Making Design Memoirs: Understanding and Honoring Difficult Experiences

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ABSTRACT

Design is commonly understood as a storytelling practice, yet we have few narratives with which to describe the felt experiences of struggle, pain, and difficulty, beyond treating them as subjects to resolve. This work uses the praxis of embodied design as a way to bring more complex narratives to the community for contemplation—to engage and entangle personal and difficult stories within a public context. We propose the term Design Memoirs for these first-person practices and reflections. Design Memoirs are subjective and corporeal in nature, and provide a direct and observable way to reckon with felt experiences through, and for, design. We demonstrate Design Memoirs by drawing on our own experiences as mothers, caregivers, and corporeal subjects. Following Barad, we propose a practice of diffractive reading to locate resonances between Design Memoirs which render difficult autobiographical material addressable, shareable, and open for new interpretations. We present this strategy as a method for arriving at deeper understandings of difficult experiences.

Author Keywords

Design Memoirs; Design Research; Design Fiction;
Autobiographical Design; Methodology; Motherhood.

CCS Concepts

•**Human-centered computing** → **Interaction design process and methods;**

INTRODUCTION

We are shaped, and in turn shape our material world. As designers, the artefacts that we create, consume, or discard operate as "constitutive processes" that continuously make and remake culture [14]. These objects can be understood to have particular performance characteristics when encountered in different interaction contexts, comprising physical, symbolic, and/or aesthetic aspects [53, 31]. Within the field of design, objects are often described as stories [44, 9, 8] and scripts

[41], where they present narratives of action, need, and resolution. These narratives emerge at the intersection of design aesthetics, material form, and the socio-cultural norms within which the design process is embedded. They give themselves to be read, critiqued, or ignored by the viewer.

Our work aims to make space for alternative stories on the practice of design through first person and embodied design reflections that we call *Design Memoirs*. Design Memoirs are a method for provoking curiosity and investigation of deeply felt and formative emotional experiences. We use the term memoirs to acknowledge how this particular literary form can be a useful, insightful, and repeatable generative form for designers to center personal values and insights held in intimate knowledge. We propose Design Memoirs as a strategy for "another way of telling" [7], where the created things themselves speak in social, political, and historical terms. This is a form of shareable autobiographical design that wants and indeed claims to be sincere [16], while all-the-while reflexively testing and probing the limits and constraints of that public claim. We see our approach as sitting within the growing body of subjective and first-hand HCI research including autobiographical design [17, 49], design fiction [10, 38], and autoethnography [15, 32].

We ground our work in prior methodologies that aim to bring greater awareness to the "personal" within research practices, arguing that the personal is deeply impactful in shaping how and what we design. Thus, Design Memoirs operate as *mattering artifacts* [27], where the designed objects serve as a guide to our own perceptions of our lived experiences, and the values and perceived value-shifts of these representations in different contexts [23]. Through this orientation to the person, they can bring greater awareness to lived experiences that may not be particularly amenable for public discussion, such as frustration, sorrow, rage, or regret [4]. As such, they create space to engage and communicate about aspects of our (and others') lives that are difficult, taboo, or "off limits". Rather than hide these narratives in the subtext of projects or consider them only for personal catharsis, we would like practitioners to bring them to the fore and name them as formative and valuable experiences shaping design approaches.

We present three distinct, yet interwoven Design Memoirs that speak of and to, particular experiences of the authors. Intimate Exoskeletons grapple with the discomfort of the early years of motherhood; the Done Medals address the physical weariness

of assisted fertility treatments; and Pockets interrogate the role of pockets as personal sites of power and secrecy between generations. Through these Design Memoirs—in the form of garments, wearable technology, and adornment—we bring visibility to our experiences in relationship to design. These memoirs are narratives designed for ourselves, our families and our research and practice communities. Specifically, we believe they can lean against emergent solutionist narratives about technology in early motherhood that we find inadequate for addressing the totality of a complex felt experience.

Through the process of designing our own memoirs, and interpreting them in relationship to one another, we claim that this practice creates a broader space for "troubling" design as a straightforward problem/solution discipline [30, 19]. For instance, our memoirs present and accept frustration as a valid emotion, capable of resting comfortably alongside joy and love. Furthermore, they propose frustration and struggle as necessary complements to more positively perceived emotions. Thus, while the memoirs take up and operate through the rhetoric of design, their status as narrative objects allows them to bring forth broader commentaries and perspectives on normative design practices within a particular context.

We aim to interrogate our approach by reflecting on particular challenges or limitations in these practices. Specifically, we will address the challenges Design Memoirs create with traditional notions of contribution in design research; how "making about" experiences that might be too difficult to speak about can bring about multifaceted understandings of those situations while maintaining some level of secrecy; and the social contracts we developed as authors to protect our emotional health during the creation of this work. In summary, we argue that Design Memoirs create space to stop and consider a situation, why it occurred, and the complexity of the situations involved, before or even instead of, jumping to a solution(s). The memoirs are ultimately objects that give themselves to be read through the particular vocabularies of design.

What is a Design Memoir?

"Minutes later she asks me about the book again, and I tell her that I am working on it and, yes, it is a memoir, but memory is not fixed. I have always believed that memory and the imagination are a single faculty."

-Siri Hustvedt [34, p. 158]

We propose Design Memoirs as a method for traversing and communicating one's memories of life events through the practices of design. A memoir is a story one tells about one's past experiences from the first-person perspective. In contrast to popular notions of autobiography, memoirs tend to focus on a set of meaningful events rather than a lifetime, and often emphasize the subjective or felt experience of that event, rather than a recollection of key moments and facts. Memoirist and professor in English Literature Mary Karr proposes the term 'sacred carnality' [36] to describe how memoir authors use sensual details to lure the reader into precisely knowing the particulars of their physical world. Thus, memoirs are often more emotionally, sensually, and subjectively charged than autobiographies. Literary memoirs allow readers to connect,

Figure 1. An Exoskeleton for Sucking. Materials: wool, pacifier nipples; Method: hand crochet. Subjects: expectations, providing, protecting. Worn at home or office, the exoskeleton allows those in your community to suck from you while safely protecting your own body. To be worn as a badge of pride in the capacity to provide, to be worn as a rally against the expectation to provide.

gain insight into, and become enchanted by the storied experiences of the writer. This takes a variety of forms and has the ability to speak to experiences with a basis of knowing some semblance of the story that "happened" or "was experienced" while acknowledging (and accepting) that the narrative may not be true. The memoir's more elastic connection to objective truth provides greater space for reflection and poetry, coloring

the story in ways that allow it to resonate with a reader along emotional lines.

The form of the memoir gives audiences access to stories that are not often told, or stories told in ways that are framed through moral narratives, with particular attention to the feelings of those experiences. For instance, Maggie Nelson's *The Argonauts* describes the relationship, conception, transition, and changing relations to gender and notions of normative families between herself and her partner [48]. Weaving memories with theoretical exposition, the author offers the reader a more nuanced access and a different way of understanding normative and non-normative gender constructs in relation to parenting. Nelson's memoir thus provides readers who do not share the exact experience with a better, and perhaps more complicated sense of where they can and cannot relate [55].

Memoirs also attend to the complexity of lived experience by evoking poetic constructs to maintain multiple readings and connection points, thus problematizing notions of the authority of one singular narrative. Siri Hustvedt's *Memories of the Future* features a triumvarate of narratives, namely her diary entries as a 23 year old, her novel written during that same period, and finally her reflections as a woman in her 60s [34]. The Beckettian switching of narratives, of what was felt at one moment and how it is re-felt, what she thought then and what she knows now, the kinds of memories and odd details that stick in ones consciousness, demonstrate how the "self" is formed in conjunction with bodily experience.

Where literary memoirs use the form of writing to speak about emotionally charged memories and experiences, we propose *design* memoirs as a way of "making about" emotional experiences that resonate within their maker. The forms through which Design Memoirs are communicated are therefore designerly prototypes: things that give form or curate access to that which is difficult to speak about. At the same time, the design objects and practices aim, like memoirs, to resonate as emotionally true. They emerge through a socio-material-technical practice, and in working with various material aspect (people, matter, activities etc.), one begins to bring forward new insights and to communicate experiences in a more abstract way. Where the written form, at times, lends itself to longer, more detailed readings and tellings, the design form embraces reflexivity by opening itself to a wide variety of expressions, from brief to extended, and with a variety of interpretations [54, 18, 3].

As a project of communication (and not just making for one's pleasure or therapy), memoirs are crafted at the intersection of what one wants to communicate about how one felt, and the idea of how an audience might come to understand, resonate with, or possibly reject those perspectives. The idea of an "audience" or "interpreter" is present throughout the making process, shaping how memories are investigated as well as expressed. This factor is perhaps the most impactful in shaping how one might approach Design Memoirs differently than literary memoirs. For instance, Mary Karr urges writers of memoirs to "cop to it all," [36, p.74], meaning that the author must relate the full swath of their emotions and not just the pleasant, palatable ones. However, much of our "all" still falls

Figure 2. The Done Medals. Materials: VeroClear and Tango Black Plus 3D printing filament, ribbon. Method: 3D multi-jet printing. Subjects: being diagnosed as what you are: "Advanced Maternal Age in Multigravida". The Done Medals commemorate the completion of an assisted fertility treatment cycle, publicly, privately, and semi-publicly. The embossed letters are flexible and have a slightly sticky quality, which is pleasant (at least for me) to touch and press upon. The medals can be worn publicly as a talking point, or squirreled away in the "important documents" drawer, or perhaps placed on a nightstand for everyday viewing pleasure.

outside the scope of what our community might deem to be valid or appropriate. There are power dynamics in play, and a risk one takes in revealing oneself to ones community in this way. As such, we proceed with caution, using the ambiguity of design to cloak that which we don't feel comfortable saying in writing, while at the same time, giving itself to be interpreted in the memoirs we create. There is not one "true" story expressed in the memoirs, but unique points of connection and interpretation emergent between the memoir(s) and the audience.

A Case for Drawing Out the Personal in Public
Feminist science and technology studies and prior work in social science helps us frame the making of Design Memoirs as firstly a method to account for the personal as a domain worthy of greater focus for HCI, and secondly as a way to understand how the things we experience personally, shape how we practice design. At the core of these claims is the perspective of design as a representational (in a material-semiotic sense) practice—one that actively represents the lives, concerns and values of ourselves and our cultures through the production of things. The way in which we give voice, space, or representations to the lives we study, inevitably shapes the objects we design. In this process, we must not only attend to the relationship between the voices and the things we make, but also how these voices (which "conjure the human who

utters it" [36, p.66] are inherently muddled with our own "expert" notions of how design ought to be. In design there is no such thing as an unbiased account and following Haraway, we need to acknowledge the specific ways our understanding of the world emerge from situated and partial perspectives [29]. Specifically, we are attentive towards how our physical and emotional perspectives shape and are shaped by our particular socio-culture situations and upbringings. We acknowledge the boundaries of those perspectives, noting our privilege as white, cis-gender women with academic jobs, and living with financial security in the relative comfort of the western world.

Acknowledging our own perspectives is important when attempting to speak directly to contexts and experiences that the researcher shares with their subjects. If we understand representations of users as co-produced with our sense of self, then we may begin to better understand why we need methods that help us reflect on the personal and subjective. The "personal" here can be understood as "a way of drawing attention to experiences that are constituted around a sense of self or identity, to do with emotions, intimacy or the body...it concerns the social as ontologically experienced by the individual" [50]. Writing specifically of their experiences in child rearing, the authors express the need for a third space of the "personal" to be defined alongside the "public" and "private." On one hand, interrogating the personal becomes a way of understanding oneself as a researcher and how ones' perspectives are shaped; on the other, it may allow one to fundamentally question research practices in and of themselves—particularly where scholarly discourses seem to somewhat or even fundamentally contradict personal experiences.

Engagements with the Personal in Design Research

We position Design Memoirs as a contribution to methods for first-person research in HCI that highlights the felt or somatic memories of lived experience (e.g. [42, 4, 24]). They sit within a broader tradition of inductive and anti-solutionist design approaches such as Design Probes [25], which invite users to generate personal design input; Ehn's design games which facilitate personal expressive experiments with props and rules [22], and Placebo Design [21]; which inspires participants to address problems without solving them [45]. Additionally, we draw from Gaver et al.'s formulations of Research through Design to locate the value of these designs in their "fertility" or ability to inspire new conceptualizations and possible paths to action [26].

Design Memoirs take these inductive approaches to inquiry and blend them with aspects of autobiographical design and autoethnography. In their 2018 survey of autobiographical design, Desjardins and Ball highlight the ability of first-hand methods to emphasize the personal and intimate relationships between a user/designer and their technology [16]. They distinguish autoethnography from autobiography in the particular integration of both design and *living with* the systems and how one understands that relationship though embodied and personal use. It is in this capacity of "use" that Design Memoirs depart from both autoethnography and autobiographical design. Rather than designing a system, using it, and reporting on how we felt or engaged, Design Memoirs rely more heavily
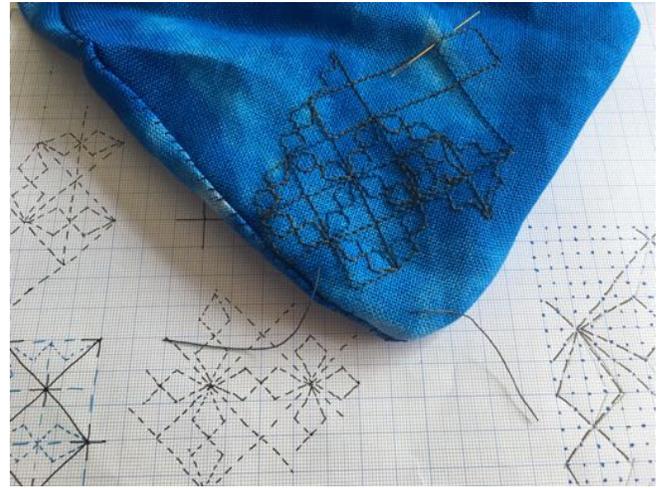
Figure 3. Repetition (expecting different outcomes). Materials: linen, paint and embroidery. Subjects: madness and determination. A pocket of embroidery linen is coloured blue and added to a pocket-less dress. A traditional Sashiko pattern is modified into the rectilinear thread structure of the linen. As the pocket curves it becomes increasingly hard to reconcile the patterns on either side of the seam. The continued determined work to do so, constitutes the madness aspect of the construction. It will never be done, it will never fit. It still has to be done.

on the design process itself as a method of meditating on and drawing out the past. Put another way, the value in Design Memoirs is the *mattering* of the memories through design practice as opposed to the specific value or understanding gleaned through their use. The objects are used as books for telling stories and bringing attention to narratives for contemplation and connection. We intend for the designs to be read as responses to statements like "this is what I felt," "these are the rituals I performed," or "this is what I needed to maintain." The *actual* potential utility and practicality of our designs has to give way in order to remain true to the emotions and feelings. By not considering use, we can take broader narrative liberties, trading utility for hyperbole and echoing the way particular emotions have a tendency to feel larger than the self.

MATERIALIZING DESIGN MEMOIRS

In the Design Memoirs presented here, each author created a series of objects to draw out their personal and felt experiences of a particular aspect of their lives - parenting and being parented. Devendorf's Intimate Exoskeletons are an attempt to wrestle with the discomfort and demands she feels as a parent, through the form of body-worn protective garments; Kelliher's Done Medals honor her ability to endure fertility treatment cycles though the fabrication of medals marking her experience; and Andersen's Pockets reflect on the daily practices of secrecy and adaptation to the everyday. In the following three sections, each author explains their project below using the first-person perspective. Images from the three projects are presented throughout this paper.

Intimate Exoskeletons

Intimate exoskeletons are an exercise in creating hyperbolic and storied responses to the physical and emotional frictions I experience in everyday life. They represent the pressures

I put on myself to buck up, do more, and sustain. Their "soft" handcrafted nature sits in tension with these pressures, representing my continual failure to guard myself, of giving too much, and seeing my "worth" so-to-speak in the capacity my body affords to provide comfort and kindness.

I constructed each exoskeleton by hand using weaving and crochet, utilizing modes of labor characterized by repetition and coded with gendered legacies of "women's work" [6, 52]. The making process brought these to mind as a way of getting used to, embracing, and drawing out the repetition and scheduled nature of my daily life into a material form. The forms the garments took drew as much from military imaginaries as they did from Nick Cave's tactile *Sound Suits* [13]. In this way, they embraced contrasts of visibility and shielding. They bring to mind ideas of protection but in their flimsy softness do less protecting than capturing of the bodily forces and interactions—the experiences that become so taxing but also so sweet with time and distance. **Figures 1 and 5.**

Done Medals

The Done Medals commemorate the completion of an assisted fertility treatment cycle. They are awards that I earned through competitive participation with my body. They recognize the cycles of testing, suppressing, probing, retrieving, sedating, injecting, inserting, tracking, traveling, managing, and waiting, as a notable and noteworthy human achievement. They attest to an all-consuming process that I, along with many others (who can either afford it or have it covered by insurance), often carry out invisibly and silently in public. The medals simply affirm that I endured this process and it was done. This retrospective framing serves to attempt to reorient my deeply felt negative, sad, and shameful emotions about the process in a new and different direction. I could only attempt to conceptualize and create these "design things" [40] several years after experiencing these cycles, and I constrain and limit my Design Memoir to only my interpretation of them; others may of course feel very differently of their own experiences in this regard.

Instead of hiding this diagnosis and process as I originally did, the medals commemorate a brutal, complicated, painful, and for a long time, profoundly disappointing process, that played out over several years. This involved the mundane, but anxiety-inducing chart-keeping of appointments and medicines using detailed spreadsheets, the use of multiple daily alarms and timers, the injecting, inserting or ingesting of medicines into my body on a daily and/or regular basis, and because of my rural location, the many 100 or 300 mile daily roundtrip drives for blood work, ultrasound, or other medical requirements not available in my hometown. The journeys, the injections, and the grim-sounding diagnosis are represented in this memoir. **Figures 2 and 8.**

Pockets

The pockets project is an ongoing exploration into the role of pockets as sites of power, secrecy and agency in my own life and that of others [46, 1]. Born from my experiences of powerlessness, the pockets provide a practical potential

Figure 4. Anywhere (but here). Materials: shirt and money, subjects: secrecy and flight. Money is sewn into the collar of a shirt, providing freedom and the possibility for flight. This pocket is hardly a pocket at all, it's a slow transition of power.

of smuggling systems-of-survival, as they range from practical solutions (tampons, money, pain killers) over material for expression and mental freedom (writing, embroidery, un-picking) to symbolic objects of memories and power (lucky stone, safety pin, tool). The pockets included here, are made for myself, my mother and my daughter, as my responses to our cross-generational struggles with the long lasting reverberations of sorrow and grief, against our collective longing for independence and expression.

The pockets aim to make small seemingly harmless interventions that hint at what I may want to empower, conceal or keep safe. What I keep in them influences what I can do, what actions I am prepared for. As design objects, they are containers not yet filled, folds adding depth to the space around my body, rather than surface area. They form a kind of intermediate zone, not clearly belonging to my body, my intimate self, or to my public, communal self. In this way the pockets are a way to add a buffer between myself and the external world, facilitating any transfers in between them and acting as sites for rebellion and the ongoing marking of experience. **Figures 3, 4, 6 and 7.**

DIFFRACTIVELY READING OUR DESIGN MEMOIRS

As we look across our Design Memoirs, they reveal an emphasis on being seen and concealing, on memories and preparation, on the wish for power and the frustrations of its absence. In order to further explore such emergent qualities, we propose to look at our Design Memoirs in dyads, effectively reading and questioning one through the other in pairs. In doing so, we extend a strategy of diffractive readings of text [56] to the reading and interpreting of objects as a way of both attending to them and exploring the resonance between their material-semiotic expressions. This technique is inspired by Karen Barad, who proposes diffraction as an alternative metaphor to common practices of critical reflection which reinforce the "geometries of sameness" [5, p.72]. Diffractions, such as the complex wave forms created when light is beamed through slits, are "attuned to difference" and, specifically, the way that those differences, expressed as regions of light and dark, are *produced* under specific conditions of analysis. This metaphor helps us understand that in reading Design Memoirs, we are not reading them for the truth and shared feelings in the separate narratives but to the way that multiple "different" objects and memories can intermix to reveal new approaches, ideas, and understandings.

Put into practice, we read our objects side by side, asking how one might be used in tandem with the other. The focus on the imagined or hypothetical use of the objects (as opposed to the personal stories they tell), creates a space to approach memoirs from a generative perspective, and in considering their utility, uniquely approaching them as *design* objects. In practice, we worked together to generate these readings, thinking of how we might use our desired objects with the others, what they might mean to us in the scenarios of use, and what new possibilities they may generate.

Medals + Pockets

The pocket turns the medal into a secret accomplishment, a marker of change, kept like a talisman or a lucky stone, secretly marking bravery and functioning as a potential source of tangible comfort in times of need. In return the medal makes the pocket into a mark of pride, a scar carried with acknowledgement of its history. The pocket and the medal combined provide opportunities for new personal and social rituals, where they can be used to bolster individual encouragement, or to signal interpersonal solidarity (much as the knowing looks exchanged when "the breast pump bag" is noticed in professional settings).

Even if we stay with the current shape and actuality of these two sets of objects, we can imagine the pocket as an alternative occasional place for the medal, heavy, present like a secret ballast or "gravitas", the heavy form of dignity, earned through experience or hardship. We may see this in contrast to the military wearing of a commendation medal. Medals inhabit a fascinating historical point as objects of recognition, traditionally given for military service or athletic excellence. They identify the role of the hero and indicate the possibility of obtaining power through luck, bravery, hard work, and excellence. Instead of an object of displayed pride, the pocketed medal is a talisman of experience or sacrifice to be worn only

Figure 5. An Exoskeleton for Sedimentation. Materials: stiff cotton and stainless steel thread. Method: handweaving. Subjects: wear, memory, dirt. What if my garments became dirty with the memories and imprints of the other bodies that I've held and those that have held me? These memories would take the form of both data collected though one of the 13 force sensors integrated through the garment, as well as the material wear into its demin-like texture. These patterns of wear compared to the shape of my body over time could display how my body became both eroded and built up by my ongoing labor of care and surrender to being cared for.

on certain days or possibly never. By placing the medal in a pocket we are not signalling external power, but rather indicating personal accomplishment and supporting or confirming the self image of the wearer.

Pockets + Exoskeletons

The exoskeleton can effectively be seen as an inside-out pocket. When retracted into a fold or a pocket, the exoskeleton is all potential and power; it fills the wearer with confidence like an airbag or parachute. And as such it provides the potential that we will be okay in moments of emergency and peril. In this manner, the exoskeleton can be carried with us to be deployed when needed. It makes us braver, stronger, hides us from the desires and demands of others; but also gives us cover, buys us time, and provides the potential for (the ineffectual illusion of) sanctuary.

Taking the same line of thought, reading the pocket through the lens of the exoskeleton, we can imagine an exoskeleton that is all pockets. On one hand, to represent the vast amounts of things carried on the body and on the other as a suggestion of the need to hide. Perhaps the entire pocket exoskeleton inverts to cloak the wearer. The exoskeleton of pockets allows itself to be filled with resources (or non-resources) in reflection of experience and time. As such, it may carry sustenance or regrets, protection or weapons. Together the exoskeleton and the pocket form an exercise in telling stories both in secret and in public. Of whispering under your breath and shouting at the top of your lungs, of rehearsing at future moments of both bravery and fear. Such devices and symbolic items incorporate a sense of humor, not to make others laugh, but to allow the maker to simply deal and proceed in the face of difficulty. Sometimes the ridiculous forms a rescue float of a kind: the

Figure 6. Collaboration (with moths). Materials: cashmere and cotton jersey, subjects: defeat and thrift. A much loved sweater falls prey to this winter's moth attack, prompting purging, washing, freezing and repairs. This sweater however is more than ten years old, irreplaceable, un-repairable, and tied in with the memories of grief and defiance. So the hole, made by the moths, becomes the opening to a pocket behind it, the placement perfect for tokens of all kinds.

preposterous execution of these ideas constitutes a defense against shame and silence. In this sense, it's the feeling of it, not the look of it, that matters.

Exoskeletons + Medals

Reading the exoskeleton through the lens of the medal inspires reflection of practices of display and communication. While the medal commemorates endured achievement, the exoskeleton forms both a distraction from, and an expression of, a fear or a concern. Time plays a role here: the medal reflects past episodes and a physicalization of events that have already occurred, while the exoskeleton protects the wearer in the present, in preparation for the future. In that sense, bringing the projects together collapses the past and the future into a forward/backward looking now, allowing the wearer the ability to act with agency and force—donning a medal and exoskeleton makes the wearer into a warrior returning from battle only to fight another.

When brought into relationship with one another, the two forms speak to the nature of time, experience, and endurance while re-configuring the mother as one who is honored for her achievements [57]. The comparison brings comfort in the sense that it marks the passage of time and shifting nature of experience, creating a space for hopefulness in futures where one has the ability to look upon from the outside, to selectively remember the bits and pieces that bring pride or fondness. The dyad offers us the gift of "marking" and remembering while also highlighting the personal nature of what we want to remember. Where the exoskeleton explicitly creates a trace of the work of coexistence between mother and daughter, the medals dismiss the spreadsheets, notebooks, and data tracking apps of corporeal measurement, in favor of a selective memorialization of the most meaningful events in the process.

RESONANCES

The diffractive readings of our design objects allowed us to engage intimately rather than critically to each Design Memoir juxtaposition and to pay attention to any new notions, directions, and disturbances as they emerge. We refer to these outcomes of our dyad/diffractive readings as "resonances" to emphasize their emergent quality between two recollections. Specifically, resonances embrace the "fertility" [26] of ideas and understandings that are produced when we read different Design Memoirs in relation to one another. This approach intentionally muddies the personal and the singular in order to locate the connections in between. In this way we can find inspiration in another's memoir, even though the lives described are not our own.

As we read our objects through and in relation to another, we generated the following resonances in response to our experience creating our Design Memoirs.

Marking Emotional Space

The Design Memoirs and their dyad combinations act as markers in an emotional and felt space [2]. We take our understanding of marking from dance, where dancers mark by executing "a dance phrase in a simplified, schematic or abstracted form [39]." In *How Marking in Dance Constitutes Thinking with the Body*, Kirsh describes marking as a way to think with the body as "a body-in-motion can serve as a dynamic vehicle of thought for a dancer, much like trying out a musical phrase on a piano might help a composer think compositionally." In a similar way, we inhabit complex emotional and felt landscapes; the Design Memoirs can be seen as markers in those spaces. We cannot ever fully comprehend the experience of another, but sometimes through such markers we may feel a fraction of how it felt. Our hearts go out to each other, as the cliche goes, and the markers themselves makes the difficult tangible and addressable, and allow us to begin to interact with complicated, hard to share narratives.

Staying with Contradiction

Seen through an individual lens, the memoirs embrace contradiction in the way they balance concept with execution—a medal commemorating physical vulnerability, a protective garment made of open yarn stitches, the revelation of a pocket's secret strategies and contents. Seen as dyads, these contradictions become alternately amplified and focused as they take on additional qualities, relationships, and personal/social meanings, such as the warrior of parenting holding power through the smuggling ability of pockets, or the hidden medal weighing on the body throughout the day. The dyadic exercise allowed us to hold contradictions in suspension, moving the conversation "forward" whilst keeping space for the inherent complexity of our felt experience.

Staying with Struggle

A resonance shared among the three projects suggests that while we remain committed to care and caregiving, it is also a potentially painful process. Producing this body of work leads us to reflect on this pain as inherent and relative to our experiences as humans and as such it is inherent in the "infrastructures" with which we must contend. These struggles

"mark" a territory where we also experience joy and pride simultaneously within. While technological interventions often seek to find a pain point to resolve or alleviate, our memoirs suggest an alternative strategy of simply honoring the difficult or even, sometimes literally, wearing it as a badge of pride.

DISCUSSION

The Design Memoir objects are made to allow highly emotional content to be expressed through making, and as a result they initially manifest outside of language and description. Once they are made, each author might be able to describe them, but it is our observation that this is a tentative process that remains difficult and revealing. Each of us might find it hard to express a deep held unpleasant emotion, but once we held two of these objects up against each other, we are freed from the shame or regret we might feel regarding the original object. This mirrors one of the original surrealist art techniques of countering the difficulty of a subject with difficulty of material, through deliberately limiting the possibilities to for example found objects [11] or games of chance [12].

In the discussion that follows, we refine our connections to other research methods in HCI and articulate the goals and contributions emerging from this work.

Entangling the Felt and Fiction in First-Person HCI

In her argument for considering Somaesethetic Design practices, Höök asserts that, "Despite all the work we have seen in HCI in designing for embodiment, the actual corporeal, pulsating, live, felt body has been notably absent from both theory and practical design work" [33]. Our practice of creating, reading, and drawing out inspiration from Design Memoirs give us a way to reconstitute these pulsating bodies through attempts to connect with and communicate the felt experience. In line with Höök, we see these memories and their particularly charged emotions as held within the body and mind. Furthermore, through the practices of designating and the physicality of production, we selectively draw out aspects of the experience we wish to relive or reflect upon within the making process. For instance, the processes of hand-weaving or hand-stitching our prototypes amplified the notions of care, repetition, and gendered labor that serve as a framework to interpret our memories.

It is in this turn to evocative retelling and (re)making that Design Memoirs blend autobiographical and first-hand design with design fiction. As Hustvedt reminds us, memory and memoir are fictional over factual [34]. In remembering, we amplify and distort particular experiences and the variety of ways through which we remember brings forth recollections of a particular kind. As such, Design Memoirs might be seen as "props" within the selective revealing of first-person memory. To create these props, we must necessarily dive into those memories and create objects and systems that were not there, but could emphasize what we desired at the time. By going into the past at various stages of remoteness, the particularly charged emotions of frustration and love, or struggle and success tended to be the most present source of inspiration. In this sense, Design Memoirs (and design fiction as well) embrace the role of the author/designer as a provocateur and, as a

Figure 7. Stay (pocket for heart monitor). Materials: linen, paper and cotton, subjects: sorrow. This is a bag for a heart monitor, to replace the one made from plastic used in the cardiology ward. Instead this one is linen, cotton and paper. Almost the same. Threads are pulled from the linen and embroidered back in. It's an ongoing work, it is an acknowledgement of dread, it cannot be written about.

byproduct, smooths the way for a broader set of anxieties, critical perspectives, and politics to be expressed through design research.

Trading Empathy for Companionship

Making Design Memoirs in parallel has helped us reconsider our own design practices and the different ways we arrive at our personal understandings through the engagement with material. It is this doing-together that has made it possible to extend beyond our personal stories and processes and reflect on what they might mean alongside and through each other. In that sense the Design Memoirs offer a kind of *companionship*, where we do not share the exact same issues and concerns, but through the making of the objects we walk alongside each other for a while. This is different from empathy, which is often used as a term to express an understanding of someone else's otherness, while reinforcing this difference [35]. The Design Memoirs have put us next to each other at times when things were hard to explain, and somehow they explained themselves. Our motivation for offering them up in public is not for empathy, but for illuminating other modes of engagement and possibilities within emotionally charged territory.

Additionally, we see the shift away from empathy as a way of creating a space to make light of our struggles, and thereby diminishing some of their power. The lateral move of taking a deeply felt expression of emotion and "reading" it through the lens of another is almost disrespectful in its irreverence, yet it has been a key emergent strategy. Liberated from the complex emotions of our own objects and our carefulness with each others', we were allowed to fabulate as to what these things might mean to each other [51]. This made the reflections deeper, lighter, and more playful. Suddenly we were taking liberties with each others' ideas and memories, imagining entirely new transitional objects, while still addressing each

other with respect and care. The process introduced a touch of levity and unlocked the creative space around us. To put it differently: no one cried while writing the diffractional dyads (the same cannot be said about the individual descriptions).

Our ability to make light also came from the structure of our relationship and collaboration and we found the utility of Design Memoirs to provoke reflection and new ways of addressing and understanding challenges as closely coupled with the collaborative group structure. The process of conceptualizing and developing Design Memoirs requires continuous sharing of experiences in order to make sense of the artifacts and the value they might bring to our design communities (e.g. HCI) more broadly. Such collaborative groups require a foundation of trust and intimacy in order to make sharing and learning constructive and valuable. As such, deploying Design Memoirs among groups that do not have a strong foundation of trust or where different power dynamics shapes relationships (e.g. a typical designer/user scenario) can have negative ethical implications. We caution readers to proceed carefully, acknowledging the ethical dilemmas in how deeply felt personal experiences are both shared and represented.

We maintained boundaries by establishing an informal drop-out contract, stating out loud that each of us could leave this work at any moment, if it turned out to be too hard or too unwise to continue. The drop-out contract has been the safety valve that allowed us to do this, it is in a sense a consent form for collaborators and peers, and as such if it was ever written out it might state: I. I agree to take part in this. II. I understand that I may withdraw at any stage and that this will not affect my relationship with my collaborators now, or in the future. III. I understand that I may always contact my collaborators if I require further support, or I wish to withdraw my involvement.

From Solutions to Inquiry and Commemoration

Our Design Memoirs suggest that we may also want to stay with, attend to, and find our way through the struggle from the perspective of an explorer. Rather than resolve, remove, or conquer the struggle, we want to be honored for enduring over delegating. We want a way to make the struggle visible, to become part of our daily dealings, to shift it away from being taboo. We want tools that help us deal with the present, alongside those seeking preferable futures. As a research community, HCI lacks a cohesive body of language or strategies for dealing with negative experiences beyond seeking their resolution. While we admire the drive to do work for good, and note that the creation of products that assist and help is certainly a laudable characteristic of our field, such work calls us to turn our attention away from understanding the nature of these struggles in the first place. Design Memoirs help us appreciate the way that emotions are deeply entangled. They show that the "good" emotions cannot be so simply disentangled and separated from the "bad" emotions without causing deeper ripple effects. Additionally, they help us see that struggle, frustration, and care are not necessarily matters we might want to delegate to technology. They are formative in our identities and critical to growth. By resisting the urge to remove these experiences, we found ways to commemorate them instead.

Figure 8. Adorned with the Done Medal. 3D CAD model of a Done Medal created using Tinkercad. Syringe models are embedded horizontally in the middle of the medallion to represent the geographical road between my hometown and the fertility clinic, both represented using vertical syringes

Locating the Contribution in Design Memoirs

As stated earlier, Design Memoirs are more than therapeutic practices, meaning that fundamentally, they function as way to draw out the personal. They offer something to a broader audience beyond simply the author(s) themselves or the HCI community. That said, given the novelty of memoir in this particular form to HCI, we find it necessary to describe how they should be read, or rather, what expectations for value one ought to bring with them in order to add value. Key to this is the abandonment of the objects themselves being read for implicit design suggestions. For instance, we are not advocating that someone market and mass produce "Done Medals" or

innovate pocket design. Instead, we see the value in memoirs aligning much more closely with the value of written memoirs in their ability to connect with a reader. In that connection that makes something difficult-to-express visible through its unique description-agnostic form. A good memoir, as such, might be one that forms an expression of that which was previously inexpressible. It is a call to recognize vulnerability and struggle, and to balance our frequent narratives of empowerment and optimization.

For us, the experiences we wanted and needed to address were about personal struggles with motherhood in its various stages. However, more broadly, we believe that Design Memoirs can be particularly insightful when applied to experiences where technology is integrated with deeply felt and subjective emotions such as falling in love, losing a loved one, or making sense of a life transition.

We have found the notion of "imprinting" useful in describing our desired outcomes for this project. We aim for memoirs to be objects that imprint upon memory, ideally in a way that can be felt in addition to visually recalled, and in a way that surfaces memories during related design discussions and projects. The things that get marked, counted, historicized, and noticed shape our collective memory about that which is/has/will continue to happen. In the context of HCI, we might see this as referencing how the stories we tell of design bring about the things in which we design [51, 47]. However, as Blythe and others have argued, the stories we tell about design only encapsule a very limited set of narratives and tend to be told from a small set of subject positions [9]. Memoirs, as stories, populate or "mark" a different territory for design objects, creating space for a new kind of story and perspective to come forth. In this sense, the imprinting objects function as artworks. The specific projects that imprinted upon us and were recalled in this project included Kelly Dobson's *Scream Body* [20], Mary Kelly's *Post-Partum Document* [37], Ree Morton's body of work [28], or Addie Wagenknecht's *Optimization of Parenthood* [58]. These works have both inspired and informed us, but also made us feel seen and acknowledged in our personal experiences.

CONCLUSIONS

> [Suffering] exists... It's real. I can call it a misunderstanding, but I can't pretend that it doesn't exist, or will ever cease to exist. Suffering is the condition on which we live." Ursula Le Guin, The Dispossessed [43]

Through making the Design Memoirs, we reflected on the values in our practice(s) and studied the emergent qualities born at the intersection of our individual experiences. This reflective process also gave rise to understandings that maintained complexity while still creating fruitful grounds for new things. The focus on the felt and embodied brought forth relationships in time and distance, the changing of present and memory, and the characterizations we take on as mothers and academics. While these are difficult to translate into specific design requirements, the constructs with which they pose can be seen as a framing mechanism to guide designers in their processes of wayfinding. Here the process is less about determining a specific argument but rather making value by creating space for

contemplation. The objects themselves are thus expressions of emotion rather than rationalizations or proof.

At this stage, we believe that Design Memoirs are best considered as a self-reflective activity for design practitioners. They are a way to look deeply at felt experiences, understand how they shape practice, and share insights about the experiences with our research community. As such, they can provide unique and intimate access to experiences HCI audiences may not be able to access through traditional user study methods. In contemplating the positioning of memoirs within broader research in HCI, we see memoirs as a method to complement other forms of technical practice. This is particularly in cases where the experiences in question are emotionally charged, overwhelmingly driven by clinical (as opposed to emotional or felt) narratives, or are described by parties who have not experienced the events they wish to address.

Memoirs probe at what is felt without judgment, calling attention to where the experiences of struggles emerge and how some technologies may exacerbate such struggles when they deny the broader lived experience in which they are deployed. The Design Memoirs described here do not serve as facilitation of counting, monitoring, and optimizing, but instead they are expressions of the personal toll of such ongoing labor.

By creating our Design Memoirs, we found our way back to and among the memories of an event, while intentionally recognizing that these memories are partial, marked by absences and inconsistencies, yet bound together through emotional resonance.In so doing we gifted ourselves the agency to address what went before by going back and reconsidering the past. Our Design Memoirs did not just change how we remembered and felt about events. By making and editing and comparing individual experiences collectively, they also served to reach out and change those experiences. We know that much to be true.

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