

From Dust You Came and to a Dust Jacket You Shall Return:

An Exploration of a Book as a
Method of Interment and Memorial

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Declaration of Authorship

I, Christine Andres, declare that the contents of this project are my original work, with research conducted and compiled as part of the requirements of the Master's in Graphic Design and Editorial Projects at University of Porto. I affirm that the research presented in this thesis has been carried out independently with the guidance of my supervisor Professor Cristina Ferreira. Any work that is not my own has been clearly indicated and credited to the respective authors or creators. I acknowledge that the development of this thesis involved the use of automated tools, including Claude and ChatGPT to assist with language refinement and structure. I understand and accept University of Porto's institutional policies regarding academic integrity and plagiarism and affirm that this thesis adheres to these principles.

Ethics Statement

This project was conducted in accordance with ethical research practices and with sensitivity toward the subject of death and memorialization. No actual human remains were used at any stage of the process; all materials referred to as “cremains” were simulated using a carefully formulated mixture of inorganic and natural substances to replicate the physical characteristics of cremated remains. This approach was chosen to ensure ethical compliance, avoid potential harm, and respect the dignity of the deceased and the bereaved.

The project also employs autoethnographic reflection. All introspective material and personal narrative components are based on the author’s own experiences and were voluntarily included. Care was taken to avoid the inclusion of identifying details about other individuals unless explicit permission was granted or the information was anonymized.

As the work engages with themes of death, grief, and memory, it was approached with a commitment to cultural sensitivity and emotional care. The intention of the project is to explore the potential for personalized memorial practices and to contribute meaningfully to discussions around contemporary remembrance.

No participants were recruited for this study, and thus, no formal ethics board approval was required. However, ethical considerations consistent with institutional guidelines on research involving sensitive topics were observed throughout.

Dedication & Acknowledgments

To my parents, whose own remarkable journeys instilled in me a love of culture and the courage to live life on my own terms. Their belief that the world is mine to explore has shaped everything I do.

To Reydan, for his unwavering support and for sharing and witnessing half a lifetime by my side.

With gratitude to Professor Cristina, for her support and genuine interest in this project.

Abstract

In recent years, alternate forms of memorializing the dead, such as interring cremated remains into vinyl albums or diamonds, have gained prominence. These innovative approaches to memorialization reflect evolving sentiments towards traditional death rituals and the desire to find unique and personalized ways to celebrate the lives of the departed (Moncur & Kirk, 2014).

This project investigates the integration of simulated cremated remains into the pages of a book memorializing a loved one, offering a unique method of interment and remembrance. By combining traditional papermaking techniques with a thoughtful, commemorative approach, the study aims to create cremains-infused paper that balances sentimentality with editorial practicality.

The methodology follows a two-phase approach; the first phase involves crafting batches of paper using simulated cremains. Physical testing evaluates the paper's resistance to wear, ink absorption, and pH stability, ensuring suitability for editorial applications. The second phase results in a memorial book layout that incorporates symbolic and visual elements to evoke emotional resonance to the deceased. This study introduces an auto-ethnographic evaluation, using introspective methods to assess the book's emotional effectiveness. A Likert-scale-based frame-

work measures its success in evoking memories, fostering connection, and fulfilling its role as a personal commemorative object. This reflective approach ensures the project aligns with the emotional needs of grieving individuals, demonstrating the potential for personalized memorial objects such as a cremains-infused memorial book to bridge the tangible and emotional gap left by loss.

These findings guide the production of a memorial book that integrates personal photographs and symbolic visuals, delivered with analog techniques and minimal text to evoke an ethereal quality that resonates with the emotional texture of memory rather than its biographical context.

By addressing both technical and psychological dimensions, the project offers a new avenue for memorialization, contributing to contemporary funerary practices and broader artistic discussions on how the bereaved remember and honor loved ones.

Keywords:

Memorial Design;
Funerary Practices;
Mortuary Innovation;
Commemorative Objects

Resumo

Nos últimos anos, formas alternativas de memorializar os mortos, como a integração de cinzas cremadas em discos de vinil ou diamantes, têm ganho destaque. Estas abordagens inovadoras refletem sentimentos em evolução face aos rituais tradicionais da morte e o desejo de encontrar formas únicas e personalizadas de celebrar a vida dos que partiram (Moncur & Kirk, 2014).

Este projeto investiga a integração de cinzas cremadas simuladas nas páginas de um livro memorial, oferecendo um método único de inumação e recordação. Ao combinar técnicas tradicionais de fabrico de papel com uma abordagem comemorativa e cuidadosa, o estudo procura criar papel infundido com cinzas que equilibre a carga sentimental com a praticidade editorial.

A metodologia segue uma abordagem em duas fases: a primeira envolve a criação de lotes de papel utilizando cinzas simuladas. Testes físicos avaliam a resistência do papel ao desgaste, a absorção de tinta e a estabilidade do pH, garantindo a sua adequação para aplicações editoriais. A segunda fase resulta num *layout* de livro memorial que incorpora elementos simbólicos e visuais, com o objetivo de evocar uma ressonância emocional em relação à pessoa falecida.

Este estudo introduz uma avaliação autoetnográfica, recorrendo a métodos introspectivos para analisar a eficácia emocional do livro.

Um enquadramento baseado numa escala de Likert mede o sucesso do projeto em evocar memórias, fomentar ligação e cumprir o seu papel como objeto comemorativo pessoal. Esta abordagem reflexiva assegura que o projeto responde às necessidades emocionais de quem está em luto, demonstrando o potencial de objetos memoriais personalizados, como um livro infundido com cinzas, para estabelecer uma ponte entre o tangível e o emocional deixado pela perda.

Estes resultados orientam a produção de um livro memorial que integra fotografias pessoais e elementos visuais simbólicos, apresentados através de técnicas analógicas e com texto mínimo, de modo a evocar uma qualidade etérea que ressoe com a textura emocional da memória, mais do que com o seu contexto biográfico.

Ao abordar simultaneamente dimensões técnicas e psicológicas, o projeto oferece uma nova via para a memorialização, contribuindo para as práticas funerárias contemporâneas e para discussões artísticas mais amplas sobre as formas como os enlutados recordam e homenageiam os seus entes queridos.

Palavras-chave:

Design de memoriais;
Práticas funerárias;
Inovação funerária;
Objectos comemorativos

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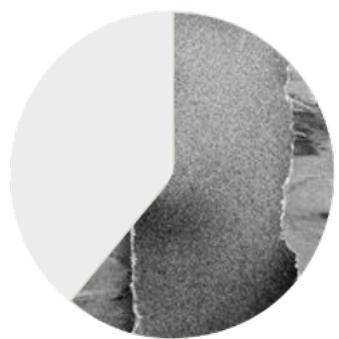
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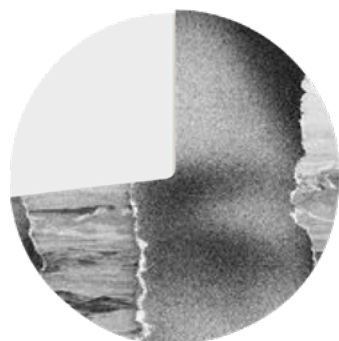
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Introduction



USA - 61%



Canada - 73%

Diagram 1 - 2023 cremation rates in the US and Canada



Figure 1 - Turning the dead into vinyl records (BBC News, 2017)

Context

In recent decades, the transformation of memorial practices has reflected broader societal shifts toward personalization and a rejection of standard burial practices as determined by the traditional death care industry in the United States. According to the Cremation Association of North America, cremation rates have risen dramatically, with 61.6% of Americans and 73.1% of Canadians choosing cremation in 2023, establishing a significant shift from traditional burial practices (CANA, 2024). This trend has catalyzed innovations in how cremated remains are preserved and memorialized.

Digital memorials, including virtual cemeteries (The New York Times, 2021) and social media preservation services, have emerged as contemporary responses to an increasingly connected digital landscape. Simultaneously, artists and artisans have developed novel approaches to incorporating cremated remains into lasting tributes, such as glass art and jewelry to tattoo ink and vinyl records. These practices represent a broader cultural movement toward more personalized and meaningful memorialization methods beyond American Christian traditional burials.

This project seeks to extend this practice of incorporating cremated remains into the realm of books - the most enduring vessel for knowledge preservation and dissemination. By literally weaving the physical remains of an individual into the pages that reveal their lived experience, this research proposes a connection of medium and message, where the memorial object becomes both a carrier of memory and the physical embodiment of the departed.

Objectives

This study seeks to explore the incorporation of cremated remains into the pages of a memorial book, balancing the practical physical properties required for editorial use with the emotional and symbolic resonance of such an intimate memorial object. Specifically, the research aims to develop a papermaking technique that successfully integrates simulated cremains - materials chemically and physically

similar to actual cremated remains – without compromising the clarity, durability, and handling characteristics needed for printed text and imagery.

Beyond the technical challenges of this material experimentation, the project also involves designing a layout and structure for the memorial book that immortalizes a loved one. Its effectiveness as a memorial object will be measured by me, as the design incorporates photographs and personal affects of my own relatives. This auto-ethnographic approach focuses on understanding how the bereaved connect to memorial objects as a proxy or tangible reminder of those they have lost, informing the book’s materiality, content, and interactive elements.

Motivation

This project addresses a few unknowns regarding the creation of functional memorial objects through the integration of cremated remains. There is a significant lack of research regarding the technical requirements for incorporating cremains into paper without compromising its durability, pH stability, and ability to retain printed text and images – essential qualities for editorial practicality. Developing an optimized paper recipe that balances these factors is foundational to conceptualizing cremation-infused editorial works into a viable, and perhaps later scalable, method of memorialization.

Additionally, while the psychology of grief and the role of objects in mourning have been the subject of numerous studies for more than three decades, there seems to be a limited understanding of how specific design elements, including tactile qualities, visual motifs, and symbolic integration evoke comfort and facilitate remembrance. This research seeks to uncover how these elements contribute to the emotional resonance of memorial objects, offering insights that bridge the technical and symbolic dimensions of grief work. By addressing these gaps, the study not only explores a novel approach to memorialization but also contributes to the broader understanding of how materials and design can influence the grieving process.

Limitations

This project does not attempt to provide a comprehensive historical overview of funerary practices or memorial traditions. Instead, it draws on contemporary grieving practices

and documented instances of object-based memorialization to frame its approach. While acknowledging the broader cultural and historical context of mourning, the study focuses primarily on the technical and emotional dimensions of incorporating cremains and memorial imagery into the construction of a book.

This project does not aim to produce a step-by-step manual for creating cremain-infused memorial books. The methodology in the first phase described further in this documentation is specific to the experimental, practice-led nature of this research and is intended as a case study rather than a universally replicable process. While drawing on external studies, the findings and designs are guided by a deeply personal, auto-ethnographic approach, emphasizing the subjective experience of memorialization over generalized application. The scope is deliberately narrowed to allow for meaningful exploration within the constraints of time, resources, and personal relevance.

Finally, while this work is grounded in a practice-based, auto-ethnographic approach, it carries the limitation of being a self-assessment. My emotional resonance with the final book is inevitably shaped by my personal involvement with this project from start to finish - without fresh eyes or the distance required for bias-free observation, affecting my interpretation of its impact. There is also the reality that this book was not created solely from personal impulse; it was produced in partial fulfillment of an academic requirement. While I found genuine enjoyment and insight in the process, it is important to acknowledge that the project was shaped by both emotional and academic intention; that this is both a labor of love and a kind of labor that demands structure, reflection, and formal analysis, traditionally rarely aligning with the blurry boundaries found in expressions of raw grief and emotion.

Preamble

The document begins with a Declaration of Authorship, affirming that this work is my own and acknowledging the use of AI for language refinement purposes. Following this, an abstract in English and Portuguese outlines the context, objectives, and scope of the project. Keywords in English and Portuguese establish the fields of relevance in this study. An introduction contextualizes contemporary funerary trends and the demands that necessitate this work.

The objectives section describes the scope of work and the main goals required to complete the project. The motivation section highlights the knowledge gap this project

seeks to address and the research required to establish the basis of this project. The limitations section outlines the aspects that this project will not focus on as well as acknowledges author bias.

The literature review is divided into several parts, addressing the key knowledge gaps: the psychological and behavioral basis for designing a memorial book, a state of the art of similar projects that memorialize loved ones through objects, material studies that explore the paper experiments essential to this project, and finally how these inform the criteria for this project.

The research methodology is presented in a step-by-step format, consisting of two main parts. The first part focuses on the process of creating cremains-infused paper, including criteria for testing and objectives for each step. The second part outlines the design research for the book's layout and an auto-ethnographic evaluation. A methodology diagram is annexed to illustrate the progression of the project's steps.

The conclusion describes the results, observations, and limitations of each phase. The document concludes with a reference section in alphabetical order, formatted in APA 7 style, with an appendix that includes the artifacts that this project will be presented with, as well as a colophon for this project report and the accompanying memorial book.

Literature Review

Components

The literature review begins with looking to studies that establish the psychological and ritualistic frameworks that shape how the bereaved form attachments to memory objects, grounding the project's emotional and autoethnographic foundation. The State of the Art surveys relevant creative precedents and editorial strategies that inform the memorial book's design, intimacy, and narrative structure. Finally, Material Studies focuses on the chemical, tactile, and mechanical requirements for creating paper suitable for editorial applications, especially when incorporating unconventional materials such as cremated remains. Together, these offer the psychological and technical rationale for the criteria developed and tested in this project.

The Behavioral Basis of Memorial Objects

The evolution of memorial practices reflects broader shifts in how the bereaved processes grief and maintains connections with the deceased. Contemporary scholarship has identified several key frameworks for understanding these changing dynamics.

A foundational work in grief studies regarding objects of remembrance is *Continuing Bonds: New Understandings of Grief* by Dennis Klass, Phyllis Silverman, and Steven Nickman (1996), which challenges traditional linear models of grief that emphasize detachment from the deceased and "healing" from a state of perceived loss. Instead, the authors reframe the bereavement process as one where maintaining connections with the deceased is a natural and healthy part of the adjustment process. Drawing on data from diverse populations, the authors argue that continuing bonds, facilitated through rituals and objects, can offer therapeutic benefits, and even enriched coping strategies to provide a state of comfort in the present. This paradigm highlights how the bereaved integrate memories of the deceased into their daily rituals with continued presence in their communities, establishing a theoretical foundation for understanding how memorial objects, such as a memorial book, can serve as enduring links to loved ones.

Elizabeth Hallam and Jenny Hockey's *Death, Memory and Material Culture* (2001) further contributes to understanding the intrinsic role objects and materiality hold in mourning and memory-making, offering insights essential to the development of this project. This study examines how residual belongings of the dead evoke memories and explores why the body and its material environment remain integral to memory-making. The authors' emphasis on the interplay between tangible artifacts and the emotional, social, and cultural dimensions of grief underscores the potential of personalized and symbolic design to create tactile links between the bereaved and the deceased. This helps to inform the project's methodology of incorporating photos and personal belongings into imagery to evoke memories and construct a narrative of the deceased that feels complete. Specifically, the study's focus on "retaining the evidence" of the loved one's existence prompted the inclusion of personal objects as a feature almost as essential as photos of the now-deceased loved one, as well as an increased focus on the tangible experience of the memorial book with the tactile qualities of the pages, cover, and the ritual of holding and opening the book. Hallam and Hockney's focus on ritualized interactions with memory objects informs how the memorial book can function as both a commemorative and ritualistic artifact, additionally emphasizing durability and emotional resonance to ensure it remains a long-term source of comfort and connection.

Gibson's (2010) concept of "melancholy objects" provides a crucial foundation for understanding how material items become vessels of memory and grief. Through psychoanalytic research, Gibson establishes that bereaved individuals often process their grief through intimate objects belonging to the deceased, with these items serving as concrete symbolic material that helps orient the often disorienting experience of loss. This theoretical framework is particularly relevant to understanding how physical objects can transition from tools of active mourning to memorialized artifacts of remembrance.

Building on this material understanding of memorial objects, Eisma's (2022) research on continuing bonds provides valuable insight into how individuals maintain relationships with the deceased through cognitive-behavioral coping mechanisms. The concept of "proximity-seeking behaviors" - such as preserving possessions, creating memorial spaces, and engaging in commemorative activities - demonstrates how the bereaved actively work to maintain connections with their departed loved ones. In this study, Dutch grief researcher Maarten Eisma establishes a measurable scale to the degree in which 694 adults display such proximity-seeking behaviors. For reference, higher "[proximity-seeking behavior scale] scores correlated positively with rumination and yearning, feeling connected to the deceased person", but also "prolonged

grief and depression symptoms” (Eisma 2022). While high proximity-seeking behaviors can sometimes correlate with prolonged grief or depression, they also underscore the bereaved’s need to stay connected with the deceased. This insight establishing the quantifiability of grief responses informs the creation of a scale (outlined further in this document) to evaluate the emotional effectiveness of the finished memorial book as a commemorative object. As this aspect of the project is auto-ethnographic, the scale focuses solely on introspective evaluation rather than incorporating external feedback or external factors. It represents a reflection of my personal reactions, with measurements marked on a scale to provide a quantifiable approach to subjective and dynamic experiences such as comfort and grief levels.

Item	EFA: Standardized factor loadings (n = 347)	CFA: Standardized factor loadings (n = 347)	M (SD) (N = 694)	Item-total correlations (N = 694)
1. I cherished things that belonged to the deceased or that were closely associated with the deceased (e.g., possessions, clothes, furniture)	.65	.50	3.35 (1.37)	.54
2. I watched or listened to things that remind me of what life was like with the deceased (e.g., photos, videos, letters)	.67	.66	3.37 (1.28)	.62
3. I did things to commemorate the deceased (e.g., organize memorial service, contribute to a memorial website, reflect on birthday or death anniversary)	.76	.69	2.68 (1.32)	.62
4. I made things (e.g., art, a book, memorial bench) or did things (e.g., plant tree, support charity) in the name of the deceased	.70	.60	2.13 (1.29)	.57
5. I talked about memories of the life of the deceased with family, friends and / or others.	.46	.52	3.47 (1.86)	.43
6. I visited certain places to remind myself of the deceased (e.g., grave, memorial place, old holiday destination, places that you would like to visit together).	.67	.75	2.66 (1.40)	.61

Diagram 2 - PSBS: Proximity-seeking behavior scale (Eisma, 2022)

Notably, this study reveals contrasting viewpoints on the adaptive value of such practices, with some scholars arguing that maintaining strong bonds can hinder healing, while others suggest these connections can facilitate healthy adjustment by providing comfort and maintaining identity continuity (Klass et al., 1996; Stroebe & Schut, 2005). These frameworks around continuing bonds and material memory provide essential context for understanding how physical objects can serve as bridges between the living and the deceased, offering both emotional comfort and tangible connections to past relationships.

Decisive to the auto-ethnographic approach of this project, the uniqueness of grief rituals is highlighted in Designing Personal Grief Rituals by Corina Sas and Alina Coman (2016) as central to the cultural and therapeutic significance

of custom memorial practices. Their research reveals that rituals tailored to the bereaved’s shared experiences with the deceased are more meaningful and therapeutic than conventional memorial services. Reminiscent of the tangible process of creating a memorial book, the study references handmade objects as a category of grief rituals, identifying them as keepsakes that “honor the power and beauty of the relationship” (Coman et al., 2016). In the study, photo collages, not unlike the composition of the visuals that will be included in this book project, are cited as an example of a handmade object that reflects a customized ritual that enhances the grieving process. This reinforces the concept that memorial objects should feel “actionable”, something that the bereaved can actively engage with to reclaim agency after loss (Van den Hoven et al., 2012). The act of collecting and generating symbols, whether through objects or ritualistic actions, contributes to the therapeutic process of mourning. This informs the project’s auto-ethnographic and practice-led approach, affirming the value of working through and selecting symbolism that reflects personal memories. Together, these psychological findings establish foundational facts about grief and demonstrate the broader cultural significance of integrating the deceased into the lives and memories of the living, validating the creation of a personalized memorial book as a meaningful contribution to contemporary memorial practices.

State of the Art

The *Encyclopedia of Things* (Smolarz, 2014–2023) presents a systematic approach to documenting personal objects as portals to memory and identity. Its strength lies in demonstrating how everyday items can become profound storytelling vessels, although its focus remains purely photographic rather than incorporating physical transformation. The project’s methodology of working directly with individuals to select and arrange meaningful objects offers valuable insights into curating personal artifacts to tell a loved one’s life story. The layout of photographs in this project inspires the visual storytelling in this project’s editorial design, intermixing personal objects with photographs relevant to the deceased. Additionally, the poetic testimonies of the bereaved in this project can be adapted to the memorial book in the form of letters and notes, for a show-don’t-tell approach.

Similarly, *The Museum of Sentimental Taxonomy* (Lucas, 2020) explores how objects of sentiment transcend their original functions to become bridges to other times, peo-

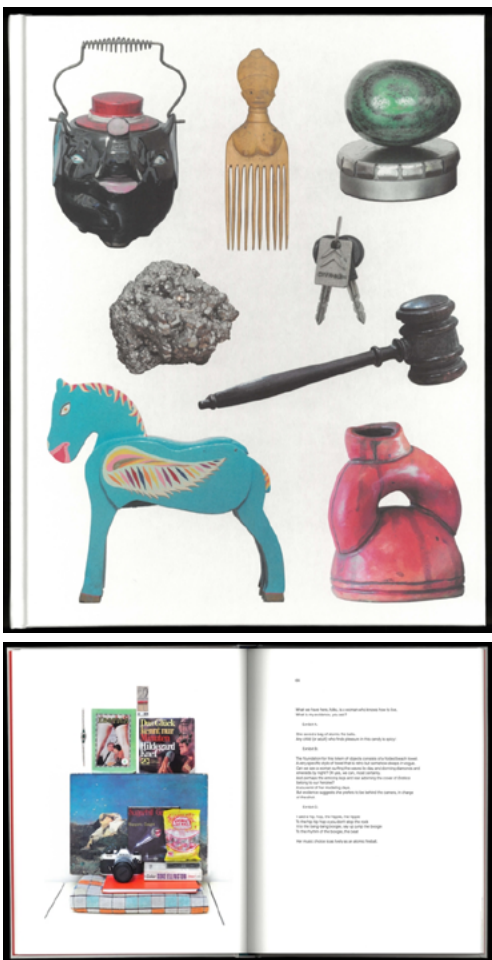


Figure 2 - ENCYCLOPEDIA OF THINGS (Smolarz, 2014-2023)

ple, and places. The project’s strength in creating meaningful narratives through object documentation and its limitation in maintaining physical distance from the objects themselves both inform this research’s approach. Its success in fostering community engagement through workshops and conversations demonstrates the potential for memorial objects to facilitate collective meaning-making. While inspired by its storytelling framework, I tighten the scope of this public and communal format, opting for an intimate and introspective approach to assign significance to the included objects in the memorial book.



Figure 3 - The Museum of Sentimental Taxonomy (Lucas, 2020)

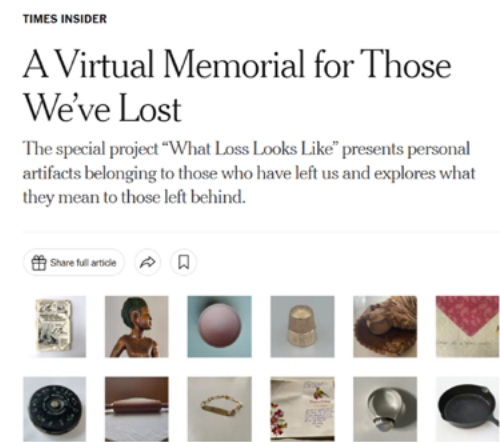


Figure 4 - What Loss Looks Like (The New York Times, 2021)

During the unprecedented isolation of the COVID-19 pandemic, The New York Times’ Virtual Memorial Project (alternatively, What Loss Look Like) emerged as a significant example of digital memorialization (The New York Times, 2021). The project, which invited readers to share memories of loved ones lost during the pandemic, demonstrates how digital spaces can facilitate collective mourning when physical gatherings become impossible. By creating an accessible platform for sharing stories, photos, and memories, this initiative not only documents a historic moment of global loss but also highlights the evolving nature of how society remembers and honors the deceased in an increasingly digital world. The project’s success in creating a communal space for grief and remembrance underscores both the potential and limitations of virtual memorial practices - while offering unprecedented accessibility and connection, it also emphasizes a larger continued desire for tangible, intimate forms of remembrance.

The public and crowdsourced formats of *The Encyclopedia of Things*, *The Museum of Sentimental Taxonomy*, and *The New York Times’ Virtual Memorial Project* both inspire and

contrast with the intimate and private approach for this project's memorial book. Instead of a large, public forum, this project results in a small, hand-held artifact intended to be cradled to the chest or read during moments of vulnerability. This focus on intimacy aligns with the tactile and emotional qualities intended for the book, prioritizing personal connection over collective engagement.

The examined contemporary projects illustrate successful approaches to object-based storytelling and community engagement while highlighting opportunities for innovation with the physical incorporation of memorial elements. This project builds upon these foundations by consolidating the material transformation in their work with the physical person that the commemorative object symbolizes. By incorporating cremated remains into the book's pages, this project establishes an unprecedented method for material connection between the memorial object and the deceased, enhancing personalized storytelling and remembrance with intimate tangibility.

Material Studies

A foundational knowledge gap in this research is identifying the measurable qualities that allow a paper recipe to be suitable for editorial use. Understanding the physical and chemical properties that contribute to paper durability and functionality is essential to the practice-led first phase of this project. According to Renda et al. (2015), "The majority of the printing and writing papers are manufactured neutral to alkaline using some amount of calcium carbonate filler, at a buffered pH of 7.8-8.2." The slight alkalinity of paper ensures both durability and longevity, with alkaline paper holding a life expectancy of approximately 1,000 years, compared to only 50 years of shelf stability for acidic paper. Furthermore, calcium carbonate has become the predominant component in neutral and alkaline papermaking across Europe and the Americas, highlighting its critical role in achieving optimal paper quality (Renda et al., 2015).

The natural composition of cremated remains makes them a useful candidate for filler material in papermaking. With a pH of around 11.8, human cremains are highly alkaline and composed of calcium and carbonates, aligning well with the materials typically used in alkaline paper production. Martin (2019) notes that, when balanced with an acid, the alkalinity of cremains can be stabilized to maintain the necessary pH range for longevity. This insight provides a foundational rationale for incorporating cremains into the

papermaking process while ensuring the material’s stability and suitability for editorial use. For the purposes of the project, simulated remains will retain most of the chemical and physical components of real cremains.

With physical testing, durability is a critical factor for paper intended for high-use applications such as heirloom books. To inform the testing methods for this project, folding endurance testing was examined as described by Smithers, a materials testing facility. This method evaluates a paper’s ability to withstand repeated folding under standardized conditions. “The test is primarily used for testing papers that are frequently handled such as currency (banknote) papers, maps, and wrapping papers. The aging characteristics of a paper can be assessed by measuring fold endurance before and after accelerated environmental aging” (Smithers, n.d.).

The evaluation of print clarity for this project is informed by the criteria outlined in the *INCITS W1.1 Standards for Perceptual Evaluation of Text and Line Quality* (Bouk et al., 2007) and the study *Standardization of Perceptually Based Image Quality for Printing Systems* (ISO/IEC JTC1 SC28 and INCITS W1.1) by Zeise and Burningham (2002). These sources provide a robust framework for assessing text and line quality attributes, serving as the basis for establishing print guidelines and testing methods. To ensure the consistent and observationally objective evaluation of printed image and text clarity without the use of microscopes or visual aids within the scope of this assessment, the project adopts the text and line quality attributes defined in these standards. *Text character purity, fidelity, uniformity, and color* are used as primary criteria for assessing the sharpness, accuracy, and visual consistency of printed characters. Similarly, line quality attributes such as *line purity, fidelity, and weight progression* are incorporated to evaluate the clarity and smoothness of printed lines, as well as their adherence to intended shapes and widths (Bouk et al., 2007).

These two guidelines also recommend test patterns specifically designed to assess print clarity. For text, the project employs the standardized pattern that includes both serif (Thorndale AMT) and sans-serif (Albany AMT) fonts, with regular, italic, and bold styles displayed side by side for comparison. The inclusion of custom fonts similar to Times New Roman and Arial ensures relevance to widely used editorial typefaces. With these strategies in place for the test pattern, accurate evaluation across font styles and weights facilitates a more comprehensive analysis of visual print quality.

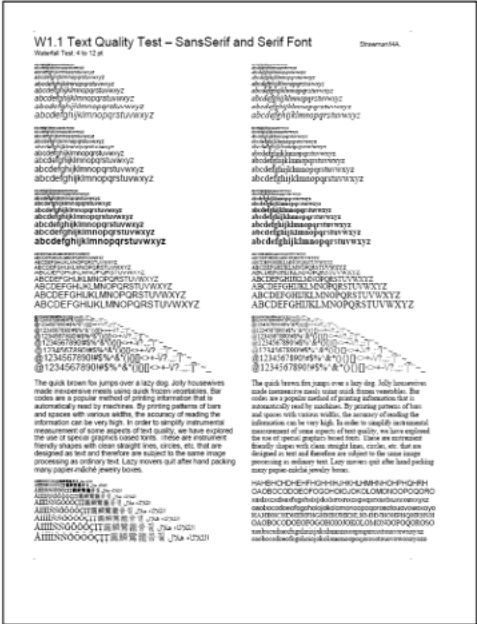


Figure 5- W1.1 Standards for Perceptual Evaluation of Text and Line Quality (Bouk et al., 2007)

The line quality test pattern described by Zeise and Burningham will also be integrated into the methodology. This pattern features horizontal and vertical lines in primary and secondary colors, angled black lines, concentric circles,

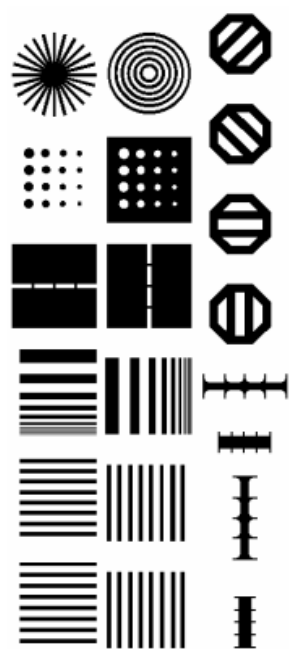


Figure 6 - W1.1 Standards for Perceptual Evaluation of Text and Line Quality (Bouk et al., 2007)

and extended black lines. By maintaining consistent spacing and a linear progression of line widths, the test pattern enables precise evaluation of line clarity, weight progression, and density.

To maintain experimental control, all print tests are conducted using the same printer and print settings. This ensures that any observed variations in print clarity can be attributed to the physical properties of the simulated cremains-infused paper samples rather than inconsistencies in the printing process. By adhering to these established guidelines and test patterns, the study rigorously assesses the suitability of the developed paper samples for editorial use, ensuring that it meets legible standards for text and image clarity.

Summary

Through the process of synthesizing grief theory, precedents in grief objects, and paper and printing material experimentation, several insights emerge that establish essential design decisions for the memorial book.

Gibson’s theory of melancholy objects and Coman’s observation of actionable grieving objects provides a foundation for understanding how the physical book can serve as both an active tool for grief work and a lasting memorial object. Eisma’s research on continuing bonds supports the value of creating tangible connections to the deceased, while raising important considerations about balancing these connections with healthy grief processes.

Furthermore, Continuing Bonds establishes that the bereaved’s relationship to the memorial object is not passive, but rather involves a great degree of physical engagement, sensory presence, and emotional investment. This understanding informs choices like the inclusion of a weighted slipcase, which introduces a small ritual in accessing the book from the table or a shelf and removing it from its state of safekeeping. Removing the book from its protective case makes the reader aware of its importance through its weight, while also affirming that, in this uncovered state, it is meant to be held and experienced, not perpetually preserved and untouched. Another choice that magnifies the sensory presence and physical engagement is the inclusion of the handmade paper. This creates a tactile quality that invites slow, embodied interaction — at first touch the reader might experience discomfort or curiosity with the feeling of the textured paper. The reader might notice that the roughness of the cremains-infused paper contrasts with the

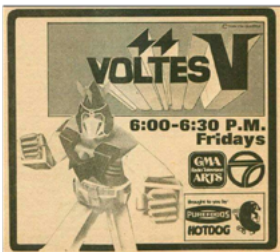


Figure 7 - A selection of the many photographs collected and scanned

smooth uniformity of the manufactured paper sandwiched between them.

Building on Proximity-Seeking Behaviors, the act of collecting photographs, clippings, and objects, then curating them into a sparse, poetic narrative, becomes an extended process of emotional closeness. At times, it also creates productive distance. The labor of making the paper, editing text, and making several visits to the printer shifts my role from grieving relative to diligent curator. This balance between intimacy and authorship helps me better understand how memory operates across time, material, and form when I'm in a position to direct and define the moments that feel meaningful to me as the reader.

The minimalist editorial strategy, informed by State of the Art examples (Smolarz, 2014–2023; Lucas, 2020), allows the included artifacts (such as women's magazine layouts, handwritten recipes, old textbooks, and family photographs) to serve as open invitations for viewer interpretation. This prompts reflective questions for the reader, and for myself as the author, to determine if the inclusion of these objects signifies my intention to create a narrative about the deceased subject based on my personal observations. Does the inclusion of the print media mean that she engages in popular culture? Do the photographs of objects and streetscapes mean she is deeply observant of the mundane? Does the increase of children's photos upon motherhood redirect her lens from documenting the world to preserving family memory? These patterns suggest that memorial design with this framework can help surface new understandings of a life, even beyond the creation of new lived experiences. In this way, these sections of the literature review enable the creation of rituals and design decisions that enable the "re-seeing" of the deceased loved one.

To complement these qualitative reflections, a Likert-style emotional evaluation tool is developed by adapting the Proximity-Seeking Behavior scale detailed in Eisma's study (2022). Using a 1 to 5 scale, the tool assesses the finished book's emotional and sensory impact. Questions further outlined in the Methodology evaluate factors such as whether the book evokes specific memories, a sense of emotional closeness, or a contemplative tone through its design and tactile experience.

On the material side, standards for print clarity (W1.1 and INCITS guidelines) and endurance shaped physical testing procedures, ensuring the handmade paper could reliably carry text and images. The adapted print testing criteria includes the typeface used in the book at varying sizes, as well as a selection of photographs and objects from the layout to test the legibility of image. A less precise and more manual version of the Smithers folding test is used for the purposes of this project to test the sheet's durability. pH testing is also

conducted due to the emphasis of retaining slight paper alkalinity in the Renda et al. (2015) study, in both the early and late stages of papermaking phase to ensure consistency and pH stability.

Methodology

Objective & Components

This study employs a mixed-methods approach to explore the incorporation of cremated remains into book pages for memorial purposes. The research is conducted in two phases.

In the first phase, practice-led experimentation begins with the creation of simulated, plant-based cremains. Using a manual papermaking method with a mold and deckle, paper samples are produced by incorporating varying amounts of these cremains along with an acid stabilizer. These samples undergo rigorous testing for ink retention and pH stability, with a target pH range of 7.8–8.2 (Renda et al., 2015). Data analysis is conducted to determine the optimal ratio of cremains to paper pulp.

The second phase focuses on qualitative design, beginning with research into the emotional aspects of memorial objects through literature review. Based on these findings and the optimal paper recipe from phase one, a memorial book is designed. A prototype featuring text and photographic layouts is created and subsequently evaluated by potential users.

This methodology bridges the gap between technical paper engineering and the emotional aspects of memorialization, resulting in a unique and meaningful approach to honoring deceased loved ones through the medium of books.

Methodology Phase 1: *Practice-led Framework*

1.1 Simulated Cremains Preparation

1. Weigh and combine the ingredients for the plant-based cremains mixture:



Figure 8 - Simulated Cremains

- 70% Calcium Carbonate (CaCO_3)
- 15% Calcium Phosphate ($\text{Ca}_3(\text{PO}_4)_2$)
- 5% Magnesium Carbonate (MgCO_3)
- 5% Potassium Chloride (KCl)
- 3% Sodium Bicarbonate (NaHCO_3)
- 2% trace minerals (simulated using finely ground black pepper for color and texture tracking)

2. Initial pH validation

To validate the alkalinity of the mixture, dissolve a small amount of the dry mix in distilled water and test with a pH strip. The target reading is approximately pH 11.8 to match the alkaline properties of real cremated remains.

3. Batch division

Once validated, divide the cremains mixture into four containers to create trials with different concentrations. Each container is designed to be mixed into a paper slurry composed of 300 g of printer paper pulp suspended in 30 L of water. The cremains-to-pulp ratios used are:

- Trial A: 10 g cremains + 300 g pulp + 30 L water
- Trial B: 30 g cremains + 300 g pulp + 30 L water
- Trial C: 50 g cremains + 300 g pulp + 30 L water
- Trial D: 70 g cremains + 300 g pulp + 30 L water

4. Verification

Before use, each container’s texture and particle distribution are verified visually and by touch to ensure a close approximation to well-pulverized human cremains.

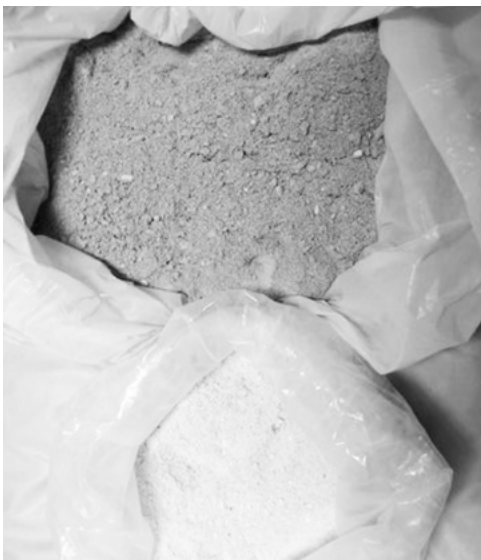


Figure 9 - Human Cremains for reference. Higher temperatures and longer exposure times result in lighter colored “ashes”



Figure 10 - Cellulose paper pulp



Figure 11 - Dissipating the pulp medium in water

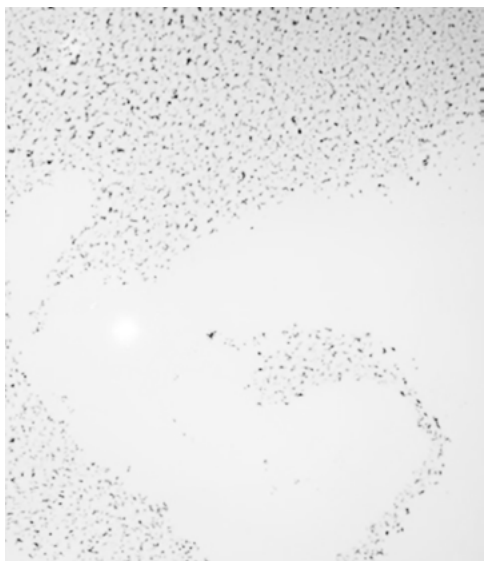


Figure 12 - Incorporating simulated cremains

1.2 Paper Making Process

Prepare the Base Material:

Rip or blend cellulose-based printer paper in a blender filled with enough water to fully submerge the material (About a 1:1 weight ratio between the raw paper and water). Blend the mixture until a smooth, chunk-free pulp forms. After each batch, strain out the excess water but ensure enough air remains in the pulp so the resulting pulp remains fluffy and workable, allowing the pulp to dissolve quickly into water. Transfer a quarter of the pulp into a large plastic vat. Remember to add more blended pulp after every four sheets to maintain sheet thickness and an approximate similar sheet grammage, as the pulp begins to dilute with repeated use.

Incorporate Simulated Cremains:

Thoroughly incorporate the cremains batch into the vat of pulp, mixing well between each sheet formation to ensure even distribution throughout the pulp medium.

Forming the Sheets:

Submerge a screen and deckle into the pulp vat and gently rock the frame back and forth while lifting to achieve an even pulp layer. The ideal amount of pulp reaches just below the deckle's edge. If the layer appears too thin, remix and repeat. Wet misformed sheets can be reintroduced into the vat for reuse.

Transfer to Drying Surface:

Place the mold on to a flat surface and press out water using a clean dish towel. Dabbing gently prevents wrinkles, tears, or pulp shifting. A soft art sponge proved effective for evenly absorbing moisture while preserving the sheet's integrity.



Figure 13 - A dried sheet, peeled from the mesh of the mold



Figure 14- pH strip reading target range (neutral to alkaline)

Drying the Sheets:
Sheets were dried directly on the mold using a home dehumidifier. This method replaced traditional couching techniques, which yielded overly delicate and inconsistently-shaped sheets. Each sheet took approximately two hours to dry fully in place. Once dry, sheets were carefully peeled from mesh mold surface. The dried paper displayed dual textures: a uniform, meshed back side (screen-facing) and a dimensional front side (with the tactile effect from the peaks of pulp and cremain content), providing visual and tactile variety.

pH Stabilization (Optional):
If necessary, mix a diluted solution of Hydrochloric Acid (HCl) into the slurry to reduce the pH of the paper slurry to a target range of 7.8–8.2, which is considered archival. As cremains are highly alkaline, achieving a stable alkaline paper is vital for its longevity, estimated at 1,000 years compared to only 50 years for acidic paper (Renda et al., 2015).

This step proved unnecessary to the process, as the mixture of the simulated cremains into the papermaking medium diluted all trial batches into the target range of 7.8–8.2.

1.3 Physical Property Testing

Ink Retention:
Test the paper’s ability to hold both typed text and printed images, utilizing the same inkjet printer as a control for each of the four paper samples. Evaluate the ink’s clarity, absorption, and distribution by printing the same test pattern, as defined by Bouk et al. (2007), on each batch.

For text, evaluate the following (Bouk et al., 2007):

Character Fidelity: The visible faithfulness of the characters to the intended shape, including edge sharpness and smoothness, and freedom from plugging, voids, breaks, and erosion of serifs and corners.

Text Contrast: The perceived density or contrast to background, and appropriate contrast between normal, bold, and italic text.

Text Uniformity: The perceived uniformity of text weight across characters of the same font, style, and size.

For lines, ensure the following (Bouk et al., 2007):

Line Purity: Characteristics such as sharp, smooth, and parallel edges; uniform width; and freedom from waviness, visible voids, and breaks.

Line Color: Proper color, density, or contrast to background, especially important for thick lines.

Line Weight Progression: The ability to produce a visually smooth progression of line weights.

Durability:

Assess the paper’s resistance to wear. Fold a narrow strip of each sample repeatedly forward and backward in a standardized manner to subject it to longitudinal stress until it breaks (Paper testing – paper specifications, 2021). Record the median number of folds required to tear the paper for each of the four cremains ratio trials. Ensure the sample possesses sufficient grammage per surface area to resist tearing. Adjust pulp concentration during sheet formation to achieve uniform thickness.

pH Stability:

Place each paper sample in a clean container and submerge it in distilled water. Soak for 5–10 minutes to allow the pH of the paper to transfer into the water. Use a pH strip to take the reading. Monitor the pH levels over two weeks to verify consistency. Confirm that neither the cremains nor ambient moisture fluctuations introduce pH shifts that could affect archival longevity.

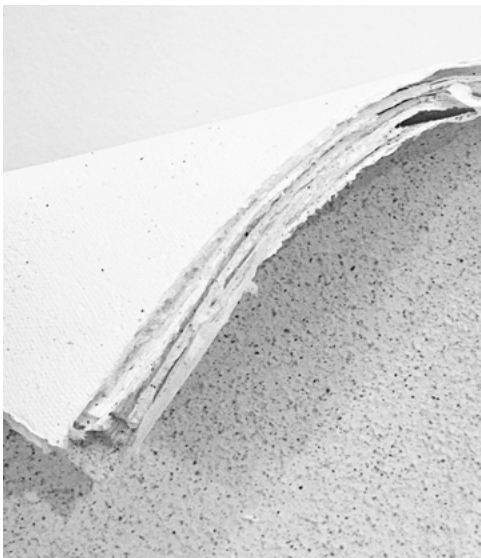


Figure 15 - Dried sheets, ranging from 10g to 70g of cremains per 300g of paper pulp

1.4 Data Analysis

Analyze the results of the physical property tests. Determine the optimal cremains-to-pulp ratio that preserves desired physical performance while maximizing material integration. Identify the most successful paper recipe based on combined performance metrics.

Methodology Phase 2: *Practice-based, Auto-ethnographic Framework*

2.1 Memorial Object Research

Conduct a literature review on the psychological and emotional dimensions of memorial objects. Focus on identifying the factors that contribute to their effectiveness in evoking memories, narrating the story of a loved one, and supporting the bereaved during grief processing.

Utilize insights from the review to inform visual motifs, tactile considerations, and layout strategies for the memorial book design. Emphasize themes such as narrative coherence, symbolic personalization, and the integration of sensory qualities that enhance remembrance.

2.2 Memorial Book Design

Use findings from the memorial object research to design a commemorative book incorporating the cremains-infused paper developed in Phase 1.

Use cremains-infused handmade paper to create a textured, tactile surface that evokes curiosity and sensory presence. This contrast between rough and smooth papers heightens awareness of materiality.

Collect personal photographs, such as portraits of my deceased loved one and images of her personal belongings.

Be intentional with the use of image and text to avoid visual overload while supporting quiet reflection.

Use semi-analog processes such as printing in risograph to complement the memorial tone.



Figure 16 - A selection of the many photographs collected and scanned

Utilize visual pacing by varying white space, image density, and paper texture to prompt a slower, more embodied reading experience.

Implement visual ambiguity (blurred photos, poetic texts, faded ink) to invite reflection and imagination, rather than fixed narrative.

Explore absence as design; use blank pages, faded marks, or faint imprints to symbolize the natural progression memory as it relates to emotion instead of precise detail.

Embrace manual, involved production methods such as papermaking and risograph to create imperfections that signal handmade care and a meditative process.

Apply editorial design strategies that align with the emotional and psychological needs identified in the research.

Employ a low-context narrative as opposed to a robust biographical account to evoke ephemeral moments and fading details in memory.

Curate found materials such as magazine layouts, recipes, textbooks, and street photographs as narrative fragments that reflect both personal history and cultural atmosphere.

Encourage a sense of “re-seeing” by making the viewer question objects or images included, prompting them to read between and beyond the visible artifacts.

Integrate visual progression and contrast across the book, moving from presence to absence, closeness to distance, indoor to outdoor. For example, using posed portrait photographs paired with candid in the book layout to express a contrast between the presented vs. observed reality.

Let labor be legible through visible thread bindings, pulp inconsistencies, or unfinished edges that reflect the maker’s emotional involvement and the artifact’s humanity.

Avoid digital polish; instead, embrace material irregularities that signal authenticity and the physical labor of grief.

Produce a working prototype of the book using the custom paper and finalized design elements.

Size the book appropriately at approximately 13.5 cm × 19 cm, allowing it to be comfortably held against the chest to foster an intimate, bodily sense of closeness.

Incorporate a weighted slipcase to introduce a ritual of removal, emphasizing the act of accessing the book as a moment of intentional engagement.

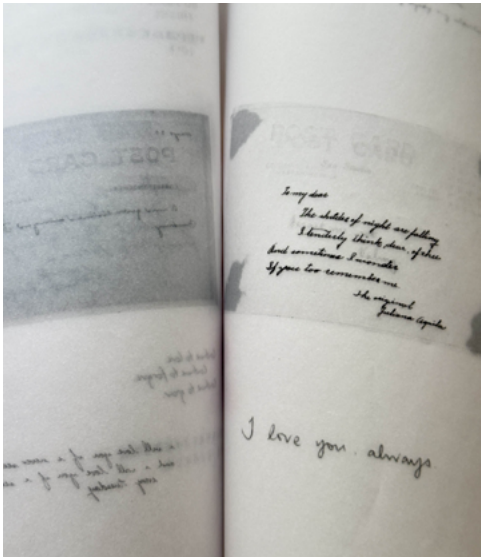


Figure 17 -A section of the book that features postcards and hand-written notes

Create a physical threshold between protective storage and use (such as its protective state in the slipcase vs. its accessible state without), underscoring the book’s transformation from relic to active object.

Consider proximal comfort, with sizing and weight optimized for lap reading, holding to the chest, or placing beside the bed.

Consider the user experience of the book and the small rituals involved in opening and reading the book from cover to cover.

2.3 Personal Reflection & Assessment

Reflect on the completed book as a memorial object. Use a Likert scale to assess the book’s emotional and mnemonic effectiveness. Each statement is rated from 1 to 5:

- 1 = Strongly Disagree
- 2 = Somewhat Disagree
- 3 = Neither Agree nor Disagree
- 4 = Somewhat Agree
- 5 = Strongly Agree

Evaluation Questions:

Holding the book evokes a sense of comfort and emotional connection.

Interacting with the book enhances feelings of closeness to my loved one.

The physical act of handling the book adds to its memorial significance.

The book successfully brings specific memories of my deceased loved one to mind.

The photographs evoke meaningful recollections beyond what I expected.

The inclusion of personal effects in the book increases its emotional depth.



Figure 18 - The memorial book's clothbound hardcover is essential to conveying a tactile and metaphorical sense of gentleness.

The book reflects distinctive traits of my loved one's life and personality.

The tactile qualities of the paper (texture, weight, finish) enhance its commemorative function.

The visual design creates a reflective, contemplative tone that supports remembrance.

The sparse layout of text and images contributes meaningfully to emotional storytelling.

The size and proportions of the book feel appropriate for its memorial purpose.

The book's design balances personal expression and editorial clarity.

This book fulfills a role that conventional memorial objects (e.g., urns, photos) do not.

The cremains-infused paper adds a meaningful, embodied connection to the deceased.

The process of creating and engaging with the book has contributed to emotional healing.

The book feels sacred, precious, or set apart from ordinary books.

Turning the pages provides a ritualistic experience of remembrance.

The memorial book feels like a lasting extension of my deceased loved one's presence.

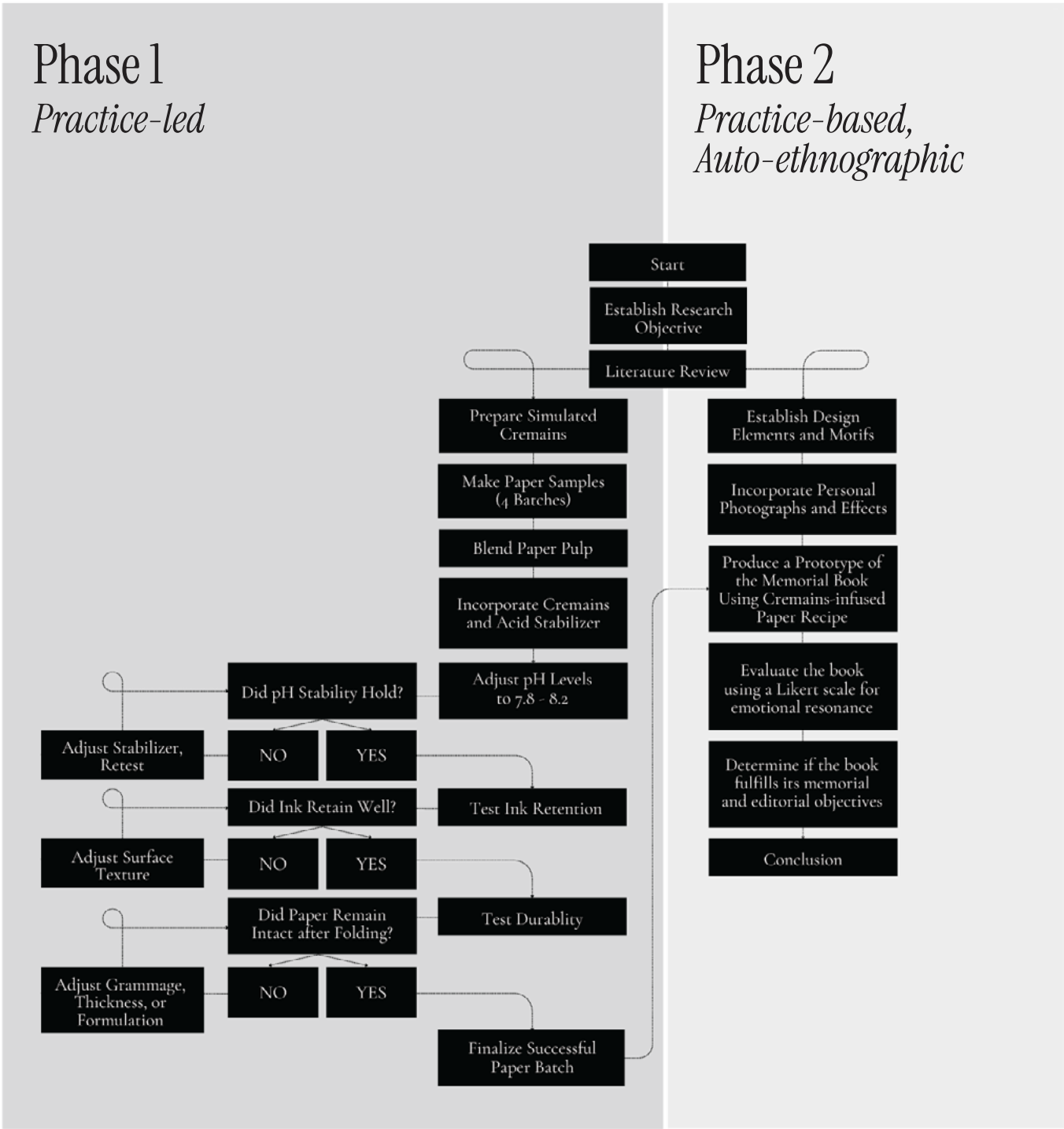
The book helps transform loss into something tangible and expressive.

I would consider making another memorial object using similar materials and processes.

Use the results of this reflection to write a brief narrative conclusion evaluating the book's success as both an editorial design artifact and a meaningful personal memorial.

Methodology Diagram

Diagram 3



Results

Results Phase 1: *Practice-led Framework*

Observations & Outcomes



Figure 19 - “Front” and “Back”
of the winning paper mixture

10g of cremains per 300g of paper
pulp provided the most editorial
practicality

To evaluate the editorial viability of cremains-infused paper, four pulp batches are produced using increasing concentrations of simulated cremains: 10g, 30g, 50g, and 70g per 300g of paper pulp in 35L of water. Each batch undergoes physical testing to determine suitability for archival and editorial applications. The testing metrics are adapted from industry standards including Renda et al. (2015), Bouk et al. (2007), and INCITS W1.1 to include photos and the typeface used in the memorial book layout.

Testing Criteria

The physical testing chart (Diagram X) evaluates each sample across four critical editorial and archival metrics: ink retention, durability, texture uniformity, and pH stability. Each criterion was specifically chosen for its practical implications:

Ink Retention

Ink retention measures how clearly ink adheres to paper fibers. Optimal ink retention strikes a careful balance where ink must absorb just enough into the fibers of the paper to avoid smudging, but to also avoid the ink permeating so deeply that it bleeds and diminishes image and text fidelity. For a memorial book, compromised ink retention could undermine the emotional impact by reducing the clarity and legibility of both the imagery and the contextual text content. Clear text reproduction is essential because the minimal written narrative provides critical emotional and contextual grounding.

Durability (Folding Endurance)

Durability testing involves repeatedly folding paper strips until they break, reflecting resistance to physical stress and handling. Although the project intentionally embraces material imperfections to reflect the rawness of grief and the highly manual process, it must also strike a careful balance between authenticity and longevity. The memorial object is expected to withstand repeated engagement, shared

viewing among family members, and a potential future being passed down as generational heirloom. Therefore, sufficient folding endurance is vital to its role as a lasting commemorative artifact.

Texture Uniformity
Texture uniformity affects both printing precision and readability. Excessive surface irregularities or pronounced paper pulp peaks can cause registration issues in printing, producing warped or distorted images and text. Industrial printing equipment is calibrated for consistently sized, uniformly textured, mass-produced paper. Handmade cremains-infused paper challenges these machines, emphasizing the need for controlled textural variance to avoid compromising editorial quality and potential broader production scalability.

Physical Testing Results

Diagram 4

Metric	10g cremains sample	30g cremains sample	50g cremains sample	70g cremains sample
pH Level of the sheets before drying (Target: 7.8–8.2)	7.8	8.0	7.5	8.0
pH Level of the sheets after drying (Target: 7.8–8.2)	7.7	7.4	7.7	7.3
Durability (Number of folds until breaking)	23 folds	26 folds	30 folds	39 folds
Ink Retention – Text Clarity (Rate 1–5)	4	3	2	1
Ink Retention – Image Clarity (Rate 1–5)	5	5	2	1
Texture Uniformity	Uniform with Peaks	Varied	Rough	Rough



Figure 20 - Print test with 30g cremains batch sample

pH Stability

While initial tests and research placed high importance on pH stability due to archival standards, subsequent observations indicated minimal practical impact within the observed ranges when testing the both the integrated paper pulp and the subsequently dried sheets. However, maintaining a stable neutral-to-alkaline pH remains theoretically significant for long-term archival integrity, as alkaline paper demonstrates significantly improved longevity compared to acidic substrates. As a result, pH stability in the somewhat neutral-to-alkaline range is vital to the durability and archival suitability of the memorial paper.

Testing Results

The results, presented in the physical testing chart (Diagram X), assess performance across four primary metrics:

1. pH Stability (Before and After Drying)
Initial hypotheses emphasized the importance of maintaining a pH between 7.8 and 8.2, in line with alkaline paper-making standards. However, test results revealed minimal variation between batches and negligible fluctuation pre- and post-drying. The 10g and 50g samples maintained target levels, but even the lowest-scoring sample (70g post-drying) only dropped to 7.3. These minor deviations suggest that pH may not play a significant role in performance at this level of simulated cremains dilution in the paper pulp. The cremains-infused pulp naturally maintained a near-neutral to slightly alkaline state, requiring no chemical buffering. Therefore, while pH monitoring was included, it ultimately had limited relevance in determining paper quality.
2. Durability (Folding Endurance)
Folding endurance is tested by repeatedly bending narrow paper strips until they ripped. Durability generally increased with higher cremains concentrations. The 70g sample endured 39 folds before failure, whereas the 10g sample withstood 23. While this suggests that denser samples resist tearing under stress, this gain in strength came at the expense of surface printability. The 10g and 30g samples achieved a more functional balance between durability and editorial usability.
3. Ink Retention (Text and Image Clarity)
Ink retention is evaluated using adapted INCITS W1.1 criteria for perceptual quality. Text clarity was highest in the 10g sample, which earned a score of 4 out of 5. This sample preserved character sharpness, contrast, and fidelity with minimal feathering or distortion. As the simulated cremains concentration increased, clarity degraded significantly, with the 70g sample scoring a 1 due to ink bleeding and loss of definition. Image clarity followed a similar trend. The 10g and 30g samples rendered photography and tonal gradients clearly. Higher concentrations created noise and

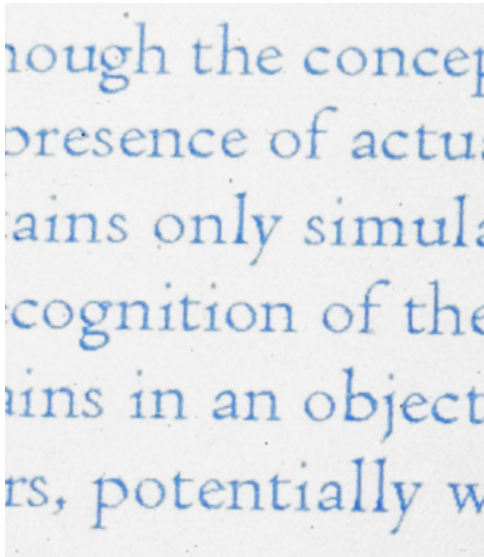


Figure 21 - A closeup of the risograph printed text, achieving a great degree of legibility on the paper

textural interference, reducing image legibility and undermining editorial functionality.

4. Texture Uniformity

The visual and tactile properties of each sample were documented to assess symbolic impact and consistency. The 10g sample featured a uniform texture with embedded peaks that gave it a distinctive surface without compromising performance. Higher cremains concentrations produced rougher, less consistent sheets. These introduced interferences with both handling and printing. Texture irregularity also affected drying speed and introduced severe warping in larger concentrations of simulated cremains.

Based on this evaluation, the 10g cremains sample is selected as the most effective blend for symbolic and editorial purposes. It offers the best compromise between aesthetic texture and functional reliability. It required no pH adjustment, printed clearly, and held up reasonably well under physical handling. The inclusion of particulate cremains is visible but subtle, allowing the paper to perform like a traditional editorial substrate while maintaining a tactile reminder of its commemorative significance.

This sample successfully supports both inked text and photographic imagery with minimal smudging or absorbency issues. Its consistent pH, adequate durability, and clean finish suggest that even low cremains concentrations are optimal for maintaining editorial standards while still achieving symbolic presence.

Limitations Revealed

While promising, several limitations were identified. First, consistency in grammage and sheet thickness is difficult to achieve with handmade methods. This inconsistency made the paper less suitable for use as a full text block, especially in bookbinding techniques that rely on tight tolerances for sewing and trimming. Variability in surface texture and alignment also reduced compatibility with some mechanical printers, which require uniformity to avoid paper jams and roller damage.

Technical scalability is another concern. Many local printers declined to run tests using these samples due to the risk they posed to equipment. Higher-end commercial shops cited the need for specialized handling, while smaller shops quoted prohibitive costs for manually processing this paper with the already manual process of risograph. These barriers confirm that cremains-infused paper, in its current handmade form, is not yet a viable option for widespread editorial production.

Instead, the material serves best as a symbolic element, used sparingly throughout a book to mark transitions, frame highly personal images, or signal ritual intent. Within these limitations, it remains a powerful and affective material, but one whose practical use must be carefully scoped.



Figure 22 - Hundreds of imposition test sheets made in copy paper, papel vegetal, and hand-made cremains-infused paper

Results Phase 2: *Practice-based, Auto-ethnographic Framework*

Observations & Outcomes

Drawing from the literature on ritual design and emotional resonance, the layout of the memorial book prioritized slowness, ambiguity, and embodied interaction.

A Likert scale developed from Eisma’s (2022) proximity-seeking behavior scale is used to assess the emotional effectiveness of the memorial book. The scale is adapted to address the material, sensory, and psychological qualities of a commemorative object, specifically evaluating how these qualities contribute to memory, emotional engagement, and ritual use. The assessment includes 20 statements rated on a scale from 1 to 5 (1 denoting strong disagreement with the statement and 5 denoting strong resonance), accompanied by reflective commentary. Topics include comfort, tactile engagement, symbolic resonance, and narrative clarity. The average score across all items is 4.4 out of 5, indicating strong emotional resonance and functional effectiveness.

Several statements receive consistently high scores. Items related to sensory interaction, such as “turning the pages provides a ritualistic experience of remembrance” and “the cremains-infused paper adds a meaningful, embodied connection to the deceased,” are rated 5. These statements highlight the book’s success in establishing presence through tactile engagement and material symbolism. Its physical format, muted design, and pacing support quiet, reflective interaction.

Other responses reflect areas of complexity or ambivalence. While the book avoids traditional biographical structure in favor of a low-context, visual narrative, this strategy introduces tension between emotional openness and memory preservation. As the user, I note the benefit of poetic ambiguity, but also express concern that memories may fade without more detailed narrative cues. The creative process contributes to emotional reflection, but I also observe moments where the academic pressure of completing this book as a project slightly distances me from the personal aspect of the work.



Figure 23 -Risograph printed photography prioritizes the feeling of the imagery instead of the detail

Likert Scale

Statement	(1-5)	Comments
Holding the book evokes a sense of comfort and emotional connection.	4	Its size and weight create an immediate sense of closeness. However, creating distance as an observer rather than the author, I would need to spend more time with the book to re-orient this object as a representation of my loved one.
Interacting with the book enhances feelings of closeness to my loved one.	5	Each page turn feels meditative, like part of a private ritual. Seeing some of the objects in the book and photographs where I wasn't present inspires me to create memories surrounding these scenes I wasn't witness to.
The physical act of handling the book adds to its memorial significance.	3	Touching the clothbound cover and the surface of the book block is an evokes a sense of gentleness. The light neutral colors of the material give an grounded appearance.
The book successfully brings specific memories of my deceased loved one to mind.	4	Associating this version of my deceased loved one in the book with the one I shared lived experiences creates an overlap of narratives that feels conducive to the memory-making process.
The photographs evoke meaningful recollections beyond what I expected.	5	The imagery and objects evoke clear personal associations, as well as new perspectives as I view my loved one at ages before I was able to witness her, as well as in places that no longer exist as the interiors and streetscapes have since evolved.
The inclusion of personal effects in the book increases its emotional depth.	5	Placing objects like recipes, textiles, and personal notes next to her photographs add dimension to her existence; you can almost imagine her interacting with them to navigate daily life and remain connected to the world around her. The inclusion of these objects almost evokes how pharaohs and emperors were buried with objects they often used for a comfortable and familiar afterlife.
The book reflects distinctive traits of my loved one's life and personality.	4	The text provides just enough context for the reader to glean the subject's personal values and life focuses at each stage in her life without feeling prescriptive.
The tactile qualities of the paper (texture, weight, finish) enhance its commemorative function.	5	The cremains-infused paper's roughness contrasts beautifully with smooth stock. The imperfect "peaks" of paper pulp that add dimension under the print and specks of black embedded in the fibers creates a dynamic tactile experience paired with the photography, objects, and text narrative. The cremains-infused paper also creates a fibrous airiness, similar to cotton linen - evoking domesticity and pared down familiarity.
The visual design creates a reflective, contemplative tone that supports remembrance.	5	The design encourages slow reading and a highly restrained text layout to decelerate the reader's experience, fostering a contemplative and introspective environment for the reader.

<i>Statement</i>	<i>(1-5)</i>	<i>Comments</i>
The sparse layout of text and images contributes meaningfully to emotional storytelling.	3	The motifs and artifacts offer insight without being overly descriptive or biographical, allowing the reader to create their interpretation within the memorial object. However, while recognizing the value of this approach, I wonder if I would regret not adding more text-based narrative when my concrete memories of my loved one begin to dissipate over the years.
The size and proportions of the book feel appropriate for its memorial purpose.	5	Its scale suggests not just physical comfort but emotional proximity, reinforcing the idea that this is not a public object, but a personal one meant to be cradled, kept, and returned to in private moments of remembrance.
The book’s design balances personal expression and editorial clarity.	4	The design is visual rather than narrative, and that feels intentional as it invites ambiguity without losing meaning of the essential observable parts of the subject. This offers the reader space to reflect and gently revealing aspects of the deceased’s identity.
This book fulfills a role that conventional memorial objects (e.g., urns, photos) do not.	5	Unlike static and conventional forms of memorial, the book invites participation by turning pages, touching them, and pausing to absorb the content. This allows this form of interment to “unfold” memories rather than being a fixed representation.
The cremains -infused paper adds a meaningful, embodied connection to the deceased.	5	Incorporating cremated remains directly into the material of the book establishes a physical link to the subject, literally embodying a person’s presence as a grief object.
The process of creating and engaging with the book has contributed to emotional healing.	4	In more introspective moments, I see crafting and curating as helpful acts of grief work. However, there are times where I’m more critical of the book as a project outcome rather than a cumulation of this experience.
The book feels sacred, precious, or set apart from ordinary books.	5	Its materials, weight, and design elevate it from a typical photo book to a personal keepsake. The inclusion of cremains and the handcrafted elements reinforce its value as a meaningful personal object.
Turning the pages provides a ritualistic experience of remembrance.	5	Handling the book, especially during slow reading or tactile engagement, functions as a small-scale memorial ritual. The process encourages attentiveness and reflection, similar to traditional acts of remembrance.
The memorial book feels like a lasting extension of my deceased loved one’s presence.	3	It certainly captures her essence. However, knowing her makes me want for something more concrete to preserve her personhood, although this isn’t the objective. While not a replacement, the book offers a consistent emotional connection to the deceased.
The book helps transform loss into something tangible and expressive.	5	By translating grief into visual and material form, the book provides a concrete outlet for mourning. This makes the emotional experience of loss more approachable and communicable.
I would consider making another memorial object using similar materials and processes.	2	While the outcome of the memorial book is satisfying, the labor of the highly manual process leaves little time to reflect positively on the experience and I would recommend scaling this project down to a tightly curated photo booklet.

Diagram 5

Throughout the papermaking and printing processes, my emotional observations varied significantly. The tactile nature and sensory experience of creating the handmade paper (mixing the simulated cremains into water, brushing excess paper pulp and cremains from my arms, disposing of leftover material) frequently served as a physical reminder of loss, prompting moments of reflection about how involved, and for some, how macabre, this process is. Certain experiences, especially straining leftover pulp and cremains mixture for disposal, triggered slight discomfort with the understanding that this material substitutes human remains, yet these moments quickly transitioned into contemplative acceptance. Over time, the repeated manual tasks of paper production evolved into a calming ritual, offering a meaningful and productive channel for reflecting on memories and honoring the deceased. While the hands-on approach facilitated a unique emotional engagement, it also presented practical challenges, underscoring the complexity of balancing thoughtful reflection with the demands inherent in manual production.

Ultimately, the results indicate that the memorial book is successful in meeting its intended objectives. It invites intimate interaction, supports reflective memory, and transforms loss into a tactile and expressive object. The inclusion of simulated cremains-infused paper, personal artifacts, and analog production methods contributes to its distinct role as a commemorative form. It operates as a materially and emotionally grounded alternative to traditional memorial items, encouraging a sustained relationship between the object and the bereaved.

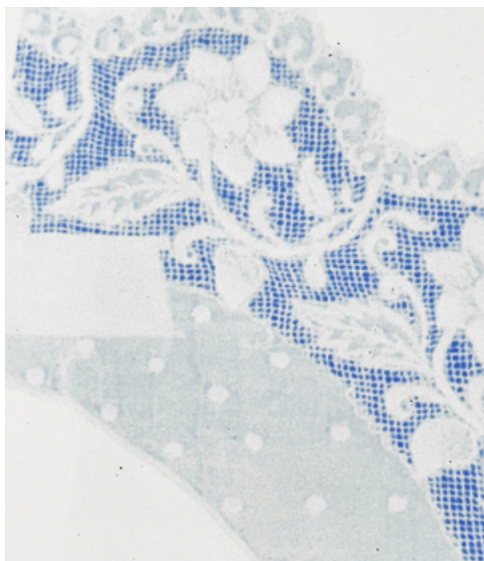


Figure 24 - Risograph printed detail, Piña collar

Symbolic & Narrative Framework

The symbolic language and narrative structure of the memorial book are intentionally curated to evoke subtle emotional connections, layered meaning, and introspective reflection. This deliberate approach emphasizes visual storytelling over explicit textual narration, inviting the viewer into a personal yet ambiguous space that respects memory’s inherent subjectivity.

Lace, doilies, and textiles recur frequently throughout the memorial book, serving as visual metaphors deeply connected to my grandmother’s personal identity, cultural heritage, and life experience. Lace and embroidered handkerchiefs are strongly associated with Filipino domestic

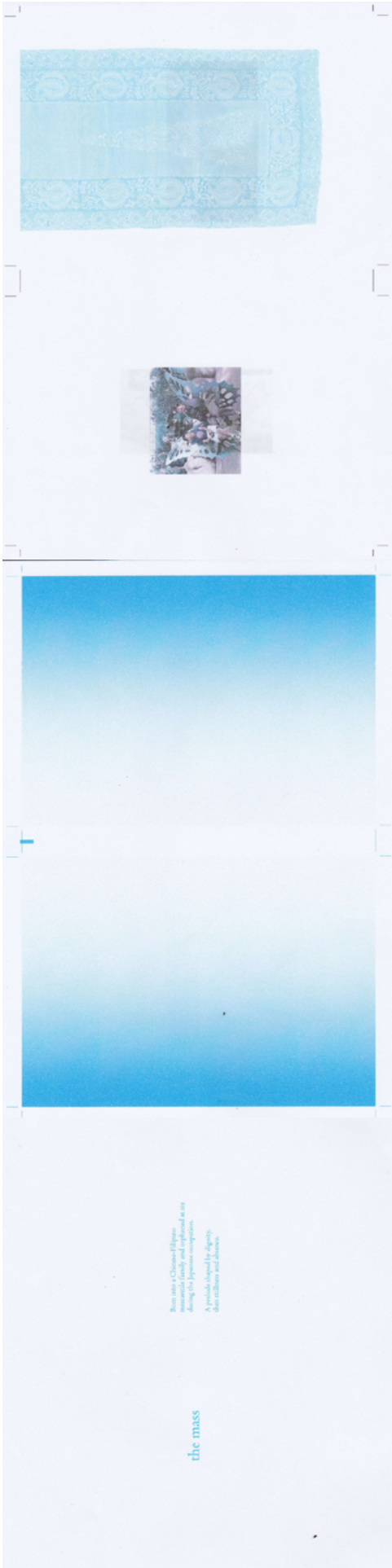


Figure 25 - Additional layout designs (pre-bound risograph prints)

tradition, especially textiles crafted from piña fabric, delicate cloth woven from pineapple fibers. Piña textiles were a staple within Filipino clothing design and are valued for their natural sheerness, intricate detailing, durability, and their lightweight breathability well-suited to tropical climates.

However, the industry’s prominence declined sharply due to the economic devastation during World War II and Japanese occupation (Montinola, 1991). This historical context parallels my grandmother’s personal history of loss during the same occupation, creating an intimate cultural resonance. Moreover, lace symbolizes domesticity and family propriety, values that my grandmother strongly upheld and transmitted for her family. By embedding these visual motifs, the book subtly captures her values and the complexities of familial relationships.

Other curated family objects, such as handwritten recipes, clippings from women’s magazines, and school textbooks, also carry significant emotional and cultural weight. Recipes are markers of generational transmission, emphasizing continuity through domestic rituals of cooking and caregiving. Magazine clippings not only hint at engagement with popular culture but reflect aspirations, dreams, and subtle hints of personal identity. The textbooks and school-related objects embody values of education and self-improvement, which were important narratives throughout her life and strongly influenced her family environment. Each object inclusion was deliberate, selected to invite viewers into quiet contemplation and to consider their relationships to the deceased.

The visual sequencing and narrative pacing of the book are carefully constructed around emotional rhythm rather than strict chronology. The initial pages introduce subtle textures, sparse imagery, and ambiguous visuals, establishing a quiet, reflective entry point. As the narrative progresses, it gradually reveals clearer elements of the subject’s life and identity. Strategic blank spaces and faded imagery symbolize memory gaps, emotional distance, or the inevitable erosion of clarity over time.

Pacing shifts are introduced through variations in visual density and material texture. Chapters punctuated by cremains-infused paper offer tactile moments of pause and deeper contemplation. Transitioning from smoother, mass-manufactured paper to handmade sheets signals shifts between personal reflection and collective memory, or between historical record and emotional interpretation. Towards the final sections, imagery shifts notably toward the symbolic motifs mentioned earlier, piña lace, textiles, and everyday domestic objects, grounding the narrative in tactile reminders of intimacy and identity, ultimately returning the narrative from broader memory back into intimate, personal connection.

Overall, the book's structure invites the reader to actively reconstruct narratives from fragmentary memories and symbolic imagery, aligning closely with theories of grief and material memory by Hallam and Hockey (2001), and Gibson's (2010) concept of melancholy objects. This careful narrative construction offers a contemplative yet deeply personal experience, reflecting both the complexity of memory and the nuanced emotional landscape of grief.

Limitations Revealed

While the project achieves its emotional and commemorative goals, it also presents a number of material, logistical, and emotional limitations. The cremains-infused paper, though central to the symbolic framework of the book, proves too fragile and inconsistent in dimension for full integration into the text block. Its limited compatibility with print processes reduces its role to chapter punctuations and symbolic insertions. These appearances are visually and emotionally amplified, often paired with transitional spreads or deeply personal imagery, but the material cannot support continuous editorial use in the form of an entire book block more than 100 pages.

Risograph printing is selected for its textured, analog aesthetic, which aligns with the intended tone of warmth, tactility, and imperfection. However, this production method introduces significant technical constraints. Preparing risograph impositions for over 200 pages requires multiple rounds of CMYK layering and page adjustments. The standard A3 Munken Pure stock used for the primary text block contrasts with the handmade cremains-infused sheets, which vary in thickness and size (slightly larger than an A4 sheet). This mismatch causes registration issues and frequent misfeeds during printing. As a result, production is delayed and complicated by inconsistent paper behavior.

Finding a print service capable of accommodating both paper types proves equally challenging. Smaller print shops quote high fees, while larger commercial printers impose last-minute restrictions on services. Several aspects of the final prototype require improvisation to meet project deadlines, such as the lack of yellow ink in some of the printed sheets.

The high degree of manual labor involved in papermaking and risograph printing also slightly limits the mental space available for informal or emotional reflection during production. The scale and technical demands of the book occasionally shift focus away from its personal memorial function and toward the logistics of execution.

Additionally, while the use of sparse text and low-context narrative encourages interpretive flexibility, it may not preserve specific memory cues over time. This concern emerges in the Likert-scale assessment, where the question of repeating the process receives a low score (2 out of 5). Although the final result is meaningful, the intensive nature of the production suggests that future iterations may benefit from streamlined methods that retain emotional depth while reducing physical and logistical strain.

Ethical & Cultural Considerations

This project also brings forward critical ethical and cultural questions concerning the use of real human cremains. Although this research employed simulated cremains for experimental and ethical feasibility, potential future implementation with actual human cremains would introduce additional complexities. Ethical considerations include consent, dignity, and the respectful handling of human remains, all of which would require careful protocols and transparency, especially if its use becomes expanded to being rendered as a service to a consumer.

Cultural acceptance also significantly shapes responses. Informal conversational reactions reveal several nuanced points of potential resistance. Some individuals express surprise or discomfort about physically interacting with cremated remains. In Portugal specifically, reactions highlight cultural norms surrounding death and burial. Keeping cremains within a domestic context, rather than in a cemetery or sacred ground, can evoke discomfort or even taboo responses, described as “hoarding” ashes rather than properly placing them where culturally perceived as appropriate.

Furthermore, the secular nature of this project might raise additional objections among religious individuals, particularly those who believe human remains must be buried in consecrated ground or blessed by religious authorities. Such beliefs underscore the tension between personalized, secular memorial practices and traditional religious customs. Therefore, implementation must thoughtfully navigate diverse religious sensitivities and expectations around the ethical handling and final resting place of cremated remains.

These ethical and cultural questions point to important areas for future research, suggesting that successful implementation might involve contextual adaptations or customizable memorial formats, depending on user cultural backgrounds and ethical sensitivities.

Conclusion

The outcomes of this project are evaluated against three core goals that were outlined in the Objectives section: (1) the technical feasibility of cremains-infused paper for editorial application, (2) the emotional and symbolic resonance of the memorial book, and (3) the alignment of material and design strategies with best practices in grief theory and ritual design.

Technical Performance

Benchmarked against the adapted versions of the Renda et al. (2015) and INCITS W1.1, the 10g simulated cremains per 300g of paper formula meets targets for pH stability and ink retention. The paper holds printed imagery clearly and maintains a stable alkaline pH, suggesting baseline suitability for editorial application. However, irregularities in grammage, drying, and dimensionality introduce substantial barriers to scale. The paper's incompatibility with standard printing and finishing equipment limits its application beyond symbolic insertions.

In particular, binding presents a unique challenge. The fragility of handmade sheets under pressure means that sewing large numbers of pages together can damage the material or cause tearing at the spine. This constraint makes long-form editions difficult to assemble and restricts production to shorter or selectively bound formats. These factors indicate that cremains-infused paper is most effective when used as a symbolic component within a hybrid book structure, rather than as the primary substrate for full editorial production.

Emotional Resonance

A Likert scale developed from Eisma's (2022) proximity-seeking behavior framework is used to assess the emotional effectiveness of the memorial object. This self-study includes 20 statements covering tactile experience, visual tone, memory recall, and personal meaning, each rated on a scale from 1 to 5. The average score is 4.4 out of 5, with higher marks for stronger sensory engagement, ritual qualities, and emotional presence.

Reflections describe the book as sacred and contemplative. Page-turning, object and photo curation, and the physical handling of materials offer a form of mourning that genuinely feels slow and embodied. The cremains-infused paper enhances this ritual quality, offering not only a symbolic connection but also a tangible reminder of the subject's simultaneous presence and absence.

Alignment with Grief Work Best Practices

The design approach aligns closely with theories on material memory and personalized ritual. Concepts from Gibson (2010), Sas and Coman (2016), and Hallam and Hockey (2001) inform the decision to minimize explanatory text, prioritize sensory richness, and embrace visual ambiguity. Each of these highly intentional design choices supports introspective interaction and encourages open emotional interpretation. The project contributes to ongoing conversations about how grief objects function best when they facilitate material tactility, symbolic authorship, and emotional accessibility.

Further Reflections

Scaling this method into a service, similar to cremains-infused jewelry or vinyl records, raises questions about material standardization, authorship, and emotional ownership. The current process is deeply manual, from the paper pulp preparation to the image and object sequencing, to the risograph impositions. If scaled for consumer availability, it would require much more controlled paper formulations, preset layouts, and perhaps modular content templates – limiting its customizability and as a result, its meaningfulness to the bereaved.

Expanding this work especially complicates the concept of authorship. Memorial jewelry and vinyl records typically involve minimal interpretive input from the bereaved. A book, by contrast, requires narrative framing, curation, and emotional perspective. If authored by a third party, how would the memories be shaped? If authored by the bereaved, how much labor can reasonably be expected in the midst of loss? These questions suggest that any responsibly scalable version should balance personal expression with production support.

In this project, I take the role of both the author and the intended reader as the bereaved. This dual role allows for tailored meaning but also introduces bias. The book reflects my version of my loved one's life, and consequently, what I chose to include, exclude, and interpret for the narrative. For other relatives grieving the same person, the book might feel either partial or overly specific. Emotional resonance may be minimized when the object reflects one person's memory rather than a shared or collective narrative.

This raises a fundamental question: can a deeply personalized object still function as a communal tool for grief? The answer may depend on how clearly the object signals that it is not an absolute complete portrait, but one perspective among many witnesses to the subject's life.

Beyond the challenges of production and narrative bias, the project also reveals limits in emotional sustainability. The physical and emotional intensity of the process, particularly

in papermaking, printing, and assembling a complex prototype, reduces the opportunity for casual reflection as well as an opportunity to digest the content over a longer period of time as intended for a memorial object. At times, the task of completion overtakes the experience of mourning. The low score (2 out of 5) for the willingness to repeat the process reflects the intense labor this method takes.

Additionally, the physically delicate nature of the simulated cremains-infused sheets makes the object harder to handle long-term. Pages must be turned with care, and binding structures are more vulnerable to wear. These realities could limit the object's lifespan even with reinforced binding methods and suggest that durability must be considered if this model is ever replicated again.

Closing Thoughts

This project demonstrates that integrating cremated remains into the structure of a book is a viable and emotionally powerful method of intimate memorialization. It extends the possibilities of how grief, materiality, and authorship intersect in the design of memory objects. While technical and emotional limitations challenge its scalability, the symbolic impact of the work remains clear. The memorial book functions not only as a container of memory but as an active participant in the mourning process. It invites presence, as well as facilitates intentional memory and reflection. This project serves as both a process and a product that demonstrates the potential for a personalized memorial book to bridge the tangible and emotional gap left by loss.

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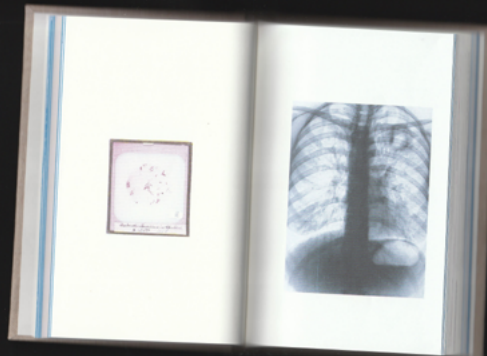
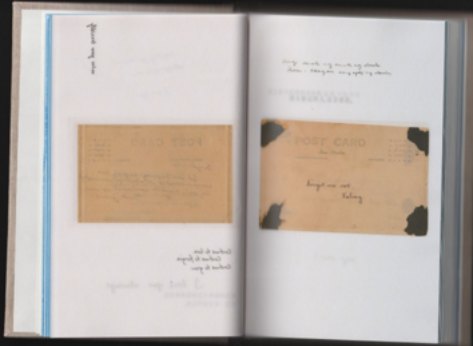
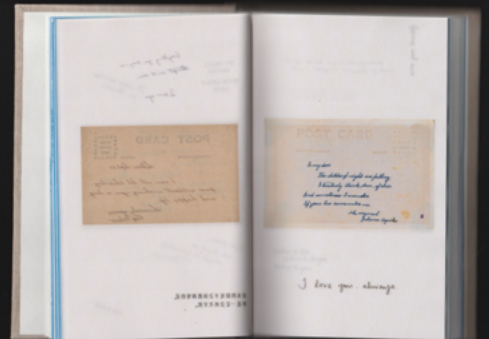
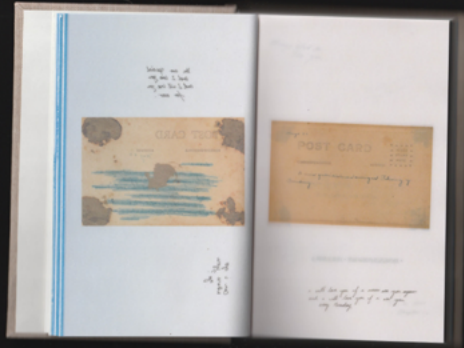
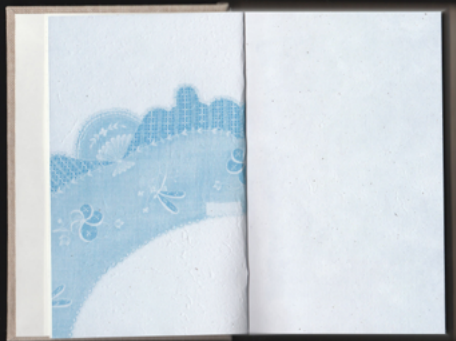
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Appendix

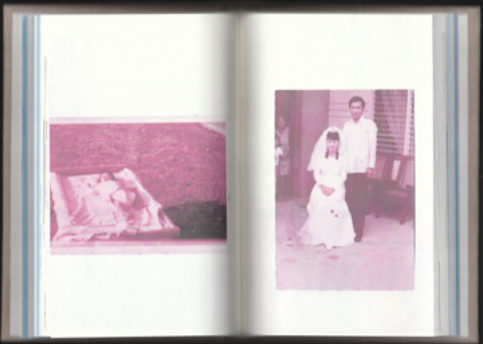
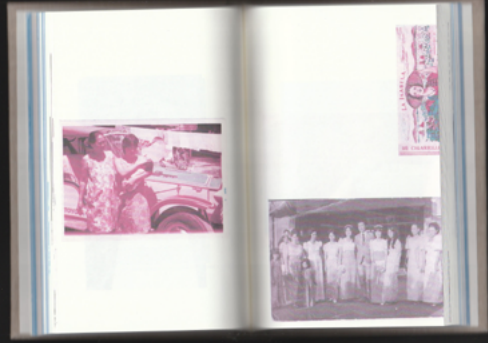
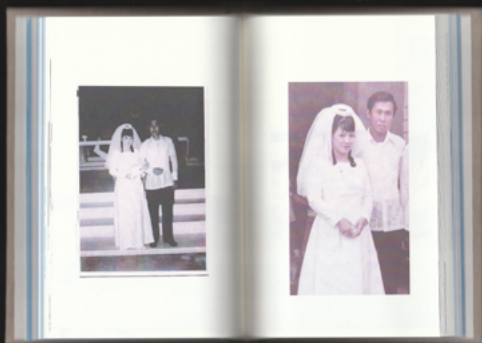
(1) Memorial Book





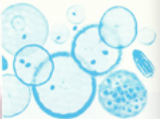
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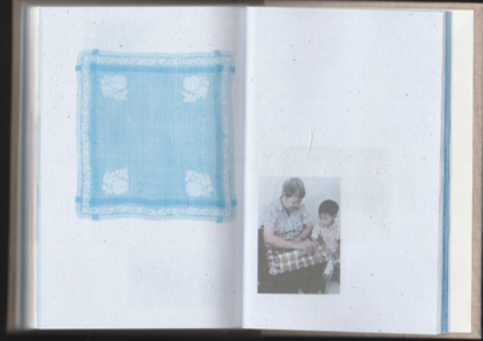
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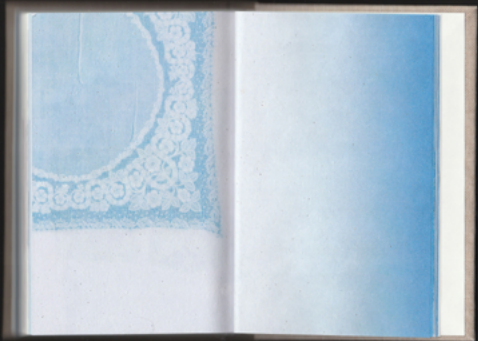




望展
40 LOOK







Colophon

Project Report

Heading: Instrument Serif Regular and Italic
Designed by Rodrigo Fuenzalida with direction from Jordan Egstad for the Instrument brand.

Body: General Sans Light and Light Italic
Designed by Frode Helland for the Indian Type Foundry.

Memorial Book

Heading and Body: Centaur Regular
Designed by Bruce Rogers for the Metropolitan Museum of Art.

Risograph printed in collaboration with EchoPress and Norcopia (Porto, Portugal) on Munken Pure 100g and handmade paper containing simulated cremains.

Print 1/1.