending, however as Westwood states 'Climate revolution is punk. […] [W]ith ideas more developed, more solid, and hopefully more earth-changing' (2014:133). In this way perhaps, invisible mending could be seen as a refined, version of punk. Punk originated as a youth cultural rebellion on the street a philosophy of 'anti-fashion' in the early 1970's (Worsley, 2011; Lister, 2015). British pioneers of punk were Vivienne Westwood and Malcolm McLaren who clothed the Sex Pistols an influential British punk band from Westwood's shop SEX rebranded in 1974 (Westwood, 2014:157). Punk fashion was accessible to all and easy to modify existing garments by intentionally slashing, creating rips and tears and safety pinning together, an example is a Sex Pistols 'God Save the Queen' t-shirt from 1977 which has an image of the queen with a safety pin in her nose (ibid:177).

[66] as a reaction against American nuclear cruise missile s over Europe, Hamnett's message used Margaret Thatcher's (the UK prime minister at the time) greeting for publicity (Hamnett, 2018).

2.7.3.1 Deconstruction

As mending naturally uses damaged garments to repair them to a useable state, the mends can often echo the deconstructed fashion aesthetic. Arguably deconstruction (or even Punk) in fashion can go back as far as the late sixteenth century when slashing the top layer of fabric was fashionable (Boucher, 1996:238). Deconstruction in fashion began in Antwerp in the late twentieth century by a group of six designers including; Ann Demeulemeester, Dries Van Noten, Dirk Bikkembergs and Martin Margiela (Worsley, 2011). The movement exposed the hidden aspects of clothing by leaving unfinished hems with raw edges, turning garments inside out to expose seams and tapes, revealing the art of fashion construction to wearers (Volpintesta, 2014:95). This movement has had a lasting impression on wearers' attitudes to clothing; unfinished, reconstructed and torn areas of a garment can be seen as beautiful (ibid:97). Deconstruction could arguably have changed how menders perceived repairs, as leaving visible traces of the garments mend echo's the ethics of showing off the construction of a garment that a garment is no-longer seen as 'perfect' and un-tinker-able (ibid:96). Leading to an emergence of visible mending being not only acceptable following deconstruction aesthetics, but also a fashion statement in itself. However visible mending differs from deconstruction in that the nature of the mend cannot often be mass manufactured and mending techniques are often handcrafted leading a method of personalisation that cannot be bought, a way of showing of your repair (Kurutz, 2020). Therefore I suggest that the deconstruction movement enabled visible mending to become seen as an acceptable aesthetic. Kate Sekules' mending seems to adhere to these aesthetics, using deconstruction, punk and political narratives in her work (2020)[67]. Mending is by nature; personal aesthetically and politically, often hand finished and imperfect in contrast to mass manufactured clothing. Or as Spelman states; 'Repair is the creative destruction of brokenness.' (2002:134).

[67] Sekules is a mending practitioner and researcher bringing out her book: 'Mend! A Refashioning Manual and Manifesto' later this year (2020). London born but living in Brooklyn Sekules founded Refashioner in 2009, a digital clothes swap (2020) and the Visible mending webpage (2020)

2.7.4 Summary

- Mending and increasing longevity of clothes are becoming more popular research topics and in consequence there are varied interventions occurring which are often UK or Northern European based.
- Mending is practiced by a huge variety of people from renowned artists, crafts people, activists groups, through to the general public.
- Visible mending often echo's the ethos of deconstruction and punk aesthetics frequently seen as a badge of honour or a political statement of the menders beliefs.
- Grass roots DIY and 'fixer' communities are blossoming with 'repair cafes' springing up globally.
- Within this buoyant craft community mending clothing is often seen as visible. These mends document the pride, satisfaction and aesthetic choices the wearer brought to their garment. Mending is still occurring in the traditional domestic sphere but has branched out into local grass root spaces.
- Some pioneering brands are transforming mending within industry.
- Mending can be a used to increase a user's sense of wellbeing. The repetitive nature of hand sewing has meditative properties. The benefits of spending time outdoors within nature is well documented so mending could be used in combination with nature to increase wellbeing.

2.8 Conclusion

Historically clothing tended to be repaired for the following reasons: necessity, frugality and maintenance. These motivations are no longer such important drivers, rather active choice, political views and sustainability factors may play a bigger role in the decision to mend. Although mending is a route towards sustainable behaviour, environmental concerns do not seem to be a key driver to repair. The literature review suggests that the main barriers to mending are psychological, quality, cost and time.

The developing literature is beginning to give a more comprehensive picture of mending and the juxtaposition of, a basic act with little skill or material requirements and the complex social, systemic and psychological factors surrounding the process and outcomes. However, there is an opportunity to map out these factors further (including motivations, barriers and triggers) and aid the understanding of how we can affect these habitual often innate behaviours and foster change.

The academic research mainly focuses on mending workshops (especially pre-existing) as a route to gain understanding within this topic. I believe that we need to address and better understand our domestic behaviours in tandem and to be able to understand scalability, building from unconscious sustainable behaviour traits and the willingness of society to embrace change.

There is a gap in the literature regarding expanding uptake, initiating change and observing practices over a period of time which this thesis attempts to fill. I also believe that just as the types of menders have been broken down by Middleton and Durrani the practice of mending itself warrants further scrutiny.

Chapter 3

METHODOLOGY

Theoretical Framework

Research Design

The Research Structure

3 Methodology

3.1 Theoretical Framework

This chapter defines the theoretical framework behind the thesis and endeavours to set out relevant methodologies used by researchers within mending and related fields.

3.1.1 Introduction

Mending is a use custom set within larger systems of clothing use practices. The perspectives this thesis considered are:

〈 Sustainability theory:

Sustainability perspectives are integral to the research underpinning the questions and framing the research (see 2.3). It aims to reduce unsustainable products and behaviours and to facilitate sustainable solutions to flourish (Fletcher, 2012b). Many researchers investigating reducing resource use, such as mending and clothing use practices, do so through a sustainability lens (Twigger-Holryd, 2014; Laitala, 2018; Gwilt, 2014; Fletcher, 2016; Middleton, 2014; etc.).

〈 Material culture:

Material culture is the connection of clothing in respect to user practices. Any changes in wearer-garment relationships, behaviours, and habits through mending were analysed. Essentially using a garment to develop a better understanding of the user's attitudes to clothing (or a close-up lens). (see 3.1.2).

〈 Social practice theory (specifically applied to mending practice):

This is the study of interconnected often complex things, stories and technology. Within practice theory the process is looked at as a whole, rather than the individual component parts (see 3.1.3).

〈 Behaviour change models:

This study will investigate two behaviour change models: Fogg's B=MAP and the Behaviour Change Wheel: COM-B (2019; Michie, Atkins & West, 2014). Examining how the models work in relation to mending (see 3.1.3.2). These models are used to interpret my findings.

Material culture and social practice theory can be considered separate approaches for observing a user's relationship with 'things'. Both have been used to help develop understandings towards clothing use (Shove 2003; Woodward, 2007; ibid, 2015; Laitala, 2015; Durrani, 2018c). These distinctions and commonalities are explored within the proceeding sections, building up an argument for why both theories are appropriate for this research.

3.1.2 Materiality Within Material Culture

Material culture is the investigation of culture by examining man-made objects as primary sources in order to gain an understanding of the values, ideas and attitudes of a community at a specific time, to investigate culture (Prown, 2001). Prown (a renowned art historian and pioneer in material culture) states that material culture can be considered 'a means rather than an end, a discipline rather than a field.' (2001:70). This is demonstrated by Miller who uses objects as a device within anthropology to understand human behaviour (2012). Conventional understanding of artefacts within material culture is research into unchanging, fixed objects (Ingold, 2012:). Ingold contends that there are three complications with this stance:

1. The study of material culture is predominately set within the nonhuman material world or a man-made sphere operating at the detriment of ecosystems,
2. The prominence given to materiality is affecting the understanding of material movement and flows that are part of ecological systems.
3. Removing a 'thing' from its material sources and energy flows stops any further development of meaning (Ibid:428).

Ingold suggests that in fact material culture 'requires a change of focus, from the "objectness" of things to the material flows and formative processes wherein they come into being. It means to think of making as a process of growth' consequentially materials are in the process of becoming (Ibid:431 & 435). This position respects that materials such as clothing change, develop and mould to the wearer overtime, showing wear such as the outline of a wallet in the back of a pair of jeans. Thus mending is seen by Middleton as thinking '*from* materials, not *about* them' (Ingold, 2012:437; Middleton, 2014). This premise of understanding materials (or the ecology of materials) will be used within the thesis as an approach to help explore and understand the connections with the wearer.

Woodward's research is based on the premise that clothing is a type of material culture 'that is embedded within, and emerges from everyday life, relationships and wider consumption patterns.' (Woodward, 2015:131, 2007). Within this remit her approach tends to be ethnographic, in-depth and long-term (2015). However, in an article concerning accidental sustainable clothing practices

Woodward argues towards the use of social practice theory as a method of understanding sustainable consumption habits (ibid). This thinking has developed from Woodward and Miller's research discoveries into blue jeans that showed users were already practicing sustainable behaviours (2012). Practice theory has been used predominantly in understanding consumption habits (Shove and Pantzar, 2005; Warde, 2005 & 12; Woodward, 2015). As practice research has become an established method of understanding consumption habits and behaviour change towards sustainable practices (Hargreaves, 2011; Laitala, 2015) there has been a development of interest within academic research from social science and fashion (see, Shove 2003; Laitala, 2015; Woodward, 2015; Durrani, 2018c). The next section will therefore discuss social practice theory and its benefits when considering research into clothing behaviours and practices.

3.1.3 Social Practice Theory

This thesis looks at mending as a practice so it is important to contextualise this within social practice theory that dates back to Giddens[68] (1984:2). Social scientists such as Shove, and Warde have developed Practice theory (see also: Shove and Pantzar, 2005; Warde, 2005 & 2012; Reckwitz, 2002, Schatzki, 1996, Shove, 2003 & 2010), however there is no conclusive theory, yet each stand point focuses its analysis on social practices, the core unit of analysis (Schatzki, 1996; Woodward, 2015; Hargreaves, 2011; Durrani, 2018c).

Shove and Pantzar argue that the analysis of 'things' such as the acquisition and use is often unable to fully apprehend everything involved in the processes (2005:135). They move on to suggest that within research participants should in fact be considered 'active and creative practitioners' and areas such as purchase, use and discard are an element in a larger system (idem, 2005:45). Essentially it is the understanding of everyday routines and habits, concentrating on the practice itself rather than the user, the social structures or the material (thing) in question (Hargreaves, 2011:82). Therefore, the practice becomes the central component of analysis (Giddens, 1984:2).

Within practice theory contextual 'barriers' towards sustainable consumption patterns are not understood as the consequence of beliefs, values and attitudes, rather they are seen as 'embedded within and occurring as part of social practices' (Hargreaves, 2011:82; Warde, 2005). This is because

[68] who observed: 'the basic domain of study of the social sciences...is neither the experience of the individual actor, nor the existence of any form of societal totality, but social practices ordered across space and time.' (1984:2)

the routine everyday practices are habitual and often seen as 'unthinking', 'taken-for-granted' or being on 'auto pilot' (Slater in Shove, Trentmann & Wilk, 2009:219 & 220).

Although social practice theory has been developed as a tool to understand everyday practices surrounding a user's relationship with material things, it is also used as a method to observe changes of routine (see: Shove and Pantzar, 2005; Hargreaves, 2011; Durrani, 2018c for examples). Therefore, through investigating routines of daily life, a greater understanding of the subtle undercurrents of social change are gained (Shove, 2003:3).

3.1.3.1 Clothing Practices and Mending

Within practice theory the consumption of clothing is seen as entrenched within other social practices. Woodward believes that a more enlightening method of understanding sustainable clothing practices is to understand how people use them, or what people do with their garments (2015:135). Practice is seen as a series of repetitive actions or a routine (Warde, 2005; Shove and Pantzar, 2005). Mending and its reoccurring nature of repair to keep clothing in use can be considered a practice, a habitual cog in the maintenance and care system of garments. Woodward continues to explain that the materiality of clothing, in terms of construction and material properties are crucial to developing an understanding of these quotidian practices and rhythms (2015:136). This development of detailed ethnographies (through observation and description) to understand clothing practices (the 'why' users do what they do) and how they relate to other systems, routines and rhythms, enables researchers to explore and focus on 'how' they have changed, developed or been learnt (Ehn & Lofgren in Shove, Trentmann & Wilk, 2009:101). Therefore, researchers could discover more about concealed meanings of apparently unassuming routine behaviours (idem:102). Jalas moves on to suggest that not only do rhythms and practices 'establish and carry meanings, organise time and capture people [they] may represent a pattern that is more common than one might at first suppose.' (in Shove, 2009:204). This suggests that understanding the mending practices of a small number of people may help uncover more commonplace patterns of practice for the maintenance and care of clothing. Durrani studied this through researching mending workshops from a sociomaterial practice theory-based methodology (2018:4c). She commenced by researching the perspective from an 'outsider's' viewpoint, detailing the structure of the practice then 'zoomed in' to glean an 'insider's' perspective (ibid). Investigating both the 'insider' and 'outsider' viewpoint is important as it enables a more thorough scrutiny of the practice and helps to dispel bias from either viewpoint. Durrani's theoretical lens of sociomaterial practice is built on Gherardi's philosophy that the discourse (story and knowledge), material (garment) and the body (doing) are but 'expressions of the same sociomaterial world' (Gherardi, 2017:42). Therefore everything (the doing, knowing, material and the social factors) is researched as connected, not separated and as part of the act of practice (ibid).

3.1.3.2 Behaviour Change and Practice Theory

Practice theory is often seen as a tool in behaviour change towards sustainable practices and this section will now discuss the matters more thoroughly and why it is relevant to the thesis.

The traditional understanding of behaviour is 'the outcome of a linear and ultimately rational process' possibly because it allowed for a much more straightforward method to predict the result (Harrison and Davies, 1998:2). Bevir and Trentmann corroborate this stance, arguing that as a rational process behaviour should be the responsibility of the consumer (2007). Whilst Hargreaves suggests that the reason why it is so difficult to make changes in how we consume (patterns in behaviour) is 'our narrow view of social change'. (Hargreaves, 2011:80). Behaviour as explored in relation to clothing, is very complex and is difficult to predict or measure (Chapman, 2010). Humans are by nature messy, complicated and unpredictable. Therefore, Hargreaves suggests that we need to look more holistically at the problem and the incentives and increase the variables to generate change (2011). Therefore, if the changes of behaviour can be made at an unconscious level and ingrained as part of routine everyday practice it could be maintained for life (ibid). Consequentially social practice theory could be used as a method towards sustainable behaviours either to change (ibid) or to understand current sustainable practices (Woodward, 2015) or past practices that would now be considered sustainable (Wahlen, 2011:512). Or as Ward describes, 'the principal implication of a theory of practice is that the sources of behaviour change lie in the development of practices themselves' (2005:140).

To make these changes, existing practices must by implication be challenged then broken, in order for more sustainable practices to be re-made in replacement (Hargreaves, 2011:83). Consequentially it is important that the repeated acts of the practice are adopted to maintain the practice (Shove and Pantzar, 2005; Warde, 2005; Hargreaves, 2011). Therefore, in order to sustain practices, there needs to be a focus on 'communities of practice' (Wenger, 1998). To develop an understanding of the relationship between them, as within these groupings practices are continually transformed, negotiated, (re-)shaped and (re-)created (Hargreaves, 2011:96; Wahlen, 2011:512).

Social practice theory is a good approach or methodology to use to observe and comment on mending practice however for my research implementation and analysis further tools were deemed appropriate to use to help categorise and understand separate factors within mending behaviours. Two behaviour change models that I identified were (see Table 7).

	Why identified:
〈 **COM-B** The behaviour change wheel (Michie, Atkins and West, 2014)	This model has been developed for behaviour change implemented through policies for example. So, a model for top down behaviour change (government to consumer) offering different methods to entice the public behaviour change.
〈 **B=Map** Fogg behaviour model (2009)	Is a more straightforward model, based on introducing tiny habits to create behaviour change. A model for how to implement grass roots change.

Table 7. Behaviour change models identified.

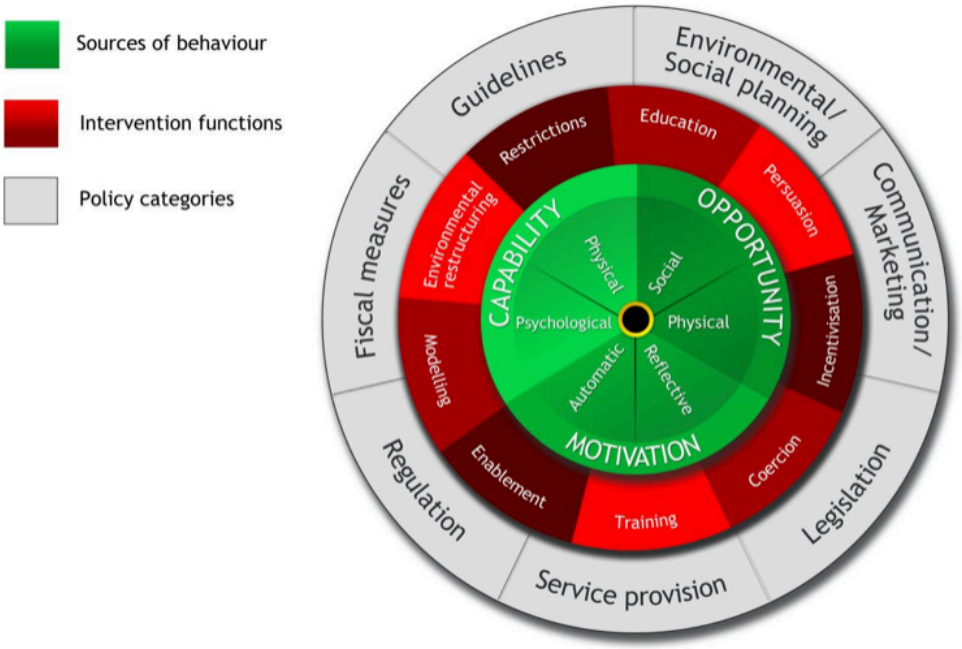


Figure 3. Behaviour change wheel COM-B (Michie, Atkins & West, 2014)

Behaviour, especially changing behaviour is complex, as can be seen through the behaviour change wheel (see Figure 3) designed by Michie, Atkins and West (2014). The wheel is a tool to help negotiate the complex arena with the central disk as the starting point. 'COM-B (capability, opportunity, motivation and behaviour) model' recognises that these elements of consideration are part of a networked system (or more factors) and that to adapt behaviour one or more of these elements needs to change in an intervention to help prevent the behaviour reverting (ibid). The middle ring has nine intervention functions to choose from and then the brim of the wheel, contains seven policy categories that can provide support with the intervention delivery (ibid).

Using the COM-B model the preliminary study's Wear > Craft > Mend workshops required the participants to be **motivated** to mend (to want to learn how to mend), while the participants' opportunities and capabilities to mend were changed through the workshop interventions:

- They gave them the **opportunity** to mend through a set time and space for mending (the workshop - not a permanent change)
- They developed their **capabilities** through education and enabling them to understand the processes and practices required to mend (more permanent change).

COM-B and its application in research methods and analysis can be seen in (Table 31) along with Fogg's).

The second behaviour model employed is Fogg's behaviour model (FBM, Fogg, 2009). Fogg is a behaviour scientist who developed his model: B=MAP in 2007 (Fogg, 2019):

Behaviour (B) = Motivation (M), Ability (A) and Prompt (P).

In order for a behaviour to occur Fogg stipulates that motivation, ability and prompts (triggers) are required (2009:1). Therefore, using his theory increases, in motivation and ability both increase the likelihood of the desired behaviour such as mending a damaged garment. The relationship between B=MAP can be seen in (Figure 4) where low motivation and low ability cause the prompts to fail. However, for a trigger to succeed with low ability high motivation is needed.

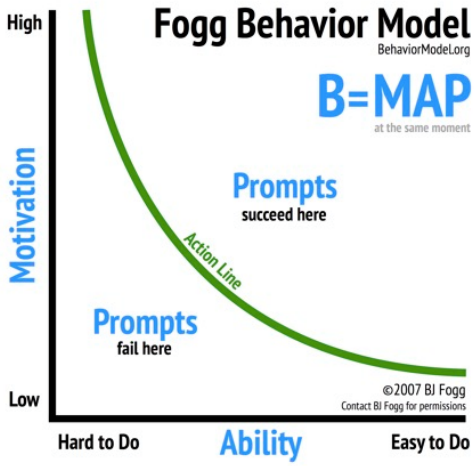


Figure 4. Fogg's behaviour model. B=MAP (2019)

Fogg goes on to suggest that the prompts are more likely to be effective when the ability to do is made easier to perform, so little motivation is required for the action to take place (2009). Thus, if non-menders see mending as an easy task, making a repair should be more likely. The Wear > Craft > Mend workshops therefore were designed to help simplify and make the concept and the process of mending more accessible and easier to perform (see 3.3.2.3). Fogg advocates the idea of habit

formation through tiny steps, adding a behaviour after an existing routine that is less than thirty seconds long, is much easier to implement and form routines (2018). This concept of 'tiny habits' is difficult to translate into the mending arena, because even the simplest mend such as re-sewing a button would take a few minutes[69]. So, although the repair tends to be quick it is higher than the thirty seconds Fogg suggests for easy to do behaviours with low motivation. It would suggest that higher motivation (to perform a mend) is required even if the ability of the mender is increased and the repair simplified.

3.1.4 Summary

- Environmental concerns such as reducing resources impact are often initial drivers for research into the field of mending.
- Mending and the surrounding practices have been be explored using several approaches, the most popular were; material culture and social practice theory.
- Material culture: Ingold advocates a move towards material objects being in the process of becoming (2012:431-5). That the thinking comes *from* materials not *about* them (ibid:7). Therefore, rather than looking at single objects, an ecology of materials can be considered and how it networks with the natural world.
- Social practice theory has been used more recently by Woodward and Durrani (2015; 2018c). Focusing on the practice of everyday routines not the user, object or social structures. It is often used as a model for sustainable behaviours, either documenting existing behaviours or understanding changing patterns.
- Behaviour change approaches discussed within this thesis are: 'the behaviour change wheel' (Michie, 2014) and Fogg's behaviour model (2009). These are useful to aid discovery into how mending uptake can be increased.
- Habits and routines are continually evolving and interact with other related practices. Therefore, to continue the practice of desired routines habit formation is important.

[69] finding the materials required (thread, needle and scissors), then re-sewing the button

3.2 Research Design

This research investigates users' connections to clothing using mending as a trigger towards sustainability. Mending spans the fields of social anthropology, clothing studies and sustainability. Consequentially the methodology was developed as a mixed approach, using the 'bricolage' method 'of re-appropriating and combining elements' (Yee 2011).

3.2.1 Appropriating Action Research Principles in Mixed Method Research

The study involved interventions using mending workshops that contained participatory elements and the direction of the research evolved as the data was analysed. These concur with Costello's description of action research, usually cyclic, involving participatory 'research, systematic, critical reflection, and action' allowing understanding, evaluation and changes to develop (Costello 2003:5). The cyclic process typical of action research can be seen within the methodology diagram and each stage is evaluated before informing further research (Figure 5).

Although I followed basic action research principles of participation and outputs influencing further research, I do not consider this investigation to be action research. This is because action research tends to be performed by practitioners or educators (Costello 2003). In terms of my research, I did not develop or consolidate my practice rather as an educator I developed and strengthened other's mending practices (Crouch & Pearce, 2012:143). Therefore, my research does share some commonalities with action research in that: 'practices can and should be changed' in the hope of producing more sustainable outcomes (ibid). However, this was only a small portion of the research and considered insubstantial for an action research methodology.

Therefore, mixed methods were identified as the overarching methodology because of the type of data I required, its versatility and the ability to adopt either qualitative or quantitative research methods, whilst action research principles, were used to inform the participatory research design.

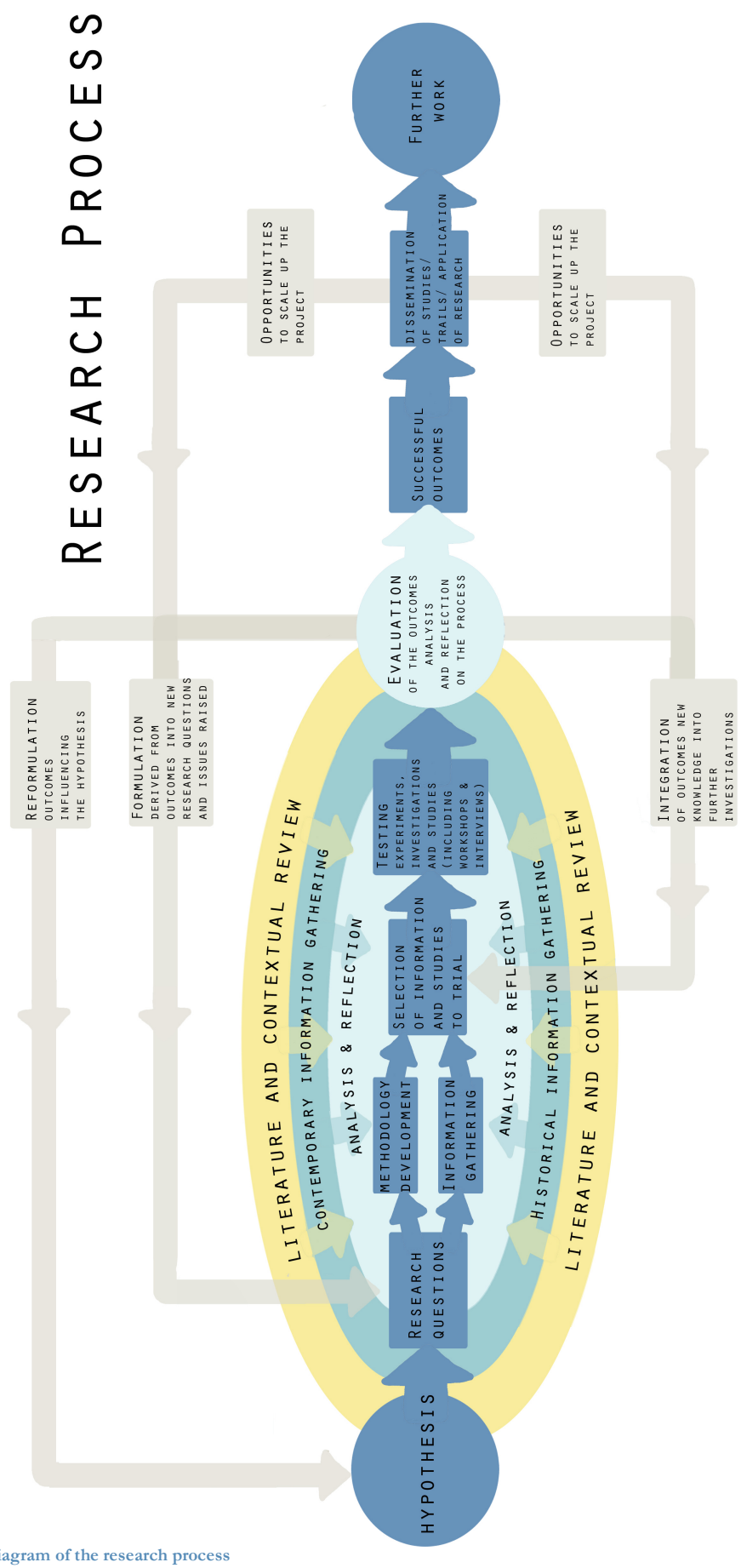


Figure 5. Macro diagram of the research process

3.2.1.1 My Position Within the Research

As a design practitioner, my practice and the subsequent teaching of my tacit knowledge is imbedded within the research and is used to support and educate individuals in developing their own practice. Candy suggests that: 'If the research leads primarily to new understandings about practice, it is practice-led.' (2006:3). Whilst Sullivan contends that 'In its broadest sense, practice-led research is circumscribed by an equally important emphasis placed on the artist-practitioner, the creative product and the critical process' (2009:47).

Designer-practitioner	My tacit knowledge and skills as a designer maker and practitioner.	
The creative product	*Explicit*:	The mended garment[70].
	Implicit:	In this instance I contend that practice is the design, development and the implementation of the research[71].
Critical process	The analysis, its critical reflection of each stage of the research and its effect on the evolving research process.	

Table 8. My position within the research as a design practitioner

Although my research utilises the three roles, the emphasis is on the process (Table 8). Therefore, I believe that as practice is not the research's driving force and it does not lead specifically to new findings on practice, the research is informed by practice rather than practice led. Chynoweth describes practice-informed research as 'projects where practitioner knowledge and understanding are used to inform both the purpose and the methodology of the research.' (2013:438). Practice-informed research therefore appears to straddle the divide between (i) traditional social science methods that take 'a detached and critical position' (Chynoweth, P 2013:444) and (ii) practitioner research, practice-based methods leading to new findings on practice (Candy 2006). Thus, it offers a compatibility to mixed method research (Chynoweth, P 2013).

[70] Arguably this is not creating a new product, rather: repairing, reconstructing and adding to, to add depth, narrative and visual markers that indicate the wear and repair.

[71] Therefore, the creative product is understood to be the design process.

3.2.2 Overview of Mixed Method

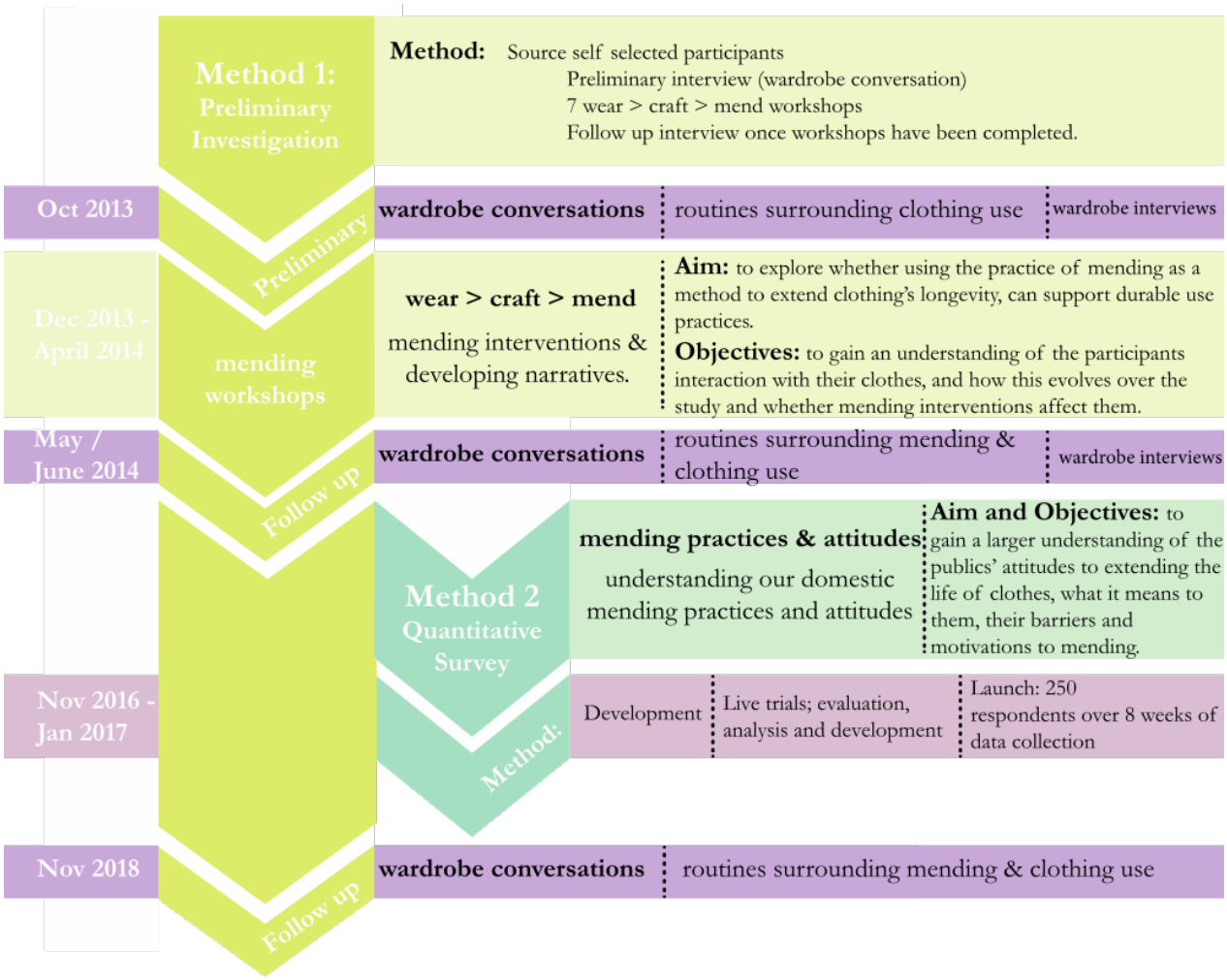


Figure 6. Overview of the research methods

The research process is detailed above (Figure 6). As the study used action research principles[72], the analysis of each stage indicated the most relevant methods for the ongoing research. The longitudinal study's initial analysis of the results (emphasised by the small sample size) indicated that a larger study should become the premise for the next stage of research. This took the form of a quantitative questionnaire to help uncover further insights into our mending practices, to aid our understanding of the motivations and barriers to mending and extending a garment's working life.

[72] research is informed by the preceding methods outcomes, reflection and analysis

These separate triangulating studies used the following methods: -

- Method 1: Longitudinal qualitative study, involving: -
  - Wear > Craft > Mend workshops,
  - Wardrobe conversations (interviews).
- Method 2: Online quantitative mending survey.

3.2.3 Qualitative, Quantitative and Mixed Method Data Collection

Qualitative and quantitative data offer stark differences in epistemological positions, focus, scope and the opposing nature of timeframes and participant/researcher relationships for example, can make it hard to consolidate as one method. However, although qualitative and quantitative research design is often seen as polar-opposites that need to be kept separate Gray argues that the two can be mutually supportive and complementary (2009). This facilitates separate studies within the same research to adhere to individual methodologies, enabling the triangulation of qualitative and quantitative data. Triangulation as Hanson describes it, is a term that has evolved to advocate qualitative and quantitative data sets as complimentary (Hanson et al, 2005:225). Or as Crouch and Pearce advise, a method of checking the validity and position of the assertions formed within the research (2012:129).

Mixed method research is a relatively new approach compared to others (from mid to late 1980s) of combining or integrating both qualitative and quantitative research within a study (Creswell, J 2014). It is progressively becoming accepted as a legitimate methodology in research within the social sciences (see Creswell, 2002, 2003; Greene, Caracelli, & Graham, 1989; Hanson et al, 2005:224), or as Gray describes it: 'the third major research approach' (2009:203).

3.2.4 Mixed Methods

The decision to use mixed methods was to enable the investigation to gain a more complete understanding of the answers to the research question than a method based predominantly on qualitative or quantitative methodology alone (Creswell, J 2014). This required a combination of methods to gain the depth, scope of behaviour and corresponding validation from the research (Sreejesh, and Mohapatra, 2014; Table 9).

Preliminary study, involving: -	Predominantly Qualitative	Wear > Craft > Mend workshops, and wardrobe conversations (interviews).	Inductive
Secondary study: -	Predominantly Quantitative	Online quantitative mending survey.	Deductive

Table 9. Illustrating the mixed methods used.

Therefore the observations and conversations developed within the preliminary study around the mending process tended to be broad, open and consequentially qualitative in nature. Whereas the secondary study's questions into the mending habits of a broader population demographic were closed, targeted towards quantitative data. Although each study was weighted towards either qualitative or quantitative, each used a mix of data sourcing. This use of mixed data, allows the researcher to not only: 'gain a deeper understanding of the phenomenon of interest', from a small sample, but also to validate these results by larger population studies. (Hanson et al, 2005:224). Mixing methodologies has also enabled this research to be inductive (first stage) so establishing the theory and deductive (second stage) validating the theory (Gray, 2009). Which in turn permitted the research question to be answered completely, something that qualitative or quantitative methodologies alone cannot fully do (Sreejesh, 2014; Denzin and Lincoln, 2000).

Hanson also asserts that when mixed method research is used as purely a 'method' researchers are free to use whatever theoretical frameworks that are justified within the research (Hanson et al, 2005:225). He goes on to say; 'The best paradigm is determined by the researcher and the research problem—not by the method.' (Ibid). Triangulating complementary data is beneficial (see 3.2.3), when used within a mixed method context the collective data sets can be used to elaborate, or inform and develop another method (Idem:226). Triangulation is consequentially implicit between the studies with the preliminary informing the secondary and used to collaborate and verify findings for mutual verification (Bryman in Bergman 2008:91). Consequentially the research design was developed sequentially. Each stage occurring and influencing the other as seen below, using the three steps recommended by key theorists (see Table 10, Creswell, 1999; Greene & Caracelli, 1997; Hanson et al, 2005)

The Studies can be seen as sequential exploratory research because the Qualitative research is used to inform the Quantitative data. This can be written as QUAL→quan (Hanson, 2005), as the qualitative is the preliminary study with the most weight, whilst the quantitative follows to validate and develop the initial findings (the preliminary interviews however work to a concurrent design as can be seen in Table 10 and Figure 7).

Sequential exploratory study's		
Preliminary study **Wear > Craft > mend & wardrobe conversations** *Total of 4 participants who participated in both the wardrobe conversations and the workshops*	lens	Inductive, Close insider relationship with participants, Material culture and Practice theory.
	Data collection procedures	Audio recordings, written accounts of interviews and diaries of workshops by researcher, photographs.
	Data analysis and interrogation procedures	Recordings are transcribed and coded on NVivo software. Quantitate data is coded on Excel and transported into NVivo for overall analysis. Works in a concurrent design where open-ended and closed questions interact in interviews, but are separated for initial analysis, merging them with corresponding identifiers (Driscoll, 2007:20).
Secondary study **Online mending survey** ***Total of 242 respondents***	lens	Deductive, distant relationship with respondents
	Data collection procedures	Qualtrics online survey platform that can help distributes and records respondents replies
	Data analysis and interrogation procedures	Qualtrics platform, gives initial analysis then is coded on Excel for interrogation and transported into NVivo for further analysis

Table 10. Sequential exploratory study's

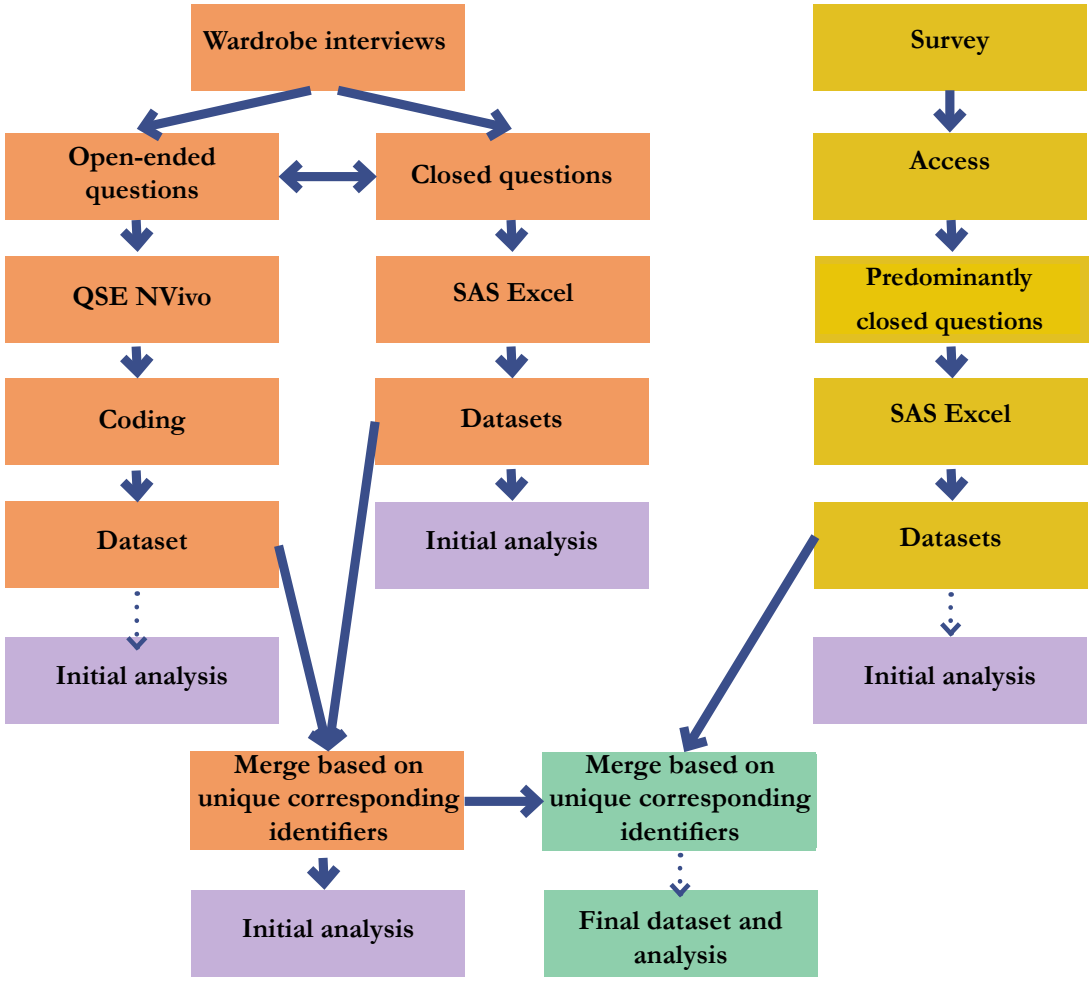


Figure 7. Diagram of mixed method analysis.

3.2.5 Analysis of the Methods Employed

Each study was approached separately and used a critical reflection of the literature, context and earlier studies to inform how the research question was addressed. The data was then collated, analysed, and triangulated with previous data sets to compare and contrast. The overarching data gathering methods were ethnographic qualitative research. This was performed through empirical observations of social practices surrounding material culture and quantitative research through a large-scale questionnaire. These are, 'multi-method inquires using mixed data sources' (Knight 2002:127)

In terms of the qualitative research a contemporary example of a thesis using mixed method of design research and creative participant research methods for her study is Twigger-Holroyd. She utilised a group of seven 'knitters to design and execute an alteration to a garment from their own wardrobes within workshops (Twigger-Holroyd, 2013:38). Similar methods were used within this

research in respect to the structure and execution of the workshops. The method has been developed to help the researcher to explore these areas through:

- Understanding connections to clothing and its domestic consumption (in-depth wardrobe interviews – materiality and practice);
- Performing mending interventions: the education of participants in the practice of repair of clothes (the process and observation of the workshops – practice).
- Observation of the individuals to understand and assess if any change in their connection to clothing takes place (both in-depth wardrobe interviews and workshops – practice).

As can be seen these areas have been investigated through both materiality and practice standpoints.

3.2.6 Studies as a Method of Research: The Wardrobe

The wardrobe as a method of clothes storage forms part of everyday life routines and repetition (Skov 2011). Items tend to spend the majority of their time within the wardrobe or as part of domestic consumption practices[73] (Woodward 2007). Historically the wardrobe[74] was a storage area containing cherished items (Skov 2011). Bachelard suggests that the wardrobe represents a 'philosophy of having' (1992:78). Skov believes that the notion of the wardrobe needs to be updated to include 'availability and choice' reflecting our notions of consumerism (2011:8). Whilst Fletcher offers a further development, 'the wardrobe as a philosophy of being.' (2012:231a). This suggests that the wardrobe is evolving from a storage facility for consumerist needs, to an extension of identity. Woodward supports this idea, stating that clothing within 'the wardrobe can be seen as an externalisation of selfhood' (in Kulcher 2005:22). She implies that the wardrobe is a place where the materiality of clothing captures the intangibility of our psyche, forming narratives of our identity. Consequently, the wardrobe is often seen as a private, personal space. In terms of research the wardrobe is seen as an invaluable tool into the public's understanding of clothing use and behaviours, often from a social science background (Bocks and Klepp, 2011; Laitala, 2015; Shove, 2003 Etc.) and a fashion design or education background (Woodward, 2007, 2014; Smith, 2013; Whitston-Smith 2018; Connor-Crabb, 2017; Fletcher & Klepp, 2017). It is seen as a method to

[73] such as wearing and laundry etc.

[74] Used from the 16th and 17th century

understand clothing within 'real lives' separate from the narrative of fashion as economic process and clothing as commodity (Fletcher & Klepp, 2017:2).

Wardrobe studies tend to be qualitative in nature combining methods such as interviews, inventories or audits, fieldwork, mapping projects, workshops, laboratory testing and surveys (Klepp & Bjerck, 2014; Laitala, 2015; Fletcher & Klepp, 2017). Because of the intimate nature of the study and the qualitative in depth studies they tend to have small numbers of participants such as; Middleton's pledge to only wear the garments already in her wardrobe (in Fletcher & Klepp, 2017:117); Twigger-Holroyd's reknitting workshops of six participants (idem:110; 2013,), and Laitala's 35 people storing and giving her, garments they were taking out of use over a period of six months (2015:95).

Research into wardrobes has in fact swelled (along with our expanding wardrobes), enabling Fletcher and Klepp to produce their seminal 'Opening up the Wardrobe. A Methods Book' (2017). This book covers over 50 avenues for exploring a user's habits, relationships and clothing surrounding the 'extended space of the wardrobe' (addressing a timeline between 1995 – 2016) (idem:2&3), including the Wear > Craft > Mend workshop method from this research that I was very kindly invited to contribute (Towers in idem:113).

I believe that it is important to note here, that this thesis's wardrobe research was undertaken in 2013 & 2014, so some of the methods used to contextualise my studies were undertaken following my own.

3.2.7 Different Viewpoints to Research Mending

Mending straddles the overlapping disciplines of:

- Social anthropology (object centred; material culture, understanding the role of the garment in mending)
- Clothing studies (user centred or the practice and systems centred); use, wardrobe studies, routine behaviours (practice theory), facilitating changes in behaviour (B=MAP and COM-B) and craft – repairing and making things with your hands
- Sustainability theory in terms of resource use and end of life solutions (holistic viewpoint).

As a result, theories that informed this research tended to be driven by sustainability thinking, (such as Fletchers' Local Wisdom project, 2016; and Holroyds' re-knitting research, 2013), material culture, Woodward's 'Why women wear what we wear' (2007 & 2015) and Miller (2008) clothing

processes (Laitala, 2018) and social practice theory (Shove and Pantzar 2005; Warde 2005 and others).

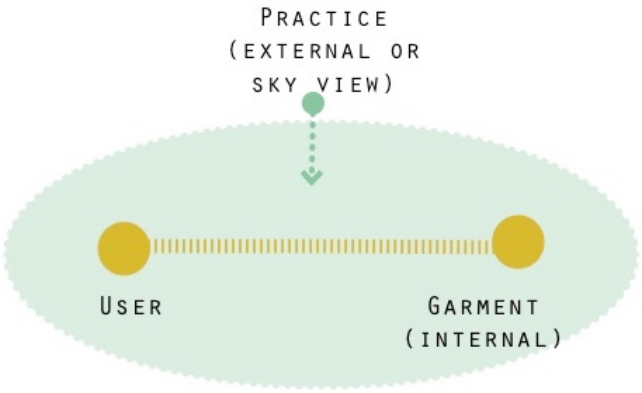


Figure 8. Initial viewpoints for mending research.

I am using material culture with the viewpoint of *from* the material and that materials are dynamic, part of the rhythm of ecology both of man and nature. Therefore, this viewpoint fits with that of practice theory, hence materiality can become part of the performance of practice.

The materiality of a garment is an 'internal' lens to study mending and the sky view or 'external', as the mending practice within an interconnected system (see Figure 8). With this scenario the practice of mending is the sum of the garment and the user. However, the garment and the user are part of other clothing practices, separate to mending, that influence mending practice. A further diagram illustrates the practice's connections to the user and the garment, giving each stance equal weighting

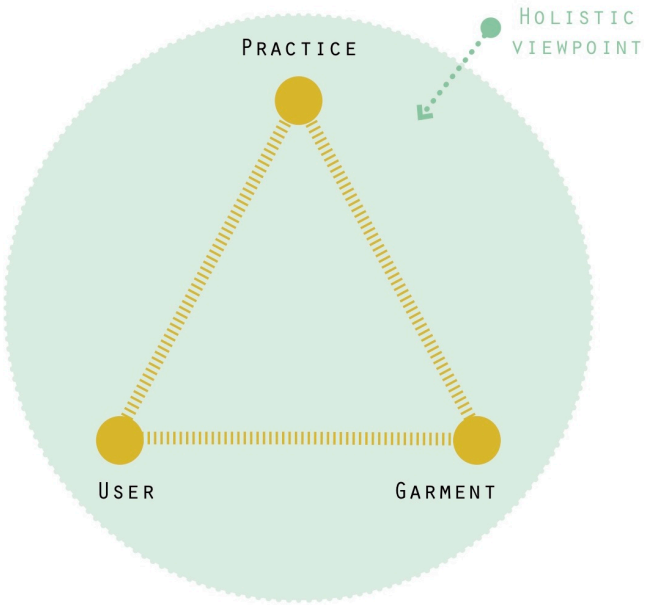


Figure 9. Areas of research for mending

(see Figure 9). So, these different areas can be explored to investigate mending from:

- the garment (or object)
- the user
- the practice of mending
- sky view (an overview or broad understanding of mending obtained by the survey).

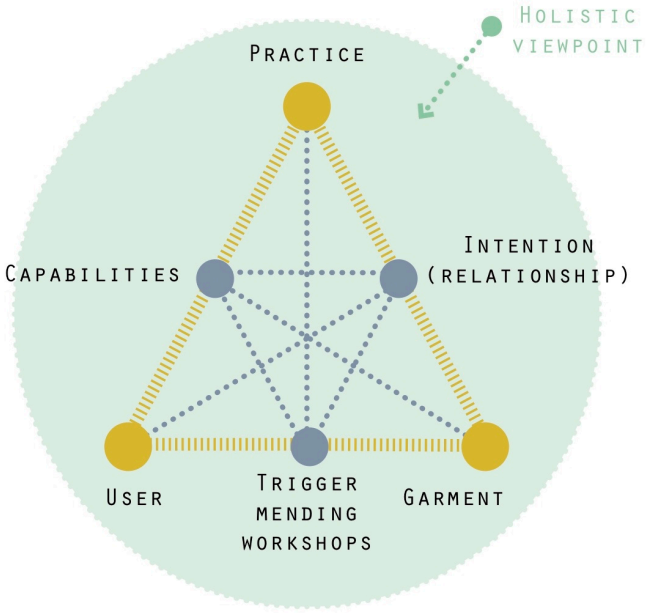


Figure 10. Mending, areas of research with B+MAP

These interlink as can be seen, each one affects the others. The diagram develops once three factors identified by behaviour change models are introduced, capabilities (skills), intention (motivation + attachment) and a trigger (for the longitudinal study the workshops are identified as the trigger) (see, Figure 10. & section, 3.1.3.2). Within this smaller triangle, mending takes place.

Within my research mending is not seen in isolation, external factors such as workshops (see [75]), can influence mending practice. When the participants contributions to the study are considered Figure 10 develops into Figure 11. What this diagram illustrates is the messy nature of the research. The impact of the mending workshops was different for each of the participants[76] (see) and also

[75] an overview of the study detailing what each participant partook

[76] 7 initially interviewed and 4 attended mending workshops regularly

they exchanged ideas and influenced each other within the sessions. Two of the interviewees did not attend the workshops so were not affected by my mending practices,

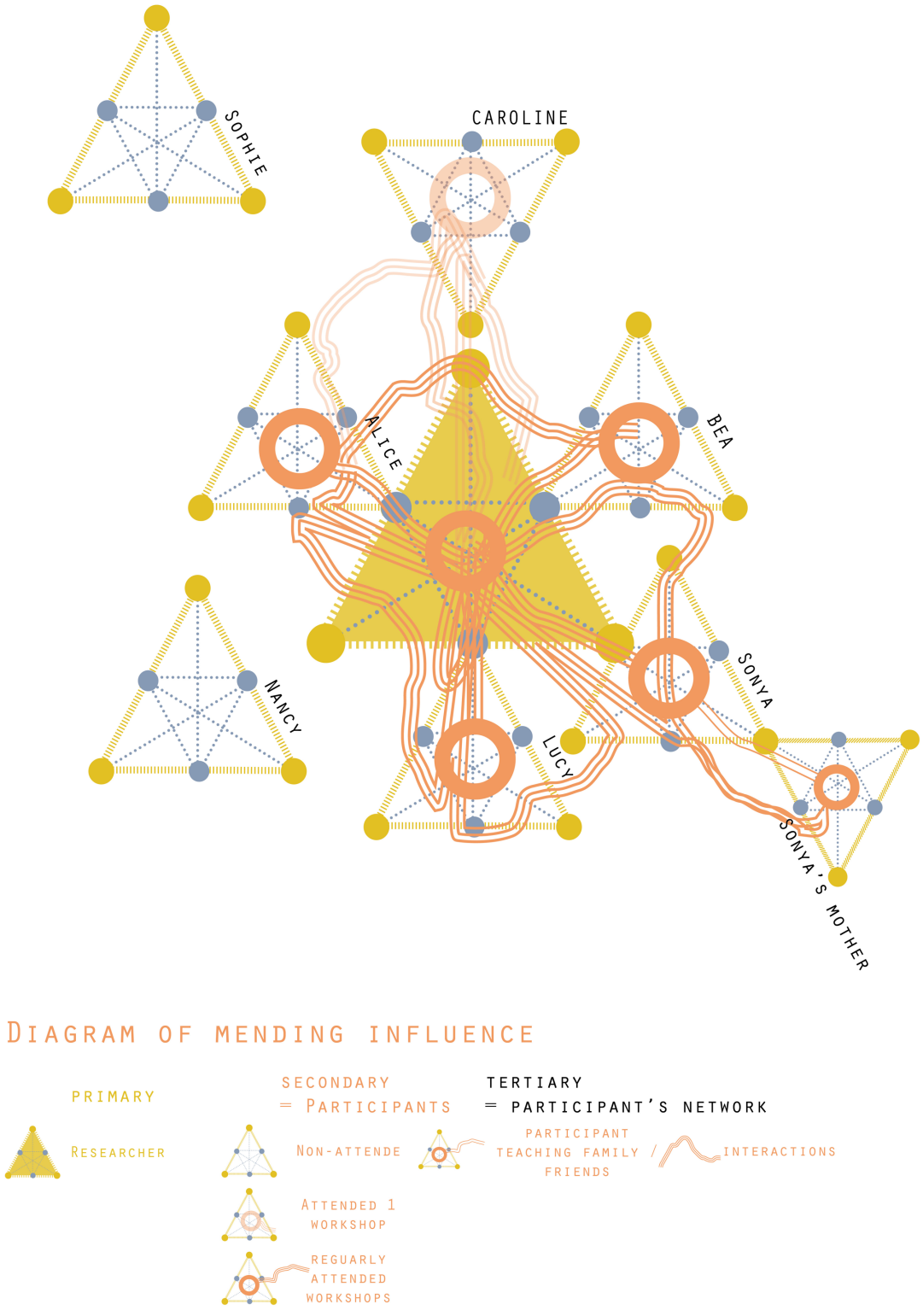


Figure 11. Diagram of mending influence.

whilst one came to one session, so the influence on their mending practices and with the other participants was limited. Once the participants felt that they had confidence in their mending ability, there is a possibility as in participant 1: Sonya's case that they might start teaching their mending skills to others within their network. This shows that the workshops have the prospect of influencing others to mend outside of the study through the participants networks.

3.2.8 Summary

- The research used a mixed methodology of QUAL➔quan using action research principles.
- Material culture, clothing studies, practice theory, sustainability and behaviour change models were used to inform the design, data collection and subsequent analysis.
- The research was separated into:
  - A qualitative longitudinal mending study
  - Quantitative mending survey.

3.3 The Research Structure.

Having defined the methodological stance and the structural outline of the studies I will now discus the research sequentially in detail. Both studies fundamentally aim to develop and expand our understanding of current mending practices.

The data gathering phase of this research took place over five years due to two maternity breaks. While not originally planned like this, the project took advantage of the time lag to return to the original respondents and generate some longitudinal data on facets and uptake of mending practices. The research was structured in response to the research question, aims and objectives (refer to introduction 1.4):

To investigate mending as a possible tool for more sustainable clothing practices, a two-part method was developed (see Figure 6):

Method 1: The preliminary research concentrated on an ethnographic qualitative in-depth small-scale study over a nine-month period, followed by a wrap-up interview five years later. Developing an understanding of participants' general clothing habits through wardrobe conversations and how mending could be incorporated into non-menders' wardrobe practices by:

- Wardrobe interviews,
- A series of Wear > Craft > Mend workshops.

Method 2: The themes and questions that this study uncovered were then used as a foundation for the second method, a larger quantitative mending practices survey.

3.3.1.1 Forms of Analysis

The analysis was of qualitative and quantitative data sets. Both forms of research utilised NVivo software for all relevant data extracted, enabling separate data sets to be directly analysed together. Quantitative pre-coded data from the questionnaire was extracted and analysed on Excel then transported into NVivo for macro and meta-analysis of the data sets. Qualitative audio recordings were transcribed, categorised into themes, coded and analysed. Reflective journals were subject to the same strategy being careful not to lose the original context, simplify or distort the data (Miller, 2012vii). Any qualitative data was subject to the most appropriate methodology.

3.3.2 Preliminary Study: Method 1

The preliminary qualitative study was designed to explore whether using the practice of mending as a method to extend clothing's longevity could support durable use practices. Using my knowledge and experience (of design, making and teaching) the natural progression to explore mending appeared to be through sharing mending skills in a workshop environment. Where interventions were taught and practiced using participants garments.

The ethnographic study was based on observations, workshops and interviews with participants and could be broken down into two parts:

- Wear > Craft > Mend Mending workshops: a series of workshops teaching participants mending skills. The workshops were tailored to the interests and skill sets of the group with the aim for each participant to have a successfully finished repaired garment.

The inspiration for the method came from a variety of sources such as Twigger-Holroyd and her workshops in re-knitting (2013), Fletcher's 'Local Wisdom' (2016) and my own experience volunteering in the Sweatshop Paris (2011).

- Wardrobe interviews: face-to-face in the participant's home, discussing their clothing habits.

  Inspiration for the method came from an assortment of sources such as Woodward (2007, 2014) and Whiston-Smith (2013, 2018).

During the main study mending probes occurred in tandem, such as interviews from a Macclesfield repair day in 2014 and an interview with Alison Winfield-Chislett at a restart and repair workshop at the Goodlife Centre in 2014. These were used to gain further information and test methods with both using a simplified questionnaire on mending (see appendix 8.4.).

Details of the performed study will now be discussed (see Figure 6).

3.3.2.1 Participants

For the preliminary study, participant sourcing criterion was decided upon (Table 11). Identifying women in particular was due to the fact that not only have women historically been the homemakers, they frequently continue to be in today's society (McVeigh 2012). Women therefore tend to perform the bulk of tasks needed to keep clothes in working order (Burman 1999). Consequently, if the participants began to repair within their routine maintenance of the family's clothing, the mending interventions would affect not only the longevity the garments but also members of their immediate households.

Participant sourcing criteria	Non-menders: - people with little to no sewing experience
	Women
	English speakers
	Age range: - 25-60

Table 11. Participant sourcing criteria

Also, I was gender specific because as a woman myself, I felt it simpler to conduct interviews within a female participant's wardrobe, to empathise and develop a relationship, whereby it is possible to enter their intimate and private space. Another consideration was my safety, interviewing a stranger in their home could pose a hazard to the researcher, accordingly it was felt that having female participants would negate some risk.

Participants with few sewing skills were sourced, so that an understanding of their connections to clothing could be established before and after the interventions took place, in order to discover if mending affected their relationship with clothing. The age range was targeted to address women who had had time to build and establish their wardrobes.

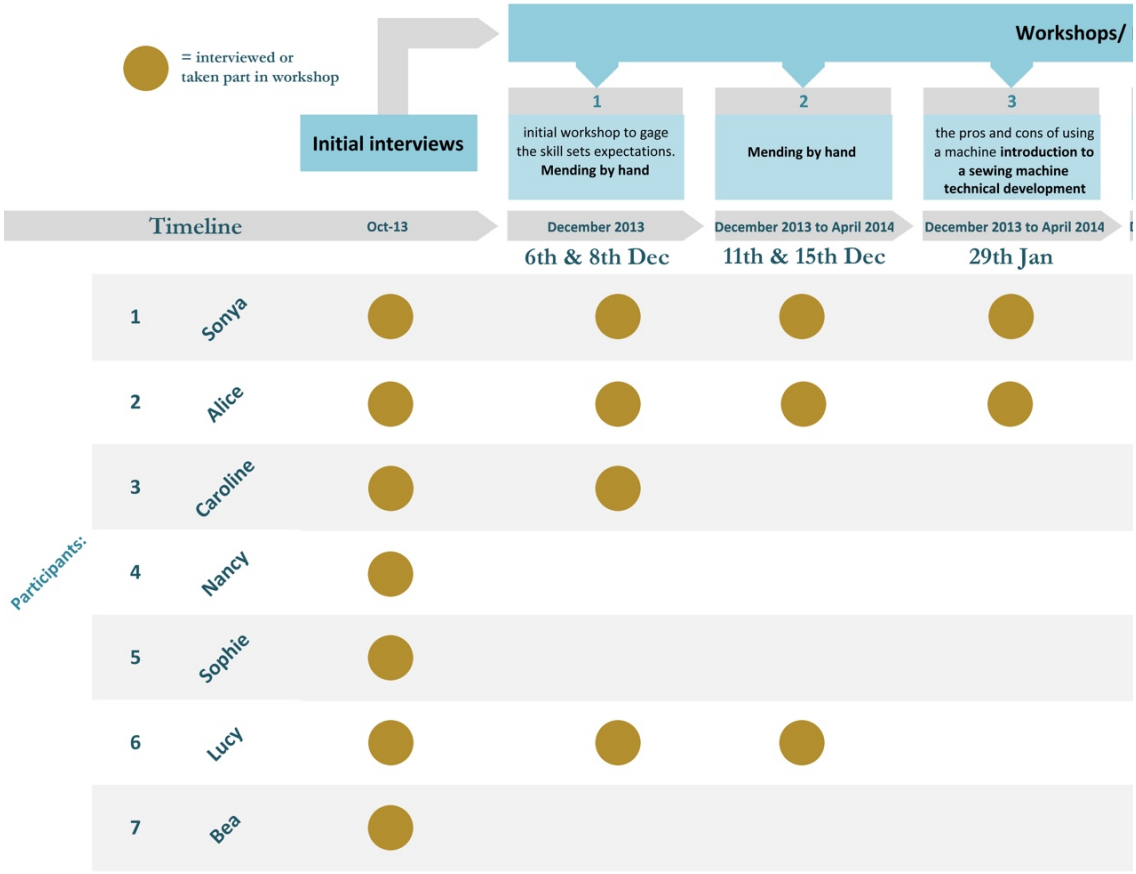


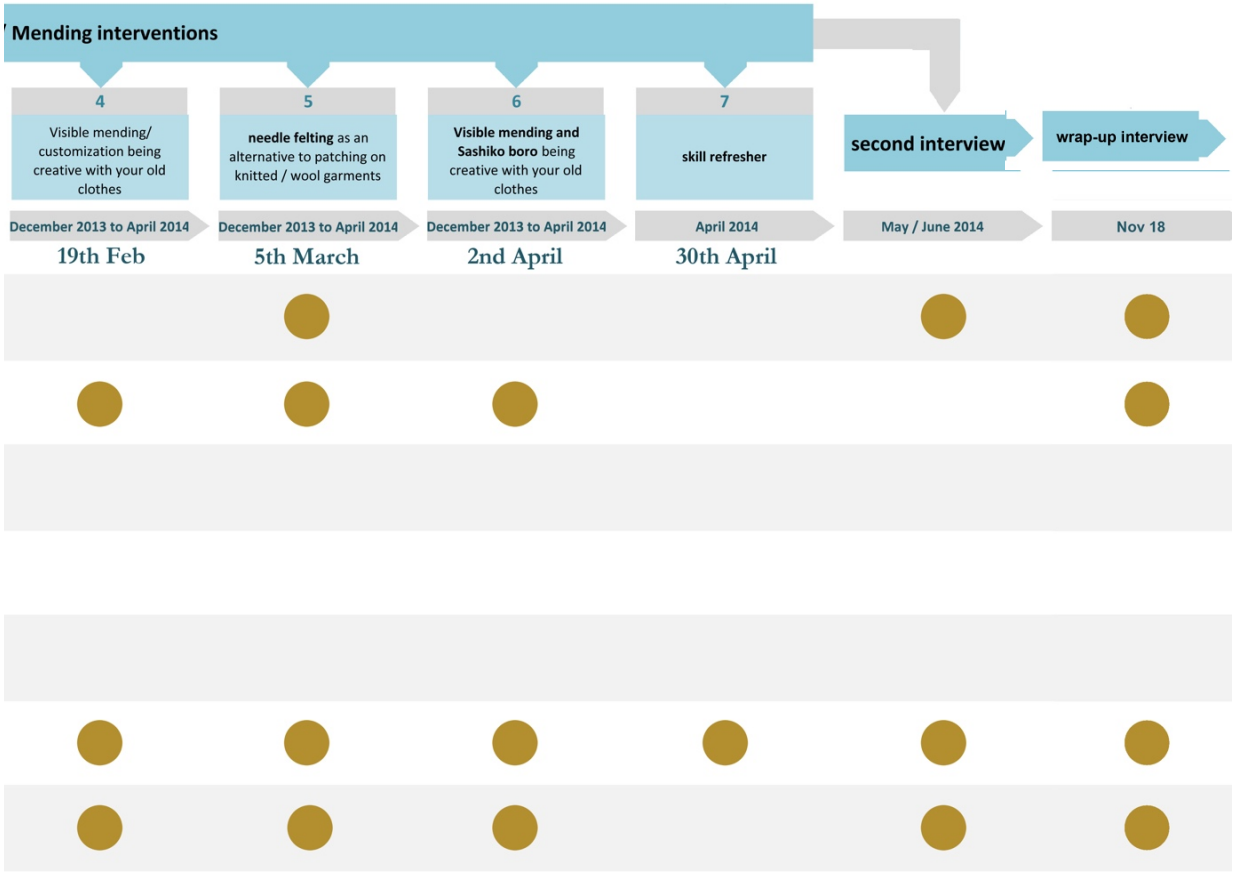
Figure 12. Overview of the preliminary study.

3.3.2.1 Sourcing Volunteers.

Opportunistic sampling was used to source the volunteers, therefore London specifically the borough of Islington was used as a geographical constraint[77]. Miller used a randomly sourced street in London and interviewed each of the residents that were open to taking part, to obtain a snapshot of the society within a period of time (Miller, 2008). I adopted this method as a starting point, using streets within my local borough. The aim was to be able to use this as a method of triangulating the study by ideally having three workshop groups from the three different streets.

The following randomly selected streets were used: Dresden Road, Florence Street and Stavordale Road. Leaflets entitled 'call for volunteers' were posted through all doorways on the streets. Of the 293 leaflets posted, there were 12 respondents (this is including asking for volunteers at a local Women's Institute meeting and leaving them in local meeting places such as libraries and community centres). From these volunteers seven were interested in being interviewed, and of these four attended the workshops regularly.

[77] predominantly for practical reasons



3.3.2.2 Semi-structured Wardrobe Interviews.

In total there were three interviews (Figure 12):

- Initial wardrobe interview before Wear > Craft > Mend workshops (2013)
- Secondary interviews after the workshops (2014)
- And then a brief wrap-up interview five years after the workshops (2018)

The interview structure was developed in reference to the studies of Woodward and Whiston-Smith, who both tried to understand people's wardrobe habits (2007, 2013). Woodward observed women in the intimate environment of their wardrobes in the act of deciding what to wear, whilst Smith performed a questionnaire, wardrobe audit and semi structured interviews to understand the active and inactive items in a person's wardrobe (ibid). It was therefore decided that semi-structured interviews within a volunteer's wardrobe were a suitable method to help determine their consumption habits. As has already been discussed the wardrobe is situated in a domestic, private space (see 3.2.6) and therefore I needed to be able to put the participants at ease quickly and not be seen as invasive. The nature of discussing garments especially ones imbued with memories (and within the wardrobe space) can lead to intimate conversations about loss, loved ones and childhood memories (Pym, 2017). Consequentially it was important to question sensitively and use the questions as a guide to depart following the participant's lead, especially on difficult topics returning

to the main enquires later. The interviews were designed to last approximately an hour, so that the volunteer would not feel like the process has been too time consuming, especially as the interview might be considered intrusive[78]. This is because garments are considered an extension of yourself (Woodward 2007) so the questions may be considered very intimate.

An initial pilot interview tested the effectiveness of the interview questions, for both, pre-workshops[79] and post-workshops[80] wardrobe interviews. Including: the interview technique and any changes that should be made for the remaining conversations.

The interviews took place over the month of October 2013 and were held in the participants' homes[81]. Due to everyone's differing schedules they took place at a variety of times but all effort was made to try and keep them as similar as possible, with the semi-structured interview questions used as a guideline. I performed a maximum of two interviews a day to enable complete focus with each interview, allowing for time to write up initial reflections.

As a method for studying the use practices of garments, post purchase the wardrobe is ideal, generating 'critical and innovative insights both at micro and macro levels' (Skov 2011:2, Woodward 2007). Garments could therefore be used as prompts for the person's memory aiding the collection of reliable data. Three areas of consideration were decided upon as being the key to understanding the participant's relationship to clothing and an overview of their habits. These were:

1. Detailing a wardrobe audit of the participant's garments including how and where they store their clothes.
2. The ebbs and flows of the wardrobe, the normal purchases and disposal habits of the wearer.
3. A detailed descriptive analysis of particular items:
   gaining an understanding of their connection to certain garments, such as how they feel about the garment, their interactions with the garment and the narratives cultivated within these items of clothing. To help the participant prepare for the interviews they were asked to find up to three items of clothing, from each of these themes to use as a starting point in our discussions. The 8 themes were:

[78] especially the wardrobe audit: going through the participants personal possessions

[79] before the workshops

[80] after the workshops had taken place

[81] see appendix 10.2 for sample interview transcript

- Your Favourite garments.
- Garments that you never wear but keep.
- Garments that you wear all the time.
- Garments that you have had the longest / or are the oldest.
- The newest garments that you have.
- Any garments that have had alterations, repairs, and or customisations made to them.
- Any garments that need maintenance/ alterations so that you can continue wearing them.
- Any garments that you are going to dispose of in the next couple of months.

Of these items, photographs were taken and a detailed record was made of the composition, frequency of wear, style, colour, quality, age, any repairs/ amendments or transformations, season, brand, and casual or smart. Seven participants undertook the preliminary wardrobe interviews and a total of 145 items of clothing that fitted into one of the eight themes were recorded. Concurrently open-ended questions about the garment ensued to discover the user's relationship with the garment. Further details of the in-depth interviews can be seen in the appendix (8.2.3 – 8.2.10).

The second wardrobe interviews occurred after workshops were completed, using the same themes to see if any change had taken place over the project's duration. (see the appendix 8.2.11 – 12). Additional discussions were instigated to understand the participants attitudes to mending:

- if they were affected by the workshops through building skills and competencies,
- the barriers and motivations towards mending,
- their connections towards specific items of clothing and how physically mending them affected these relationships,
- whether they had continued mending or would mend in the future,
- if they would feel confident to pass on any techniques they had developed.

Final wrap-up interviews (by telephone calls and email), touching base five years on were approximately ten minutes long and covered six questions to discover whether the participants were still mending years later and what affect the workshops have had on their attitudes to clothing.

3.3.2.3 Workshops

I investigated mending within the UK and how the uptake of mending might be increased. The question asked was: what happened when non-menders with little to no sewing knowledge, or experience were taught a series of mending methods? To answer this, I decided that workshops were the ideal settings for mending interventions with the participants and where their ideas become tangible (Koskinem 2011). I believed that sharing the experience with other novice menders was important. Not only would they be taught the necessary skills required to mend their garments, it would also be performed in an enjoyable environment where a rapport could develop between the participants.

Holroyd has used a similar research format in her PhD, observing a small group of women within knitting workshops. Her thesis examined amateur re-knitting, a process of extending the life of knitwear through the reworking of an original garment, and its effect on the participant's behaviour rather than as a tool for understanding how it affects the broader wearer garment relationship (2013). Whilst Gwilt used a mixed methods approach for her 'Make do and Mend' workshops to investigate how experienced menders and novice menders approached a mending task (2014). McLaren's pop-up mending events used action research principles (2015). Whereas Durrani used existing mending workshops in Finland and New Zealand to investigate mending practice using sociomaterial practice theory (2018a & b).

The aim of the workshops was for the participants to have completed a mending task on at least one of their own garments to their own satisfaction. Whilst the objectives were to gain a better understanding of garments, their materiality, how they are made, the quality as well as a basic knowledge and skill set into executing a variety of mends on different types of garments. The workshops and interviews were testing whether interventions into re-skilling non-menders in the practice of mending affected their everyday use of clothes and whether they continued mending. Therefore, the experience within the workshops was crucial, a fun, creative, supportive, relaxed and inclusive environment was essential. The aims and objectives of the study were developed to incorporate findings from the preliminary wardrobe conversations, tailoring the workshops to their skill sets, to help maintain interest over an extended period. To do this a workshop strategy was designed and implemented:

Workshop Aims:

- To investigate mending as a possible tool for more sustainable mending practices.
- To build skills and competencies in a participant's wardrobe: providing the participants (users) the tools required to help create successful mending outcomes with their own clothing, giving them greater autonomy over the design and making process.

Objectives of the workshops:

- To develop the participant's sewing skills using both hand and machine techniques.
- To develop key transferable mending skills.
- To provide an alternative view of mending; one that does not have to be a chore, rather something fun, creative and relaxing.
- To build confidence in their practical capabilities surrounding the craft of mending: design, problem solving, and sewing.
- To explore the participants' understanding of clothes and their environmental concerns regarding clothing.

Project outcome:

- To culminate the series of workshops with a mended item of the participants' own clothing.

Workshop Design

The workshops were designed to facilitate skill building, encouraging the participants to problem solve, enabling them to decide how they would approach mending a garment and use methods that they were comfortable with aesthetically and could perform confidently.

The skills selected to share with the participants were extensively researched, exploring contemporary methods of mending (such as visible mending) and traditional techniques from other cultures[82]. A list of common points of wear that prevent use and the types of mending required to repair them was developed. The final methods of repair selected were a mixture of traditional and contemporary to give the participants a variety of skills to draw from, when deciding how to approach a mend. These techniques were:

- **General methods: -** used for multiple types of damaged areas or garments
  - Darning (Figure 15),
  - Patching (Figure 16 & Figure 28).
- **Creative or 'fun' visible mending approach**: -
  - Needle felting (Figure 17, Figure 32),
  - Embroidery and applique, including traditional Japanese repair, Sashiko boro (Figure 29).

[82] From both contemporary and historical research, using both literature and artefacts.

- **Specific method's for participants needs: -**
  - Re-seaming and re-hemming (Figure 30),
  - Replacing a zip.

Figure 13. Participants using domestic dewing machines in workshops. Workshop 4 at HTHT. 19 Feb 2014

As the majority of the participants had shown an interest in using a sewing machine, each technique addressed hand-sewing and machine alternatives (Figure 13). For continued use of mending skills and confidence developed during the sessions, it was important that the techniques were as simple as possible and required few tools and materials. Also, the workshops needed to offer possibilities other than just basic repairs, to help engage the participants and give them the opportunity to produce creative solutions.

The agenda for Wear > Craft > Mend was broken down into seven successive workshops, approximately 2.5 hours long over a five-month period[83], with a skill refresher on the last session (see methodology 3.3.2.3.). The skills to develop for each session, expected outcomes and equipment needed were outlined (see Table 12). Although each of the workshops had a planned brief for the session, the process evolved with close relationships between the participants forming. Therefore, the workshops would often loosely follow the parameters set out, still achieving the objectives but tailoring the skill exchange to the participant's needs, expectations and interests, thus they became more participant led.

[83] the aim was to have the workshops at fortnightly intervals but because of participants commitments I organised them around their available dates so the process became approximately once or twice a month

An important factor in the workshop design was its situation. The initial workshops used a trial of two locations:

- A room within the Holborn site of the University of the Arts, a formal space with tables and chairs set out for class discussions (Figure 14).
- The interior of 'Here Today Here Tomorrow' (HTHT), a studio shop in Dalston[84] (Figure 13).

Figure 14. Mending workshop 1 at Holborn site. 8 Dec 2013.

The Holborn site was clinical. Even after the furniture, sewing materials and equipment were displayed in as informal a manner as the room would allow, the setting was not conducive to fostering rapport between the participants. Whereas HTHT offered a relaxed informal space full of visual stimulation from the products for sale, echoing the ethos the workshops were intending to portray. Consequently, the groups from the separate workshops were merged and held in HTHT[85].

Within the workshops I recognised that not only was the researcher a participant observer but also a teacher and facilitator as in Holroyd's study (2013). The workshops were founded on using Kolb's experiential learning cycle of learning through doing (Figure 18; 1984). Where the participants first encountered a new skill, visually watched how to perform the task, practiced and tested the skill and

[84] set up by four sustainably minded London College of Fashion graduates who wanted to have a workspace and shop showcasing sustainable and Fair Trade products including clothing (Renée 2013, Corner, F 2016)

[85] a high drop out rate from the initial workshops meant that combining the groups became feasible.

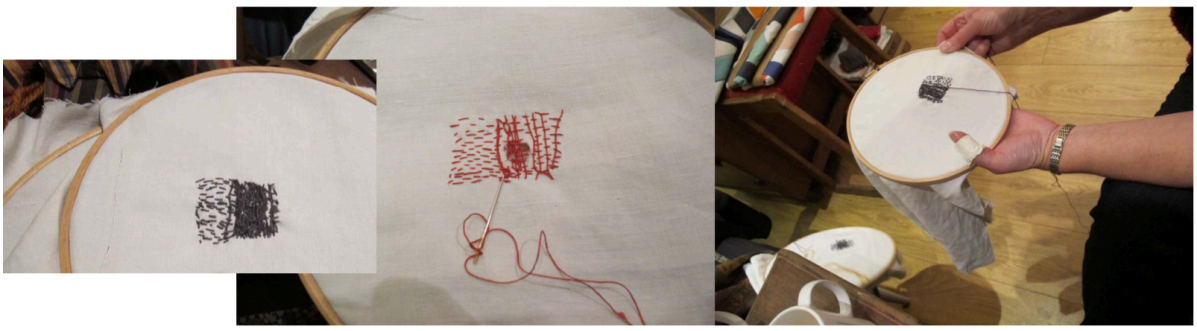


Figure 15. Outcomes of first mending workshop: Darning

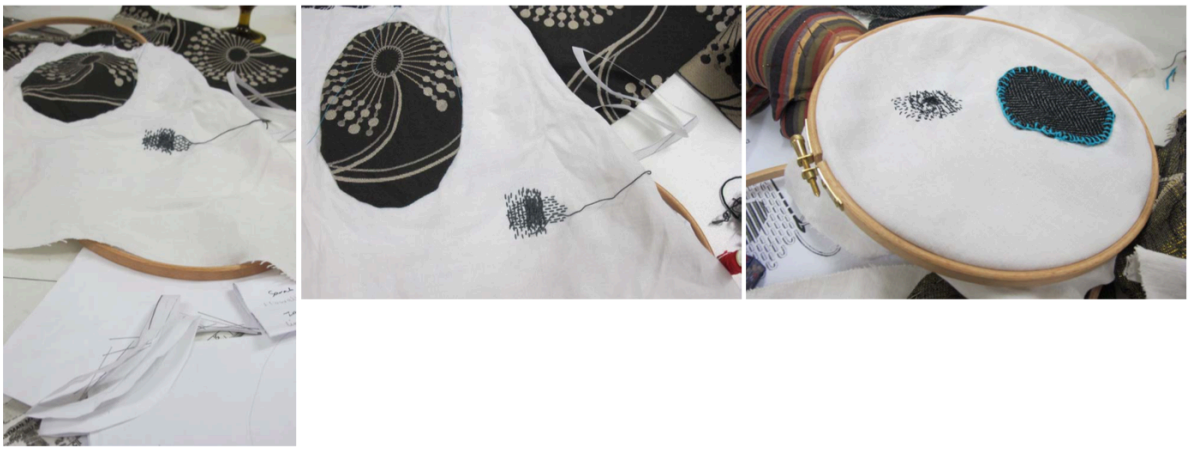


Figure 16. Outcomes of 2nd mending workshop: Darning and patching

Figure 17. Needle felting workshop 5. 5 March 2014

then reflected and developed this skill used finally on existing garments. In reference to Kolb, each session was designed to allow the participants time to understand, practice and test a new skill culminating in design development, where they explored how to use the mending practices on their own garments (Table 12). This also fitted with Terzioğlu's discovery of the 'three phases of the repair experience'; *Discovery* inspecting and discovering its features, *Ideation* exploring how to mend , and *Implementation* repairing the item (2017:409-11).

The researcher was therefore providing the participants (users), the tools required to help create successful mending outcomes with their own clothing, giving them greater autonomy over the design and making process. Consequently, the workshops could be seen as a process of co-design involving skill sharing, mutual learning and empowerment with the

participants seen as equal stakeholders (Faud-Luke in Chapman & Grant 2007:39). Hopefully the increased user involvement would result in rebuilt connections between the wearer-garment relationship resulting in increased use. Therefore, the workshops were broken down into sections, following the speed and the capabilities of the participants. All the sessions followed a similar structure;

- an email before the workshop to detail the objectives for the session,
- a few minutes at the beginning to catch up, check in and settle,
- a short-taught section where the mending method was explored, examples of the finished methods shown and the process of repair taught, often giving examples created by hand and machine,
- the participants would then try out the techniques, using scrap fabrics, equipment and materials provided (Figure 15 & Figure 16).
- a short break,
- then continuing the exploration and development of techniques onto their own garments for repair,
- at the end of each workshop a short discussion and evaluation of the outcomes would be facilitated, and the activities for the next session explored.

Figure 18. Diagram based on Kolb's experiential learning cycle (Kolb, 1984)

	Mending workshops - 1	2	3
	initial workshop to gage the skill sets expectations. **Mending by hand**	the pros and cons of using a machine **introduction to a sewing machine**	**technical development**
preperation for volunteers before the workshop	to bring a garment along in need of repair	to bring a garment along in need of repair	to bring a garment along in need of repair
Skills to develop this session:	hand embroidery techniques: running stitch, back stitch, stem stitch, blanket stitch and darning on fabric swatches. So how to darn, patch, hem, mend broken seams using these techniques and Re-sew buttons	basic understanding of a sewing machine, confidence using a machine, machine darning, patching, re-seaming, heming	re -sizing: enlarging, reducing in size. Replacing a broken zip.
Expected Outcomes:	to have practiced all the stitches and to have a mended panel on a sample	to feel confident using a machine, and have the ability to patch, hem and darn using it.	to practice unpicking, adding panels, reducing, pinning to fit and other construction methods, including normal and invisible zips
Equipment needed:	fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board	fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board 5x sewing machines	fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board 5x sewing machines, zips

Table 12. mending workshops strategy

Throughout the workshops I was on hand to offer advice and help when needed, often leading discussions regarding attitudes towards clothing. These were seen as an opportunity to implement probes on clothing habit. One example was the shop, buy, snap and email prompt. Each participant was given a card designed to fit with credit cards to be used as a reminder to record garment purchases throughout the workshop timeline (see appendix 8.2.4).

3.3.2.4 Data Collection

Throughout the research, multiple data recording methods were used with the main elements being audio recordings of face-to-face interviews with supporting photographs of garments and written notes. The decision was made to audio record the interviews,[86] as it was felt that an audio recorder is less intrusive in comparison to a video recorder, which can make the interviewee self-conscious and could affect the content of the replies.

In respect to the workshops, only specific sessions (when themes were introduced for discussion) were audio recorded. Although the interventions were an important aspect of the research, the principle data collected for analysis was from interviews before and after the workshops took

[86] in conjunction with making detailed notes and photographs

teaching people the craft of looking after their clothes.

4	5	6	7
Visible mending/ customization being **creative with your old clothes**	**needle felting** as an alternative to patching on knitted / wool garments	Visible mending/ customization being **creative with your old clothes**	Visible mending/ customization being **creative with your old clothes**
to bring a garment along in need of repair	to bring a garment along in need of repair	to bring a garment along in need of repair	to bring a garment along in need of repair
using aplique, and other forms of embroidery, and trims to visibly mend and to transform your old clothes senstively	to give a demonstration on how to needle felt and then go through what everyone wants to do for the session and also have a go at customising t-shirts if time	developing skills learnt, session will become more of a 1 to 1 development of the skils that the individual would like and also more of a social occasion	developing skills learnt, session will become more of a 1 to 1 development of the skils that the individual would like and also more of a social occasion
to design a method of customization on one of their garments to add a personal touch and to add value to it. Either by hand or with a machine	to design a method of customization on one of their garments to add a personal touch and to add value to it. Either by hand or with a machine	to design a method of customization on one of their garments to add a personal touch and to add value to it. Either by hand or with a machine	to design a method of customization on one of their garments to add a personal touch and to add value to it. Either by hand or with a machine
fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board 5x sewing machines	fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board 5x sewing machines, wool, felting needles	fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board 5x sewing machines	fabric, threads, sissors, needles, pins tape measures, interfacing, pattern paper, card, iron and ironing board 5x sewing machines

place[87]. A reflective diary by the researcher was therefore used to encapsulate each session along with photographic records to document the workshop process. However, for future studies, it was decided that audio recordings would be made, and then selectively transcribed following pre-specified themes to prevent any aspects being missed in the reflective journals. Especially as when the researcher was leading the session and supporting each participant individually, separate conversations could be missed.

3.3.2.5 Data Analysis

All data collected was anonymised and pseudonyms given to the participants. This is due to the fact that the data collected is predominantly qualitative and therefore referring to them by number does not seem appropriate (see Table 13).

[87] so that an understanding of how the wearer-garment relationships develop can be measured

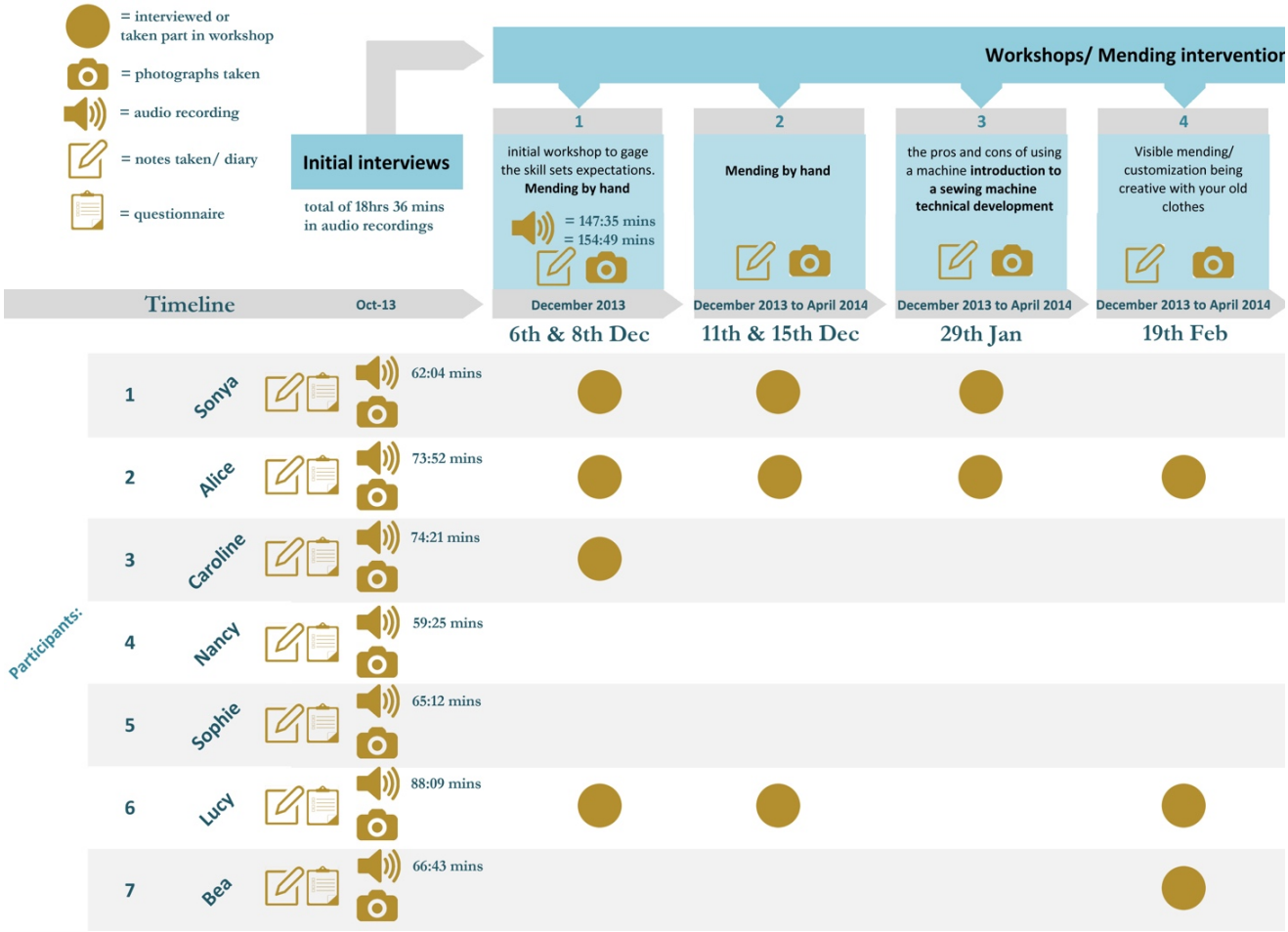


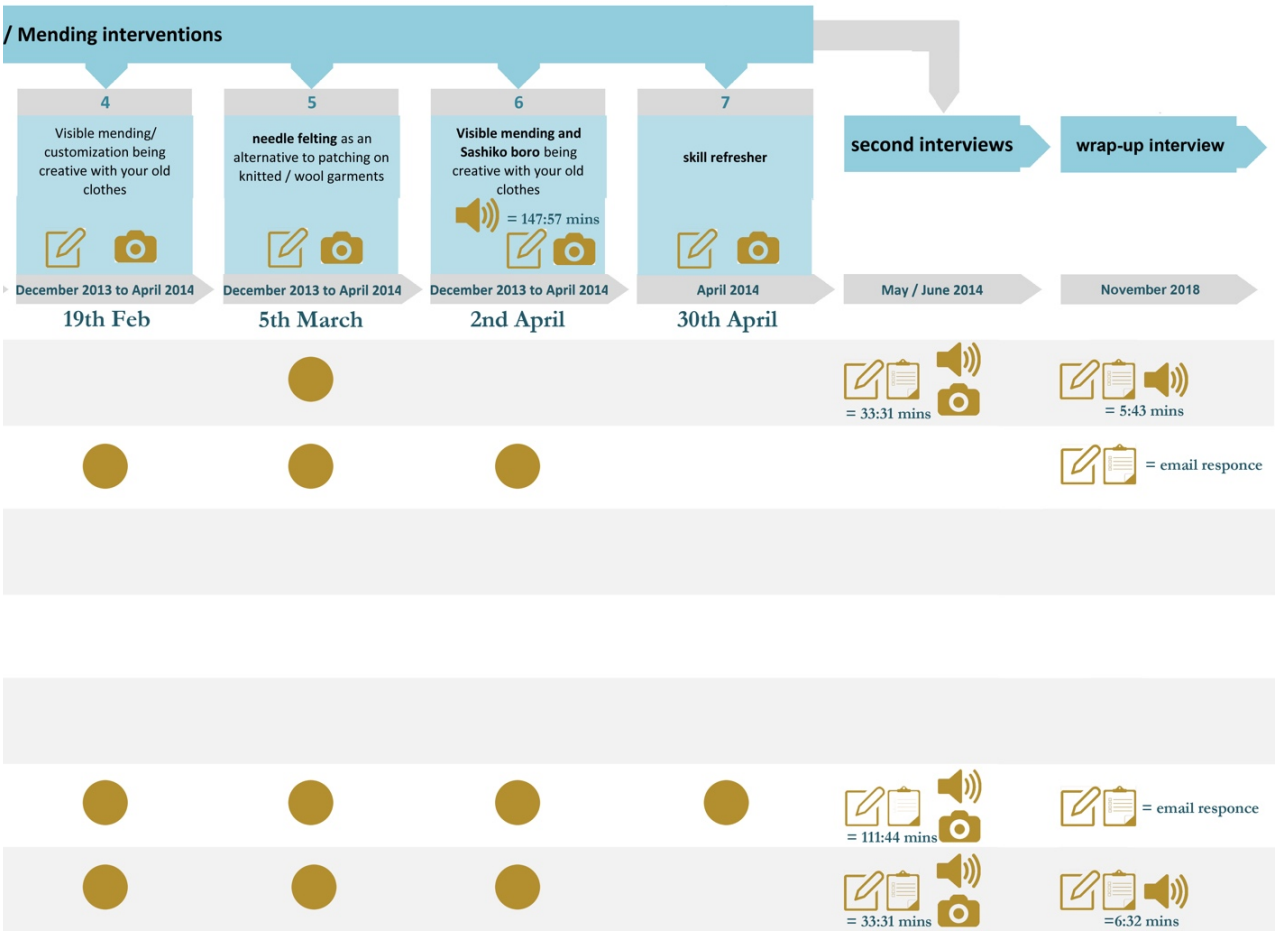
Figure 19. Breakdown of data collection for preliminary study.

For each interview and workshop session, the researcher wrote a diary entry to detail any observations that might not have been recorded. These general notes were reviewed initially to get a sense of the information for analysis. The data was then organized, with the quantitative wardrobe interview questions arranged into spreadsheets on excel for analysis, along with the corresponding garment photographs. This quantitative data was analysed, through the use of charts to help identify emerging themes from the qualitative data.

The audio recordings for the face-to-face interviews and the workshops were transcribed (a total of eighteen hours and thirty-six minutes of audio were recorded see Figure 19). This sizable block of qualitative data[88] were transferred into NVivo[89]. Examined using coding methods; which can be described as a 'deep reflection about and, thus, deep analysis and interpretation of the data's meanings.' (Miles, 2014:72).

[88] including diary entries and interview reports

[89] qualitative analysis software



Participants:

1. *Sonya;* 35-39, AGENT FOR CELEBRITIES, LIVES ALONE
2. *Alice;* 30-34, MATERNITY LEAVE/ GUIDE DOG TRAINER, LIVES WITH HUSBAND AND CHILD.
3. *Caroline;* 30-34, SINGER SONGWRITER, LIVES WITH PARTNER
4. *Nancy;* 30-34, STOCKROOM MANAGER OF FASHION BOUTIQUE, LIVES IN A SHARED HOUSE.
5. *Sophie;* 26-29, RISK RESEARCHER, LIVES WITH PARTNER
6. *Lucy;* 45-49, VOLUNTEERING AFTER REDUNDANCY, LIVES WITH HUSBAND
7. *Bea;* 35-39, AUDIOLOGIST, LIVING WITH HUSBAND

Table 13. participants pseudonym's

The transcribed material was reviewed and an interview selected to commence initial first cycle coding. Provisional coding was used developed from the research questions, theories uncovered through the literature review and my personal experience as a starting point to create a 'meta-code' through descriptive methods (adding labels to data such as ability) (ibid). This was then revised, modified, expanded and deleted during further cycles (ibid). The second cycle revisited the coded data looking for patterns to incorporate into smaller 'categories, themes, or constructs.' (ibid:86). These emerging themes were then used to go through all the qualitative data for a third cycle, to verify nothing had been missed. The resulting coded data were then gathered into clusters and organised thematically, then reviewed for a fourth cycle to confirm the emerging themes and their relationships. These were then categorised into three summaries (Table 14).

〈	**Themes:** motivations and barriers to mending
〈	**Causes:** processes, the act of mending
〈	**Theoretical constructs:** beliefs/ principles surrounding mending

Table 14. Emerging themes

These emerging themes were then tested in the next wave of data collection for verification and to investigate any gaps in the existing data. Although much of the quantitative data collected[92] within this study had been marginalised[93] parts were used to support findings from the qualitative data and in general the analysis helped the holistic enquiry. The raw quantitative data from each of the interviews was compiled into tables (see appendix 8.2.5-6), broken down into component parts, ordered then rebuilt (Denzin, 2011) and the analysis extrapolated from the data.

The subsequent analysis of the data resulted in various forms of representation to aid understanding, such as; tables, graphs and flow diagrams. Care was taken to make sure that the data illustrated contained relevant arguments and simplified understanding. These diagrams and the studies outcomes will be discussed in chapter 4, along with the emerging themes.

As discussed, the participant's explicit biases were: from a small geographical area, non-mending women of a similar age and demographic (see 3.3.2.1). Although care was taken to alleviate bias, my implicit biases may have influenced the research. To help validate the findings and alleviate unintentional bias a subsequent study was developed.

[92] predominantly the initial analysis made from the written minutes of the interview

[93] as the limited number of participants made it difficult to analyse and verify quantitative data

3.3.3 Large Scale Survey: Method 2.

The data from the preliminary study was rich but small scale. Therefore, the following stage of research proposed to complement it with a larger study in the form of a questionnaire. Chosen for its ability to be less biased and difference to the preliminary study, a survey offers the opportunity to have a larger data set with the advantages of rapid turnaround in data collection (Creswell, J 2014). The survey is cross-sectional[94] with the data collected over an eight-week period. In order for a wider population response and within a short time frame[95] it was decided to collect the data online[96].

The aim was to gain a better understanding of the public's attitudes to extending the life of clothes, what mending means to them (see questionnaire objectives below). This would enable comparisons to be made with the preliminary study's small sample size, and an understanding of where they fit within the data range. The survey recognised social desirability bias, which is that people answering questions about behaviours or attitudes are often not 100% honest (Brace 2008).

Questionnaire objectives:

- To unpick the emerging themes.
- To build a better understanding of the motivations and barriers towards mending in the UK.
- To gain a better understanding of the use of mended clothing.
- To gain a better understanding of the attitudes towards mending and mended clothes.

3.3.3.1 Population Sample

Although the preliminary study focused on a specific category of participant (see 3.3.2.1), English speaking female non-sewers living within the borough of Islington, the survey targeted the general population with one requirement; to be sixteen or over for ethical reasons[97]. Gender was not used as a constraint as I was interested to discover who the survey would appeal to and whether there was any difference in mending attitudes, especially as a study discovered that men were more likely

[94] From a wider population at a specific point in time in time

[95] Including my time and practicalities as sourcing respondents online was decided to be quicker than on foot and allow a larger geographical demographic of the UK population.

[96] although it could be argued that completing an online questionnaire is alienating some population demographics, chiefly computer novices and luddites which could reduce the response rate for the older generation

[97] as minors required parental consent and this was difficult to police within an online survey

to mend their clothes (Hobbycraft 2016). Laitala's research encountered an overrepresentation of women and consequentially it was interesting to discover if the mending survey would meet similar gender ratios (2015, 2018). The concluding questions of the survey were used to understand the social demographic of the participants (Table 15).

1.	**Age**	to categorise into small age brackets.
2.	**Gender**	
3.	**Job title**	to categorise into basic social groups. I felt this question was less intrusive than income.
4.	**Employment status**	to glean an understanding of possible free time.
5.	**Living environment**	to discover if there are any differences between urban and rural living.
6.	**Nationality**	although predominantly a British based study, this was to discover if other nationalities have different mending habits (the preliminary study uncovered interesting differences in findings between British born and other European nationalities living in Islington).
7.	**Environmental attitudes**	using DEFRA's seven pro-environmental behavioural groups framework (2008).

Table 15. questions to understand social demographic

A response rate of 250 completed surveys was felt to be appropriate in order to validate the data collected and to be able to statically use the analysis as an indication of the general public's attitudes towards mending. The initial sampling method used was a non-probability sample based on convenience and availability (Creswell, 2014) and used a snowballing technique (sourcing initial respondents by using social media, contacts and the University of the Arts research students) to gain responses. As a result, it could be argued that this stratum of respondents are more engaged with mending, design and sustainability than the general population. As the initial response rate was low (50 responses) and I had a tight time frame of six weeks, Qualtrics a survey builder was used to acquire a further 150 responses. This provided the data with three quarters random sampling.

3.3.3.2 Instrumentation

The data was sourced using predominantly pre-coded closed questions, in the form of:

- Likert scales - to understand attitudes towards mending and the strength of agreement or disagreement (Brace, 2008),
- Ordinal scales – ranking questions, putting something in order of preference.

After copious research and trials Qualtrics survey software was decided to be the most appropriate. It was easy to navigate, design, offered many question styles and could be manipulated to create branches within the survey. The software was malleable to my requirements and was used unmodified. Throughout each stage of the survey's construction, piloting and data analysis, a checklist detailed by Creswell was used to retain validity in the quantitative research in respect to the preliminary investigation and other existing research (2014):

- Content – does it measure the themes?
- Predictive – does the data correlate with existing research? Or do they 'predict a criterion measure?' (Creswell, J 2014:160)
- Construct – does the survey measure the proposed concepts within the research question? (ibid).

3.3.3.3 Survey Design and Development

The design of the survey was an intuitive process, using action research principles. Outlined themes identified from the literature review and method 1, Wear > Craft > Mend research, were used as the foundation to the survey to explore along with any additional areas discovered. These emerging themes[98] (see Table 14) were developed and built upon to form the foundation of the questionnaire, which aimed to further unpick these themes and the surrounding questions that arose. The survey evolved as the questionnaire was tested and retested by the researcher and then through live trials.[99] The first trial (of two participants) concentrated on the survey's content, ease of understanding and appropriateness for the research and targeted demographic. The various branching pathways along the survey were also checked. Whilst the second trial (piloted online) highlighted finer points, including language, simplifying and improving the survey flow.

The initial criticisms to the survey were its length and complexity. Therefore, to obtain the target response rate it was evident that simplification was necessary. This involved reducing the number of questions and points in each question. I had to prioritise what would be most beneficial, for new findings, while repetitions and arguments that could not be analysed in relation to the rest of the data were discarded.

To develop the survey, spider diagrams for each complex question were used to illustrate the themes and the core areas being addressed. At this point the questions were re-evaluated against the emerging themes from the preliminary study with four main question types highlighted (Table 16).

[98] Are discussed in further detail in the following chapter

[99] Although the preliminary trials used the live questionnaire the outcomes will not be recorded in the data.

〈	**materiality (of garments),**
〈	**processes (use practices),**
〈	**emotional drivers,**
〈	**and motivation (to mend).**

Table 16. Four question types for survey

The survey was then examined in terms of these themes to create a more conducive flow. At the same time the Meta themes for data collection and analysis were re-analysed and trimmed down to reduce repetition and ambiguity. At this point any questions that were relevant to the preliminary research but would not gain further insights from the questionnaire were dismissed.

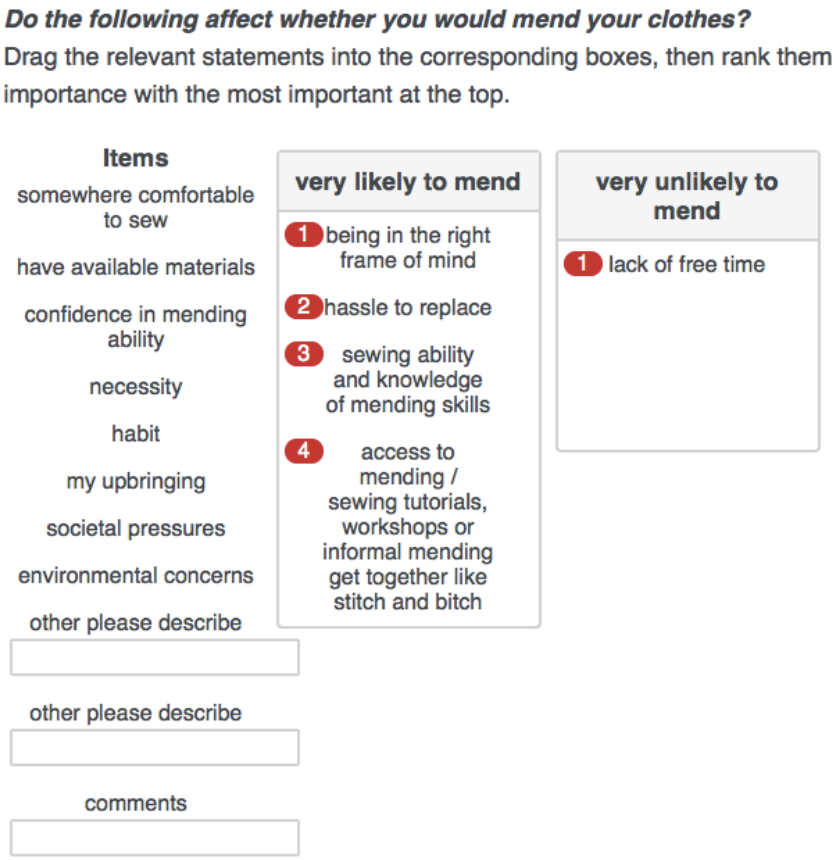


Figure 20. Example pick and rank question from survey

The language was scrutinised to make sure that each question was clear, easy to understand, complete and flowed. This was to try and reduce misinterpretation. Terms such as 'fashion' are difficult to clarify and are open to individual interpretations. I therefore made assumptions that the respondents would respond in similar ways to the term helped by the use of ratings scales. Finally, other question styles were explored and the style 'pick, group and rank' was selected as well as the sliding scale. As not only would similar data sets be obtained compared to ratings scales (although

not statistical), levels of importance would also be identified (see Figure 20 For example question and layout).

Three people piloted the final version for feedback and analysis before the survey was launched. Once the finer points were settled, the survey (see Figure 21 and appendix 8.3) was emailed to specific respondents from my contacts and placed on social media sites (such as Facebook, LinkedIn and Twitter,) to implement a snowball data collection technique enabling a convenience sample of the UK population to take part. Using social media as a tool for a snowball technique was naive as I only received 4 responses. Therefore, I utilised other avenues;[100] using my contacts, research students at UAL[101] and posting leaflets[102] to try and encourage people to take part. Fryrear suggests that you only get between 10 to 15 per cent uptake from any external online survey requests (2015) therefore to achieve the number of responses required over 2500 requests for participation would have had to be sent out. In consequence the participant database of the survey platform Qualtrics was utilised to cover a much wider sample.

3.3.3.4 Data Collection

The raw data from the completed surveys were collected and organised in order of completion and separated into three:

- **Initial trials** of 32 respondents[103]
- **Non-probability sample:** using snowballing technique, of 87 respondents
- **Random sample:** a random UK response panel of 155 respondents.

The raw data covered a total of 242 responses of a survey with two branches. The first branch, the menders had a total of 17 questions and the second of 12 generating a significant amount of data. As most of the questions contained multiple options such as the 'pick, group and rank' design, a total of 236 columns of raw data and 242 rows were collected.

[100] for the snowball method

[101] the University of the Arts

[102] approximately 250 within a ½ mile radius of my home in Cheltenham

[103] This data has not been used in the analysis

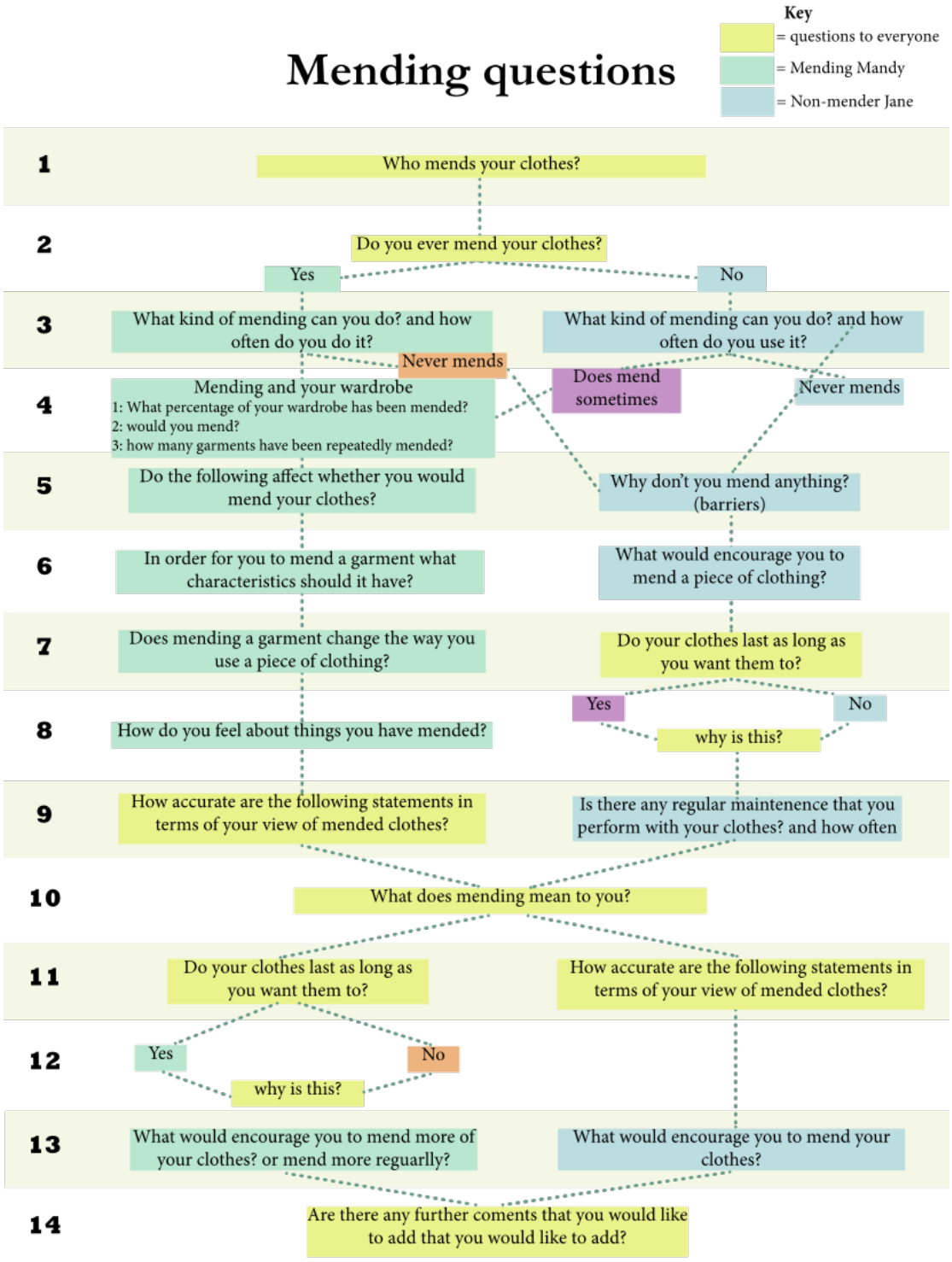


Figure 21. Mending survey questions

3.3.3.5 Data Analysis

The Qualtrics program was used for initial analysis and an overview of the data. The raw data was then extracted, organised, anonymised[104] and coded on Microsoft Excel. Then analysis was performed on the data to discover emerging patterns.

Any qualitative data was subject to the same analysis as the preliminary study. Some of the coded data with unique significant identifiers was merged with the preliminary study for further analysis. The majority of the quantitative and qualitative data has consequentially been consciously kept separate to compare, contrast and for verification purposes.

3.3.4 Summary

- The research was mixed methods using action research principles with sustainability theory framing the research.
- Both material culture studies and social practice theory were used as interchangeable tools within the research.
- The research comprised of two sequential QUAL→quan methods, which amassed significant amounts of both qualitative and quantitative data.
- Method 1: longitudinal study, a series of in-depth wardrobe interviews, and mending workshops with four non-menders.
- Method 2: larger online quantitative survey had approximately 250 respondents.
- Data for the studies was analysed and coded separately then coded data with unique identifiers was merged for further analysis.

[104] although the survey was anonymous it contained a voluntary section where you could leave your name and email address for further research purposes

Chapter 4

PRELIMINARY STUDY: ANTHOLOGY OF MENDING CONVERSATIONS

Wardrobe Interviews

Wear > Craft > Mend: Workshops

Anthology of Mending Conversations: Conclusion

4 Preliminary Study: Anthology of Mending Conversations

This chapter sets out the analysis of the data gathered for the duration of the preliminary study. Initially there is an overview of the participants who attended the mending workshops and then observations from the wardrobe interviews will set the scene of the participants' clothing behaviours and original attitudes to mending. The subsequent section details the workshops and the mending practice that followed. The final section discusses the wardrobe conversations that developed over the period of the study – the three interviews occurred at: 0 months, 9 months and 5 years points during the data gathering stage.

4.1 Wardrobe Interviews

4.1.1 Introduction: Context for The Wardrobe Conversations

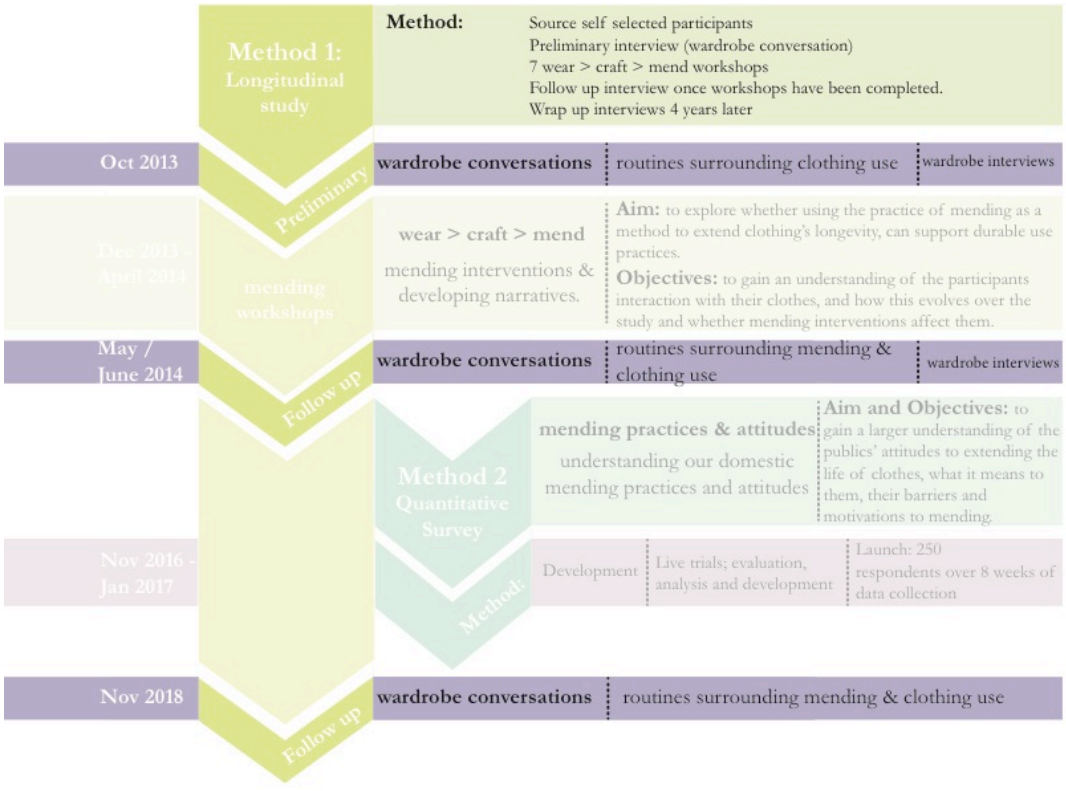


Figure 22. overview of methodology, interviews.

The aim for the preliminary study Wear > Craft > Mend was to investigate mending as a possible tool for more sustainable practices (see 3.3.2). Therefore, an overview of the participant's clothing habits (including mending), was necessary to contextualise their behaviour, in order to develop a general understanding of their current domestic consumption of clothing. This 'general understanding' is investigated through two rounds of interviews of volunteers within their domestic wardrobes (see methodology 3.3.2.2). The data gathered in these interviews form a point of reference and comparison in relation to further data collected.

4.1.2 Participant Overview

As discussed in the methodology over the period of the study participants dropped out, often for work related reasons or moving away (Table 17 & 3.3.2.2).

7	performed the initial wardrobe interviews
4	regularly attended the workshops
3	(of the 4 workshop attendees) performed the second wardrobe interviews
4	(the workshop attendees) performed the wrap up interview touching base five years later.

Table 17. Method 1: number of participants at each data gathering point.

A summary of each of the participants who attended the workshops follows (see appendix for the others 8.2.9):

4.1.2.1 Participant 1: Sonya

Series of interviews	participated		comments
Initial 2013	✓	62:04 mins audio recording	Sonya volunteered because she wanted to improve on her 'terrible' skills (2014). She had recently moved into a house on her own and was in-between jobs (Celebrity agent)
Second 2014	✓	33:31 mins audio recording	
Wrap-up 2018	✓	5:43 mins audio recording	Newly returned to the UK after living in Austria and completing 3 ski seasons
Workshops	✓	4 (attended)	Acquired a new job during the workshops so found it difficult to always attend the sessions

Table 18. Sonya: details of data collected and workshops attended

In 2013 Sonya was single, aged between 35-39 (Table 18). She had recently moved into a small cottage in Islington, on her own. On the wall in the living room there were a group of Sonya's worn ballet shoes (Figure 23). One of the shoes, had hand stitching by Sonya, in running stitch sewed on the point (toe), sewn to extend its life, suggesting that she has some sewing skills. However, she found she had only enough patience to do one; the second shoe remains unstitched.

Figure 23. Sonya's ballet shoes. One reinforced by hand stitching the other left.

At the time of the initial interview, Sonya was in-between jobs and was trying to limit her purchases. In her previous role as an agent for television celebrities most of the day would have been spent in an office. But Sonya would also have been travelling to meetings and photo-shoots. The variety of roles that she had had within her job, meant it was necessary that her clothes were versatile and comfortable. For her, clothing was an important part of creating the right impression. She did not have a separate wardrobe for work, rather everything intermingled and could be easily dressed up or down. Through her clients and friends, Sonya had had access to discounted designer clothing. Thus, for example she had garments by Acne, Isabelle Marant Etoile but lived in J Crew jeans. Her clothes were predominantly dark and were made up of brands such as, Zara, Kooples, Reiss, All Saints, Other stories and Topshop.

Over the period encompassing the workshops Sonya obtained another job and in consequence could not manage to attend all the subsequent sessions. Touching base five years later Sonya had been as she put it 'reliving her youth' (2018) and had been living in Austria where she had completed three ski seasons. Recently returned to the UK she briefly discussed how the changes in circumstance (such as: situation, home and finances) had affected her attitudes and use of clothing.

4.1.2.2 Participant 2: Alice

Series of interviews	participated		comments
Initial 2013	✓	73:52 mins audio recording	On maternity leave with first child of 6 months
Second 2014	✗		Moved overseas. Unable to attend second interview
Wrap-up 2018	✓	Answered via email	In the interim Alice had her second child and worked in Singapore and has recently returned to the UK resuming training guide dogs for the blind.
Workshops	✓	6 (attended)	During the workshops Alice discovered that her husband was being seconded overseas to Singapore therefore unfortunately the second interview was unable to be performed.

Table 19. Alice: details of data collected and workshops attended

In 2013 Alice was married and in the 30-34 age bracket (Table 19). She was a new mother on maternity leave with a 6-month child. Consequentially she had very different wardrobe needs, from when she was working. Her work prior to having a child was training guide dogs for the blind, which entailed wearing work branded sweatshirts and spending most of the time outdoors, in an office, or someone's home.

Alice lived in a large three bedroom flat with her husband and daughter, covering the first, second and third floors of a Victorian property on a residential street. As space was not at a premium Alice stored her clothes in her bedroom and the spare room. Her clothes were mixed with her husband's over two wardrobes and two chest-of-drawers with a separate chest for knits. Overall, I gained the impression that out of all the garments that Alice had, very few were being worn.

Also, her husband had put together a bag full of his clothes for mending. Although the gesture seemed to be inferred as supportive within the interview it could be viewed as continuing and reinforcing the gendered roles of maintenance and care of clothing (see 2.4.4.2. Mending drudgery: Burman 1999, McVeigh 2012; Lewis 1984:218; Middleton, 2014:268).

4.1.2.3 Participant 6: Lucy

Series of interviews	participated		comments
Initial 2013	✔	88:09 mins audio recording	Lives with husband and had recently been made redundant and not returned to work. Leads a full life volunteering and gardening.
Second 2014	✔	111:44 mins audio recording	
Wrap-up 2018	✔	Answered via email	
Workshops	✔	6 (attended)	Missed one workshop because of a holiday

Table 20. Lucy: details of data collected and workshops attended.

Lucy was in the 45-49 age bracket (Table 20). She was made redundant and has not returned to work. She filled her time volunteering for various charities and organisations finding she was busier than before, but doing things that she wanted to do. She lived in a large, three storied Victorian terraced house in Finsbury Park with her husband (who was still working). The house was overflowing with possessions, a visual narrative of their lives together.

Her clothing style was comfortable, practical and casual. Lucy's clothes tended to have three lives starting off as smart, then when showing signs of wear moving to the casual category, to finally when they were considered too scruffy they became gardening clothes, until they fell apart.

As Lucy was older than the other volunteers she had had the opportunity to keep some of her clothing for longer. Some items were from secondary school (over 30 years old), these garments seemed to be imbued with attachment. However, there were a few pieces that she had come across that she had completely forgotten about and had decided that they should go. Lucy seemed to have two reasons for keeping things: practicality equating to the garments that were worn regularly and then items with emotional attachment that were worn less regularly. Often special pieces were kept because of the memories associated with them, and were never worn.

4.1.2.4 Participant 7: Bea

Series of interviews	participated		comments
Initial 2013	✓	66:43 mins audio recording	Lived with her husband and pregnant with their first child. Works as an audiologist at a local hospital.
Second 2014	✓	33:31 mins audio recording	Bea was on maternity leave having had had her first child who was 6 weeks old at the time of the interview
Wrap-up 2018	✓	6:32 mins audio recording	She had recently returned to work after a second maternity leave. They now have 2 boys, still living in the same home.
Workshops	✓	3 (attended)	Bea did not manage to attend all the workshops due to exhaustion from full-time work combined with pregnancy.

Table 21. Bea: details of data collected and workshops attended.

Bea was in the 35-39 age category and volunteered after a call for volunteers at a WI evening (Table 21). She was recently married and was expecting her first child. Bea lived in Islington, in an ex-local authority house that was being renovated with her husband.

Bea's attachment to clothes seemed to be one for practical rather than emotional reasons; her garments had to really work for her, as she did not have much storage space. She was ruthless at rationalising her clothing and was very careful about buying things. A lot of her clothes came from charity shops, because they tended to be more interesting, and better quality for the price. Some of her garments had minor repairs; buttons re-sewn, split seams hand sewn together and a bit of crochet covering a hole in a jumper. Although these items had been repaired, they had become house clothes, as she now considered them not smart enough to be seen in public.

Bea used to work for a denim company and had over 50 pairs of jeans in the past and now only has two, a contrast to the amount of clothes she currently had. In the wardrobe count there were 65 items of clothing and of these items she had two pairs of jeans. However, Bea did admit that she had approximately two bags of clothes in storage. But she could not remember what was in them.

4.1.3 General Analysis of Clothing Habits

A brief overview of the participants' clothing habits in relation to mending will now follow. As the literature review discovered the routines surrounding garment usage, including the ebbs and flows of purchase and discard are idiosyncratic especially when looked at in the minutia. This was confirmed by the participant's clothing habits, for example the range in quantity of clothing in their

wardrobes. Participant 1: Sonya had almost four times as many clothes as participant 7: Bea[105]. As the study was of a small group, current research such as WRAP's and Laitala's has been used to identify where the participants sat within the behavioural norms (2013, 2015).

It became clear through the analysis that the practices involved with clothing use and disposal are complex, entwined around notions of the self, how you want to be perceived by others along with; social norms (Woodward, 2007), space (how much space you have to store garments), time (Skov, 2011), value (economic), duty of care (Gwilt, 2017) (emotional attachment, nostalgia and respect for the materiality of garments).

4.1.4 Maintenance and Care

As previously discussed, the participants sourced were non-menders who were interested in acquiring mending skills. So, I expected there to be few hand repaired garments in their wardrobes in the first interview. The analysis surrounding maintenance and care will now be looked at in greater detail.

4.1.4.1 First Interview

Mending – Skills and Competencies

In the initial wardrobe interviews the participants all expressed a desire to improve their sewing skills and confidence, with half of them wanting to use a sewing machine (see Table 22). All the participants said that they had a little, or basic sewing skills, except for participant 4: Nancy (who had learnt how to hand sew, embroider, crochet and knit) and participant 3: Caroline (who had learnt at school but was unsure what level she was). However, they all felt confident to re-sew on a button, with some of them happy to perform other tasks such as: shortening (Figure 24), lengthening, repairing tears, patching and customising. These skills were performed by hand and the capabilities were varied from novice (Lucy) to some sewing experience. However, when asked what they would do with a garment the only repair work that they seemed happy to do themselves was to re-stitch a button. Whilst Caroline would wear it without the buttons:

[105] The outliers had: 65 (Bea) and 238 (Sonya) respectively in their wardrobe audits.

Figure 24. Sonya's Miss Selfridge dress shortened by hand. 1st wardrobe interview 2013

'I do still wear stuff without the buttons until there's so few that I can't wear it. […] I just, it looks fine with just one or two. If it goes down there and up here [pointing] you are kind of ok with two in the middle and wearing something underneath so that's what I do.' (Caroline 1st interview 2013, Figure 25).

Figure 25. Caroline's shirt with missing buttons. 1st interview 2013

Holes on a garment would depend on how much they liked it, where the hole was and how bad it was as to whether they would wear it, repair (although none of them said that they would repair it) or discard it. Whilst a more complex mend such as a broken zip would be predominantly taken somewhere to be repaired.

Through looking in Sonya's wardrobe a garment with a hand sewn name tag was found (sewn herself), this led to a conversation about her mother and her sewing skills:

> *'one thing she could do is chain stitch […] She used to embroider our initials in, really nicely […] I didn't think we could do anything technical but actually, there's an ability to sew.' (Sonya 1st interview 2013).*

Within this quote Sonya was reflecting that she had sewing skills, an ability that had been overlooked. This backs up the argument from the literature review suggesting that as mending is often performed hidden from view, the skills and the concept of mending have been forgotten (see 2.2.3).

1st wardrobe interviews	general sewing skills				
participants	how much sewing experience	confidence in using a sewing machine	confident to perform forms of mending	what they hope to gain from the workshops	main constraints to mending
1 Sonya	basic	not at all	shortening, lengthening, re-sewing buttons	Sewing's terrible so would like to gain those skills	Forgotten she had sewing skills.
2 Alice	a little	never used	re-sewing buttons, patching, repairing tears, customizing	know how to darn, sewing machines, change in attitude and new skills	motivation, lack of skills.
3 Caroline	at school not sure	not at all	re-sewing buttons, customizing	confidence to do simple repairs	time, skills, equipment
4 Nancy	learnt how to hand sew, embroider, crochet and knit	never used	re-sewing buttons, repairing tears, & re-seaming broken stitch work	nice to do, to have the space to be creative	time
5 Sophie	basic	never used	re-sewing buttons, repairing tears, & re-seaming broken stitch work	better sewing skills, capacity to alter garments	time and willingness to make time
6 Lucy	a little	not at all	re-sewing buttons	love to be able to use the machine and sew a straight hem	not practical, knowledge base and confidence. Learn by doing.
7 Bea	basic	a little	re-sewing buttons, patching, repairing tears & customizing	love to use a sewing machine a little more	Time and ability as frustrated with previous attempts that have come undone

Table 22. General sewing skills 1st wardrobe interviews

Interest in Mending Workshops and Constraints to Mending

All the participants voiced a love of fashion and clothing as part of the reason for volunteering (see Table 23). They were interested in learning how to mend and sew. Lucy wanted to understand more about how garments were put together. Others hoped the workshops would spur them into having different relationships with their clothes, for example, Alice who had a lot of clothes but very few were worn (2013) (see Table 22). Whereas Sophie's main motive seemed to be empathy[106].

[106] From her experience of knowing how hard it is to find volunteers for research

1	Sonya	Would like to gain sewing skills
2	Alice	have lots of clothes and not many are used
3	Caroline	not very good at sewing and wanted to learn, like the idea of reusing, alternative activity
4	Nancy	crafts and fashion, always busy,
5	Sophie	interesting, to sew on a button, fix basic tears, also empathy as difficult to find volunteers.
6	Lucy	had issues at secondary school. Love clothes, to find out how garments are put together, not good with clothes
7	Bea	interested in mending workshops, like clothes and fashion

Table 23. Why the participants volunteered.

The main reasons for not mending were voiced as; time, skills, motivation and confidence in ability. They hoped to gain confidence and mending skills through the workshops and three of them were interested in using a sewing machine.

Lucy's main reason for volunteering was to dispel her aversion to sewing developed at school:

> *'I really didn't do well in my needle work class and was the worst girl in the class to quite an extreme degree. […] I had to be locked in my classroom in order to complete projects and I still didn't complete them and all the other girls used to come along and knock on the window. Either to tease me, or to try to encourage me and ever since (I finished my two-year O-level needle work course and failed of course), I have never taken up needle and thread again not even to sew on a button' (Lucy 1st wardrobe interview 2013).*

This highlights the impact teachers can have on their students. For Lucy, not only was she brought up to consider needlework a chore she had developed negative associations such as; punishment and failure to the task.

Caring for Garments

When asked what care practices the participants had to keep clothing in use for longer, they had varied responses (Table 24). Sonya for example felt that to care for delicate clothes was through caution, infrequent wear and careful washing. While Alice had a different approach, using layering

to hide holes and stains for instance. This illustrated their different attitudes for what represents a decent standard of dress. Whilst Bea had repaired some often much-loved items, such as crocheting a patch on a sweater (Figure 26), or changing buttons to give a garment a new lease of life. She had also attended swishing events[107] to 'refresh' her wardrobe. Nancy, Sophie and Caroline all mentioned using some form of mending service.

Figure 26. Bea's repaired jumper by crocheting a patch. 1st wardrobe interview 2013.

Tailors and Local Repair Services

Caroline had had a couple of garments repaired, while Nancy and Sophie seemed to use professionals as part of their general garment care. Nancy had had much of her wardrobe fitted by a tailor in her hometown, and Sophie used a drycleaner or her aunt to repair her clothes,

> *'I've had a coat that I had the lining, part replaced and mended several times but then it got quite worn out on the outside, so I think I gave that to charity actually. Yes, I've got other things that have just been repeatedly mended just [be]cause I liked them so much.'*
> *(Sophie, 1st interview 2013)*

Both Nancy and Sophie had European backgrounds that may explain their different attitudes to the repair and maintenance of their clothing from the other participants. But their upbringing and the family's behaviour, habits and routines towards clothing could have a greater influence than the social norms of their country of origin. Also, Nancy indicated that a major factor for her using the family tailor was cost, and quality of repair. She found the price of having an item repaired in

[107] Clothes swapping party

London was considered exorbitant in comparison and of poor quality (in line with the literature review see 2.4.4.3).

1st wardrobe interviews **Open-ended questions about worn out clothing**

Participants		anything they do to extend a garments life	what they do when a button falls off	what they do with a hole in the garment	what they do with a broken zip.
1	**Sonya**	'cautious about washing delicate clothes, and wearing delicate things too much'	sew it on	nothing	nothing
2	**Alice**	'not personally, just layer up to hide/cover marks and holes'	sew it herself	'depends on how much you liked it.'	'depends on how much you liked it'.
3	**Caroline**	'keep stuff until its fashionable again, get stuff mended'	'wear without buttons'	'leave it until it gets too big'	'local tailor'
4	**Nancy**	'take to tailor'	sew on yourself	'nothing'	'take to tailor'
5	**Sophie**	'had a coats lining repaired several times'	sew it on	'depends on how bad it was'	'go somewhere'
6	**Lucy**	no	have done	'nothing'	'nothing'
7	**Bea**	'patched holes, normally in a loved item. Went swishing, changed buttons on a cardi'	fix it	'depending on where it was'	'not know how to fix, if really wanted to go to Upper St.'

Table 24. 1st wardrobe interviews. open-ended questions about worn out clothing

4.1.4.2 Identifying Changes in Mending Ability, and Confidence (Pre and Post-workshops).

What can be seen (in Table 25) is that the participants did not feel their sewing expertise had changed much, however their confidence to perform different types of mend had altered considerably. Although they felt that their skills had not developed (through a short period of mending workshops), their willingness to mend had increased, as they had become confident to perform a wide range of types of mend, rather than the simplest such as re-sewing buttons.

Perhaps the mending workshops were not solely about teaching sewing skills. Rather the capacity to mend, that opening up a person's thinking to include a range of techniques and demonstrating mending can be creative in its own right may increase the likelihood of them repairing, as much as teaching them how to sew. Or as Lucy stated:

'knowing those techniques enriches your approach and ability to do things and possibly your ability to be more creative with anything that you are doing.' (2nd interview 2014)

Therefore, having built up a repertoire of possible mending solutions, the group had grown in confidence and should be more likely to mend (using one of the techniques taught or may be more likely to experiment with new ideas). Sonya also mentioned a sense of pride, of mastering a technique that she would use frequently, blind hemming (2nd interview 2014). However, when asked about how the new-found mending ability and confidence would translate in to everyday life, both Sonya and Bea used scenarios to do with shopping, saying that it had given them the confidence to be able to purchase items, that would need attention. Therefore, an unintentional consequence may be that some items could be bought just to be repaired or altered, so increasing the quantity of unworn garments in their wardrobe.

	General sewing skills					
	how much sewing experience		**confidence in using a sewing machine**		**confident to perform forms of mending**	
Participants	1st wardrobe interviews	2nd wardrobe interviews	1st wardrobe interviews	2nd wardrobe interviews	1st wardrobe interviews	2nd wardrobe interviews
1 Sonya	basic	basic	not at all	A little	shortening, lengthening, re-sewing buttons	Darning, shortening, lengthening, re-sewing buttons, patching, invisible mending (hemming), re-seaming broken seam work and customising
6 Lucy	None/a little	basic	not at all	A little	re-sewing buttons	Darning, shortening, re-sewing buttons, patching, slight alterations in size, repairing tears and customising
7 Bea	basic	Basic to intermediate.	a little	basic	re-sewing buttons, patching, repairing tears & customising	Darning, re-sewing buttons, patching, repairing tears, Re-seaming broken seam work, Customising

Table 25. general sewing skills change, before and after workshops

4.1.4.3 Classifying the Participants Using Durrani's 4 Types of Menders

Durrani uncovered four types of menders within her research (2.7.1). To recap these were: restorers, re-doers, recruits and the reluctants (2018b). I found the 4 types of menders a useful tool to classify the participants in the group according to their skills and attitudes.

Reluctants

To begin I will discuss two participants who never managed to attend a workshop: participants 4 'Nancy' and 5 'Sophie' (see appendix: 8.2.9 for further information). They would be considered by Durrani as reluctant menders (2018b). They both had knowledge of the construction of a garment and understood the handle of fabrics: 'Often I take quite delicate garments to be mended like silk which I wouldn't do myself, as I don't know what I am doing' (Sophie, wardrobe interview 2013). Whilst Nancy could articulate how she wanted a repair to take place for example, aware of how the crotch of a pair of leather jeans had been repaired badly:

> *'it was repaired by a friend of mine that does leather jackets […] and because she's more, used to follow patterns she couldn't think about the way to solve a problem… [later in the interview] 'I have no idea what to do with them but I should have kind of a triangle shape.' (Nancy, wardrobe interview 2013).*

However, both seemed reluctant to perform them themselves, possibly because their repairs and alterations were complex but when necessary Nancy had re-stitched a zip. In fact, in comparison to the other participants they both had a greater respect for clothing and valued the resources used both in the materials and the construction. Nancy seemed to have little affection for her garments and used them purely as practical items, cared for with respect. They were then gifted, or sold on via online marketplaces, as soon as she stopped wearing them (Wardrobe interview, 2013). Whilst Sophie had had garments repaired multiple times:

> *'I've got a silk dress […] I've had that fixed actually two or three times. Just like it's a very thin silk and then the lining wore through and the material was wearing thin as well in one place and actually my aunt did it because she is great at sewing…' (Wardrobe interviews 2013).*

Therefore, although Nancy and Sophie were reluctant menders, they were maintaining and caring for their clothes. They chose to delegate the physical mending process to trusted individuals to

repair their clothes and keep them in a useable state. So, they were being resourceful with their clothes, by using alternative mending avenues to themselves.

The fact that they both responded to the call for volunteers meant that they had some interest in repairing, however they did not attend the workshops[108]. So, they could possibly have been nudged towards becoming new-recruits, if circumstances had been different.

New-recruits

The other participants could all be considered new-recruits (Durrani, 2018b). In the initial wardrobe interviews and workshops, they had performed basic mends such as re-stitching buttons or alterations such as shortening garments by cutting the fabric themselves. These repaired garments had all been worn since; 1 only once, 2 rarely, 5 worn occasionally, and 5 worn regularly or more even though two of them have now been downgraded to home-wear. Bea perhaps, could already be considered a re-doer as although she had basic sewing skills in the initial interview she had performed slightly more complex repairs, such as patches on a cardigan's elbows and crocheted a panel for another patch, and replaced a cardigan's buttons for contrasting ones. These mends were visible and drew attention to the repair.

Moving Towards Restorers and Re-doers

Directly after the workshops, the group would still be considered new-recruits as they had only been practicing repairs for a few months, with Bea and Lucy showing signs of becoming re-doers (happy to experiment and add to a garment) as Lucy's comment shows:

> *'I like the idea of wanting it to be modified and customised and adapted and the whole idea that it has been worn and ripped, making a feature of that. Really I find that just a really appealing idea and it does sort of funk up the garment as well' (2nd interview 2014).*

Whilst Sonya's preference seemed to be towards a restorer, having mastered the technique of blind hemming she believed would aid her maintenance and care routines.

Following the wrap-up interviews (5 years later) the group had had time to integrate mending into their wardrobe routines. Lucy (re-doer) and Sonya (restorer) seemed to have remained in their respective types relating to their aesthetic tastes. However, Alice tended to perform visible mends on mostly her children's clothes, but invisible on her husband's, illustrating the dichotomy between

[108] Nancy found it difficult due to work commitments and Sophie moved out of London.

the restorer and re-doer. Whilst Bea discussed the same: 'things that I have done or got done are probably invisible ones, but I am inclined towards visible ones.' (2018). This demonstrates that they both straddled the types of mender, using the garment's function and wearer as a guide for the type of mend. This suggests that although menders may have an aesthetic preference for a mending technique, perhaps the categories of mending Durrani advocates are not fixed instead they are fluid depending on aspects such as use and user.

4.1.5 Conclusion

The data collections' biases may subconsciously have been from both the participant and researcher. As the researcher was only shown what the participants wanted her to see and this may have been influenced by the researcher's initial questions. Even though there was some bias the study was still a good method of observing behaviour and therefore gave a truer picture than other measures of attitude and self-reporting behaviour. Though the study was time consuming it is a valid method of research. Consequently, the findings are considered indications of their participants' wardrobe habits, that warrant further study into understanding how we care and maintain wardrobes and where mending fits, and how it can expand within these practices.

General wardrobe habits

- Although this analysis is from a small sample, it corroborates other academic findings (Laitala, 2015 & 2018; WRAP 2013). In the minutiae each participant had an individual set of behaviours and rituals that intricately determined the point in which a garment was no longer suitable for wear, and needed mending or disposing. To summarise this thesis offers qualitative details that follow the findings of other wardrobe studies fleshing out their findings.

Maintenance, care and mending

- Although they classed themselves as non-menders they all had garments in their wardrobes that had been repaired in some capacity, either by themselves, a friend or local tailor.
- The participants voiced that although they had little basic sewing skills they were all confident to re-sew a button at a minimum.
- The analysis of the second interviews showed that the mending group did not feel their sewing skills had increased dramatically (possibly because they needed more

practice to achieve a neater finish), however their confidence to perform a wider range of types of mend had.

- The wrap-up interviews show that all participants in the mending group, were continuing to mend in some form.
- The reluctant menders and Bea's admission that although she was willing to mend, she had little opportunity to[109], indicates that even in the small group multiple solutions to increasing the longevity of clothing were required to suit different behaviour traits and perhaps stages in one's life.
- When categorising the participants using Durrani's 4 types of menders people are idiosyncratic and can be difficult to categorise the re-doers and restorers as the garment, and the user seem to affect the style of repair as much as the mender's aesthetic taste.

4.2 Wear > Craft > Mend: Workshops

4.2.1 Introduction

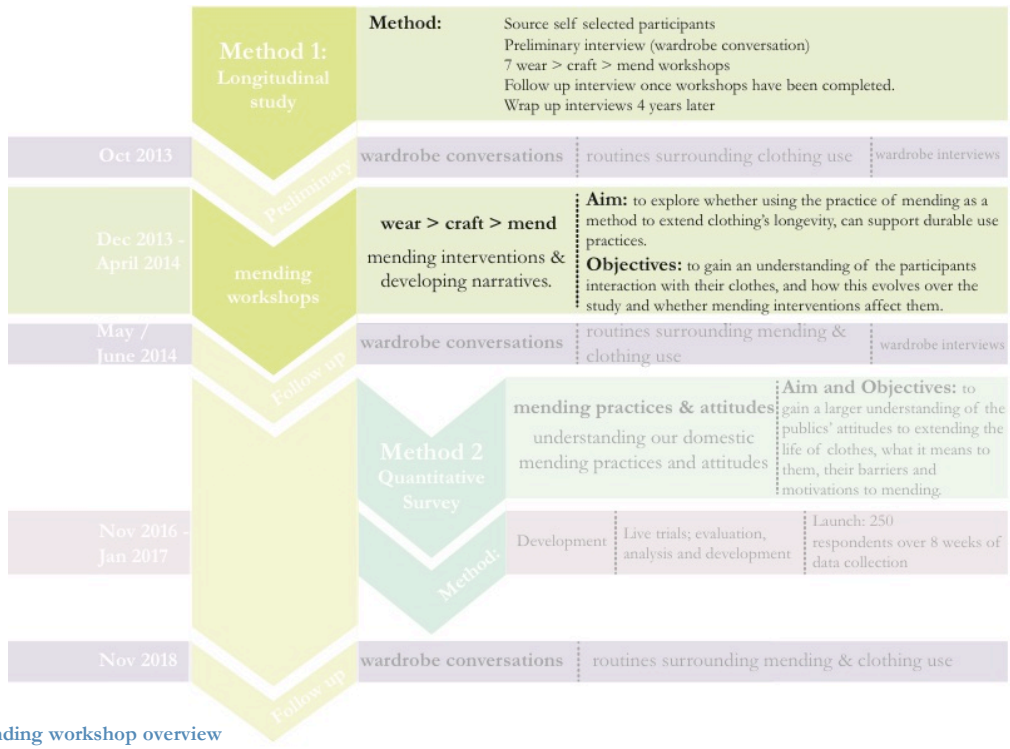


Figure 27. mending workshop overview

[109] Returning to work after maternity leave and with two small children left her with little time to mend.

Wear > Craft > Mend uses three words to succinctly describe the process of post-consumer interaction with a garment (the day to day rituals surrounding garment maintenance and wear), which involves tending and repair to keep it in use. The three words form a cycle of; wear, craft, mend. Each naturally leads to the next task and describes a complex sequence of processes that enable a garment to extend its useful life. Visually it can be thought as a long line, which represents the wear stage, this then loops when it is taken out of active wear and into craft and mend:

- Wear: the active stage of a garment when the garment is repeatedly worn. Until the garment physically needs an intervention to maintain use.
- Craft: the processes that the wearer goes through making the garment theirs; such as by wearing constantly to get the fit right, the challenge of finding a suitable method of repair that the wearer is comfortable to perform. Or as Fletcher proposes in the *Craft of Use* 'to give attention to tending and wearing garments; to favour their use as much as their creation.' (2016:16). This part of the loop can be blurred with the use and mending stages, when the reflective or unconscious process does not affect the use.
- Mend: the physical repairing of the garment and the processes involved with it.

This model of garment use becomes a repeated loop with the loops becoming closer together as the garment ages, each loop highlighting a mend with the periods in-between the use. These loops detailing a garment's extended life have been described in isolation but when placed in context within a wardrobe with other garments a complex intertwining of these threads can occur, as garments that can no-longer be mended and worn become spare parts for others or are transformed.

4.2.2 Outcomes

The workshops became an immersive experience for all parties, where I the researcher interacted with the participants absorbed on the activity (see

Figure 27 for method details). Once everyone had settled down to mend, the sessions seemed to become contemplative and often led to interesting discussions regarding the participants' clothing behaviours and views on sustainability.

Figure 28. Patching third workshop

Because the workshops only ran for seven sessions, all I could anticipate as a teacher and facilitator was to give the participants an introduction of a variety of mending methods. Hoping that my enthusiasm and the attention towards making the workshops fun and supportive acted as an inspiration to them to develop a long-term commitment to mending their clothes. The workshops were used as a safe place to build up sewing experience and test different methods that could become part of the participants' repertoire of mending techniques in the future, that they could expand on, hone and develop through use (Figure 28). This viewpoint was shared by Bea in the second wardrobe interview and was considered when discussing the Japanese mending technique, Sashiko Boro (Figure 29):

> *'because it was completely new to me and I thought it gave a very sort of attractive result, and it wasn't too difficult to do and I feel that I've learnt that skill now and I can use that in the future and it will stay with me.' (Bea 2nd wardrobe interview 2014)*

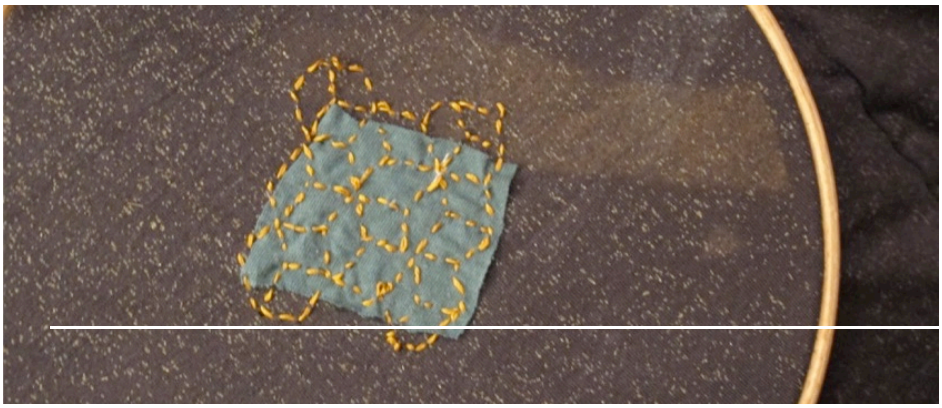


Figure 29. Sashiko Boro mending technique, by Bea

Of the four participants that attended the sessions regularly each managed to mend a garment to their own satisfaction. Their taste, values and relationships to clothes seemed to affect how they mended:

- traditionally using methods suited to hidden repairs to maintain a standard of dress for example; Sonya,
- motivated by resourcefulness, Alice,
- built on existing garment narrative's, Lucy,
- experimenting and playfulness, Bea.

These four methods will now be explored further:

4.2.2.1 Sonya: Hidden Practices of Mending are Still a Valuable Method for Keeping Up Appearances

Sonya treated her clothes with caution, trying not to wear out favourite pieces. For her, clothes were an important part of her identity, showing clients that she was abreast of fashion trends. She wanted to maintain their appearance. Understandably Sonya was drawn to hidden mending practices such as hemming. Blind Hemming's invisible nature when stitched in tonal thread hides the repair and ensures that however many times the hem is redone, the practice of mending is hidden. The number of times it is repaired is difficult to track, unless the thread used is visibly different each time. Therefore, the garment is cared for and maintained in its original state.

Figure 30. Blind hemming using herringbone stitch

Often a fine machine stitch is used for invisible hemming that is easily caught, unravelling the stitch which results in the folded hem edge to drop, becoming visible to the wearer and others. Even when repaired, the use of clothes and the blind hem's delicate nature often ensures a reoccurring mend; another section comes undone (hand stitched blind hems tend to be more durable). To try and combat this Sonya learnt how to repair these hems using herringbone stitch (Figure 30):

> *'I've actually since hemmed everything that needed doing. And some things I was going to take in to you know shops so I've done everything. In my own time as well. […] That's probably the thing that I will use the most.' (2nd wardrobe interview 2014).*

Sonya even passed on this skill, teaching her mother, saying that invisible hems were the most relevant technique she learnt in the workshops (2018). In the wrap-up interview Sonya indicated changes in circumstance led to increases in resourcefulness and mending such as stitching up holes.

4.2.2.2 Alice: Resourcefulness (Frugality)

Figure 31. transforming work branded clothing unsuitable for reuse – Alice

For Alice the motivation behind mending and repair seemed to be keeping valuable resources in use. Instead of mending damaged garments Alice decided to repurpose unusable items. Within the workshops she disclosed that her employers had recently changed their branding and in consequence her uniform. This meant that her original work clothes could no longer be worn, or donated to charity because of the labelling (this was machine embroidered and although only small the area would be damaged or leave a trace of the embroidery if unpicked). Alice felt strongly about the resource misuse taking great pains to decide how to repurpose them, settling on making a patchwork blanket (Figure 31). This resourcefulness enabled her to keep the essence of each garment and transform it into something useable within her home. Therefore, the narrative of these work garments could continue to develop with her.

4.2.2.3 Lucy: Narrative Building

Figure 32. Repairing moth holes using hand felting

For Lucy clothes seemed to hold emotional narratives that she was loath to part with. These garments were stored away unworn imbued with memories. What the workshops facilitated was the possibility to enable these garments to continue use such as:

'I brought one of them along a green woolly jumper that I adore. So thin from washing. Probably had it for 25 years and felted up the holes in it and people that have seen it have said that is so cute. So: A. I've completed and done something with that and with a much-loved garment and, B. it's a sustainable way of approaching my clothes and, C. it's so dam therapeutic to do. I liked felting I really did.' (Lucy 2nd wardrobe interview 2014).

Figure 33. Sashiko Boro embroidery

This jumper had been relegated to gardening, that could be further damaged through use, but after mending the jumper it was promoted back into everyday use (Figure 32). Something that Lucy was again happy to be seen wearing and She actively enjoyed the positive comments that she received for the repair. This became a positive feedback loop to encourage her to perform more mends, building and developing the narratives further with her clothes. Her reasons for mending tended to be:

> *'Some garments I just feel have history and I don't want to lose them (like my Mother-in-law's cardigan or a jumper that I have worn forever and it is like an old well-fitting friend). Other garments I like the promise they hold of being plain and susceptible to a little bit of rejuvenating to bring them back to good life and be a bit individual.' (Lucy, Wrap-up interview. 2018)*

This shows that Lucy considered the piece itself and the relationship to her for each garment before a mend, deciding on the appropriate treatments or styles of mend. This autonomy and style of mending added to the narrative (Figure 32 & Figure 33) and appeared to increase the enjoyment of the mending process and its therapeutic nature. Or as a volunteer at the Macclesfield repair day (see 3.3.2 & appendix 8.4) stated about self-repaired garments:

> *'I love them a bit more, […] because they've got a personal touch to them, a bit of me has gone into them. The creative process I reckon'. (anonymous Macclesfield repair day 2014).*

Another item Lucy repaired during the workshops was a printed dress, ripped and worn around the waist (see Figure 33). The busy print led to Lucy wanting to add to it as Kintsugi (golden joinery) to increase its value and celebrate the wear. A second bright print was found and placed behind the hole and it was embroidered on using Sashiko embroidery techniques of a circled pattern. This could be seen on the tracing paper used as a guide that is pulled away when finished. The aim was for the finished piece to acknowledge the damage while adding to the garment, expressing some of Lucy's personality whilst returning the dress to usability. Lucy seemed to have an innate frugal mentality and emotional attachment to items (keeping things as mementos), so if the workshops helped her to weave her feelings and stories into these garments to wear them again there was a benefit. Lucy felt that the workshops affected her by:

- **Buying** fewer new garments:
- ***Use***:

'I use my garments more readily because I know that I can repair and alter more confidently now so I don't feel that it matters so much if something gets torn or gets a hole etc' (ibid).

- **Storing** items carefully and protecting them from moths.
- ***Un worn items*** Lucy has: *'worked on them to make them wearable (such as the kimono and the African costume passed on to me)' (ibid).*
- **End of life:**

  'I am less likely to dispose of clothing readily now. I will look at something if it is an item I have always really liked to see if I can do something to salvage it. If not, I will make something from it sometimes.' (ibid).

4.2.2.4 Experimenting/ Playfulness

Bea had customised an unworn t-shirt by making the neckline bigger and binding the edge, then cutting and platting the sleeves (Figure 34). She used it as an exercise to trial various methods, but was satisfied with the results and began wearing the item again. However, when reflecting on the outcome, Bea mentioned that she did not feel that the transformations had added anything to the

Figure 34. Customizing

garment and that she did not feel that it would change her behaviour towards it, insinuating that she did not expect to wear it.

4.2.3 Summary

- The workshops delivered a range of identified mending techniques useful to encompass a range of clothing faults.
- Each workshop, presented, performed and practiced the mending techniques before moving on to the participants interests and own garments to repair.
- Each participant who attended the workshops regularly, managed to satisfactorily mend a garment and had worn it since.
- The mending group continued to mend some of their garments.
- The four participants appeared to have different drivers for mending: Alice's resourcefulness and Sonya's maintenance reflect traditional motives for repair whilst Lucy's narrative building and Bea's playfulness offered a lens into alternative mending motivations.
- The motivations to mend and the ensuing outcomes appeared to be determined by the garment, the user and the mender's aesthetics.

4.3 Anthology of Mending Conversations: Conclusion

The final interviews at the end of the longitudinal study indicate that the participants continued to mend their clothes, having picked up the taught skills that were most relevant to them (both technique and aesthetically). It could be argued that because these volunteers were self-selecting that they were already interested in the idea of extending the life of garments and wanting to get more use from them. This was seen in Bea's response to whether her attitudes to clothing had changed during the study:

> *'I feel like I had quite a make do and mend attitude to begin with, I just didn't have the skills. So I would just probably be more confident to mend something like maybe if I came across something in a charity shop that was more of a fix up job I'd have more skills to actually do that now.' (Bea. Second interview. 2014)*

Although mending is often considered a chore the participants admitted to enjoying mending. Lucy mentioned that she found it therapeutic correlating with the literature surrounding repetitive acts such as sewing as increasing wellbeing (see 2.7.1). Not only did they enjoy the process but they found the outcomes satisfying and were proud of their work. They developed in confidence over the workshops and as Sonya put it: 'it just gives you the confidence to think oh I could do that instead of automatically assuming that you can't.' (second Wardrobe interviews, 2014).

In consequence it seems that the women began thinking of their clothes as 'open' (repairable), items that could be maintained and mended when necessary rather than disposed of as soon as an item looked worn. They have continued sewing and mending their clothes over the years in varying amounts. The repairs ebbing and flowing when necessary or stalling and piling up as lives become busy with other things. From the two participants (Alice and Bea) who have had children during the longitudinal study and returned to work, the domestic duties of caring and maintenance of clothing has been extended to the children. In Alice's case especially the roles seem to be traditionally gendered (see 2.4), her mending tends to be for the children and husband rather than herself:

> *'it tends to be relatively easy mends such as socks, ripped knees in trousers (mostly kids as they aren't so fussy with how perfect the repair job is) or the seat of my husband's suits (they're rather old!).' (Alice wrap-up interview 2018)*

Whilst Bea admitted that although the inclination is there to mend, she is currently time poor so has been taking items to a local tailor in the interim:

> *'I try to keep an item of clothing for as long as possible. I've only got a couple of pairs of jeans. So, if I can repair the ones I've got and keep them going for longer then they will sort of last a bit more, before having to get a new pair' (Bea 2018).*

Yet although she has mentioned lack of time she went into detail about a proposed mend of her older child's pair of trousers to be passed on to the younger one. Wanting to make sure that the outcome was fun. This confirms that Bea had projects in mind once she had the time to initiate them. Whilst Lucy seemed to have taken to mending and was visibly mending or personalising items such as her mother-in-law's cardigan, or salvaging an unfinished African costume and turning it into a summer dress (2018). Lucy was looking:

> *'at everything now to see how I can mend, customise, modernise or re-use and love that satisfaction and continuity and personalisation*

[…] now I feel that I have that ability and that mind set to also be more individual, more sustainable, have a positive relationship with some special clothes, buy less new clothes and be more ethical as a result and feel good about at least some of my wardrobe.' (2018).

4.3.1 Sustainability and Clothing Habits

To consume sustainably is on the face of it simple; buy less, wear what you have, mend to keep in use and recycle unused clothing. However, this research has shown that to act more sustainably with clothing means incorporating additional and often more complex behaviours into the care and maintenance of people's wardrobes and mending clothes, is not necessarily done for sustainability reasons (Woodward, 2014). The mending workshops were therefore designed to encourage the participants to actively engage with their clothes, to take time, handle a garment and build a respect for the garment and the processes and skills used to create it.

Although during the wardrobe interviews and the workshops I tried to keep the subject away from environmental issues to prevent bias (as I did not want their attitudes towards clothing and mending affected by my sustainability concerns), I found the conversations surrounding mending organically evolved to ones about the environment and resource use (something that Durrani witnessed too 2018a:14). As the number of workshops performed increased and the participants' confidence in mending and the tactile act of sewing developed, so too did their understanding of garment construction, fabrics and their corresponding quality. To clarify this in the second interview I asked the women what they thought about the quality of clothes available in the shops at the moment? Their replies echoed the literature review, detailing the reduction in quality of both materials and construction quality, especially within fast fashion. An example is:

'some of it is really badly made, you can see that it is really fast fashion and that they do very quick turnarounds, you know if you buy something from Zara it doesn't last longer than a season. It will, shirts will end up with holes in them on the seams and […] hems always come down. […] I think to a degree you get what you pay for so the more you spend…' (Sonya second interview 2014)

Sonya admitted that she already had the skills to evaluate the quality of a garment. Therefore, perhaps what these workshops did instead of developing their tacit assessment of garments, was to rekindle these forgotten skills. This led to the participants feeling that they could take more informed decisions when purchasing a new garment (such as: fabric less likely to disintegrate in the

wash or the seams split because of cheap, shoddy workmanship). Or more specifically as Lucy mentioned, a renewed 'awareness' of clothes (2014).

> *'what's wrong with having a lovely garment and funking it up by customising and repairing it? And to me that's what sustainability means; being happy with what you've got [… and] bringing that awareness into what you do.' (Lucy second interview 2014)*

The workshops and the wardrobe interviews not only put mending on the radar for the participants, no longer hidden in domestic drudgery and forgotten about but reinvented as something fun and communal to do. It gave the participants the confidence to try out new techniques and experiment with their clothes in the act of repair. These two small acts seem to have created a bigger change in the women's clothing use.

When asked whether their clothing habits had changed since the workshops they replied:

> *'my spending habits have changed slightly. I still enjoy shopping for clothes, and I've had the need to, moving to the equator and back. Though I'm more likely to think twice before a purchase about what in my wardrobe suits that purpose and if it can be altered or mended accordingly to negate buying new.' (Alice, 2018)*

> *'I think I buy less new garments because I can repair or alter my clothes not only to extend [their lives] (important obviously) but also I feel more connected and bonded with something I have worked on […] I still buy new clothes too […] but with more of a balance.' (Lucy, 2018)*

Although the participants could have said what they thought I wanted to hear due to the relationships I built with them over the course of the research, I believe they were being honest. None of them mentioned huge changes in behaviour and Lucy for instance went into great detail over the pieces she had mended recently.

Bea, who was already sustainably minded, tried to buy vintage rather than new and only when necessary said: 'they're pretty much the same' (Bea, 2018). However, the family are trying to protect the clothes they have,

> *'we have a few moths in London. We've been making efforts to try and bag stuff up better, as the seasons change. So that we are not going to have to repair everything with moth holes in it.' (ibid)*

Whilst Sonya mentioned that the mending workshops had partially affected her consumption habits but she felt her changes in circumstance were the bigger drivers to change, finishing with:

> *'I don't think I've been buying as much then, I definitely do care more for the pieces that I have spent money on.' (Sonya, 2018)*

Therefore, even just a few hours of mending workshops can change a person's mindset and understanding of a garment's value. Learning how to repair worn garments instead of disposing of them, of extending their use has empowered these women to care-through-use by maintaining existing garments and to slow down their dependencies for the 'new', or consumption of products. Durrani had similar discoveries from the workshops in Finland and New Zealand (2018a:16). This suggests that mending workshops could become a method or a tool to help in the reduction of waste, of caring for clothes and making better purchase decisions. Durrani states that:

> *'Approaches such as these acknowledge the benefits that reside in collective actions aimed at accelerating pro-environmental change. In such a way, communal workshops help activate users to collectively seek tailored solutions to environmental problems that often seem too daunting to address if left to resolve individually.' (ibid:18).*

4.3.2 Summary

- Most of the participants appeared to be going through a life change that may make them more susceptible to adopting sustainable behaviours.
- The study seemed to have subtly changed the group's relationship to clothing:
    - Garments no longer seem closed, rather they are seen as open for tinkering in both a functional or aesthetic way.
    - The group seemed to find the workshops a positive experience: Lucy found the process therapeutic, Sonya had new found confidence and they all discussed their mended garments with pride and satisfaction.

- The process seemed to have rekindled their material awareness of clothing, affecting their purchase decisions by adding a reflective step.

〈 Mending clothing does not seem to be directly linked with pro-environmental behaviours. But mending garments appear to change the menders' mindsets towards their clothes and consequentially they may develop more sustainable behaviours. However, Lucy for example stated that she is less likely to recycle clothing, rather she kept garments just because they were salvageable. This may be an unintentional negative consequence, as it interrupts the material flows through hoarding and not using, just as discarding the item would but without the possibility of another use (Lucy, 2014).

4.3.3 Limitations

The study built up an understanding of the group's mending behaviours observing their and my (the researcher's) inherent biases, and recorded the limitations in order to inform the analysis. A rich and deep section of data was extracted from the preliminary study. The data came from a small number of self-selected participants in a London Borough. The time taken with each participant and workshop session to design, perform, data collect and analyse means that unless the method was changed the study could only ever have been with a small sample. Consequently, this study offers interesting insights into a group's mending journey, giving suggestions of general behaviour and would need further study. Because the findings are limited due to sample size ideally I would have done another companion study elsewhere.

The use practices of clothing including the care and maintenance were found to be individual and varied. A weakness in the method used is that these inconsistent habits, along with participants finding it difficult to remember inconsequential events and recall unimportant information are recognised by Brace who comments: 'As researchers, we have to recognise that we cannot expect to be given perfectly accurate information by our respondents' (2008:3)[110].

Also, the study's success depended on the participant's enthusiasm for or to engage with the project. Problems with data gathering over the longitudinal study were participants moving away and work commitments especially when no reward was offered for participating in the research

[110] However, when both sets of information are looked at in tandem it can be seen that Sonya the most frequent consumer also disposes of the largest volume of clothing. Sophie who consumes approximately 40 new items of clothing a year only disposes of four plastic bags worth. This suggests that the quantity of clothing in her wardrobe is probably expanding by approximately twenty garments a yearwhilst Nancy's output of clothing is higher than the flow of new garments. As she purchases less than twenty garments a year but disposes of four full bin bags worth of clothing. This suggests that she is discarding double the amount of clothing that she is buying.

other than learning mending practices. The project covered a long period of time and although I tried to encourage the group and install my enthusiasm for mending, understandably the participants enthusiasm towards the project ebbed and flowed, consequentially not all the participants performed the workshops or all the interviews.

4.3.3.1 Moments of Change

Within this study the participants were self-selected volunteers[111], and may therefore have been more open to mending and be concerned with environmental issues. Interestingly of the interviewed respondents the majority were going through a period of change such as moving home or having a child[112], corresponding with academic research findings into when people are more likely to adopt sustainable practices. Verplanken suggests that during these periods of change, people are more open to breaking habits, forming new habits that may become sustainable lifestyle practices (2008; Venn, 2013). However, these shifts in habits are often small and participants may return to more established routines (Verplanken, 2014). The volunteers have therefore subconsciously admitted that they may be open to changing their lifestyle practices and would like to have support with the process.

Consequently, I believe that the volunteers did so as much to learn new sewing skills as to change their clothing habits into more sustainable practices. This corroborates the initial findings from the interviews. To gain a better understanding of the volunteers' environmental behaviours a framework from Defra could be used (2008; see 5.2.3.1). However, no specific sustainable behaviour traits were measured or investigated other than methods of clothes disposal, in hindsight a weakness in my methodology and an area for further research. Therefore, it is difficult to explicitly categorise each participant into a behaviour type. Instead a discussion will ensue regarding the relationship of the participants' clothing habits and sustainability.

[111] although the streets were picked at random

[112] With only one exception, although she is no longer working due to redundancy there is no evidence to suggest that this is recent.

4.3.4 Feasibility of Workshops as a Tool for Sustainable Behaviours:

- The mending workshops seemed to have increased the participants' understanding of the value of clothes, and the quality. It seemed to have lessened the automatic response to purchase an item they desired. They declared that they would think twice before purchasing something new and would be less swayed by persuasive marketing tools and the emotional desires surrounding acquisition. Therefore, by taking part in the research the participants have become aware of the unconscious behaviours surrounding consumption and it has given the women breathing space to stop and think. Or as the French would call 'le pause'[113]. Ultimately, they are back in control of their shopping habits.
- Of the 4 participants who performed the workshops regularly, all are still mending garments and hopefully wearing the mended garments, and consequentially keeping them in use for longer.
- In the second wardrobe interviews 3 of the 4 participants mentioned that they would like to purchase a sewing machine. This could be considered moving the consumption elsewhere so instead of purchasing clothes they are purchasing equipment for sewing and mending.
- The literature review and the analysis of the data suggests that rather than thinking of sustainable behaviours towards clothing we should indeed become clothing custodians, maintaining and mending garments with the respect they deserve within the domestic remit of wardrobe maintenance (storing, laundering etc.).

[113] a method of waiting, listening trying to decipher a crying baby rather than instantly picking them up (Druckerman 2013).

Chapter 5

SECONDARY STUDY: MENDING WITHIN THE REMIT OF DOMESTIC PROVISIONING

Conclusion

5 Secondary Study: Mending Within the Remit of Domestic Provisioning

This chapter will first outline the general findings from the online quantitative mending survey. These will then be discussed, analysing how they relate to other research.

5.1 Introduction

5.1.1 Summary

- Total of 242 respondents[114].
- The total ratio of the respondents was just over 70% female and below 30% male.
- 78 % of the respondents had mended something in the last 5 years.
- Broken down by gender: over 80% of the women and 60% of the men in the study had mended something in the last five years.
- Just under 20% of respondents came from the 36-40 age group and just over 16% in the 31-35.
- Respondents from the age group 16 to 25 have higher ratios (approximately 40%) of non-menders in comparison to other age groups, with another smaller spike of non-menders in the 56 to 60 cohort.
- Most common repairs performed: over 80% of menders had mended broken stitch work, repaired tears and/or replaced buttons. Patching, customising and darning were just under 60%.
- From the non-mending group 80% had replaced a button in the last 5 years, suggesting that the term mending may be blurred.
- 70% of both menders and non-menders were content with how long their clothes last.

[114] After 10 responses were removed because of suspect reporting

5.1.2 Definition of Terms.

The data was split into the following groups for prior analysis and will be discussed using these categories (see appendix 8.3.3):

Menders: classed as respondents who reported that they had used at least one form of mending in the last five years.

Non-menders: respondents who reported that they had not mended any clothing in the last five years.

Non-probability sample (NPS): using snowballing technique, initially from the researcher's contacts of 87 respondents (76 without Inconsistent Sample: IDS).

Random sample (RS): a random UK response panel of 155 respondents (118 without the IDS).

Inconsistent sample (IDS): Respondents that reported inconsistently, who either considered that they mended clothing but who hadn't mended anything in the last five years or the reverse, reporting that they had mended something in the last five years when they considered themselves non-menders (sample of 48). This sample is a mix of menders and non-menders, non-probability and random samples.

5.2 Survey findings

5.2.1 Overview

The data provided the following key findings, which will be discussed further in this chapter (To see a more detailed report of the findings refer to appendix 8.3.3):

- Most non-menders were found in the 16 to 25 age-group, where there appear to be strong links with employment status and non-menders. There is also a drift towards non-mending in the 56 to 60 age-groups.
- Mending clothing seems to be influenced by gender.
- Mending is predominately performed within the domestic space.
- There seems to be some confusion with the understanding of the term mending in relation to simple repairs such as resewing buttons.

- The findings suggest that there are strata of mending.
- The process of mending is complex and idiosyncratic.
- Three-quarters of the respondents are generally content with how long their clothes last.

5.2.2 Age as an Inhibitor to Mending – Generational Differences

The 16 to 25 age group had the largest proportion of non-menders (see appendix 8.3.3 Figure 36 & Figure 35), formed predominantly of a cohort, dubbed: generation Z (Combi defines them as born between 1995 and 2001[115]; (2015)). This generation has grown up with the notion of 'fast fashion' being the norm[116], where engagement with clothing is often short-term and consumption based (Black 2012, WRAP 2016).

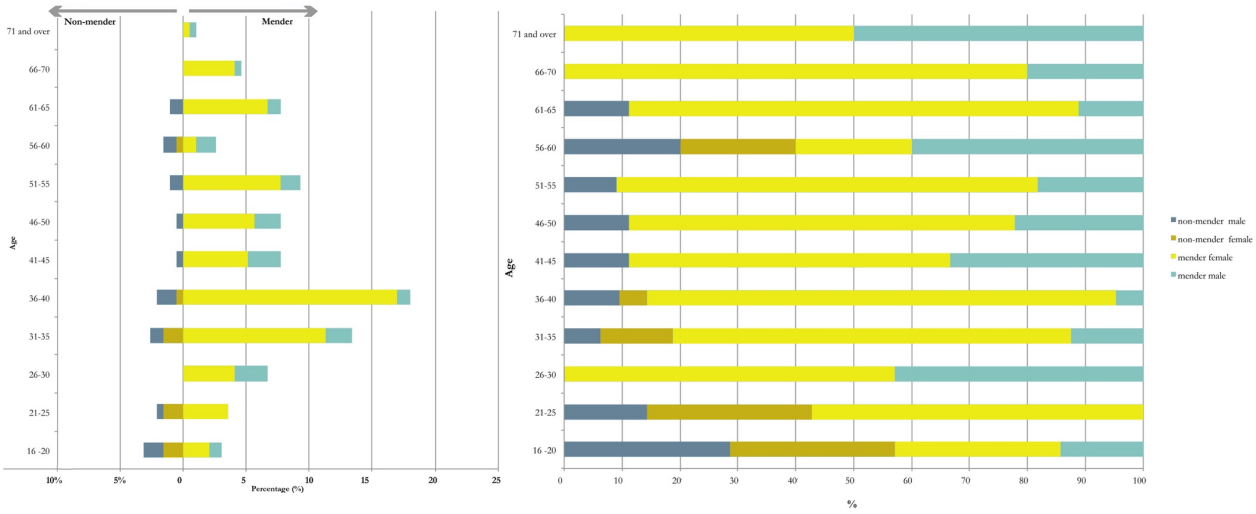


Figure 35. (Right) Total Ratio of menders and non-menders by age and gender (without IDS count of 194).

Figure 36. (Left) Total percentage of menders and non-menders from gender by age group (without IDS count 194).

[115] between 22 and 16 years old in 2017

[116] Originated by Zara (who arrived in the UK high street in 1998) the industry model no longer designs, manufactures and sells in traditional seasons rather they have a continual supply of small volume new lines (styles) arriving into the high-street twice a week (Siegle 2011).

The way this cohort consumes however, has subtle differences to previous generations before[117]. They are the first group to have grown up in the digital age with access to technology throughout childhood[118]. Connectivity and social media are significant to their daily lives where experiences are documented and shared, suggesting that the experience is as, or if not more important to them than the physical object (Schmitt 2015). This short-termism, of buying for experience may lead to a loss of the need for ownership as leasing products and services gains strength (Adrodegari, 2015). The consequential accumulation of 'stuff' may in fact be detrimental to mending clothes, as wearing items of clothing for short periods before discarding or hoarding them[119] negates the need to repair. It in turn prevents bonds through wear to be built up with clothes which may not encourage the trigger to mend (Chapman, 2010). Having large amounts of garments reduces the bond between them and the need to mend and keep single items in use (Fletcher, 2016). Therefore, mending at home in the domestic environment may not be a viable solution for this cohort to increase their use of a garment and its longevity. Other mending scenarios should be explored such as ones linked to the retail industry and part of leasing infrastructure.

The findings from the survey concerning free time were insightful and suggested that the less time you have, the more likely you are to mend, following the quote by Benjamin Franklin: 'if you want something done, ask a busy person' (Speake 2015:340). This view is supported by the survey's analysis of students and the unemployed who had large amounts of 'supposed free-time' yet had the highest percentages of non-menders in their groups. However, respondents who were retired, working part time or homemakers (this does not suggest that these roles mean that you are any less busy) were more likely to mend than those working full time suggesting that there may be an optimum amount of available time required to mend. It also backs up recent literature suggesting working less reduces your carbon footprint (Taylor, 2019).

The higher proportion of non-menders in the unemployed group is interesting (38% unemployed non-menders[120] compared to 22% non-menders of survey), as financial pressures and larger amounts of free-time might be expected to incentivise mending (see 2.4.4 for time as major barrier to mending, and 2.4.4.2 for mending's associations with poverty). However, the non-mending unemployed respondents were all from the 16 to 25 age group, the least likely to mend[121]. The

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[117] Punk youth subculture in the 1970's used rips and tears fastened together with safety pins for anarchy (Gwilt 2014). The 1980's had large numbers of young people altering and making their own clothes highlighted by the film 'Pretty in Pink' where a girl creates her own prom dress repurposing two other dresses (1986).

[118] They have never known a time before mobile phones, the internet and digital cameras.

[119] 'some 58% of people aged 16-24 said they own unworn items that are 'no longer my style/taste' – compared to 36% overall.' From data of a recent WRAP survey; valuing our clothes (2016).

[120] with IDS removed

[121] These numbers are small and make up 13% of the 16-25 cohort.

students were a large proportion of this age group and a high proportion of non-menders, but not all of the non-menders are from this demographic. This suggests that although age is a key factor in the likelihood of mending (61 % of the 16 to 25 age group are either students or unemployed and 80 % of the non-menders from this demographic are in one of these categories) is interwoven with employment status and free time (especially for this cohort) signifying that whether you mend is more complex.

What these groups could be lacking is confidence, confidence in their skill set to perform the repair and in themselves to wear a personally mended garment. They may lack access to equipment, not have the experience to create a project, the skills which need to be developed or wearing worn clothes might be considered fashionable. However, what these findings do show, are that shortage of time does not indicate: whether someone mends, what their skill level is or if they are confident to repair.

For one of the non-mending unemployed respondents another member of their family mended their clothing, which may suggest that they might still be living with family members who continue to perform the majority of the clothing care and maintenance rituals. In fact, of the non-mending students and unemployed 16-25 cohort, 50% of the sample said that another member of their family repaired their clothes and one of them said they went to a repair shop. This shows that although this group first appears not to mend, it uses alternative measures to outsource the repairs with family or local services. In fact, 68% of the non-menders[122] answered that family members, friends or local mending services repaired their clothes. Therefore, what this survey highlights is that although mending clothing is understood in the literature to be performed less frequently (2.4.4.1; Laitala, 2018), 96% of the respondents either had mended their clothes in the last five years or had had their clothes mended[123]. So once the outsourcing of mending is taken into consideration nearly all respondents had some mended garments in their wardrobe. As the questions for how many mended garments the respondents estimated they had in their wardrobes suggested over reporting a further study looking at wardrobe audits and the proportion of mended clothes is warranted for further research to clarify exactly what types of mending are performed and the quantity[124].

Although the findings indicate the age groups less likely to mend, and their levels of free-time once the respondents are broken down into the subcategories of age and mending, there are only small

[122] with IDS removed

[123] with IDS

[124] Laitala and Klepp's recent surveys into mending have concentrated on types of mending performed in the last year (2018). These were performed in 2010 (268 respondents), 2011 (1124 respondents) and 2017 (1001 respondents) (Laitala, 2018:5 & 6).

numbers per group (due to survey count of 194). Therefore, this analysis gives an indication of the UK mending habits, consequentially further investigation is required to verify these initial findings.

5.2.2.1 Reduction of Mending Practices as Participants Age.

What this study discovered, is that as respondents age their likelihood of mending decreases with a bulge of non-menders in the 56 to 60 age group. This generation is part of the baby boomer cohort, a group who have lived through a predominantly prosperous and stable period both economically and socially (Gibney, 2017). They are arguably the first generation to experience abundance (brought up without rationing[125] which stopped in 1954). Consequently, they were brought up to not think about waste, rather to be self-indulgent (ibid). Within their lifespan clothing values have changed, new items of clothing were no longer a luxury (Gwilt, 2014) and home-made and mended items could no longer compete with readily accessible, affordable mass-produced clothing. Therefore, it is understandable that this cohort, brought up with abundant affordable clothing is less likely to mend. Mending therefore is an activity, which is tightly entwined with social norms and practices, whose influence seems to affect small generation clusters differently. These findings differ from Laitala and Klepp's Norwegian study which found that older age groups were more active with mending activities, this could be due to cultural differences (2018).

5.2.3 Mending and the Domestic Space.

It can be seen (see Table 26 and appendix 8.3.3) mending is performed primarily within the domestic sphere[126] showing us that clothes are mainly dealt with at home. Local repair shops are used, but only by a quarter of the respondents, implying that they are not employed for the bulk of repairs. Correspondingly, 60% of the respondents reported repairing other members of the family's garments as well as their own. Consequently, the findings infer that mending is tied to domestic household provision, thus continuing traditional customs which

[125] Implemented in WW2

[126] Using the random respondents data to eliminate bias.

suggest the repair and renewal of clothing are part of wardrobe maintenance (see Skov, 2011).

	RS % (count 155)
Yourself	69.94
Member of your family	31.90
Dry cleaner	4.29
Friend	4.91
Local tailor	9.82
Repair shop	10.43
No one/ never	8.59
Other	0.61

Table 26. Table to show the percentage of participants who mend clothes[127].

The analysis from the survey indicates that mending's historically gendered practices tied to housework continue to be the case. The two supporting findings are:

- Firstly the respondent rate around 60% for women and 40% for men (see Figure 37) as seen with the random study[128], which highlighted that mending clothing is of more interest to women.
- Secondly the percentages of female menders were substantially higher than for men (just under 80% of women mended and around 40% of men[129] see Figure 38), showing that the findings themselves confirms that the traditional gender roles are not changing much (it is important to note that this is not a feminist study, rather a method to understand the delimitation of household chores better).

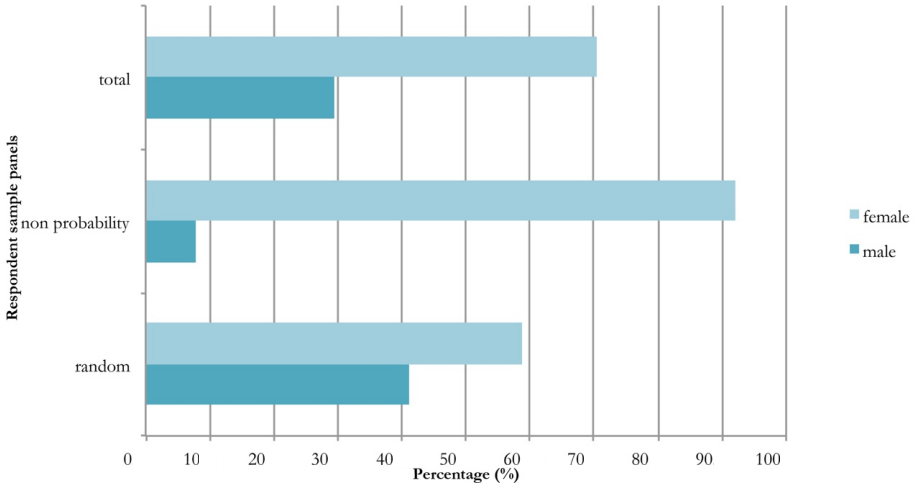


Figure 37. Chart showing disparity of male-female respondents.

[127] they were asked to pick as many as appropriate

[128] the survey was sent out to an equal gender split

[129] Using the random respondent's data to eliminate bias.

These corroborating findings support evidence:

- The soft textile arts are still largely a female concern (Burman 1999, McVeigh 2012; Laitala, 2018).
- Mending is a form of domestic provisioning within the wardrobe (washing, ironing and general maintenance of clothing).
- Mending is entwined with the long history of household provisioning, (Burman, 1999; Woodward, 2007; Cluver, 2008; Skov, 2011; Fletcher, 2016).

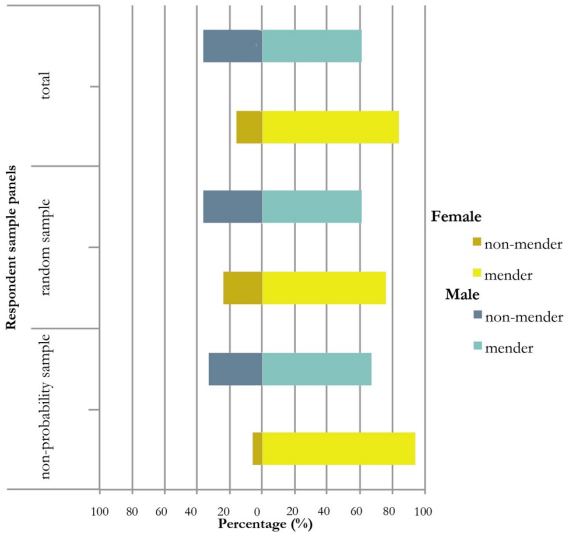


Figure 38. Gender breakdown of menders and non-menders, excluding inconsistent group.

The low percentage of respondents using local high-street services (one quarter) to mend clothes collaborates with Middleton and Gwilt's explanation of low demand and high cost of repair (2014; 2014). Laitala also found that mending was predominantly performed by the respondents or privately by family or friends (2018). However, in some countries this could be changing by tax incentives to encourage users to have items repaired and fixed using local high-street services (Orange, 2016). Therefore, further investigation is needed to see what impact the legislation has had on the Swedish population's attitude towards repair.

5.2.3.1 Mending and the Environment

When the respondents' environmental attitudes using Defra's seven environmental behaviours framework were assessed the findings showed that group 2: waste watchers (38 %) and group 1: positive greens (35 %) were the most pertinent groups (Figure 39 & see appendix 8.3.3 & DEFRA, 2008). In both these groups which are more environmentally minded approximately 90 % were menders, a higher ratio than the surveys total findings of 78%. This finding may not be considered

unusual for group 2: waste watchers who DEFRA stipulates: have a high ability to act yet have a low willingness to do so. However, the positive greens have both a high ability and willingness to act so I expected a lower ratio of non-menders in comparison to other groups. This suggests that mending clothing may not be directly linked to environmental behaviours and is confirmed by the two groups containing around 30 % of non-menders who were identified as: group 4: side-line supporters (high willingness and low ability to act) and group 3: concerned consumers (high willingness and ability to act). This cannot indicate a clear relationship between environmental behaviours due to small numbers in some of the groups, meaning the data may not be reliable

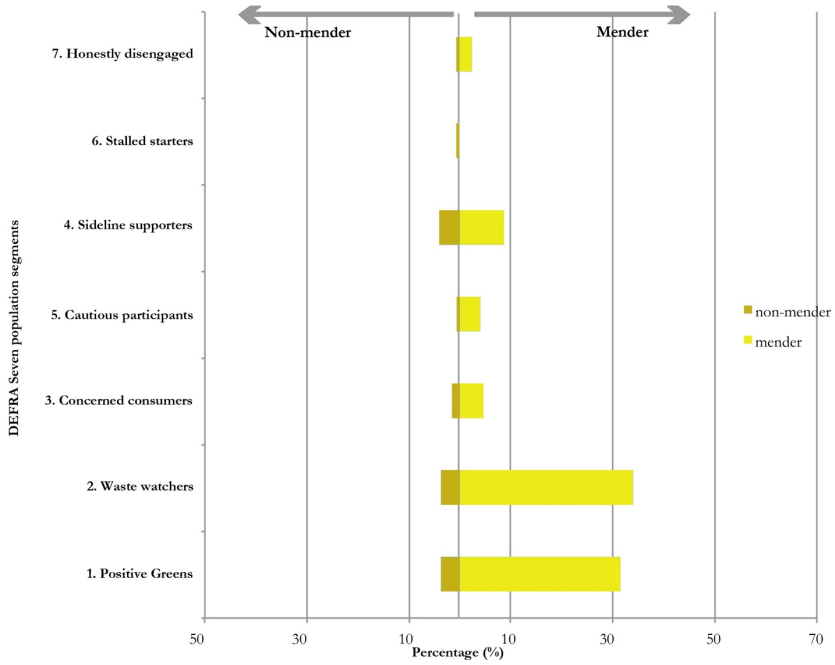


Figure 39. Diagram of DEFRA environmental behaviour statements in relevance to menders and non-menders (excluding IDS, count 194).

	Likelihood of environmental intensions of mending being upheld through behaviour		
Factors	Benefits	Versus	Apparent costs
Wealth	mending tends to be cheaper in terms of material costs to a replacement.	V	when the actual time to repair is factored into cost mending may appear more expensive, especially if using local high street mending services.
Power	Mending a garment puts the user back in control of their clothing. Controlling how long they want to use it for, not how long the garment can be worn before wear and damage appear	V	Mending is performed often on an ad hoc basis so is often difficult to control when the mend is needed, placing the power onto the garment and user and their mending proficiency. Whereas a replacement purchase superficially seems simpler and easier to control.
Social standing	A method of visibly demonstrating your environmental concerns through repairing garments.	V	Wearing a visibly repaired garment may not adhere to current social norms of propriety and clothing maintenance. Mending can therefore be seen as a rebellion against these social norms and a method of breaking away from them.

Table 27. likelihood of environmental intensions being upheld through mending

and larger samples are needed to verify the results (group 5: Stalled starters has only one respondent). However, the data corresponds with other findings reporting a substantial gap between reported ethical intensions of a consumer and their actual acquisition behaviour (Summer in Becker-Leifhold & Heuer ed's 2018:27). Summer moves on to explain that ethical or environmental values are upheld through behaviour if the benefits offset the apparent costs, meaning that the sustainable behaviour must not compromise the following; wealth, power or social standing (ibid:29). See Table 27 for how these values and behaviours relate to mending as a sustainable clothing practice. What can be seen is that mending for environmental concerns seems to be an intricate balancing act especially as mending a garment is often considered more complicated and time consuming than the dominant behaviour of consumption.

When the general public are asked what their view is on mended clothes they strongly believe that mending is better for the environment. However, there are conflicting reports when looked at in comparison to the motivations and barriers to mending. Although 40% agree with the statement that environmental concerns affect whether you mend, this is seen equally, as both a motivation and barrier. These differing attitudes question whether mending is performed for, or motivated by environmental concerns echoing the longitudinal study's findings. This is triangulated by the findings from the DEFRA environmental behaviour question, which concluded that there seemed to be no direct link between mending clothing and positive environmental behaviours. The lack of evidence that mending fits within an environmental sphere may in part be down to a lack of information as WRAP discovered (2016).

Nevertheless, the fact that mending extends the useful life of clothes, often preventing replacement purchases and therefore hopefully reducing resource use, suggests that mending operates within a sustainable remit, albeit unconsciously. This is supported by WRAP: '57% of [their] respondents said that they regard buying good quality clothes as a 'sound investment' and only 21% of consumers said they consider the latest trends in fashion as influential when buying clothes.' (2016). This could possibly be because mending and repair have long been considered within the narratives of frugality, domestic provisioning, and more recently austerity[130] and nostalgia specifically from the 'make do and mend' era.

Therefore, environmental values can be considered a factor in why people mend but not the primary reason (see Woodward & Miller, 2012; Woodward, 2015). In consequence both the literature and the findings suggest that menders are not necessarily environmentally minded and that people with strong environmental credentials are not necessarily mending.

[130] the UK has been experiencing a prolonged period of austerity which commenced with the financial crisis in 2007

5.2.4 Mending and Household Chores: The Evolving Definition of Mending

The inconsistent responses highlighted that around a fifth of the reporters felt some confusion as to whether they mended or not. It may be feasible that they consider themselves a mender (having mended something or at some stage in their life) even though they have not repaired anything in the last 5 years or vice versa[131] (This is a phenomenon that has been recognised in Gwilt's project 'make do and mend' where she discovered discrepancies between how people perceive they behave in comparison to what they actually do[132] (2014)). This is a recognised phenomenon with self-completed surveys (Ritter, 2007:40). Another possible explanation is that mending clothing for this group holds a different meaning, which might suggest that the types of mending they do, are not in their opinion considered mending (a third of these inconsistent menders had darned, patched and/or invisibly mended something (Figure 40), and 84% of them had mended a button within the last 5 years, all classic clothes mending techniques). Also, a problem with the survey was that the branching points prevented respondents going back to change their answers.

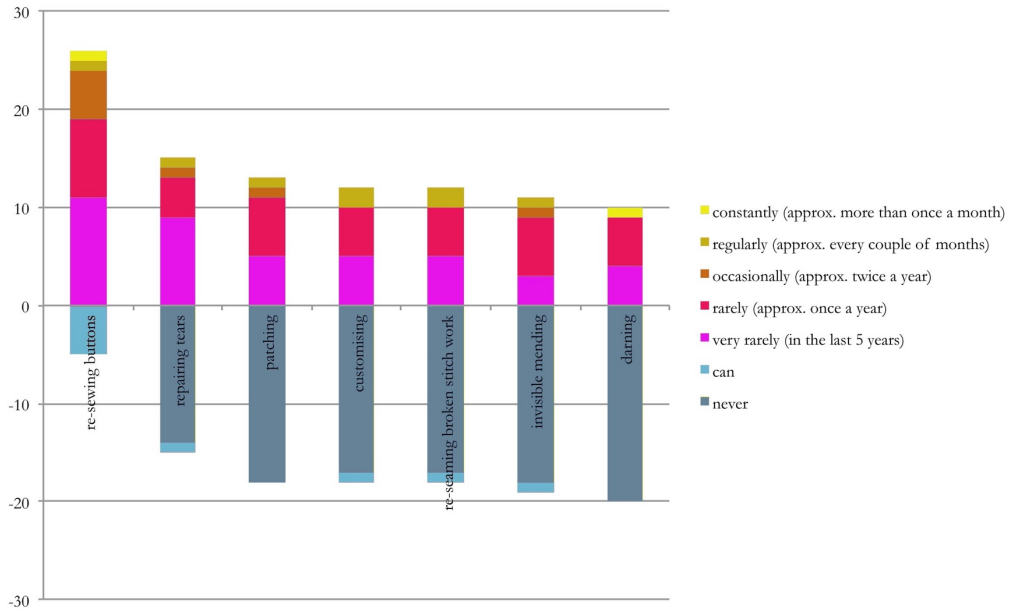


Figure 40. Respondents who said they did not mend yet had repaired something in the last five years (from IDS).

The non-menders reporting of their wardrobe maintenance offer some interesting discoveries that corroborate with this analysis. 60% of the non-menders had recently repaired buttons, (yet did not consider it mending), making the very idea of what the respondents see as mending questionable,

[131] Other explanations could be: inattentive responses, the survey question is difficult to understand leading to inaccurate results.

[132] Where she found that the participants perceived mending skills were different to the observation of them in practice.

suggesting that there is a need to redefine what it means to mend clothing (see Figure 41 and appendix 8.3.3).

The inconsistent reporting and non-menders responding that they had recently repaired items were shared by Laitala's survey's findings, she also came to a similar conclusion:

> *'a high percentage of respondents that said that they "never repair clothing" also said that they have done some repairs during the past year, usually either sewing on a button or fixing an unravelled seam. This suggests that making such minor repairs may not be considered as "real" clothing repair.' (2018:6 & 7)*

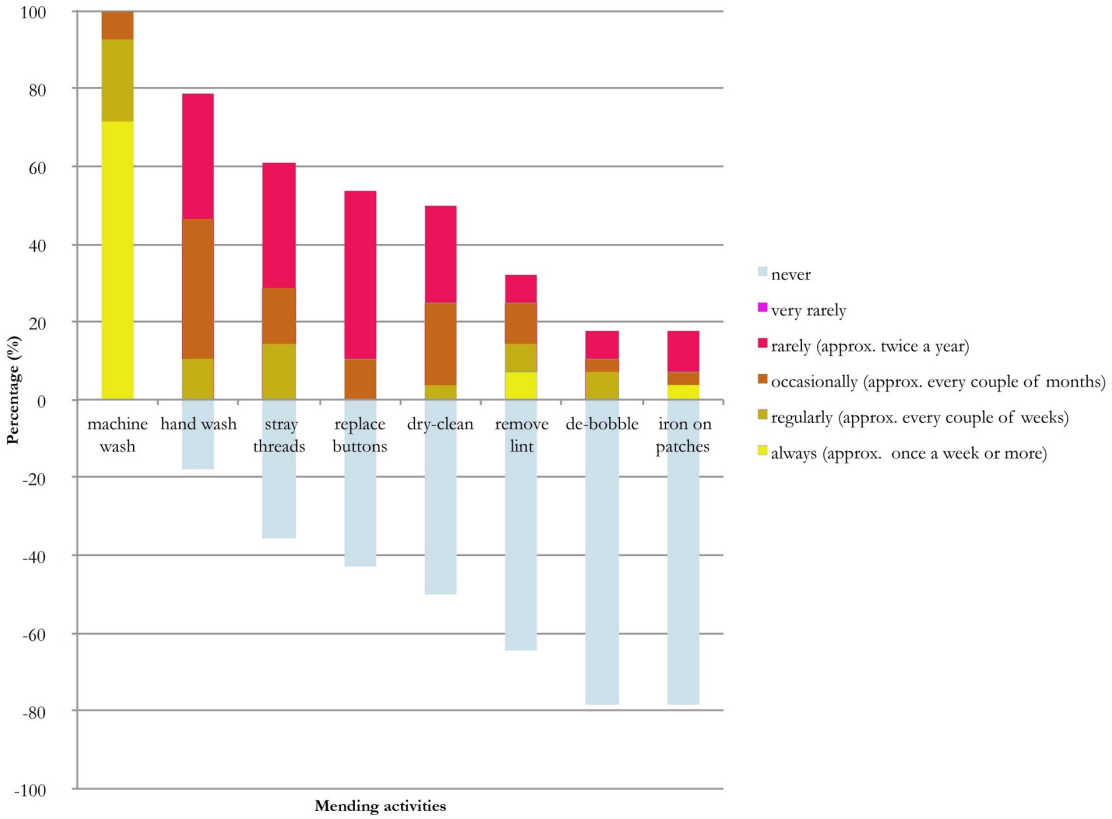


Figure 41. Non-menders frequency of wardrobe maintenance (IDS excluded).

Another point Laitala suggested was perhaps, wide-ranging questions are too general for respondents, such as: 'do you mend clothes?' Whereas questions such as: if a respondent has re-stitched a button or sewn up a broken seam, the action is more specific, easier for the respondent to remember and therefore less likely to encounter inconsistent reporting (ibid). Consequently, these points need to be addressed in the design of future studies.

Another finding which endorses a blurring of the definition of mending was the surprisingly high reporting of invisible mending; over 50% of menders reported performing this task in the last five

years (requiring a high-level of skill, patience and time to perform). This suggests that either any repair that is hidden, or invisible once finished is now classed (by the respondents) as an invisible repair, or that the technical skill set of the respondents was unusually high. This could possibly be due to invisible mending becoming seen as the opposite to the widely accepted term 'visible mending' championed by: Pym, Tom of Holland (2017, 2014), and now visible in mainstream media (see Lewis-Hammond, 2014) rather than traditional form of invisible mending of re-weaving to recreate the fabric using yarn from selvedge or hidden areas of the garment. Therefore, it could illustrate a lack of technical knowledge. It would be interesting to discover what the term means to people in further research and if they can in fact perform traditional invisible mending. This finding could be used to criticise the research tool as no definition for the term 'invisible mending' was given. Assumptions were made that the respondents would understand the term. However, the data from the responses were interesting and enabled these findings which would not have occurred if the types of mending were made explicit.

From these triangulated findings within the survey the word mending is interpreted differently. The confusion seems to stem from whether basic repairs such as re-sewing a button are considered mending. These data imply that the meaning has become blurred:

- A lack of delimitation between mending and household chores has occurred, suggesting that some forms of mending have been absorbed into the everyday routines of general clothes maintenance.
- Also, in my view the negative social connotations may have affected the reporting (people may hide the fact that they do it: 'to fit in with what they believe is the social norm for the situation.' (Ritter, 2007:39).

From this evidence mending can be viewed in layers or strata. With basic repairs becoming the baseline, these repairs are taken for granted and are no longer considered strictly mending, re-sewing buttons, and re-stitching seams, the non-visible quick fixes that do not affect the garments aesthetics.

5.2.5 Types of Mending

The most frequently performed types of mending (baseline repairs; re-sewing buttons[133], re-seaming broken stitch work and repairing tears), are the ones that people need relatively little skill to perform and are small quick jobs that require few materials, just a needle and thread. This allows the garment to be returned to functioning use speedily, without affecting its aesthetics and the repair tends to be hidden. On the other hand, patching, customising and darning suggest a larger fault that takes longer to perform and could require other materials and equipment such as scraps of fabric, yarn and a sewing machine.

When considering clothing durability (or the lack of), there is a need to understand whether regularly performed tasks are repairs that require the most frequent tending. Such as; stitch work, tears and buttons might fail first followed by the need to patch, customise and darn. While the survey identified what types of repairs are made and their frequency it did not uncover the damage to worn clothing. Consequentially it would be useful to understand if the repairs performed follow the damaged garment's requirement for repair or if garments with larger tasks are left unworn to be mended at another point or disposed of. A combination of qualitative interviews with participants and their damaged garments and surveys could be used. This would be useful to aid further research as identifying specifically what areas (for example: knee, elbow, cuffs and neckline) of a garment someone is more likely to repair may influence designers to create more durable garments specifically at areas where the user would not be happy to repair.

5.2.5.1 Attitudes Towards Mending

What can be concluded from the findings and corroborated by Laitala is that anything requiring more extensive repairs is not mended as frequently (2018). This suggests that garment problems that require more complex mends to continue to be used tend to:

- Be required less infrequently,
- Are less likely to be repaired, or are put away to be mended another time,
- Is the point when the wearer disposes of the item.

[133] corroborating with WRAP's findings of nearly three-quarters of the UK can re-stitch a button (WRAP 2016 a survey of 7,950 UK adults).

Although this pattern looks straightforward anything above baseline repairs seems to follow a complex process as to whether the garment will be mended. The survey uncovered that the respondent's attitude towards mending was varied and when the findings were mapped out mending behaviours were found to be complex (see appendix 8.3.3 and 6.4 for greater details of the findings). At a fundamental level the wearer needs to be able to diagnose the problem, work out how to solve it and then perform the repair (Fletcher 2016).

5.2.5.2 Longevity and its Relationship with Mending

Around 70% of the respondents stated they were happy with how long their clothing lasted (see appendix 8.3.3). The themes uncovered from answers to the question were common with menders and non-menders. A diagram of developing themes relating to longevity was drawn up (Figure 42).

The comments to this open-ended question were varied and showed that clothing longevity is affected by many factors within the main themes of expectation, acquisition and use. To summarise the main findings were (for greater detail and analysis see appendix 8.3.3):

- The longevity of clothing seems to have two important themes that affect length of use: 'quality' and 'care and maintenance'. With two sub themes connected to use and care: wear and mending.
- Caring for a garment seems to cover a raft of practices such as use, laundering and mending.
- The respondents felt that mending quickly (as soon as damage to a garment was noticed) prevented further damage and they transformed garments to keep them in use either through change in function, restyling, giving them a new life, using them to repair other garments or cutting them up as rags.

These findings highlight that mending has an important role in extending the longevity of clothes.

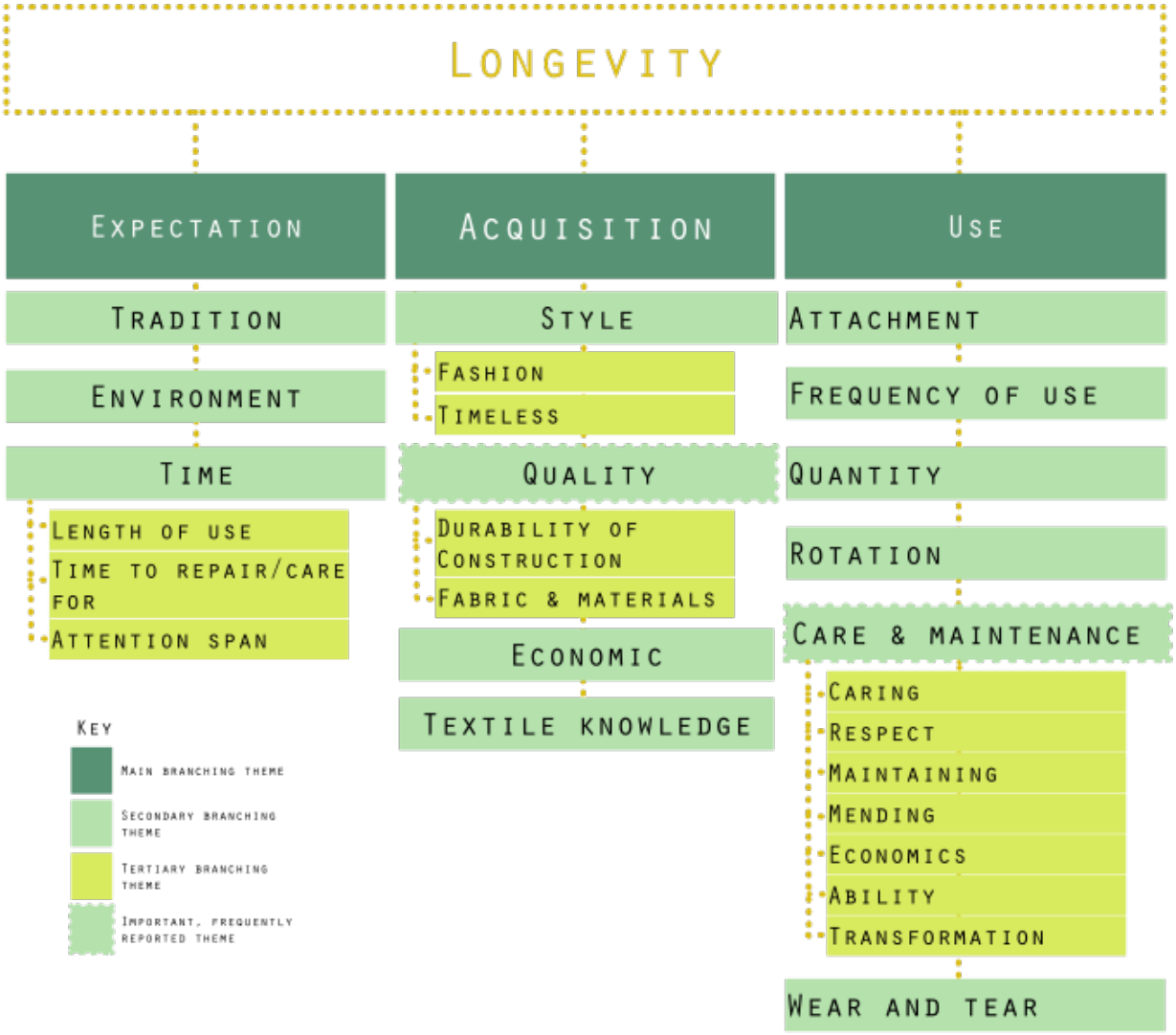


Figure 42. Diagram of themes uncovered from longevity question.

5.3 Conclusion

The analysis of the survey data appears to correlate with other academic findings that sustainable behaviours towards clothing are often ad hoc (Woodward, 2015) and are not related to the sustainable beliefs and preferences of the user. Therefore, to increase mending uptake it is important not to focus on the sustainable benefits of increasing the longevity of clothing as the sole purpose for making repairs. Perhaps the true value of clothing needs to be understood to develop a greater respect for the garment. What is required is a reconnection to the value of materials, mending therefore becomes part of the rituals and habits surrounding clothing care and use. We should become custodians of clothing respecting the resources and the expertise used to manufacture or craft the garment.

To help foster this change perhaps a more inclusive system could be designed that celebrates mending, encouraging repair to be thought of as a hobby, elevating the practice of mending from domestic drudgery to a position of esteem and creativity that could help to alleviate the gender bias. Various strategies could be developed for instance: mending kits could be sold alongside other craft kits in independent boutiques to help increase the acceptance of mending and mended clothing to become part of the social norm. However, the issues with this are that mending could become part of the mindfulness bandwagon and be a passing fad like the adult colouring book craze (2015-2017 Rowe, 2018).

Age has been indicated to be a factor in mending uptake with fewer menders in the younger and older groupings (a larger survey concentrating on these groupings is required to verify these findings) therefore to encourage uptake of mending it is important that a variety of mending interventions are required, tailored to specific groups. As one size fits all solution would not address differences such as: generational, gender and attitudes towards clothing.

Mending continues to be associated with the domestic environment and there seems to be a blurring of mending's interpretation especially with basic mends such as re-sewing a button. These can be considered part of the general routines of clothes maintenance.

Chapter 6

FINDINGS:

THE CONTEMPORARY MENDING PROCESS

Care

Three Mending Strata

Mending Cycle

The Factors Affecting the Process of Mending

Outline of The Mending Process

List of Recommendations

Conclusion: Further Mending Conversations

6 Findings: The Contemporary Mending Process

Cross study findings will now be discussed looking at the mending process in detail and finally will offer a list of recommendations for the fashion industry, government, academics and clothing users as to how mending practices could be adopted and sustained.

6.1 Introduction

Now that we have come to a basic understanding of:

- **Wardrobe interviews:** the participants' clothing habits, including their care and maintenance of clothing (in comparison to the general UK population refer to appendix 8.3.3),
- **Wear > Craft > Mend workshops:** how they developed through the introduction and consequential use of mending as a tool to increase a garment's longevity,
- and the analysis of the **mending survey**.

The research's emerging themes can be discussed. The key findings are:

- 3 levels of mending or mending strata.
- The contemporary mending process.

To begin care is discussed including the philosophy of care and its relationship to mending then the mending strata is investigated, leading to a diagram showing a simplified cycle of mending. This cycle of mending can be used to understand the behaviour surrounding baseline repairs, however a more complex contemporary mending process diagram was needed to understand the complex behaviours surrounding general and specific mending strata. This diagram is examined and then a list of recommendations follows.

6.2 Care

Mending has been identified as being a vital aspect when caring for clothing and tends to be identified within an overarching theme, garment care (see 2.5.2, 7.1.1). Approximately a third of the menders felt that mending was a way of caring for their clothes, even though Gwilt discovered that

caring practices on the whole are linked to cleanliness (2017).[134] Her study found for individuals, 'that their caring and maintenance practices was influenced by a desire to preserve the original condition of the garment.' (Gwilt, 2017:7). This notion of 'caring and maintenance' could therefore be linked to a baseline mend from the three strata of mending (Figure 43). While 42% believed that it increased the durability of clothes, corresponding to Fletcher's findings within *Local Wisdom* that durability is a 'product of nurture not nature.' (2016:212). This concurs with my findings that 70% of people are happy with how long garments last (for both menders and non-menders), suggesting that people are prepared to cherish their wanted garments, mending them to expand their lifespans (as 78% of people mended).

The nurturing values for clothing were also seen during the act of mending, the active caring for a garment. At this point it can also be refined to incorporate individual and material wellbeing. With a sense of enjoyment, or wellbeing during the process being aligned to the meditative quality of sewing (Newberg 2011; Burt & Atkinson 2011), turning to one of fulfilment at the outcome of a successful mend. This can be illustrated by Lucy: 'I think, well I can do that actually and that's a nice feeling.' (Lucy 2 wardrobe interview 2014). Ultimately the sense of satisfaction was created by producing something tangible.

6.2.1 Philosophy of Care

The academic Maria Puig de la Bellacasa suggests that rather than a moral intention, care should be considered 'as a doing' (2017:219). Caring is seen as a process or an action of looking after (see, 2.5.2.2), or as a method of engagement with items (ibid:29). In fact, she suggests 'care as an everyday maintenance of the more than human web of life' (ibid:219). Therefore, mending clothing can be seen as part of this maintenance of a person's environment. Something that Spelman concurs stating that:

> *'there appears to be a striking similarity between the kind of knowledge and skills involved in "care ethics" thinking and those involved in doing careful repair work' (2002:46).*

However, Spelman moves on to say that the connection between repair and care are the relationships between people, whereas for justice it is the 'principles by which they should live' (Spelman, 2002:49). Consequently, if I extend Spelman's definition of care in respect to mending

[134] This could be due to earlier arguments suggesting that the bulk of our caring practices are the cleaning and tidying away of our clothes due to the volume in our wardrobes.

clothes, it becomes *the maintaining the relationship between the user and the garment, conforming with the care and maintenance of clothing*. Tronto's view is more open:

> *'everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible.' Tronto and Fisher's definition of care. (Tronto, 1993:103).*

Tronto's definition of care proposes that it is *what* a wearer *does* to maintain, use and mend their clothes to continue to wear them. This definition of care corresponds to ideas mooted in the thesis of how menders care for their clothes, however as Spelman advocates maintaining relationships with clothing is also important. Therefore, in respect to caring for garments I propose a mix of the two:

> *Caring for clothes is what a wearer does to: maintain, wear and mend in order to continue their relationships and use. Essentially: caring-through-use.*

The concept of caring-through -use will now be investigated further.

6.2.1 Moving Towards Caring-Through-Use

Over the timescale of this research the sustainable fashion viewpoint seems to have altered (from implementing change at design and manufacturing) to one of caring, nurturing, guardianship, and tending (a holistic viewpoint focused on people's interaction with the natural world). This new source of vocabulary is one systemically associated with nature, belonging, and a closer relationship with oneself, dissociating from fashion's 'profound anthropocentric bias' (Fletcher at GFC, 2018). Fletcher advocates connecting clothing to nature or, fashion ecologies to help shift the focus away from the humanised, the overly industrialised complex global machine called fashion (2018c:143, 2018b).

In relation to describing methods of users' participation with clothing the terms have changed subtly. The 'consumer' became an 'active-user' developing into what I will call: 'caring-through-use' (Table 28). These delicate changes in language indicate a larger shift in beliefs underpinning clothing use towards sustainable practices.

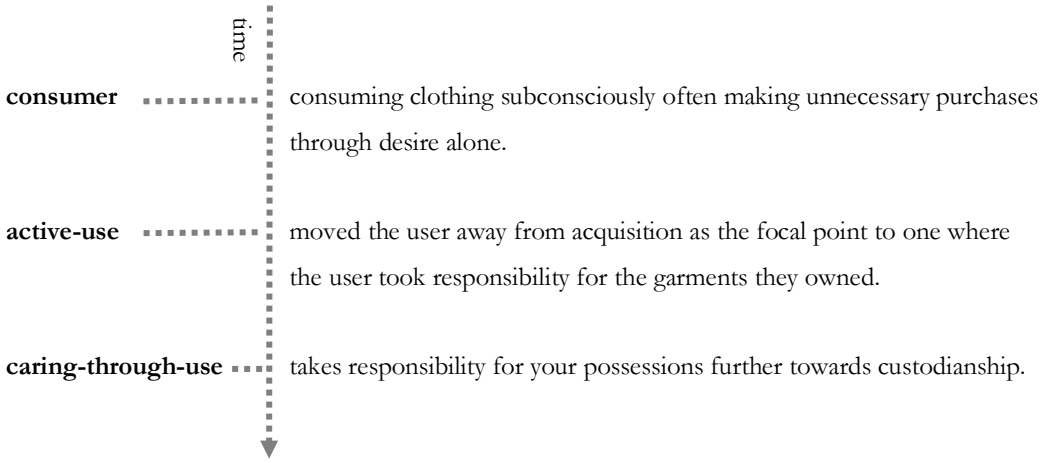


Table 28. Changing lexicon of clothing use.

'Active-use' seems to be very much to do with the materiality of an object and taking care of them in a resourceful way, object by object. Whereas 'caring-through-use' affects relationships broadly, opening out the resourceful skills, valuing materials responsibly by shaping engagement with the extensive environment tapping into sustainable development goals. Therefore 'caring-through-use' suggests an overarching philosophy to live by. Mending becomes a way of tending to clothing, nurturing them as you would plants, treating each item with respect.

I believe that this development towards rooting ourselves within our natural environment can be seen as a soft nudge towards behaviour change (Thaler & Sunstein, 2008). These terms sensitively advocate change, insinuating that the tending of garments or their guardianship fosters caring on a larger scale and into other areas of life (as a positive feedback loop) and can be adopted throughout day-to-day routines. Therefore, the initial uptake of a needle and thread to re-sew a button on a cardigan could snowball into an evening of mending items. Middleton describes this change:

> *'[T]he shift from passive fashion consumer to active wearer and carer is, I believe, more visceral and acute. Mending one's own clothes creates a direct relation or 'correspondence' between 'the wear the wearer does' and 'the wear the cloth endures'.' (Middleton, 2014:270)*

6.2.2 Summary

- Mending is often identified within maintenance and care rituals.
- Caring and nurturing seemed to be important aspects in mending clothes.
- Care is an action, a method of doing.
- This thesis proposes the use of caring-through-use for clothing. A term to help describe continued caring, maintaining and using of garments.

6.3 Three Mending Strata

The findings imply that there are various levels of mending with different complexities of operation or strata. The baseline, is a quick fix that provides non-visible results needing little skill or materials. These simple tasks appear to be perceived as part of our general wardrobe maintenance rather than as 'mending'. These basic repairs, seem to be deeply rooted with mundane domestic routines and do not support the hypothesis that environmental concerns drive mending uptake and should therefore be ignored at this level of mending.

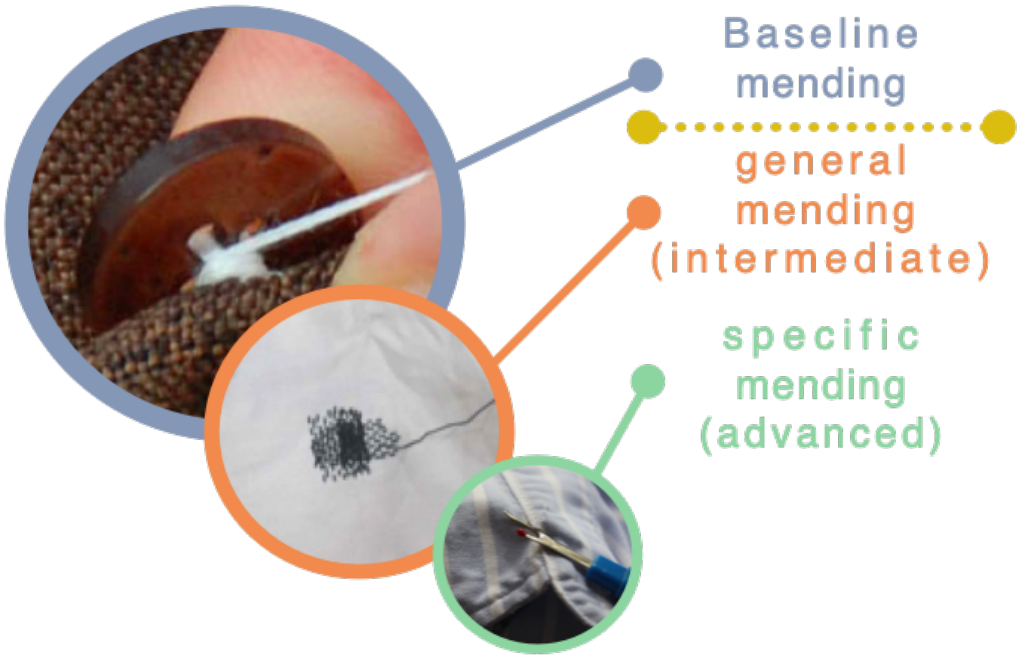


Figure 43. The three mending strata

Repairs that are above the baseline, present a complicated multi-layered picture showing a complexity of processes for understanding and influencing mending practices. These are much more complex tasks, where certain attributes are needed for the garment before mending will be considered. These repairs can be split into two further strata: general (intermediate) and specific (advanced). The mending strata that the findings uncovered are (Figure 43). These strata can be seen in the graph below (Figure 44) showing mending methods and frequency. Each stratum will now be discussed in greater detail:

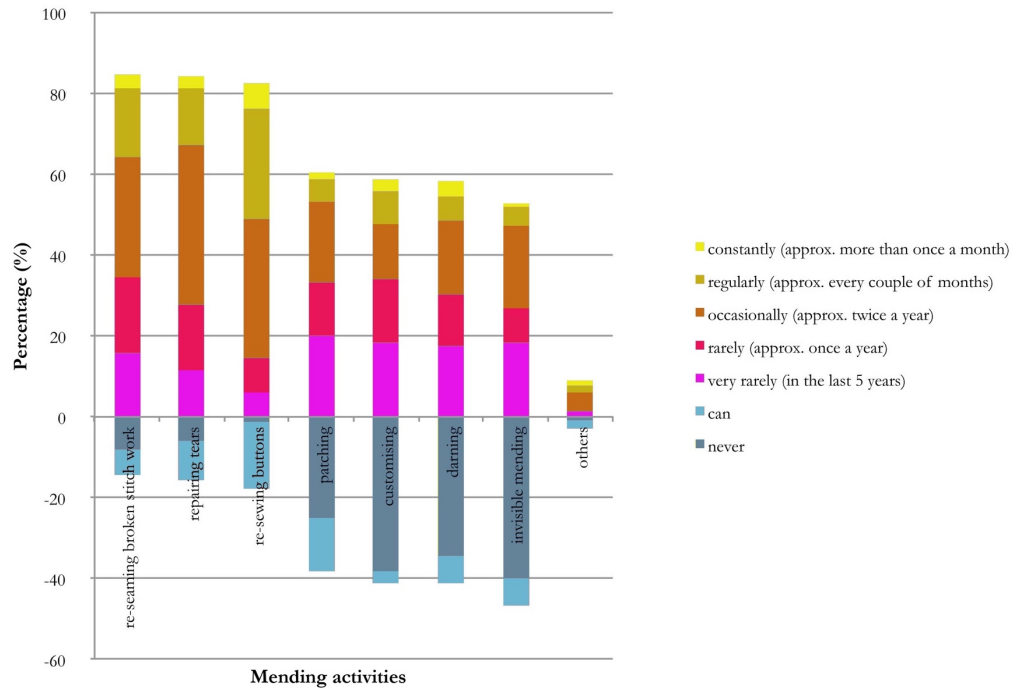


Figure 44. Methods of mending and their frequency (IDS removed).

6.3.1 Baseline Mending

`Re-stitching Buttons, Re-seaming Open Seams.`

Quick fixes performed with limited time, low skill levels required and few resources, usually just with a needle and thread. These repairs quickly return the garment back to a useable state with the mend usually inconspicuous. The mends are performed by most of the population (WRAP, 2016:25). Over 80% of the menders from my findings had re-sewn buttons, repaired broken seams or repaired tears, in line with WRAP's findings[135] (see appendix survey 2017 8.3.3; Figure 44, WRAP, 2016:25). Whilst over 60% of non-menders had replaced buttons or trimmed stray threads (see appendix survey 2017 8.3.3; Figure 41). The repairs are slight and the garment tends not to show signs of too much wear.

> *'I only 'fix' my clothes by means of reattaching buttons and hemming trousers. That's about it. I don't know how to do any*

[135] WRAP who discovered nearly 75% of the UK population can re-sew a button while almost 50% can patch or darn (Survey of 7950 UK adults over 16) (2016:25)

other big fixes and would rather take it to a tailor to do so if I could afford it. I tend to just wear what I have.' (Anonymous in Towers; mending survey 2017)

this line represents the hidden divide of the term mending: between general wardrobe maintenance above and what the findings suggested 'mending' is below.

6.3.2 General Mending (Or Intermediate)

Patching, Darning, Customising. Around 60% of the menders reported to have performed one or more of these mends in the last 5 years. The characteristics for these mends are described in relation to;

- **Garment:** This covers a wide range of damaged clothing – both the style and the type of wear. The types of mend used to repair the damage are often transferable to different forms of damage or garment, such as a patch or darn over a hole on a jumper or pair of jeans.
- **Mends:** Tend to be visible, but can be hidden.
- **Mender:** Some sewing skills are required – along with the capability to diagnose the fault, develop a solution and to perform the repair.
- **Materials:** Scrap fabrics, yarns and various haberdashery items may be required on top of a needle and thread. Possibly use of a sewing machine.
- **Investment:** Some time, effort and thought are required to perform and complete the mending project.

6.3.3 Specific Mending (Or Advanced)

Turning Collars, Replacing Zips, Re-Fashioning and Traditional Invisible Mending.

Although 55% of the menders reported that they had invisibly mended something in the last 5 years the data suggests that the term has evolved from a specific technical skilled repair to any

mend that is hidden. Specific repairs such as replacing pockets or zips had low reporting even re-hemming had only a count of 8[136].

- **Garment:** the nature of the damage such as a worn shirt collar, worn coat lining or a broken zip are very specific problems to attempt to solve and are often more complex and time consuming, involving unpicking the original stitching around the affected area before replacing the faulty zip or turning the collar (the collar is turned back to front and the unworn part of the collar is attached around the neckline and seen when wearing).
- **Mends:** are usually hidden, some are visible.
- **Mender:** Competent sewing skills, knowledge of garment construction and some pattern cutting skills required, capability to diagnose the fault, develop a solution/ project to perform the repair.
- **Materials:** scrap fabrics, yarns and various haberdashery items may be required on top of a needle and thread. Possibly use of a sewing machine.
- **Investment:** substantial amount of time, effort and thought required to perform a complex mending project.

6.3.4 Understanding Mending Strata

As can be seen the differences between general and specific mending is seen in both the mender and the garment:

- **Mender:** the technical skill, knowledge, scale of investment and capacity to perform larger scale projects affects whether specific mending will occur.
- **Garment:** either more specific problems to repair or involving more complex mends.

The aesthetic taste of the mender will determine whether the repair is as inconspicuous as possible to maintain their standard of dress or a visible repair, perhaps using the opportunity to personalise their clothes, they celebrate the patina of wear and tear (4.2.2.3; Tom of Holland, 2014; Pym, 2017). In fact, Gwilt discovered that often novices performed more creative mends (2014), suggesting that with increased competency a common aesthetic preference forms. She uncovered complications relating to menders aspiring to use invisible mending techniques as they may be disappointed with

[136] This could be because to reduce the complexity of the survey's questions only the 7 most pertinent types of mending where stated with the respondents' given the option to record others. A further survey is warranted to discover the quantity of specific mending and types performed

the outcome as these techniques can be achieved by only the most skilled (ibid:5). Consequently, the novice could be demotivated, preventing them from mending in the future. Gwilt's findings correlate with Durrani's four types of mender; the restorer, re-doer, the recruit and the reluctant (2018b. Refer to 2.7.1).

The 3 mending strata are different from Middleton's two distinct types of menders (traditional practices and new menders), and Durrani's four types of menders (2014, 2018b). Both of whom tend to prefer an aesthetic style either visible or hidden (Figure 45). Middleton and Durrani advocate that menders tend to fit within these 'types' however my findings suggest that menders are more flexible and fluid in their approach. The analysis suggested that some garments such as work clothes the mends were preferred to be hidden if possible, whilst children's clothes were more likely to be visibly repaired (wardrobe interviews 2018: 4.1.4.3 & appendix: 8.2.13). What the mending strata model offers, is a method to group menders and mended items. These 3 strata of mending acknowledge that garments and the user's taste, affect the menders and the resulting aesthetics of the repairs.

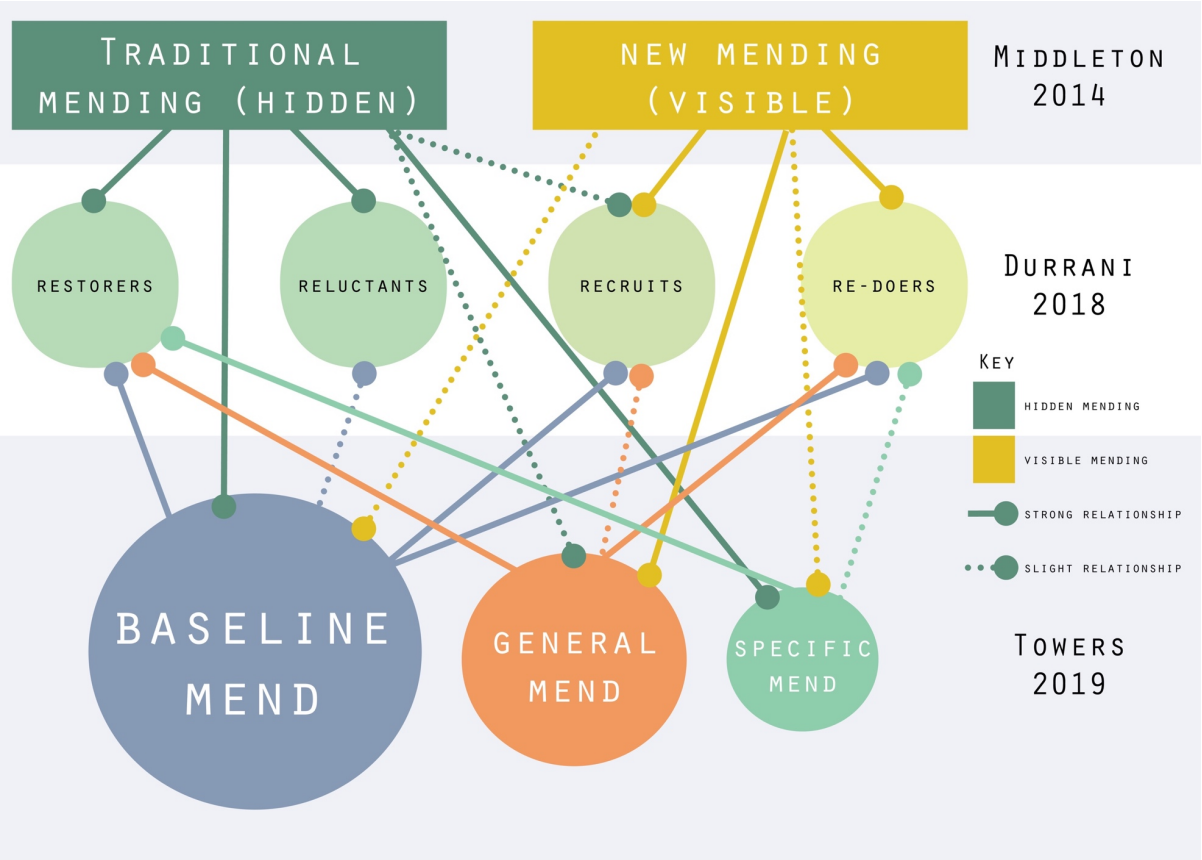


Figure 45. the 3 mending strata relationship to Middleton's 2014 and Durrani's 2018 models.

The mending strata have been developed as a tool to be used separately and in conjunction with Middleton's and Durrani's. It offers a technique to quickly identify within which mending strata the mender performs and can be used to quantify baseline, general and specific mends. This data can quickly help categorise the mender.

6.3.5 Summary

- The study and survey brought up interesting findings suggesting that:
  - Basic mending had become blurred with general clothing maintenance and simple repairs such as resewing buttons might not be considered mending.
  - The term invisible mending had changed from a specialist complex and highly skilled technique to a non-specialist one meaning any hidden repair.
- The 3 mending strata offer a technique to understand mending habits, breaking down different techniques and clothing problems into three levels. This was done by using frequency of repair type (Figure 44) and the skills and competencies needed to perform them.
- The mending strata uses the mend for categorisation (rather than menders), an area that was lacking in Middleton's and Durrani's models. Using this method (mending strata) allows for consideration of the garment, its functionality and the wearer whose aesthetics might suggest different mending techniques from the mender's usual practices.
- Although the 3 mending strata tend by their nature to be either visible or hidden, either can be made on baseline, general and specific mends.

6.4 Mending Cycle

The findings from the Wear > Craft > Mend research and initial analysis of the survey led to a diagram of the simplified cycle of mending (see Figure 46) detailing the key processes that a wearer and their garment progress through to physically mend the piece (at each stage the user may decide not to continue with the process and discard the item):

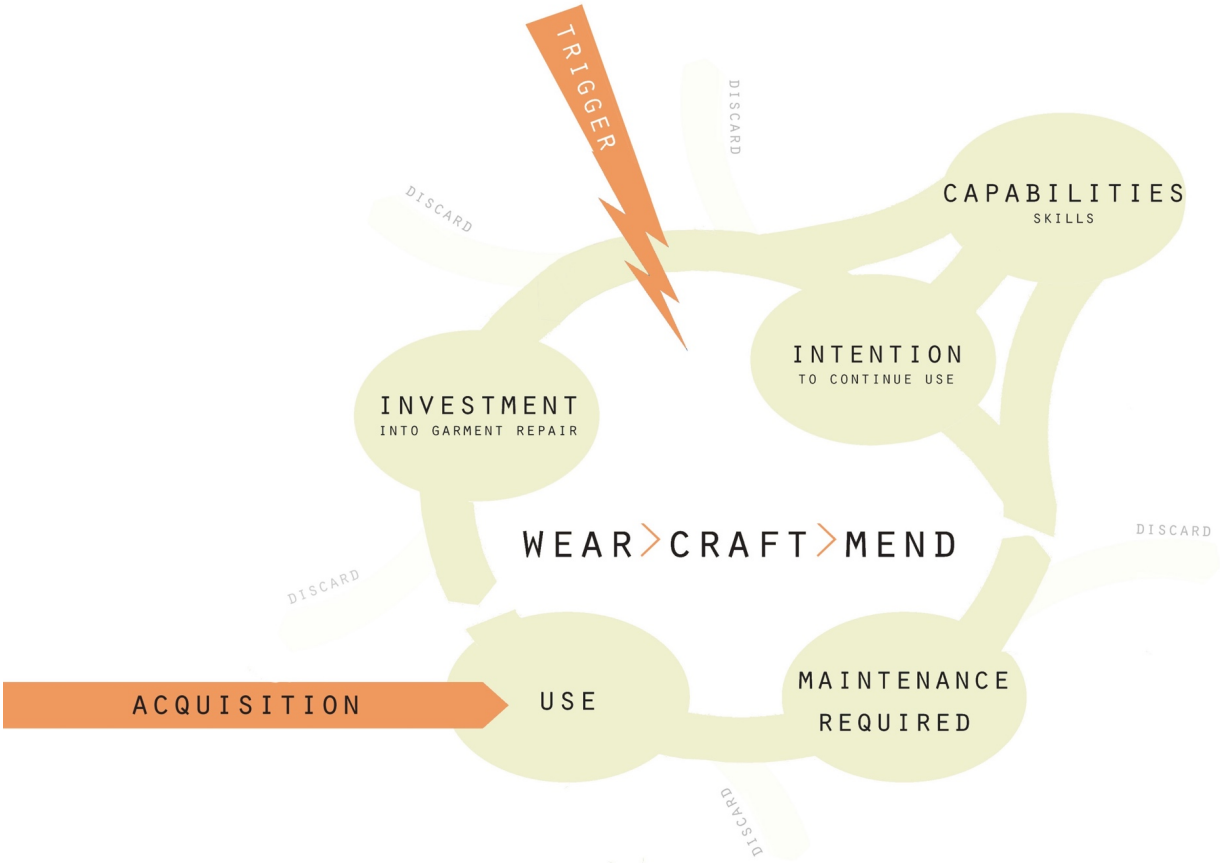


Figure 46. Simplified cycle of mending

Use: - After acquisition (through purchase, gift, re-appropriation or hand me down) the garment often goes through a heavy use stage (Cluver, 2008) and is in active wear for a period before the garment starts showing signs of wear or becomes damaged (such as a hole in the elbow, broken seams), or stained in some way.

Recognition that Maintenance is required: - At this point the wearer realises that some form of maintenance is required and will either continue wearing it until it reaches a point where the wearer classes it as un-wearable or stops wearing it while deciding what to do with it. Depending on the garment or the user, the tipping point for when garments are considered un-wearable differs. Cardigans for example were seen to be able to function when a button or two had fallen off, alternate buttons were instead used to fasten (often only one at a time) – until all the appropriate buttons had been lost then a mending intervention would be needed before the cardigan could be returned to use.

Intention to continue use (motivation): - At this point caring-through-use instigates repair practices, the wearer decides whether they have the intention to continue use (see literature 2.4.5). Often the item requiring repair would need to contain specific attributes for the wearer to consider mending it (see appendix 8.3.3).

Capabilities: - the capabilities and mending skills of the wearer are assessed along with the garments needs for how best to repair the item. To perform the task, the wearer needs to have the appropriate skill set, be confident enough to design the project and implement the repair. An important factor to consider as part of the capabilities is the resources required such as thread and sewing needles. This also becomes part of the motivation as the tools and materials need to be found or be at hand before mending takes place.

Trigger: - actions the intention and the capabilities (such as requiring the garment for a specific function or a series of mending workshops) to encourage the physical repair of the garment. Both intention and capability are required in some capacity for the trigger to work.

Investment: - At this point the wearer would invest their time, skills and materials into performing the repair, returning it to active use (The physical process of the repair).

Use: - and the cycle begins again… until the user decides to no longer continue maintaining the item[137].

6.4.1 Understanding the Behaviours Surrounding the Mending Cycle

Each stage can be broken down to detail the intricate processes and practices surrounding them. In fact this diagram can become more complicated if seen with other diagrams of use such as Cluver's (Figure 47) where garments requiring maintenance would be placed in the temporary inactive inventory waiting for the trigger to be repaired, the impetus to dispose, or to slowly transition into the permanent inactive inventory before disposal. Another diagram that is relevant to discuss is Durrani's mending process see (Figure 48). Her diagram can be viewed as part of the complex processes involved within the investment portion of the cycle of mending.

Durrani developed the above diagram to illustrate the process of mending, suggesting that this process can be broken down further into essentially a design process (2018b). Each repair is looked at individually, the cloth surrounding the fault, the garment as a whole and its functionality for the wearer is examined to form a mend strategy. This is then experimented with and implemented. At each stage the mender reflects on the mend, its suitability to the garment, the expected outcome

[137] this model was developed in January 2017 to illustrate the analysis for the wardrobe study's book 2018

and the proposed strategy. Tinkering with the initial concept throughout the fluid process; the 'continuously re-mouldable, dynamic and looped nature of mending' (ibid:13).

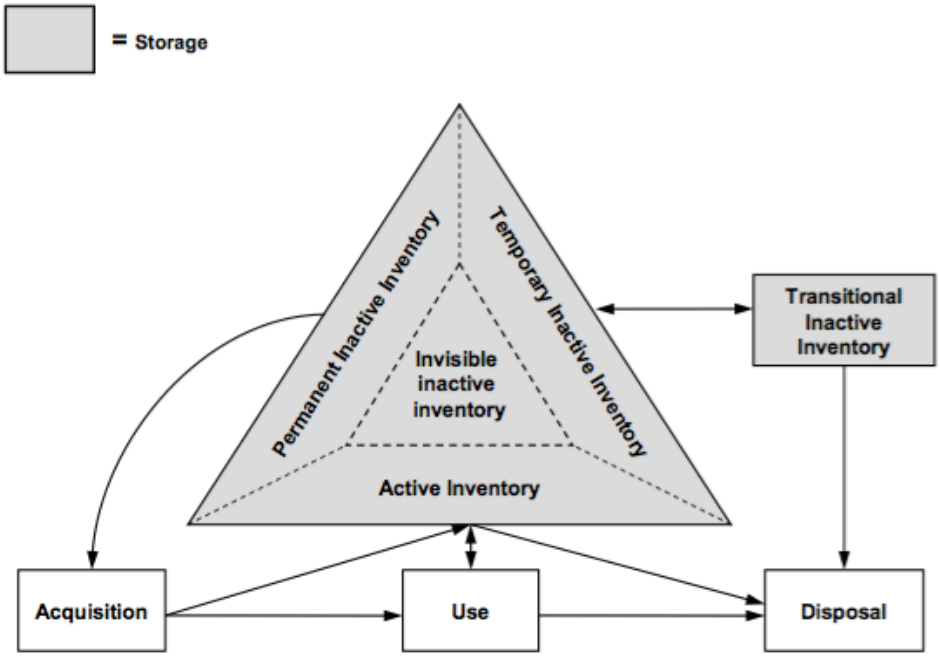


Figure 47. Cluver's Clothing inventory management model. (2008:74)

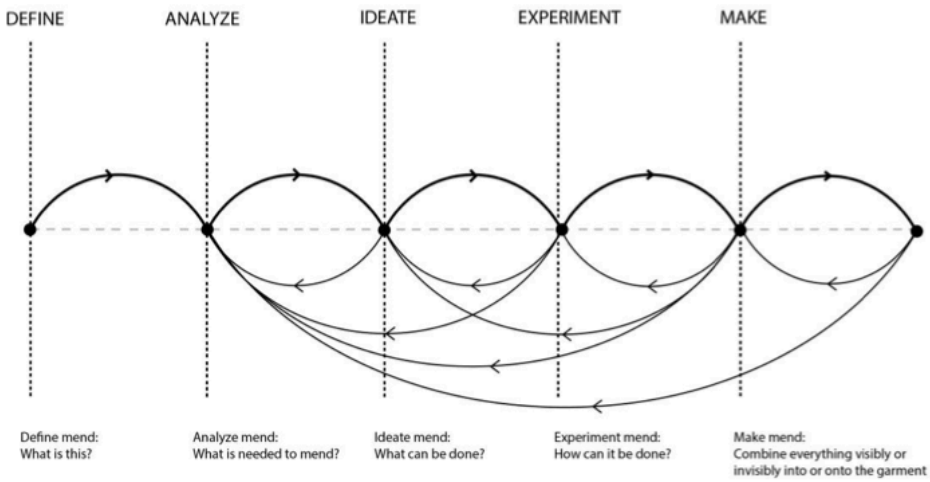


Figure 48. Durrani's Process of mending. (2018b:12)

Therefore, it can be seen that the mending cycle, or the active caring-through-use can be illustrated in a much more complex diagram with each of the stages breaking down into intricate behaviours, and the motivations and barriers surrounding them. These interrelating practices that depend on complex often unconscious behaviours mesh together to enable mending to occur. As can be seen significant time, effort and thought can go into a repair before the mend takes place. Demonstrating that the intention and/ or trigger needs to be strong enough for the mend to take place and be completed. The survey findings into mending behaviour will now build upon this cycle

of mending to construct a more comprehensive model illustrating the complexities behind the mending process.

6.4.1.1 Using Behaviour Models to Understand the Mending Process

To understand how the complexities of mending occur Fogg's behaviour model will be discussed in relation to mending using: B(Behaviour) =M(Motivation) A(Ability) P(Prompt or Trigger) (refer to methodology 3.1.3.2.) which can be translated into mending with:

Mending = Intention, Capabilities and Trigger (M=ICT)

If the diagram (Figure 46) is looked at in terms of Fogg's model the trigger (prompt) intention (motivation) and the capabilities (ability) need to be looked at in unison as each directly affect the other and all three are needed in some capacity to enable the mending process to occur (2009:1). However, (considering my findings) I would disagree to some extent, as the motivation (such as adding the garment to a mending pile to be addressed in the future) and ability (skills and capability of performing the mend) could already be there for a repair to take place, and that it is the trigger that becomes the crux for the mending practice to ensue. To clarify I concur with Fogg that all three elements of behaviour need to be present for the repair (M=ICT), however I believe that it is the trigger which determines when this will happen as the intention may be present for a period of time and the capabilities tacit within the user. Therefore, intention and the capability may be present at any point in the process as long as they both exist when triggered.

6.4.1.2 Mending: A Practice or a Behaviour Model

As previously discussed, Fogg advocates change through the appropriation of tiny habits by adding these to your daily routine (see 3.1.3.2). Suggesting it is simple to maintain motivation with something quick and easy to do. However, mending is something more complex, surrounded by negative connotations and something that is unlikely to need doing daily. Therefore, I believe it is important to reintroduce the concept of practice theory and how behaviour change can stem from changes in practice, including how small changes can affect interrelated practices creating a snowball affect towards behavioural goals. Although the approach of the two methods; investigates small changes with the intention of instigating bigger changes overall is similar, along with the use of routines to form habits, the execution is markedly different (Table 29).

Behaviour Model	Mending strata	
Fogg	**Baseline**	Fogg suggests adding to existing habits**.** They tend to be small physical customs, that ultimately improve physical and mental wellbeing.
Practice Theory	**General & specific**	Observing often complex behaviours and interrelating systems to develop an understanding of the activity in order to implement change or to detect changes in practice[138].

Table 29. differences between Fogg's behaviour model and Practice Theory

I believe that the appropriation of mending into the everyday wardrobe rituals of maintenance and care is key to increase the uptake of mending, starting with the basic mends. However, from the analysis of the data there seems to be a sticking point or a ceiling for what users are prepared to tackle. They on the whole seem happy to perform the basic tasks (baseline repairs) but often seem daunted with instigating more complex ones. Interventions could be designed such as the Wear > Craft > Mend workshops to try and breakdown the barriers and make users more likely to repair more. I believe it is important to point out that this research is not advocating the removal of tailors, or access to repair services on the high-street, specialist repair services and ones attached to brands and retailers, as they are an incredibly useful service (see Nancy and Sophie for examples 4.1.4.1). Encouraging wearers to mend more, might in turn encourage them to have items mended that they do not feel confident to do themselves.

6.4.1.3 Mending as a Hobby

A change in a user's thinking needs to occur for services such as mending workshops to be utilised. One possibility would be to reposition the idea of mending as a chore and instead look at it as something positive to do. More complicated tasks could be considered as a hobby, becoming seen as a craft for its own merit, to foster a boarder base. The problem however with marketing mending as a hobby is that the uptake may only be with people who are already interested in craft and may already be mending themselves. Therefore, possibly rebranding would be necessary to encourage expansion further (Shove and Pantzar 2005 for how Nordic Walking became socially acceptable and part of a walker's equipment). What is important is that any integration of a new practice such as mending is one that becomes entrenched with associated systems and practices, changing and developing over time. Gronow explains that while 'a fashion always remains embedded in the same old social practice, both fads and 'real' innovations have to find and establish new social and cultural practices.' (in Shove, Trentmann & Wilk, 2009:136).

[138] such as the implementation of using two walking sticks for Nordic Walking see, Shove & Pantzar 2005

6.4.2 Summary, Applying Behaviour Models to The Mending Strata

The 3 mending strata are useful to help separate the different behaviour patterns for the different levels of mending:

- Baseline mends were performed by the majority of the survey respondents (approx. 80%).
- General mends around half UK adults will patch or darn something (WRAP, 2016).
- While only a few will do a specific mend such as replace a zip or re-do a pocket.

This implies that there are different behaviour models that could be used to understand the mending strata. For instance:

Baseline mends are relatively easy and quick to perform needing little skill or materials. Although the act does not fit precisely within Fogg's model for tiny habits, the ability to perform tends to be high so baseline mends could be encouraged to be incorporated into an existing behaviour, such as checking garments before or after laundering them and fixing buttons at this point through having a 'clothes first aid kit' to hand. These small additions to an existing routine could over time make the wearer more likely to do bigger mends.

General and specific mends: are harder to do and take longer, therefore a higher motivation is required and a trigger. To make general and specific mending part of clothing care routines, repeated regular acts of mending need to occur. Practice theory may suggest how this might be achieved, including mooting the concept of mending as a hobby.

Before addressing how to encourage uptake in relation to the mending strata the model M=ICT for general and specific mends needs breaking down. Essentially a more complex picture of the mending process, the motivation barriers and triggers.

6.5 The Factors Affecting the Process of Mending

This section unravels the factors that ensure mending takes place and the relationships between them. Each element is unpicked to develop a detailed behavioural map of the mending process.

6.5.1 Emerging Themes

The literature review exposed the obstacles to mending, categorising them into quantifiable and the intangible psychological hidden crux (see literature review Table 1 and Table 2). Psychological

obstacles were identified as being the main driver against mending along with quality and cost of replacement versus the perceived time to mend. In contrast the literature uncovered the traditional motivations for mending as; necessity, frugality, maintenance and care driven by a respect and understanding of the value of materials and the processes involved to make the garment. Whilst the current drivers are seen to be active choice, politics and sustainability factors. Ultimately, there seems to be a profound lack of respect and understanding of the material value of clothing, which impacts on the likelihood of mending (Table 30).

motivations to mend	**Historical**	**Necessity**	〈 must do – or difficult to replace
		Frugality	〈 aware of the value of the resources used in the garment, and want to keep garment in use to prevent wastage
		Maintenance	〈 to keep an item of clothing in a good useable state repairing when necessary.
		Care	〈 respecting the garment and caring for it to make sure that its usability is maintained
	Contemporary	**Active choice**	〈 a conscious decision to repair – often resulting from mending routines witnessed and embraced in upbringing
		Politics	〈 mending is activism, fuelled by political beliefs
		Sustainability factors	〈 awareness and desire to reduce environmental impact or live sustainably.

Table 30. Drivers to mend uncovered in literature

However, if these three contemporary drivers are unpacked (choice, political and sustainability factors), each can be seen to encompass some of the traditional motivations. One of the key differences is that currently mending is not considered part of the social norm. Therefore, to mend clothing and importantly to be seen to mend clothing is a political statement, either from a sustainability, personal viewpoint, political beliefs or the active choice to be different. Thus, mending today requires confidence not only in mending skills but also in one's identity. To delve further into understanding these behaviours Fogg indicates that there are three core motivators, three behavioural triggers and six simplicity factors or ability factors (B=MAP). These behaviours are illustrated in (Table 31) using both Fogg's and the Behaviour change wheel (BCW) (see 3.1.3.2; Fogg, 2018; Michie, 2014). The table also describes the relating obstacles to mending and how the mending workshops removed or lessened these, facilitating the participants to mend (see the final column). Following on from these findings the preliminary study's qualitative data analysis uncovered the subsequent three emerging areas:

- Themes: capacities and corresponding obstacles to mending
  - The materiality of garments: - Value
  - Emotional drivers: - Attachment

- Ability to mend: - Capabilities and Situation

〈 Motivations and barriers within theoretical constructs: beliefs/ principles surrounding mending.

〈 Processes: the act of mending or use practices.

	description	Obstacles to mending	Obstacles removed through mending workshops
Core motivators:	*Reflective and/ or Automatic (BCW)*		
Sensory	pleasure/ pain	Chore and drudgery of mending.	Pleasure of mending, in a fun environment with like-minded people, social.
Anticipation	Hope/ fear	Fear of damaging the garment further to make it unwearable.	Hope, to create a satisfactory mend.
Belonging	Acceptance/rejection	Rejection: Mending not part of the social norm.	Become part of a mending group, accepted.
Simplicity factors:	*(Capabilities) Physical and/or Psychological (BCW)*		
Time	easier to perform with smaller time scales.	Live in a time poor society and mending is assumed to take time.	The workshops were designed to simplify the process and show that mending does not have to be time consuming.
Money	cost, lower cost to do means more likely to perform.	The cost of repair in comparison to new purchase.	Show that repair can be low cost and use few materials, often items found at home.
Physical effort	again, less physical effort means more likely to perform.	Finding the necessary tools and materials to perform the mend (e.g., sewing needles, thread and scissors).	The materials and tools necessary were all available at the workshop; reducing the physical effort.
Thought (mental effort)	simpler thought process equals more likely to perform.	Loss of sewing skills and knowledge of mending reduce the likelihood to repair.	Instruction in mending techniques, learning through doing and having an expert at hand to discuss queries in tackling the repair and the mending process reduce the mental effort.
Outside social norms (Social deviance)	easier to perform if within socially acceptable boundaries.	Mending has historically been performed at home hidden from view so is suffering from lack of awareness and is not part of the social norm.	Performing mending within a supportive group helps the mender to feel socially accepted and the finished garment to be acceptable for public use, therefore breaking down the social barriers.
Non-routine	much easier to perform behaviours when routine.	Mending is unlikely to be regularly used within the maintenance and care routines of clothing.	Attending the mending workshops regularly hopefully helped change the concept of mending from non-routine to one that becomes part of their normal wardrobe routines.
Behavioural triggers:	*(opportunity) social and/ or physical (BCW)*		
Spark	High ability, low motivation.	Low motivation & ability unlikely.	Hopefully after the workshops a spark trigger will be successful.
Facilitator	High motivation, low ability.	Low ability & motivation unlikely.	Started the workshops at this point with the workshops as a trigger.
Signal	High ability, high motivation.	Low ability & motivation unlikely.	Hopefully at the end of the workshop sessions the participants will also be able to tackle more complex mends, with corresponding triggers.

Table 31. Obstacles to mending and possibilities of unblocking through workshops (based on: Fogg, 2018 and the BCW, Michie, 2014).

These areas indicate that understanding the mending process is more complex than Fogg's model because the act of mending is a process which involves an item of clothing, an object. This relationship between a garment and mending needs taking into consideration and will be discussed further in the next section.

6.5.1.1 Themes: Capacities and Corresponding Obstacles to Mending

These encompass the explicit obstacles, uncovered within the literature review, however they have been weighted differently. The changes in emphasis are due in part to the nature of the study instigating mending workshops to impart mending skills. The bias was clear within the study of self-selecting volunteers who were invited to learn mending skills. These participants were people: 'Who do not mend their own clothes, and who don't have much sewing experience to take part in a study on mending clothing.' (Towers, call for volunteers, 2013:1 appendix 8.1.1.1). The obstacles have been broken down into three areas:

- **Materiality of garments:** The value placed on the garment in order for it to be considered worth mending. A mixture of precise and ambiguous qualities that are specific to the user and the individual garment. Some individuals may require a garment to be highly valued in order to be repaired and others only slightly valued pieces are respected enough to be mended (see Table 32).

Material values for mending		
Explicit values (physical)	**Cost:**	the initial outlay of the garment and any further costs associated with its upkeep.
	Quality:	of materials, manufacture and of the brand or label.
	Function:	is the garment functional, will it still be worn once repaired, and is it comfortable?
Ambiguous values – highly dependent on individual (Psychological)	**Aesthetics:**	the style of the garment, whether the wearer feels that it continues to suit, fit and flatter them.
	Emotional drivers:	the wearer's emotional attachment to a garment (see literature review 2.5.2.2 for further details Chapman 2009).
	Attachment:	the feelings, memories and perceived value (see below) appropriated towards the garment.
	Perceived value:	the value of the garment to the wearer – this value is often related to whether the item embodies them, rather than the economics of cost, quality and branding. For instance, Nancy would have the same repairs and alterations done to a garment that she felt was 'her' whether it was an expensive designer piece or from the high-street (2013).

Table 32. Material values for mending

Ability to mend: the attributes that affect the user's capability to mend

- **Capabilities /Skills:** As non-menders the participants all felt that lack of skills was a major barrier towards performing mending. This was expected as the literature review found that 'skills' were a barrier due to loss of sewing competencies (Fletcher, 2011; Gwilt, 2017). However, the study unpacked the theme 'skill' not only to include ability, knowledge, education and outsourcing of skills (such as tailors) but also confidence, problem solving and aspirations (Table 33). See more detail below:

Physical	**Ability**	to perform a repair, developed through practice, knowledge of skills and education.
	Knowledge	often tacit, passed down through generations and/ or built up through education and sourced for 'how to' in books and online resources or through immediate networks.
	Education	the participants identified a lack of education or in Lucy's case poor education which actively stopped her sewing and in consequence mending (2013).
	Outsourcing of skills	using immediate networks, or repair services locally to mend items.
Psychological	**Confidence**	to be able to repair, understanding that the mend will likely be successful. Confidence is often linked to ability and knowledge.
	Problem solving	being able to analyse the damaged garment, decide on a suitable method of repair such as patching, source the materials and equipment necessary; 'the probing craftsman does more than encounter mess; he or she creates it as a means of understanding working procedures.' (Sennett, 2008:161).
	Aspirations	what the wearer desires for their relationship with clothing; whether mending is considered, to hope to continue use of a garment once it shows signs of wear.

Table 33. Capabilities to mend

- **Situation:** which is broken down into time, space, materials or resources and need. Often one or more of these areas were given as a key barrier. All these attributes can be considered both physical and psychological.
- **Time:** as in the literature time can be broken up into: material, economic and psychological attributes.
- **Space:** the physical space necessary to perform the mend and the psychological one that you need to be in the right frame of mind.
- **Materials:** the materials required to repair the item including the equipment such as needles and scissors.
- **Cost:** the cost to repair versus acquisition.
- **Need:** whether the item is required, difficult or unable to replace.

These themes, highlight that there are other factors at work other than just the capability, motivation and trigger to mend. They suggest that there are attributes required for a garment to be considered suitable to mend plus an emotional driver. These material attributes should be seen as

the intention to mend. The motivations, capabilities and trigger become a separate phase of the process. This allows the behavioural and material attributes to be considered separately. The research suggests the intention to continue use (motivation for the garment) is often understood before the capabilities, motivation to mend and trigger are addressed.

To summarise: the material attributes of the garment are separated from the motivations becoming: Intention (garment). Emotional drivers (E) were also found to be important in some instances therefore + E recognises the emotional element. The mending equation consequently becomes:

$$M=I(CMT)+E$$

Mending(M)= Intention (garment) (I) [Capabilities(C) Motivation(M) Trigger(T)] + Emotional driver(E)

6.5.1.2 Theoretical Constructs: Beliefs Surrounding Mending

These principles form the basis as to whether mending is practiced or not and how our environment (often social) affects our behaviour. These can be separated into the following;

- aspects of influence; identity, social, systemic.
- and external factors (the hidden crux of mending. Table 2) (see Figure 49).

Each one interrelates and evolves with the other. For instance, the influence of each aspect changes and develop as cultural norms become more skewed towards environmental behaviours, or the core beliefs of the wearers change. These often happen through external factors triggering behaviour change taking place within any or all aspects of influence. The systemic holds greater

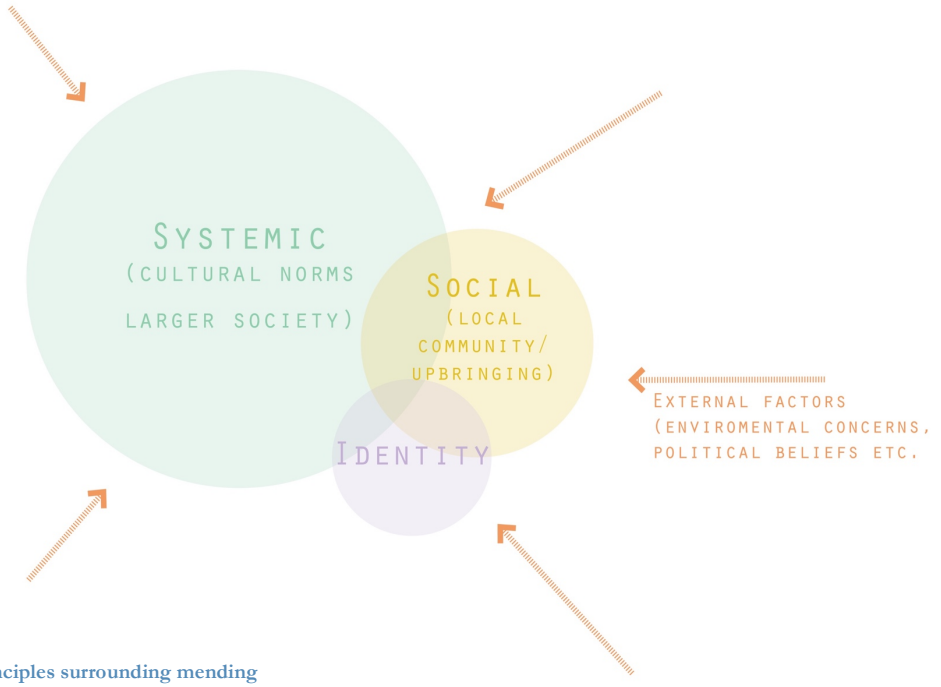


Figure 49. Principles surrounding mending

sway affecting both Social and Identity; whereas identity is more likely to affect others close to them (social), implementing grassroots change (towards systemic).

6.5.1.3 Processes: The Act of Mending

The process or the craft of mending is tactile, one involving touch as much as sight to identify the problem and to design a solution, with the hands playing an important role. As the mender carries out the repairs these repetitive processes become rhythmic, as Sennett stated: 'Built into the contractions of the human heart, the skilled craftsman has extended rhythm to the hand and eye.' (2008:175). Sennett continues to discuss craft explaining that: 'Craftwork embodies a great paradox in that a highly refined, complicated activity emerges from simple mental acts like specifying facts and then questioning them.' (2008:268). Therefore, the simple mental acts are identifying the damaged area of clothing and deciding to repair it then the highly refined acts are the:

i. creativity surrounding the design of the mend,
ii. inherent problem solving to decide how to approach and perform the mend,
iii. then the subsequent repair is the complicated activity.

Through unpicking these emerging themes and the survey findings a more detailed understanding of the mending process developed, culminating in a diagram of the contemporary mending process. This depicts positive and negative attributes and behaviours that influence a wearer's ability, motivation and opportunity to mend. This will now be discussed further.

6.6 Outline of The Mending Process

The mending process diagram (see Figure 50) is a development of the mending cycle, presenting the key positive and negative attributes (discovered and developed from the Wear > Craft > Mend and survey analysis) from the themes within the mending process to try and simplify the complex scenario of whether a garment is repaired (this diagram differs from the first diagram as the findings suggest that the skills and capabilities of the user are part of the motivations and barriers towards mending and are not considered separately). This system concurs with Fletcher's that: 'product life extension becomes a nested system within a bigger system of skills, competencies, garment-related doings and beings.' (Fletcher 2016:220). The image demonstrates the stages that

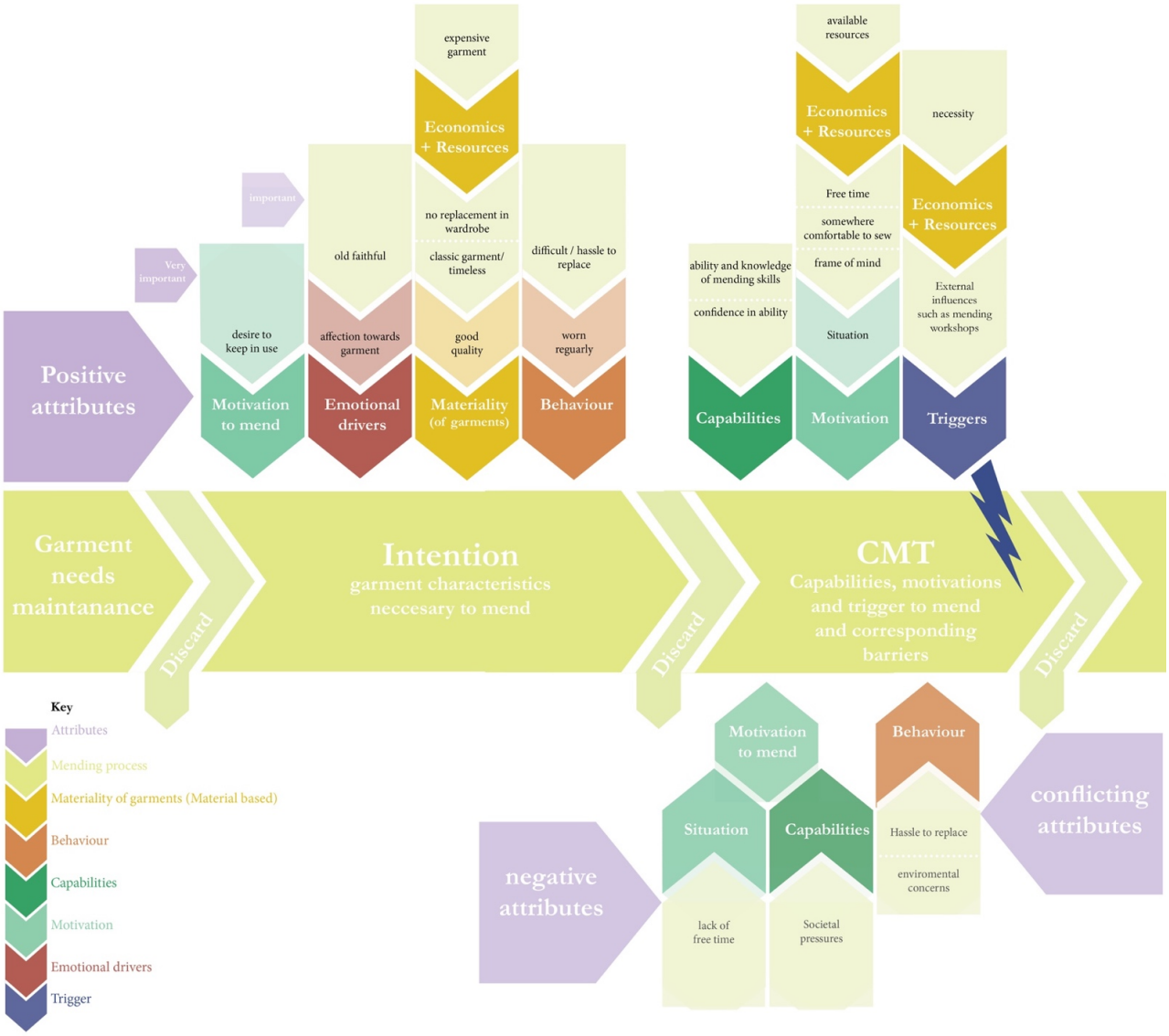
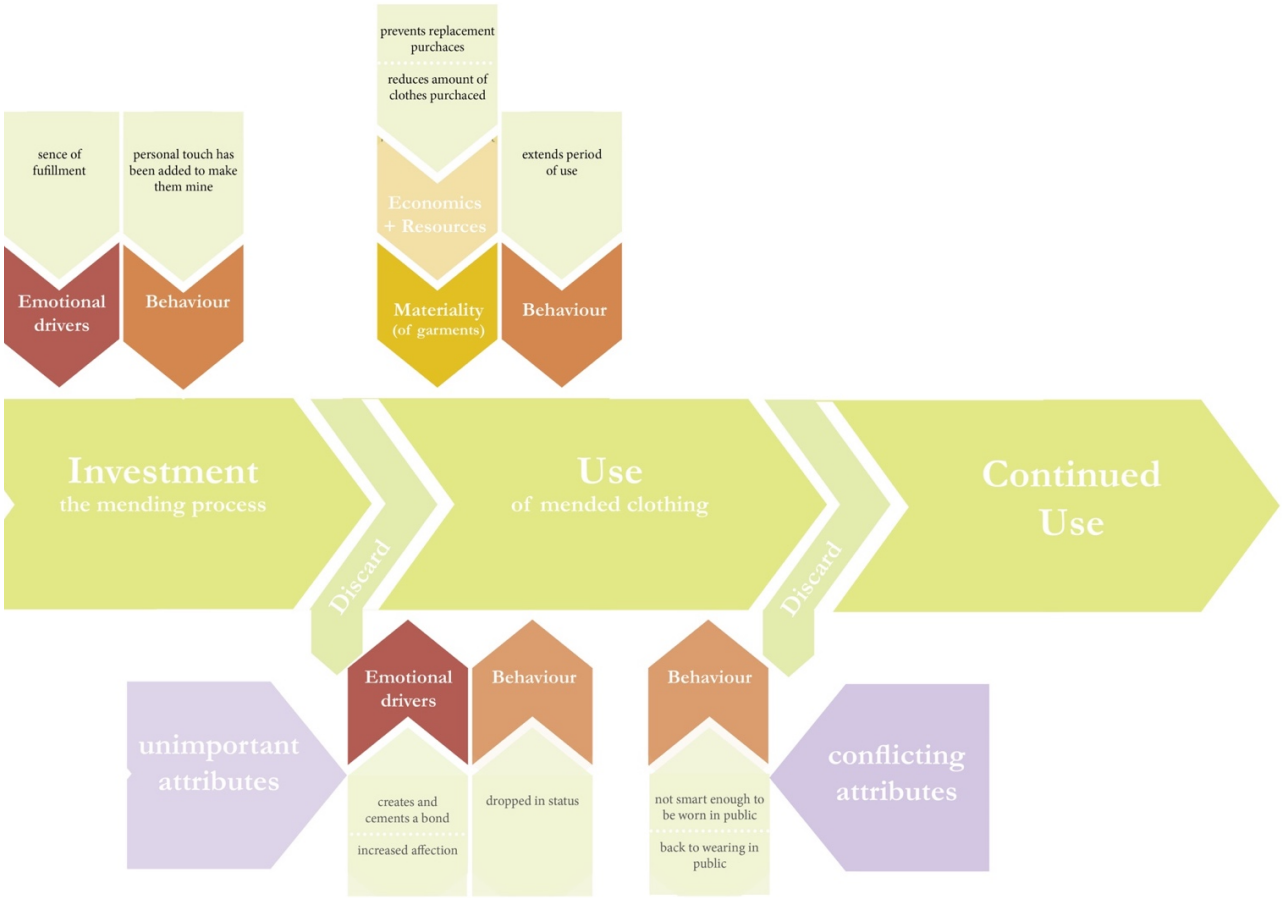


Figure 50. The contemporary mending process.


prevents replacement purchaces
reduces amount of clothes purchaced
sence of fufillment
personal touch has been added to make them mine
extends period of use
Economics + Resources
Emotional drivers
Behaviour
Materiality (of garments)
Behaviour
Investment
the mending process
Discard
Use
of mended clothing
Discard
Continued Use
unimportant attributes
Emotional drivers
Behaviour
Behaviour
conflicting attributes
creates and cements a bond
increased affection
dropped in status
not smart enough to be worn in public
back to wearing in public

the research uncovered of the mending process: from identifying that a garment needs mending, through to its continued use[140]:

- Intention: material features necessary to mend the garment.
- CMT: capabilities, motivations, trigger and obstacles (or barriers) to mend.
- Investment: the mending process.
- Use: of mended clothing.

Each stage will now be discussed further.

6.6.1 Intention to Mend (Garment Requirements)

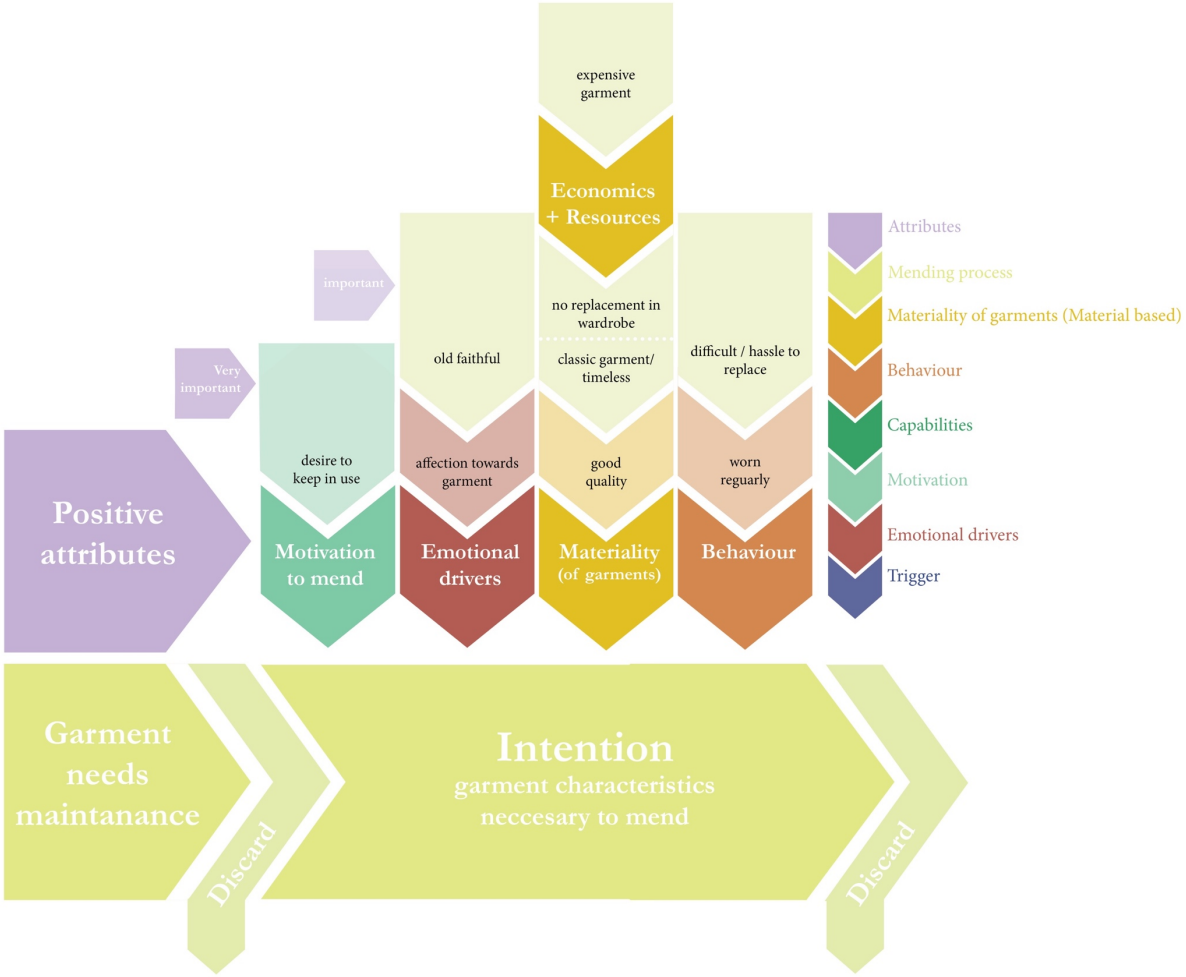


Figure 51. Intention to mend.

[140] at each stage the requirements necessary to mend may not be met and therefore the user may decide not to continue with the process and discard the item

Once the user has identified that a garment needs maintenance the wearer has to go through a process to identify whether they intend to mend the item, basically whether it has the characteristics necessary to mend (Figure 51). These characteristics or attributes all fit under the four main themes developed from the Wear > Craft > Mend project in order of importance:

- Motivation to mend – the desire to keep the garment in use.

  The item has developed a narrative with the wearer, increasing its durability and therefore the likelihood of repair to keep it in use (Chapman 2010).

- Emotional driver – the affection towards a garment, and to a lesser extent, an old faithful.

  Suggesting that a connection is needed with a garment for a repair to take place even though it is difficult to predict which items become emotionally durable garments with the process being idiosyncratic (Chapman 2010)

- Materiality of garments – good quality, practical uses.
- Behaviours (use practices) – worn regularly.

From this research's findings what is unknown is whether a combination of these drivers (attributes) are required in order to mend a garment or whether one is enough. However, in respect to the very significant attributes, these statements seem to interlink and it is likely that if you wore a garment regularly you would want to keep it in use, and/ or have affection towards it.

Although the materiality of garments is of lower importance to the motivation and emotional drivers, there are additional qualities that are significant (see appendix 8.3.3) when deciding whether to mend the garment: the original cost of the garment, whether it is a timeless piece, and if there are no replacements in the wardrobe.

6.6.2 CMT: Capability, Motivation, Trigger's and Barriers to Performing Mending

As discussed earlier the user needs a trigger to instigate the mending process. This is again complex and individual but can be illustrated by looking at the barriers and motivations towards mending. The key motivations and barriers that people cite can again use the Wear > Craft > Mend framework (Figure 52).

From the survey, access to mending tutorials was not prioritised as much as the other statements. This could be because other attributes were considered more important, however a recent study discovered that 'over half of women and nearly a quarter of men expressed an interest in learning more about how to repair clothes' (WRAP 2016) and Gwilt found in her 'Make do and Mend project, 'that the transference of knowledge and skill between and across individuals and

communities of wearers is of social benefit.' (2014). Suggesting that mending tutorials could be of significant interest in increasing the uptake of repair and warrants further research. This is backed up by my findings, that the participants who attended the mending workshops are continuing to mend after five years.

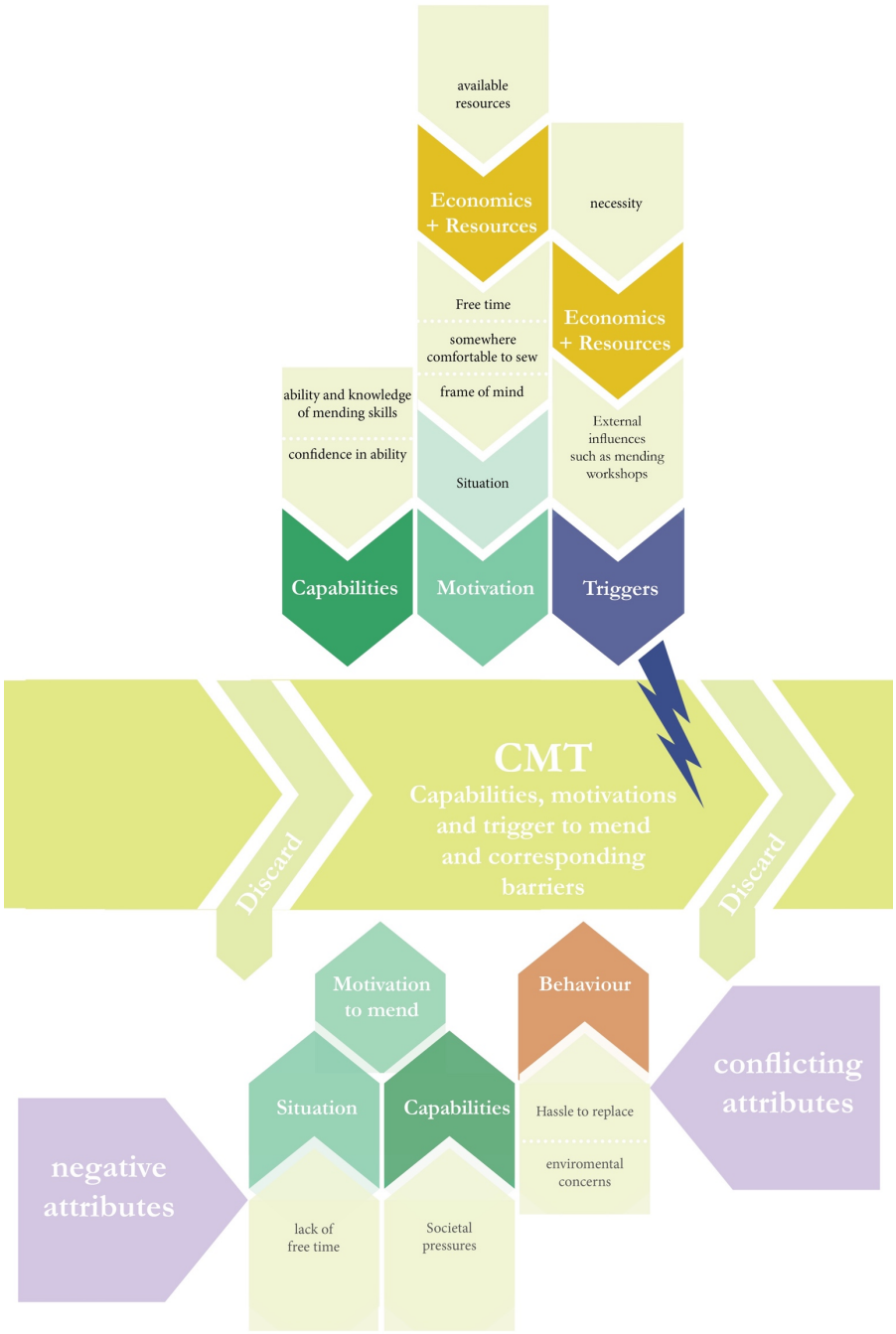


Figure 52. Diagram showing the key triggers, or motivations and barriers towards mending.

As has been discussed for the mend to take place there needs to be some level of motivation, capability and a trigger, which vary between individuals. The literature and the findings suggest that to make a mend more likely barriers need to be broken down and the process simplified to make it easy to perform with only small motivation (Fogg 2018; the Behaviour wheel, 2014). Therefore,

access to facilities, materials, resources and guidance within mending workshops could instigate the initial changes in behaviour required to develop mending practices.

6.6.2.1 Triggers - Summary

As has been discussed for a trigger to work and mending to take place the capability and motivation to mend already need to be in place. Triggers seem to be personal and can be blurred with motivations. However, some identifiable ones are:

Internal or domestic:

- **Necessity** for use, for example needing an item for a specific occasion triggers the user to mend it.
- **Garment** has reached unusable state, requiring mending before another wear (for regular menders this may be the only trigger they need).
- **Situation:** such as having the time to repair.

External:

For these triggers to take effect the user needs to be receptive to them.

- **Workshops:** regular mending workshops.
- **Access:** to materials, skill sharing and facilities.
- **Publicity:** from the government, press, local authorities, craft and mending groups. Possibly self-publicising such as a mending challenge on social media.

6.6.3 Investment – The Practice of Mending

Durrani's mending practice diagram (see Figure 48) is a good basis for understanding the practice but it does not consider emotional factors. The process of mending, investing time, effort and thought into a garment has emotional drivers (see Figure 53). Users reported a sense of fulfilment with mending and believed that a personal touch had been added to 'make them mine'. (Lucy second interview 2014 and see 4.2.2.3)

These small touches to repair garments, create individual details that help make the item intrinsically the wearer's, enabling them to continue feeling a sense of satisfaction through wear and their own handiwork. Durrani's findings concur;

> *'to the naked eye perhaps something like an invisible mend might seem to have added nothing new to a garment and instead taken as just a mundane part of fixing. However, it was within these routine moments of even invisibly mended hidden solutions one finds a reconfiguration of the original design assisting in the garments transformative continuity.' (Durrani 2018b:14)*

To summarise; the key points where emotional drivers are influential is when the user becomes aware a garment requires mending, and at the investment stage (where the time and energy input is greatest).

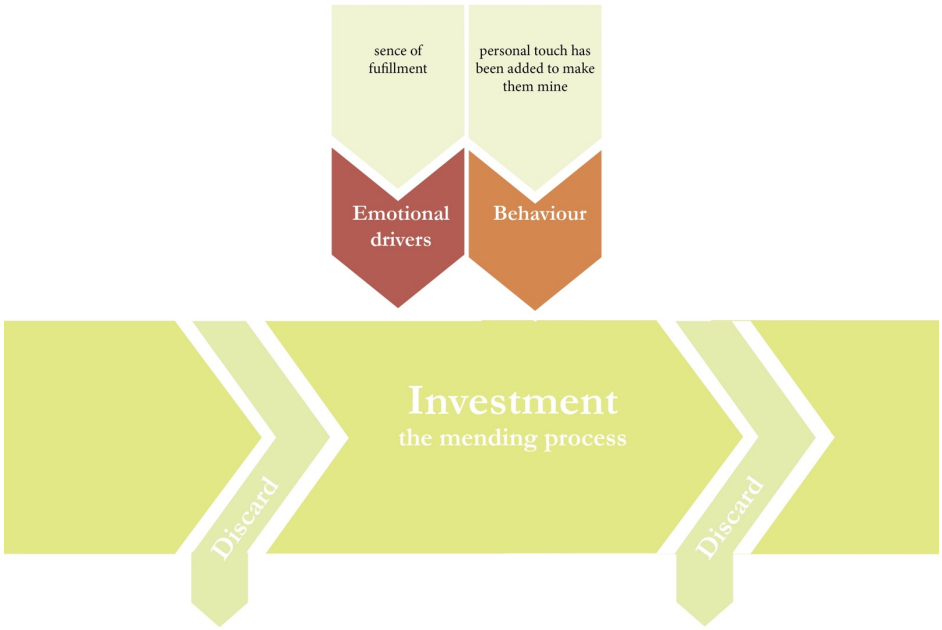


Figure 53. Investment; the practice of mending

6.6.4 Use – Post Mending User-Garment Relationships

The findings for post mending user-garment relationships offer some interesting insights into mending and how we use mended clothes. The main positive attributes for repaired clothes seem to be material (prevents and reduces the quantity of garments purchased) and behavioural (extends period of use) (see Figure 54). This is a contrast to the attributes within Intention as emotional attachment does not seem to be considered important. This suggests that although emotional attachment towards a garment is important in whether the garment is repaired, its importance when

describing a mended garment seems to lessen after mending. Perhaps mending is an indication or a physical symbol of the user's attachment.

However, my findings suggested mended garments often drop in status, implying that the wearer still sees the fault. They are not satisfied with the repair or that mended clothing does not follow the current social norms. Another more positive suggestion is that these garments were favourites saved for special occasions that once the damage and then the repair was made they were demoted from infrequent use to everyday use. 25 per cent of the respondents agreed, it was important that they could enjoy the garment and wear it all the time after mending. In fact, the respondents had conflicting opinions upon whether mended garments were worn again, or no longer smart enough

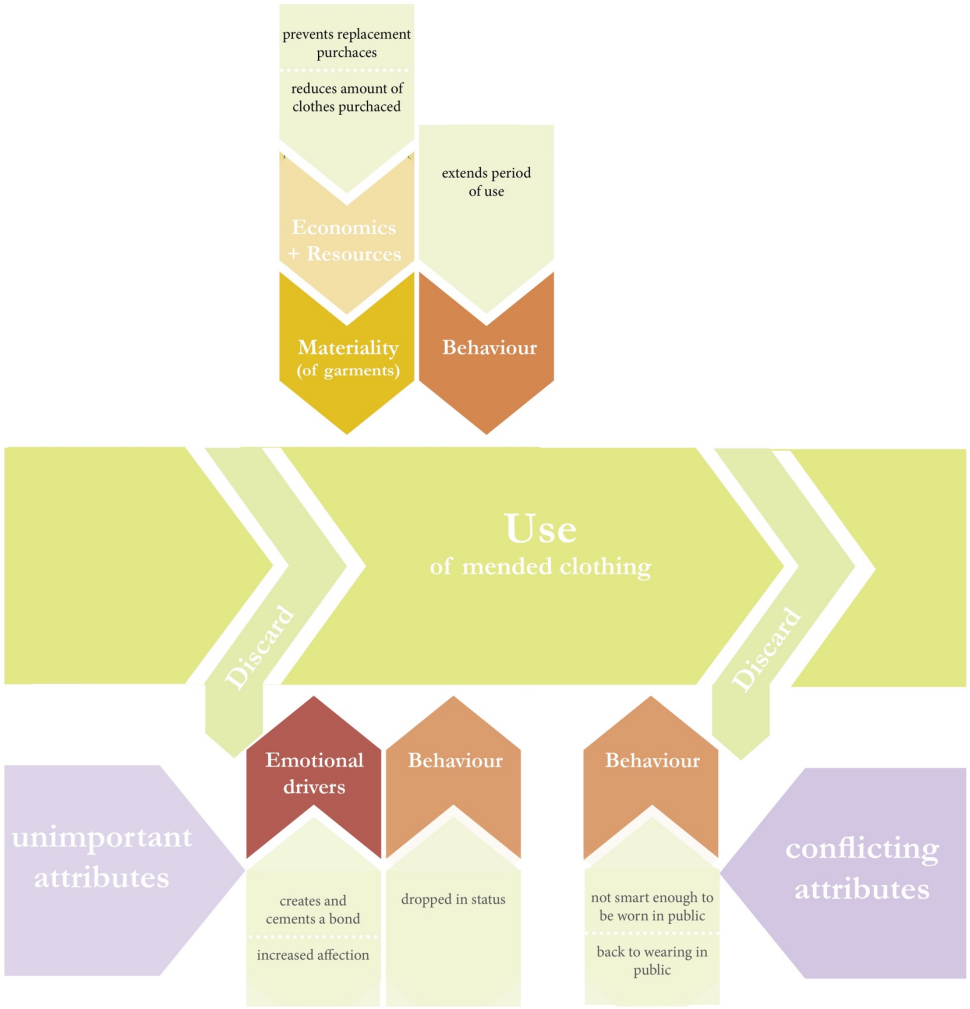


Figure 54. Use of mended clothing

to be worn in public. This shows that the repair of a garment and the use practices that evolve afterwards are determined by many factors including their aesthetics, societal pressures, upbringing and sense of self (appendix 8.3.3-4).

Mending garments therefore offers a conundrum for the wearer, as repairing it may not return it to its original state. Consequently, the mended garment may be considered as a 'new' garment and a

new relationship may need to develop. We therefore need to accept that our garments change and evolve over time, as we do ourselves, embracing the patina of life:

> *'to use clothes is to engage with a course of evolution and editing, wearing, waiting and taking action in co-ordination with the pieces themselves.'*
>
> *(Fletcher 2016:114)*

6.7 Conclusion

Three mending strata were identified as a method for categorising mending, baseline, general and specific (6.3). Baseline mends were acknowledged as often being classed as clothing maintenance, blurring what is traditionally classed as mending. The simple mending cycle can be used to understand the mending process (see 6.4). To encourage uptake, Fogg's tiny habits model was identified as being a possible path towards baseline mends becoming part of the everyday care and maintenance clothing routines. Whereas general and specific mending required more complex behaviours that were identified in the mending process diagram (6.6).

What can be seen within the mending process diagram are the ebbs and flows of the four fundamental attributes or themes related to the mending process. To mend we need a series of elements in place for it to happen. These are:

- **Garment based** (materiality or intention).
- **Individual skill set or capabilities** (within the motivation to mend attribute). **+ motivation and trigger**.
- **An emotional component**. (The behavioural attribute is often a consequence of the other factors).

These three factors all need to be present for a mending intervention to occur. The outcome needs to be usable and of acceptable quality for the user to continue wearing the garment. The advent of choice and abundance has given us the luxury to be able to decide whether to mend or not and consequently it has given the emotional drivers space to grow. The more possessions we have, the

greater our choices[141], increasing the role wearer-garment relationships (emotional drivers) play in the mending process. Moreover, this psychological element is what makes our complex mending systems novel in today's society (today we have the luxury of choice whereas in the past mending was an essential necessity). We need to work with these systems to find a way to adapt people's behaviour to increase the lifespan of clothing through mending, so reducing our consumption of clothing and consequently reducing our resource use.

To try and encourage mending we should celebrate the 'craft of use' and the materiality of our garments. We should in this way reconnect with our possessions and form a deep respect for them and the resources used to create and keep them in use. This regard of the material garment and the processes involved in production could introduce a caring, nurturing behaviour towards clothing.

6.8 List of Recommendations

The research not only corroborates other recent UK academic findings into mending and domestic activities surrounding clothing (Oxfam, 2016; Hobbycraft 2016, Gwilt 2014, WRAP 2016, Gwilt 2017, Skov, 2011; Fletcher, 2016; Durrani, 2018b; Laitala, 2018), but also builds on it to offer insights into our current mending behaviours which can be used as a foundation for further research (6.3, 6.4 & 6.6). The following discussion offers recommendations into what can be done to encourage a larger uptake of mending within the wider society:

6.8.1 Mending and The Domestic Sphere: -

- These findings suggest that mending continues to be a gendered domestic activity practiced within the home, an activity that seems to operate outside environmental concerns especially at a basic level.
    - The domestic mending activity should be encouraged whilst interventions are designed to de-gender the activity, such as teaching all children to sew

[141] leading to increases in domestic wardrobe maintenance, reducing the available free time to mend (Skov 2011)

(corroborated by a recent government report to bring back sewing and mending education[142] (Parliament, 2019)).

- Mending is seen as an opportunity to extend garments' lives and is therefore a method of reducing the environmental impact of clothing. To increase uptake of mending the sustainable angle needs to be separated and promoted.

〈 The term mending has become blurred in certain scenarios suggesting that the simplest repairs are considered part of the mundane everyday caring and maintenance of clothing, along with laundry, ironing folding and storing (verified by Laitala's report 2018). The blurring of the term mending, should be encouraged within the simplest repairs to prevent simple mending practices not occurring due to associated negative connotations with the term. As these simple quick fixes form the baseline in the three mending strata model.

〈 Accessibility of materials to repair with would also help trigger a mend, so for instance instead of storing the sewing kit in the spare room (inaccessible), to have some basic equipment stored in an easily accessible place, where the repair would be performed.

〈 Mended garments have been physically altered and the findings suggest that the emotional drivers could be considered less important once repaired. This implies that the emotional drivers are entwined with the repair and the repair becomes the attachment, whilst for some user's the attachment may need to be rebuilt (6.6.4). If this is the case the newness or the change in garment should be celebrated with the repairs adding to its narrative.

〈 We need to celebrate the materiality of garments and build a respect for them, to care for them. A covenant of care to use as a foundation for addressing society's over materialised life. We need to learn to care for what we have and not to long for the new and to curb excessive consumption (see 2.5.2.2). We must slow the pace down, appreciate what we have and maintain and care for clothing as you would family members.

6.8.2 Mending Within the Community

〈 The challenges society faces on a global scale to become sustainable and prevent runaway climate change, mean that we have a need to create a sustainable future that uses fewer materials. Therefore, creating interventions that prompt wearers to mend their clothes and in turn wear their clothes for longer is essential. This research found an ideal space to encourage and inspire uptake is though communities, either existing or created as the Wear > Craft > Mend workshops, inspiring wearers to develop and maintain a mending practice

[142] Professor Dilys Williams stated that these skills should be part of Key stages 1, 2, and 3 in the national curriculum.

that hopefully expands. Using the idea of the 'fashion commons' muted by Twigger-Holyroyd to provide access and share mending tips to help build a community of menders both physically through local communities and online (2013). Essentially this is to encourage the practice both in a domestic and community sphere. This can be done by using interventions such as regular mending workshops, to expand the reach of mending and to encourage skill sharing within local communities, families and friends, to help magnify the concept and practice of mending further. An example of how this could develop is how trees network with their roots hidden underground and new saplings (menders or /and workshops) appearing wherever there is sufficient sunlight (Wohlleben, 2016). Increasing the uptake in this way could help challenge social norms, making it more acceptable to mend and wear mended clothing.

〈 To encourage wearers to perform more than basic level mends. Opportunities within the community such as regular mending workshops would help especially if government funded (Parliament 2019). This could support a move towards mending becoming socially acceptable, where wear and tears are celebrated and the subsequent repairs are displayed as badges of honour.

6.8.3 Of Relevance to The Clothing Industry

〈 The data and analysis from this research suggest that consumers are repairing and mending their clothes, admittedly they are often the simplest, quickest repairs and therefore it is important for industry to continue providing spare button pouches.

〈 The research suggests that to encourage more complex repairs garments should become open to repairs such as patching or reinforcing pockets. Possibly adding a swatch of fabric and thread could help provide all the incentive some users require.

〈 The research discovered that people are generally happy with their clothing's longevity, as they feel they tend to care for them appropriately (see appendix 8.3.4). However, the quality of materials and manufacture were often cited for clothing not lasting as long as the respondents would like. Implying that a garment's expected longevity (from a user's perspective) is directly related to its durability. Therefore, it is imperative that the quality of clothing's materials and manufacture is appropriate for the minimum expected use time. To help guide user's a system such as the white goods guarantee (for a certain length of time) or food use by dates could be developed.

〈 Repair services (especially local) are an important aspect in mending and need to be encouraged to continue.

6.8.4 Government Research and Education

- Mending is an activity that seems to operate outside environmental concerns. To encourage higher uptake, it may be important to consider whether encouraging shifting social values and cultural norms may be more advantageous to publicising the environmental benefits of repair[143]. To help shift these behaviours towards mending and consequentially more sustainable use practices a move towards developing and building on care practices of clothing could be more successful. Wearers should be encouraged to nurture their clothes and possessions; caring-through-use. Essentially care for clothes to help the environment and respect clothes for all the resources and manufacturing that has gone into their creation
- For repairs above the mending baseline a complex system has been uncovered which tries to understand why certain garments are mended and why people mend. There are significant changes to the historic process as abundance has given us choice and we now tend to require an emotional driver in order to mend. These findings can be used with existing literature on mending to build a more comprehensive picture of the complex systems that mending navigates and help with further research into the field.
- One of the key findings is unpacking the practice of mending and understanding the behavioural attributes (see 6.6). This can be utilised as a tool to instigate further mending interventions and research into repair and longevity.
- What is seen within the research is that each arena (or groups, such as visible mending (Middleton, 2014) and type (Durrani, 2018b) is distinct (in aesthetic values and opinion). From my findings I concur that to help increase the uptake of mending, the tinkering with our clothes to enable the cultivation of enduring narratives entwined with our own ever-changing selves, these distinctions between types and groups of menders need to blur. A community that celebrates and cultivates mending, needs to evolve sharing knowledge and removing the different associations of visible versus traditional mending. This is where the mending strata can be used instead, to group mending. It should not be by aesthetic value, belief or competency but by the damaged garment and the appropriate mend (three mending strata 6.3). This could level the mending arena and reduce the stigma placed on certain types of repair making general and specific mends more socially acceptable to both repairer and wearer.

[143] There does not seem to be the same level of environmental awareness with clothing when compared to food or packaging

- There needs to be an acknowledgement that different methods are needed to encourage greater uptake of mending using the 3 mending strata as:
    - For baseline mends these could be encouraged through Fogg's tiny habits, adding them on to an existing routine of clothing care and maintenance such as before laundering or after drying and before putting away.
    - For general and specific mends which take longer to perform accessibility to materials, resources, and knowledge are necessary.
- The government could offer funding and support to mending workshops, offer tax incentives for mending services and place mending on the national curriculum. Sewing has been shown to be beneficial to wellbeing, therefore mending workshops could become part of community centres promoting wellbeing. Where general practitioners (GP's) could prescribe social wellbeing as they are being encouraged to prescribe outdoor physical activity (Lacobucci, 2018).

A possible route towards greater uptake of mending and of relevance to all stakeholders (individual, community, industry, academics and government) would be to introduce a covenant of care to our wardrobe, one that we as wearers nurture our clothing maintaining and mending over time to continue use (prolonging the use and reducing new purchases).

6.9 Conclusion: Further Mending Conversations

In terms of the research questions this research has discovered that introducing mending practice to a small group of non-menders helped support more durable use practice's with clothes with the volunteers mending in some capacity five years later. It has also gained an insight into mending attitudes of the UK and built deeper understandings by:

1. Identifying three strata of mending; baseline, general and specific, with basic mends blurring within everyday maintenance and care routines.

2. Mapping out the motivations and barriers towards mending expanding these to illustrate a behavioural diagram of the mending process. This led to the recommendations in the previous section.

3. Discovering opportunities to facilitate mending that result in the adoption of the practice of mending into the participants routine maintenance and care of their wardrobes.

4. Proposing a method of 'caring-through-use' as the result of the findings and propose it as a way forward, to implement some of my findings that incorporates mending (especially baseline mending) into a wearer's clothing routines.

In terms of the thesis aims, I discovered that mending interventions specifically workshops in small groups motivate non-menders to become menders and incorporate mending into their maintenance and care habits. I gained a deeper understanding of the UK public's attitudes to mending and used these findings to identify the three mending strata and illustrating a behavioural diagram of the mending process. Finally, I identified ways that mending can be encouraged through mending workshops, caring-through-use and a list of recommendations.

Further work needs to be done to discover how wearers can increase the use phase of clothing through a variety of methods including mending. Specific areas identified that warrant further investigation are:

- To obtain a larger data set in both studies to validate the findings.
- In terms of design, to design more durable areas into garments at points of heavy wear. To investigate the findings through practice (design and making) to create outcomes for dissemination.
- To discover reasons why 16-25 year olds are more unlikely to mend compared with the other age groups. To understand why being unemployed or students lower the likelihood of them mending. This merits a separate study to uncover the factors behind their behaviours and tailor interventions to suit.
- To have a series of focus groups to test the findings – both menders and random population samples.
- To discover if mending workshops can implement the adoption of mending practices on a larger scale and to record any associated changes in behaviour – again this warrants a longitudinal study. However existing mending workshops could be used to speed up the initial search for respondents.
- To discuss the findings with researchers within the mending and longevity arena and policy makers to create further mending conversations.
- To discover which items of clothing would most benefit from mending; basically identify garments that when mended would be frequently worn for much longer periods of time.
- Is there a way of encouraging people to repeatedly mend more of their clothes? What are these garments? Are they the workhorses that don't matter so much, the jeans, heavy-duty clothing, or even jumpers that are easily repeatedly darned, patched?

I believe that the findings of this research build on the evolving literature surrounding mending and longevity. The longitudinal study highlights the importance of facilitators in the introduction and uptake of more sustainable behaviours. Workshops that build competence, confidence and enjoyment of the craft of mending should be celebrated and encouraged to become not just one-off interventions but regular mainstays to the high-street offering alternatives to current consumption behaviour. The findings that all the participants continue to mend are positive and give optimism for further research into discovering whether facilitating mending can have other longer-term sustainable benefits.

The key obstacles, motivations, capabilities and opportunities to mend have been identified and the relationships between the attributes recognised to develop an illustration of the contemporary mending process. An opportunity to test the diagram would help verify the findings and warrants further research.

Mending needs to be seen as an ongoing conversation. Whereby mending initiates, a narrative between the garment and the wearer, as over time other areas of wear will show and further repairs ensue. This does not mean that re-sewing buttons on or sewing up broken seams are no longer classed as mends. Yet with the work of artists, textile practitioners and activist menders (see 2.7.2), mending's boundaries are extending. Mending is arguably no longer seen just as a hidden method purely to maintain the garments usability through function and condition (see 2.7.3). Moreover, mending as an art-form may not meet everyone's aesthetic tastes and sensibilities (see 2.7.3.1). Therefore, this thesis proposes to extend the remit of caring for clothes and introduce the concept of custodianship and caring-through-use. This encourages items to be mended a multitude of times maintaining the garment through a deep respect of its materiality, the resources and workmanship. Mending is therefore reconstructing itself as a way of reconnecting to our belongings and our environment. The practice of mending can be seen as a positive move towards sustainable behaviour. However, mending seemed often not to be performed for environmental reasons, perhaps separating the underlying sustainable angle from repair could have a wider impact. Rather mending should align itself with caring and nurturing as part of a larger whole where the environment is considered part of the picture not the consequence. Reintroducing care and respect for material goods will hopefully help transition us towards custodianship and to living sustainably.

Chapter 7

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