

Making Mends: Visibly Mending the Circular Economy

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Abstract: This paper introduces the Making Mends Workshop, a workshop format centering on the practice of visible mending as a means to explore broader notions of repair and care in the context of the Circular Economy. The workshop is structured into three parts: a reflective exercise that encourages participants to consider the practical and conceptual meanings of mending, a brief lecture and practice session that provides basic knowledge and skills of visible mending, followed by the participants repairing a personal item. Findings suggest the potential impacts of the visible mending workshop as a catalyst for fostering user agency through skill acquisition and meaning-making. The workshop highlights visible mending as a communal repair practice supporting the Circular Economy by extending product life and preserving material and emotional value. The notion of Mending for Others was identified as a valuable addition to communal repair, where repair strategies benefit from social interactions that involve sharing knowledge and skills, care, and joy, ultimately leading to durable repairs.

Introduction

Wasteful trends of the linear take-make-use-dispose model, led by mass consumption and materialism habits, are being counteracted in the Circular Economy (CE). The Ellen MacArthur Foundation elaborates on three principles guiding circular design: (1) eliminating waste and pollution, (2) circulating products and materials at their highest value, and (3) supporting natural processes and regenerating nature (Ellen MacArthur Foundation, 2013). One significant strategy within the circular model is slowing down resource loops, which concerns designing durable and long-lasting products and extending product life through repair and remanufacturing (Bocken et al., 2016).

Rise in initiatives such as the EU's Right-to-Repair, and global expansions of Repair Cafes and other DIY platforms have shown that repair has gained traction as a strategy for product-life extension. Repair involves extending the lifetime of a product by restoring its functionality, making it as good as new after fixing defects or replacing broken parts. Users can perform repairs themselves or use a company or third-party repair service, either for a fee or as an act of service. (Reike et al., 2018). By enabling the retention of product value and contributing to a slower rate of consumption (Dewberry, 2016), repair makes for a crucial strategy within the CE. In the

context of our clothing, obsolescence is driven by the rapid pace of the dominant fast-fashion industry, which revolves around following short-lived trends, resulting in the premature disposal of items (Durrani, 2018; Durrani et al., 2021). Research has shown that compared to 15 years prior, clothing production approximately doubled in volume, while the effective use time of garments decreased by 36% (Ellen MacArthur Foundation, 2017; Niinimäki & Durrani, 2020). Maldini et al. (2019) argue that promoting usage and longer lifetimes of clothing can have significant environmental advantages as long as they contribute to a reduction in the production of new clothes. However, extending the use phase of clothing through repair is encountering several barriers. Users may not have enough time, knowledge, or confidence to fix their garments, and the cost of repairing items may be relatively higher than buying new ones. (Gwilt, 2014; Niinimäki & Durrani, 2020). Global networks of repairers, collectively known as the 'Fixer Movement', have established various initiatives to address the barriers to repair, for instance, through hosting public events where repair and mending experts assist people in learning how to fix their broken items (Niinimäki & Durrani, 2020).

This paper introduces the Making Mends Workshop, a workshop format centring on the

practice of visible mending as a means to teach people techniques to fix their broken possessions and explore broader notions of repair and care in the context of the CE. Visible mending is a particular style of repair, generally used for clothing and other textile-based products. Rather than concealing the repair to restore an item to its original condition, visible mending highlights repair through bold hand-stitched patterns and the use of brightly coloured threads and fabrics (Jones & Girouard, 2021). The term was popularized by Tom Van Deijnen, who coined the hashtag #visiblemending on social media and started the Visible Mending Programme in Brighton, UK, in 2010. This marked the beginning of an online community focused on visible mending (Sekules, 2020), which has increasingly propelled the practice's popularity. It has continued to grow online through how-to and ASMR videos shared on social media platforms (Mattern, 2024). Repaired garments are also gaining attention in luxury segments, with artist Celia Pym becoming a finalist for the Loewe Craft Award in 2017 for her visibly mended 'Norwegian Sweater' (Wolstenholme, 2017).

The Making Mends Workshop and related tools align with a practice-based design research approach (Nicolini, 2011; Sade, 2021), and use the workshop format as a research method (Ørngreen & Levinsen, 2017) to gain insights into people-product relations and explore broader meanings of repair and care that could benefit the fields of design and design research. A key aspect is that the workshop tries to promote active engagement among participants (Andersen & Wakkary, 2019), ensuring benefits for attendees, alongside designers and researchers, in terms of knowledge and skill-building. Making Mends has a dual purpose. First, it aims to teach participants, with varying skills in sewing, visible mending methods through simple exercises and repairing a beloved personal item. Second, the workshop and its tools are designed to fulfil a research purpose. Throughout the workshop, visible mending is used as an exploratory practice that aims to initiate dialogue on various aspects of repair. This approach thereby aims to broaden the scope of designing for a CE and move us beyond a traditional industrial design context towards a more comprehensive, socially and ecologically inclusive vision for the CE.

The following sections introduce the elements of the Making Mends workshop and describe its intentions and experiences.

The Making Mends Visible Mending Workshop

Making Mends started from a personal interest in gaining insights into people-product relationships and understanding people's motivations for keeping or letting go of their belongings. By hosting the workshop in a physical space, each participant is encouraged to repair a personal item through visible mending practices, materializing and sharing their relationship and motivations for the repair.

The choice of visible mending as a leading factor in our exploration is rooted in our recognition of and appreciation for its practical and metaphorical strengths: First, visible mending provides a solution for fixing the commonplace issue of having broken garments. Due to daily use practices, clothing items are naturally prone to wear, tear and stains. Most textiles are suitable for updating through patching or darning. Although some garments require professional skills, many fixes are relatively easy to do by oneself with accessible tools and materials and comprehensible techniques. The visibly mended area becomes a new characteristic feature that gives the garment a personal touch. A garment that appeals to our senses can have a lasting, meaningful presence in our lives (Bruggeman, 2020). Chapman & Marmont (2017) argue that a product that stays in motion is better able to withstand obsolescence. Through time and effort spent adding layers of repair and alteration, the act of visible mending has the potential to create a bond between the mender and the garment (Sekules, 2020). Mending is an act of care that allows the garment to grow and transform with us, taking on a new life and carrying with it the memories of previous ones. Second, visible mending opens up space for thinking about broader meanings of repair. A metaphorical quality lingers between the layers built with each repairing thread or piece of fabric, nudging thoughts that go beyond the tactile on what it means to repair, and how we might otherwise perceive what is broken.

Over approximately one year (2023-2024), 11 workshop sessions were conducted in both Japan and the Netherlands on various

occasions (Table 1), engaging a total of 75 participants. Data was collected through written notes and observations, audio transcripts and photographs. Participants were given workbooks to fill in and refer to throughout the session, which also functioned as data collection tools. Digital scans or photos were taken of the workbooks to be archived before being returned to the participants to take home as a memento post-workshop. Online or printed questionnaires were used to gain additional insights into participants' backgrounds and their prior experiences regarding mending and repair.

Date	City, Country	Sessions	Participant Number
10-06-2023	Kyoto, JP	2	18
21-07-2023	Amsterdam, NL	1	8
08-08-2023	Almere, NL	1	6
16-03-2024 17-03-2024	Tokyo, JP	4	21
28-03-2024	Rotterdam, NL	1	8
17-09-2024	Rotterdam, NL	1	11
29-09-2024	Utrecht, NL	1	3

Table 1. Overview of workshop sessions.

Elements of the workshop

The workshop offers a space for learning how to visibly mend and reconnect with one's beloved wearable items. Participants are encouraged to bring personal items that need repairing, such as a backpack with holes, or a stained sweater. Yarns, fabrics and sewing equipment are provided, though participants are allowed to bring their own. The workshop is designed for beginners while providing creative space for more experienced individuals. The duration of one session varies between 90 minutes to 3 hours, depending on the setting and collaborators. The workshop is divided into three parts: (1) Mending a leaf, (2) Practicing visible mending, and (3) Mending a personal item. A workbook is used as a leading tool for the participants to work with throughout the session. The workbook's purpose from a data

collection perspective was to unobtrusively gather insights into people's 'everyday ways of knowing' (Pink, 2015). It aimed to unravel the often unspoken stories behind people's daily behaviour and their relationships with their garments. Each individual receives one at the start of the workshop to document their thoughts and plans for mending their item. The workbook intends to seamlessly integrate into the mending process, acting as a step-by-step guide allowing everyone to progress at their own pace. By adding a layer of playfulness, the workbook becomes part of the mending experience, fostering the participants' creative thinking and heightening their sense of materiality. The layout allows participants to add notes, drawings and material swatches to clearly express their ideas and track their progress. Questions and hints guide the participants towards successfully mending their items. Additionally, an overview of the visible mending techniques taught in the workshop is included as a reference. After the session, each participant takes their workbook home as a keepsake and resource to inspire future mending projects.

Part 1: Mending a leaf

During the first part of the workshop, each participant is given a leaf and instructed to "mend" it in 10-15 minutes. This tangible thought experiment utilizes the unique silhouettes of the leaves to create a connection to the idea of mending while allowing participants to be creative and contemplate broader meanings of mending and reimagining repair. The open-ended prompt allows participants to approach the task of mending without feeling constrained, as there are no right or wrong methods to mend a leaf. This fosters improvisation and encourages trust in their intuition as they react to the material in their hands and make their creative decisions. The prompt aims to reduce barriers to hands-on making before any formal instructions are given. While working on their leaf, participants were asked to think about what mending means to them and share their thoughts with the group after the exercise. A myriad of reflections unfolded, both material and immaterial. As each leaf was different and

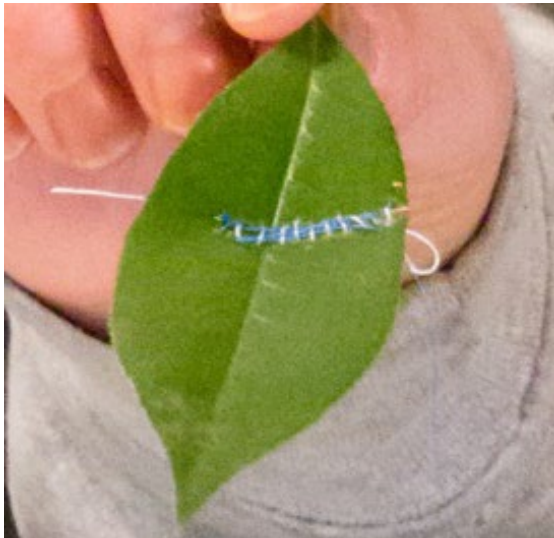


Figure 1. A leaf mended using needle and thread to stitch the torn part.

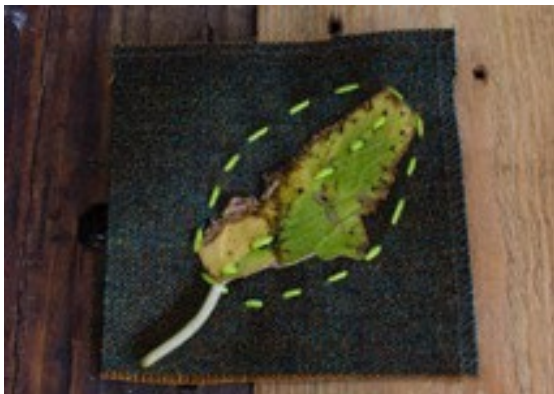


Figure 2. A leaf mended using a needle, thread, and a piece of fabric.



Figure 3. Participant 4 initially thought to mend the holes in the leaf she guessed were made by bugs, “But then I realised they’re actually too small to fix with needle and thread, and then I started asking myself if there was a need to fix

them.” Instead, she chose a ribbon with “the organic pattern to try to make a frame for the holes rather than fixing them.”

uniquely ‘broken’, participants had to navigate their leaf’s materiality and perceived ‘repair needs’ with the utmost care. Some participants opted for a repair where holes and tears were sewn shut (Figure 1), while others chose to patch and reinforce the leaf by adding a new layer to the original structure (Figure 2). The leaves opened up conversations about various aspects of mending, including functional and aesthetic purposes, restoration, reconstruction, and storytelling. A few participants questioned the brief, activating considerations about the necessity of repairing the leaf, and the reasons behind our motivations for repair (Figure 3).

Part 2: Practicing visible mending

In Part 2, the shift is made to textiles. Participants are introduced to the concept of visible mending and practice different techniques for repairing holes and covering stains. Over time, the introduction has become more comprehensive, incorporating a range of historical and contemporary mending examples to provide participants with a more holistic understanding. We have gradually included more visual references that showcase the techniques used by previous participants to mend their broken items, which have proven to be a useful source of inspiration for attendees of subsequent workshops to inform their own repairs. They contribute to Making Mends a state of flow and constant development (Konovalov et al., 2023).

The focus of the practice session, like the overall attitude of the workshop, is on learning by doing. Practising with small fabric pieces first (Figure 4) helps participants understand material characteristics, guiding their choices for mending their items. We have identified several recurring themes in participants’ mending experiences, such as materiality, connection to memories, physical challenges, and knowledge sharing (see Table 2). Participant 3 wrote about his struggle to grasp the suitable distance between each stitch (Figure 5). He continued to describe how he gradually understood the method and how the process brought back memories of his mother repairing his belongings. Similarly, Participant 15 shared her past experiences of how she used to sew for herself and her family. She

Participant No.	Quote	Theme
3	"It felt like the fabric began to fall apart if I stitched too close to the edge of the hole."	Materiality
13	"I really had to handle it (the leaf) with care because of it falling apart if you pushed it too hard, or... Because I had this one [needle], but the holes were too big, so it was already falling it apart more than..."	
15	[I used to sew for family and myself ...] "But now, because my eyes... when you put a needle... I am not anymore patient about it, so I said "ah, I love to do it, but oh, I cannot see it." So that's the thing."	Physical Challenges
17	"Do you have glue?....Because I'm having a hard time with one hand, you know?"	
3	"It (mending his jacket) reminds me of Mom. (My mom fixed it for me on New Year's Eve.) When I went back to my parents' house, I told her to fix it and she fixed it."	Memory of Mending
22	"I started wearing it less since it's broken... I'm so happy that I can wear it again!"	Pride/Joy in Result
19	"I'm happy because I feel like I can really wear it again without feeling embarrassed about the stains."	
69	"It's personal and I like the fact that I can make it look cute, fun and different for my daughter!"	Mending for Others
2	"At times I felt frustrated because I didn't want to make mistakes and make it look perfect for my friend!"	
2	"Feeling very encouraged to finish this project as it would be nice to give my friend the mended trousers"	
7	"It was so nice to take the time to consider the actions I was taking to repair my item. I find life can get busy so to put aside the time felt very good"	User Agency
8	"I would like to continue to incorporate this into my daily life and I am very proud of myself!"	
3	"I wanted to fix it but didn't have time, so I'm glad I was able to do it! I'm also glad that I have the freedom to fix it however I want."	

Table 2. Overview of identified themes and corresponding participant quotes.

was an experienced sewer but needed assistance threading her needle due to poor eyesight. Participant 17 attended the workshop with an arm injury and quit sewing halfway through the session due to physical difficulties. Despite this, she remained engaged throughout, sharing her knowledge of handicrafts, and advising others. These experiences highlight that mending relies heavily on participants' eyesight and physical mobility, prompting the need for reflections on accessibility in the mending process to minimize potential barriers. Solutions suggested during the workshop included assistance with threading needles and using firmer fabrics. Participant 15 noted that rigid fabrics were easier to work with. Furthermore, these instances demonstrate that engagement in mending is not solely tactile; it can also involve sharing knowledge and providing guidance to others.

Part 3: Mending a personal item

Once participants feel comfortable with the practice, they start interacting with their personal items. This part showcases the wide range of possibilities for mending, which includes fixing signs of wear and tear, covering stains, and altering for a better fit. As mending has been identified as essential for supporting the longevity of garments and facilitating sustainable transitions in clothing use practices (Durrani, 2018), it was important to invite workshop participants to bring and mend a personal item to emphasize individual practices of use and facilitate longer product use through repair. The workbook prompts participants to reflect on their mending process, their feelings about the results, and where they picture they would wear their mended item in the near future. Multiple participants shared remarks expressing their excitement to wear the personal items in public again (Table 2).

Several participants brought items belonging to their children for mending. Participant 2 brought an item belonging to a friend (Figure 7). During one session, participants with no items repaired the belongings of others who brought extra items. We found acts of Mending for Others valuable as they lead to successful repairs and highlighted the entanglement of the material and the social in communal repair practices (Van de Velden, 2021; Durrani, 2018). Communal repair provides individuals



Figure 4. A participant's practice piece of patching a hole.

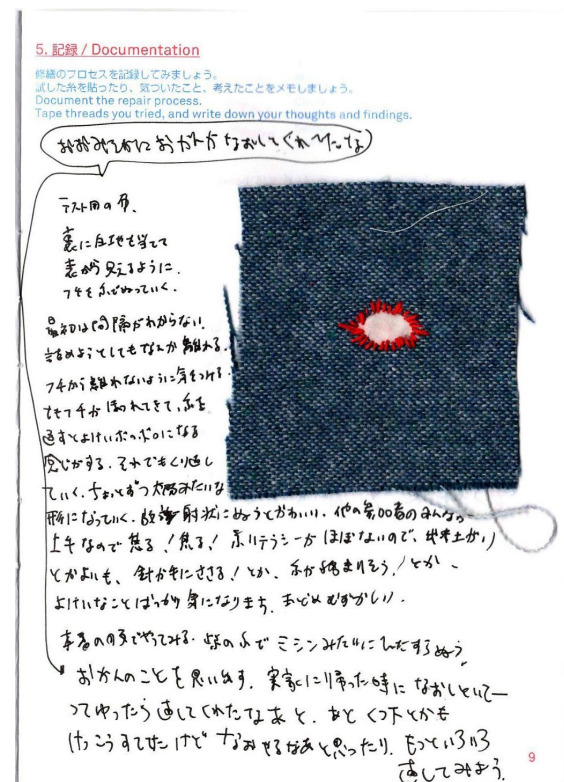


Figure 5. Participant 3's workbook documenting his thoughts during the process of learning to mend.

with a direct and tangible opportunity to contribute to a CE. Combining material efforts with social interaction through communal repair supports circular goals of product-life extension and waste reduction, while also fostering social values, including sharing, a sense of achievement and emotional attachment, and care for others. The instances of Mending for Others that we observed



Figure 6. Mending result of Participant 19. The stains on the t-shirt were ‘framed’ with stitches to make them less visible.

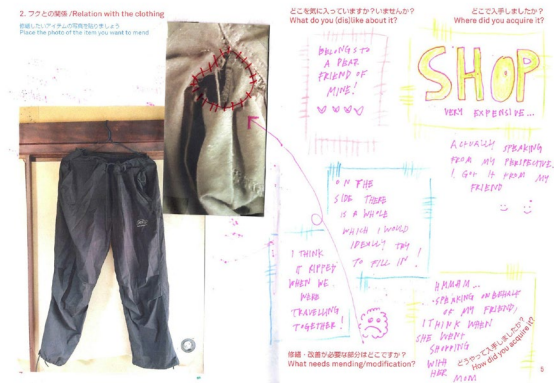


Figure 7. Scan of the workbook of Participant 2. The trousers belong to her close friend, who trusted her to repair them. They got ripped while they were travelling together. She chose an invisible mend because she believed it would create a neater appearance that her friend would like, while minimizing the visibility of any mistakes she might make as a beginner in sewing.

involved individuals who were connected through friendships and other close relationships; Participant 69 expressed a sense of joy in mending something for someone you care about. We noted a thoughtful consideration of the needs and preferences of the person whose item was being repaired. Mending for Others demonstrates that repair strategies are informed by social interactions (Van der Velden, 2021), igniting conversations and collaborative tryouts that lead to meaningful repairs that can last. On the other hand, this suggests that a lack of such close relationships may impede the willingness to mend for others, or that at least a certain level of trust is necessary among those involved.

Visible mending is both a collective and an individual endeavour. When someone joins the table with an item they have owned for a decade or several months, they not only engage in the act of mending but also share stories behind the item. They learn how to repair from and with others, fostering a sense of community around the mending process (DiSalvo et al., 2013). To keep the mending going post-workshop, we have set up an online Making Mends Map (Figure 8). Several posts indicate that items mended during the workshop were still in use, and some participants repaired additional items after the workshop, for themselves and others. People felt excited to share their mending experiences with friends and relatives. One post proudly stated that they “motivated a few others to repair their garments and not throw them out”.

Conclusions

The Making Mends Workshop is an in-depth exploration of meaning-making processes of repair through the act of visible mending. It provides a physical space where people can actively engage in visible mending in several ways. First, workshop participants contemplate both practical and conceptual meanings of mending and repair through a mind-provoking creative exercise of mending a leaf. Second, the workshop aims to give further context to visible mending by sharing historical and contemporary practices. Third, participants learn various visible mending techniques and apply their skills to repair a personal item. Through this process, participants reflect on how they are restoring meaning in their relationship with the item.

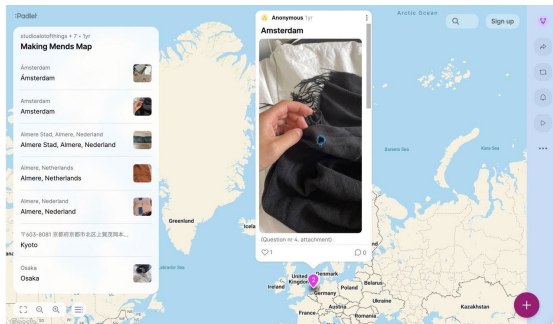


Figure 8. Screenshot of the Making Mends Map, created on the collaborative web platform Padlet. The map can be accessed via: <https://sites.google.com/view/studio-a-lot-of-things/more-things/making-mends-map>

Making Mends aims to add to the research of previous scholars regarding ‘meaningful’ relationships between people and products (Chapman & Marmont, 2017; Fletcher, 2016). Key in Making Mends is promoting user agency by fostering skill and knowledge development while encouraging creativity and positive emotions, such as pride and joy, when individuals engage in repairing their possessions. The workshop showcased visible mending as a significant practice of communal repair that can contribute to the CE by promoting product-life extension, maintaining both material and emotional value. We identified Mending for Others as a valuable addition to communal repair, where repair strategies benefit from social interactions that involve knowledge and skill sharing, expressing care, joy, and creativity, ultimately leading to durable repairs. We acknowledge the limitations of our small data set and recognize that further research is needed to expand the effectiveness of Mending for Others as a worthwhile practice. Through interactions with participants, the reliance on physical mobility during the mending process was identified as a potential barrier, pressing for more research on the accessibility of visible mending.

This paper outlines the experiences and findings of the first year of Making Mends, during which we engaged a diverse group of participants and collaborated with various organisations in education, business and creative practices. Moving forward, we aim to continue our investigation through the Making Mends workshop, involve many more stakeholders and expand our reach to get more people mending. We hope that Making Mends serves as a source of inspiration for action and reflection, and that our preliminary findings can

enrich how we design and repair within a CE, fostering environmentally and socially responsible actions.

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