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DIGITAL INTERVENTIONS IN THE REPRESENTATION OF CULTURAL HERITAGE: A CASE STUDY ON SPATIAL NARRATIVE

KÜLTÜREL MİRASIN TEMSİLİNDE DİJİTAL MÜDAHALELER: MEKANSAL ANLATI ÜZERİNE BİR VAKA ÇALIŞMASI

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ABSTRACT

This study examines the role of visual communication design in representing cultural heritage through digital tools, with particular attention to the ways in which design practices mediate between historical authenticity and contemporary interpretation. Focusing on A Special Chest (2024), an exhibition at Designmuseum Danmark, the article presents a qualitative analysis based on a semi-structured interview with designer Jakob Thorbek. The project demonstrates how digital interventions, when combined with spatial narrative strategies, can transform traditional exhibition practices into multisensory and immersive experiences.

The narrative structure of the installation emerges through the interplay of architectural space, typography, light, motion graphics, and physical objects. These elements collectively construct a contemporary approach to reinterpreting cultural memory, revealing how design can both preserve historical value and generate new aesthetic meanings. By situating Thorbek's design philosophy within the broader discourse on digital heritage, the article highlights the importance of interpretive design in shaping visitors' emotional and cognitive engagement with cultural artifacts.

Ultimately, the study argues that digital tools are not merely technical supports but active contributors to cultural storytelling. They expand the possibilities of museum display by fostering inclusivity, accessibility, and dynamic interaction, positioning visual communication design as a critical medium for both safeguarding and reimagining cultural heritage.

Keywords: *Cultural Heritage, Spatial Narratives, Projection Mapping, Visual Communication Design, Digital Museology*

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ÖZ

Bu çalışma, görsel iletişim tasarımının kültürel mirasın dijital araçlar aracılığıyla temsili konusundaki rolünü incelemekte; özellikle de tasarım uygulamalarının tarihsel özgünlük ile çağdaş yorum arasında nasıl aracılık ettiğine odaklanmaktadır. Designmuseum Danmark'ta sergilenen A Special Chest (2024) projesi üzerinden yürütülen çalışma, tasarımcı Jakob Thorbek ile yapılan yarı yapılandırılmış görüşmeye dayalı nitel bir analiz sunmaktadır. Proje, dijital müdahalelerin mekânsal anlatı stratejileriyle birleştirildiğinde, geleneksel sergileme pratiklerini çok duyulu ve immersif deneyimlere dönüştürebileceğini göstermektedir.

Yerleştirmenin anlatsal yapısı; mimari mekân, tipografi, ışık, hareketli grafikler ve fiziksel nesneler arasındaki etkileşim aracılığıyla ortaya çıkmaktadır. Bu öğeler, kültürel belleğin yeniden yorumlanmasına yönelik çağdaş bir yaklaşım inşa ederek tasarımın hem tarihsel değeri koruma hem de yeni estetik anlamlar üretme potansiyelini açığa çıkarmaktadır. Thorbek'in tasarım felsefesini dijital miras söylemi içinde konumlandıran makale, yorumlayıcı tasarımın ziyaretçilerin kültürel objelerle duygusal ve bilişsel düzeyde kurduğu etkileşimi şekillendirmedeki önemini vurgulamaktadır.

Sonuç olarak çalışma, dijital araçların yalnızca teknik destekler değil, aynı zamanda kültürel hikâyelemenin etkin bileşenleri olduğunu ileri sürmektedir. Bu araçlar, müze sergileme pratiklerini kapsayıcılığı, erişilebilirliği ve dinamik etkileşimi teşvik ederek genişletmekte; görsel iletişim tasarımını kültürel mirası hem koruyan hem de yeniden tahayyül eden kritik bir ortam olarak konumlandırmaktadır.

Anahtar Kelimeler: *Kültürel Miras, Mekânsal Anlatılar, Projeksiyon Haritalama, Görsel İletişim Tasarımı, Dijital Müzecilik*

Introduction

Cultural heritage is not merely about preserving traces of the past; it is also a living memory continually reshaped through the narrative tools of the present. With the advancement of digital technologies, the modes of representing heritage have undergone significant transformation, particularly within museology and exhibition practices. Exhibition experiences shaped by space, light, typography, and interactive media reconfigure how visitors engage with cultural narratives, while strengthening the aesthetic and affective dimensions of spatial storytelling.

This article aims to explore how cultural heritage can be re-represented through digital tools from a design-oriented perspective. Centered on A Special Chest (2024), exhibited at Designmuseum Danmark, the study draws on findings from a semi-structured interview with the project's designer, Jakob Thorbek. His spatial narrative-constructed through the aesthetics of light, typography, and objects-offers a meaningful example of how cultural memory can be simultaneously preserved and reinterpreted in a contemporary language.

The study situates digital interventions in cultural heritage representation within a broader theoretical framework, focusing on themes such as visual communication design, spatial narrative, and visitor experience. Furthermore, qualitative insights from the creative process of a professional designer shed light on the interpretive role of design in cultural

representation, while also demonstrating the potential of interviews as a research method in design studies. These theoretical approaches serve as guiding principles for the analysis of A Special Chest at Designmuseum Danmark.

Theoretical Framework

Culture enriches our lives in countless ways, encompassing elements such as historical monuments, museums, living heritage practices, and contemporary art forms. It contributes to building inclusive, innovative, and resilient communities (UNESCO, 2025). In this broad sense, culture is not merely a practice of preserving the past but also a process of creative reproduction oriented toward the future, shaped by the aesthetic and technological possibilities of the present.

Cultural heritage is a valuable and irreplaceable resource. Economic globalization and accelerated modernization have profoundly affected not only natural ecology but also cultural ecology, bringing heritage under serious threat. Today, many cultural and natural sites are being damaged for various reasons and are at risk of extinction. Moreover, in regions with rich cultural heritage, changes in living conditions accelerate the disappearance of national and regional cultural characteristics (Zhong et al., 2021, p. 535). Cultural heritage is a dynamic collection of narratives that carry the tangible and intangible traces of the past into the present. However, this heritage is not merely preserved; it is continually reinterpreted according to the aesthetic, technological, and social values of each era. In this context, cultural memory is not just stored knowledge but a reconstructed and visually mediated experience (Assmann, 2008). In the digital age, the representation of cultural heritage transcends physical display and takes on an interactive and experiential form through new media tools (Giaccardi, 2012).

Yet this process builds on a multilayered accumulation of the past. McLuhan summarized the social impact of technology with the statement: “We shape our tools, and thereafter our tools shape us” (McLuhan, 1964). This view emphasizes that technology not only provides functional tools but also transforms our perception, modes of thinking, and social relations. Lyotard (1984, p. 47), however, challenges the optimistic belief that digital technologies foster democratic relationships between users and institutions. He argues that while these technologies encourage multiple narratives and access to information, they often reproduce existing power structures. Taken together, these perspectives reveal that digital cultural heritage projects both reshape representational forms and the processes through which cultural memory is perceived, while simultaneously being constrained by existing cultural and institutional frameworks.

Michel Foucault’s concept of “heterotopia” refers to special places in which all other spaces of a culture are simultaneously represented, contested, and inverted (Foucault, 1986, p. 24). Museums, in this sense, have historically functioned as spaces where crises of historical consciousness and memory are debated, while also serving as instruments for negotiating national identity and collective memory (Crane, 1997). Thus, museums are not

merely spaces for displaying artifacts but also heterotopic places that reconstruct social memory and present multiple realities.

The curator, as the professional responsible for the management of museums, has been a key figure in the development of modern museology. Dominique Vivant Denon of the Louvre, with his chronological arrangement, and Wilhelm Bode of the Berlin Museum, with his thematic approach, are among the pioneers who shaped the modern concept of the museum (Artun, 2006, p. 173).

Culture sustains itself through communication, and the transformation of communication by technology necessitates a reevaluation of culture itself. The shift brought about by the internet and new communication technologies marks the emergence of “digital culture.” Digital technologies are no longer mere tools but have become integrated into culture, playing an active role in participatory cultural practices (Gere, 2019, p. 232).

The static and one-way model of traditional museology gave way to participatory, multidirectional, and interactive knowledge-sharing practices with the rise of the “new museology” in the 1980s. Contemporary museum spaces now employ new technologies to gamify experiences and adapt to changing digital habits, with the aim of becoming more transparent and inclusive (Ergin, 2022, p. 202). As defined by the International Council of Museums (ICOM): “A museum is a not-for-profit, permanent institution that researches, collects, conserves, interprets and exhibits tangible and intangible heritage, fostering diversity, sustainability, and community participation” (ICOM, 2022).

Digital design functions as an “intervention” in the representation of cultural heritage. Rather than erasing or distorting the past, this intervention seeks to reframe it within a contemporary context and reconnect it with audiences. Here, the designer is not only a mediator but also a narrative constructor. The digital reconstruction of elements such as space, objects, and typography transforms cultural representation into a multisensory experience (Manovich, 2001, pp. 41-42; Colomina, 1996). Site-specific works, in particular, reshape visitors’ perceptions of time and memory, enabling the re-imagination of the past. Compared to heritage sites and monuments in the physical realm, digital mediums allow for a far more dynamic presentation of cultural heritage assets with greater opportunities for display (Harland & Xu, 2021).

Visual communication design, in this sense, becomes not merely a surface of mediation but the narrative itself in the encounter between cultural heritage and contemporary audiences. Typography, light, moving images, and sound create a narrative atmosphere within exhibition spaces. Colomina (1996, p. 6) argues that modern spaces are increasingly “designed to be viewed” and that architecture has turned into a kind of mediatic surface. Today’s museum design reinforces this notion through digitalization. Visitors thus become not only receivers of information but also active subjects who experience and reinterpret meaning.

As Khan (2023) notes: “Graphic design can be the spirit of any museum. With a playful approach using graphics and modern techniques such as projection mapping, scenography,

Virtual Reality, and holographic displays, the effect can be astounding. It helps to provide context to the exhibits by placing them in a historical or cultural perspective.”

Similarly, as InsideMuseumWalls (2025) emphasizes: “Visual communication design is not just about making things look good. It is also about storytelling... helping museums connect with their audiences more effectively, making the experience memorable and impactful.”

The representation of cultural heritage is not solely an institutional or historical activity but also a domain of personal interpretation (Desai et al., 2020, p. 89). Through digital tools, designers bring the past into dialogue with contemporary aesthetics while determining which aspects of the narrative to highlight. In this sense, the designer occupies a selective and transformative role both in terms of content and form. Jakob Thorbek’s A Special Chest project exemplifies how a cultural object can be reconfigured through contemporary visual language.

Recent academic research on the digital representation of cultural heritage stresses that digital technologies are not only documentary tools but also vehicles for creating interactive, narrative-based experiences. Visual communication design is thus becoming increasingly central in reconstructing cultural narratives. Chu and Mazalek (2019, p. 7), for example, propose the Tangible and Embodied Narrative Framework (TENF), which demonstrates how digital storytelling can trigger meaning-making for visitors and guide the design of interactive museum experiences. Similarly, Kocatürk et al. (2022, p. 59) argue that intangible cultural heritage can be transmitted through spatial storytelling, showing how sensory and spatial layers transform the heritage experience.

Jaillot et al. (2020, p. 6) examine how digital urban heritage tools can be opened up to public engagement through interdisciplinary methods, highlighting the role of user participation in the reproduction of cultural memory. This perspective resonates with Li and Cai’s (2024, p. 106) study, which advocates participatory design in community museums and explores how spatial narratives can be shaped through user-centered approaches. Simon (2010) similarly emphasizes that interactive museum applications position visitors not only as information recipients but also as producers of meaning. As Miao, Bahaiddin, and Feng (2024, p. 6) note: “Spatial narrative theory examines how museum spaces convey historical, cultural, and social meaning through design. A museum is not only a place where objects are displayed but also a medium where cultural and social stories are communicated through spatial arrangements, symbols, and interactions.”

Additionally, Wimalasuriya et al. (2022, p. 82) propose a conceptual framework focusing on the development of on-site digital interpretation processes in cultural heritage spaces. This model situates technology as an interface between visitor and knowledge, producing highly applicable practical solutions. In line with this, Themistocleous et al. (2022) introduce digital twin models that document cultural heritage with high-accuracy 3D representations, expanding the possibilities of visual storytelling.

Technologies such as VR, AR, and AI offer new opportunities for enhancing user interaction in the digital presentation and preservation of cultural heritage. Yet the risk of cultural homogenization in the context of globalization persists, making it essential to strike a balance between interactivity and cultural authenticity. While research in Europe tends to focus on historical artifacts and monuments, studies in Asia prioritize intangible heritage. Future research should therefore develop context-sensitive strategies aligned with regional needs and technological capacities (JiaXing et al., 2025). This approach underscores the necessity for design processes in digital cultural heritage projects to consider both technological innovation and local cultural context.

Taken together, these models reveal the critical role that visual communication strategies—particularly typographic elements, light-based installations, and site-specific narratives—play in engaging visitors. In this way, cultural heritage is not merely preserved but continually reconstructed, acquiring new meanings within contemporary contexts.

Method

This study was designed within a qualitative research framework and conducted through the holistic evaluation of multiple data sources. The primary aim was to explore the digital reinterpretation of cultural heritage and to discuss the design methods employed in this process.

As a primary data source, a written interview with Jakob Thorbek was conducted via email on August 11, 2025. The interview provided insights into both the designer's creative process and the underlying rationale of projection-based spatial narrative practices. Rather than being presented solely in a question-answer format, the interview material was restructured and integrated into the theoretical framework and case study sections of this article.

However, the research was not confined to a single interview. Throughout the study, a wide range of academic articles, museum descriptions, theoretical perspectives (e.g., Foucault, Manovich, Miao, among others), and sectoral reports were examined, alongside reviews of current museological practices. These additional sources not only supported the interview findings but also enabled their critical interpretation.

For data analysis, a qualitative content analysis was employed. The interview and literature materials were coded under thematic categories such as “spatial narrative,” “relations between light and typography,” “digital aesthetics,” and “reinterpretation of cultural heritage.” These themes were then integrated into the case analysis section, providing a coherent interpretative structure.

This research thus constitutes a qualitative case study focusing on the digital representation of cultural heritage. Jakob Thorbek's *A Special Chest* (2024) project was selected as the case because it functions as both an object-centered and space-centered digital narrative. This qualitative approach enabled an in-depth exploration of the designer's creative thinking, visual language choices, and interpretive stance toward cultural heritage.

Designmuseum Danmark, where the project was exhibited, has been housed since 1926 in the former Royal Frederik's Hospital, one of Denmark's finest Rococo buildings. The museum is recognized as a significant example of Kaare Klint's approach to design, which integrates function with tradition (Designmuseum Danmark, 2022).

Cameron (2003, p. 337) emphasizes that digital technologies reshape two principal approaches in the presentation of museum collections and the production of knowledge: modernist and postmodernist narrative forms. Postmodern strategies allow visitors fragmented and subjective interpretive freedoms, opening pathways for individual exploration, while modernist texts preserve authority, accuracy, and contextual integrity. In digital heritage environments, these two forms often coexist, enabling both free exploration and reliable knowledge acquisition. Jakob Thorbek's application at Designmuseum Danmark exemplifies this duality: the designer produced motion design projections while maintaining modernist information delivery through physical wall texts.

As digital experiences become increasingly central to cultural heritage institutions, the need for structured approaches to understand and manage design processes has intensified. The Digital Cultural Heritage Design Practices framework developed by Mason and Vavoula (2021) is not a prescriptive model of what should be designed but rather a conceptual tool for analyzing how design occurs within the unique contexts of cultural organizations. This framework shifts the focus away from a purely technological lens and toward a human-centered perspective that understands design as a complex, collaborative, and knowledge-producing practice (Mason & Vavoula, 2021). visuals but to attempt to convey or evoke this deeper cultural resonance, or at least acknowledge what is lost in translation.



Figure 1. Integration of motion graphics and static wall-based textual narration within the A Special Chest installation at Designmuseum Denmark.

As Berk (2017, p. 273) notes, the narrator/interpreter is a figure who transports museum or heritage site visitors into the past, offering them a staged story accompanied by dramatic

content, and at times embodying a character to make the audience a witness to the event. This narrator may allow visitors to feel as though they are eavesdropping on a scene, or personalize the experience by recounting a historical moment through the eyes of a well-known figure. A similar “narrator” function can be observed in Jakob Thorbek’s project at Designmuseum Denmark. Through his integration of motion design and wall-based informational graphics, Thorbek not only presents the object itself but also positions the display as a narrative interface that conveys the object’s historical context and cultural value.

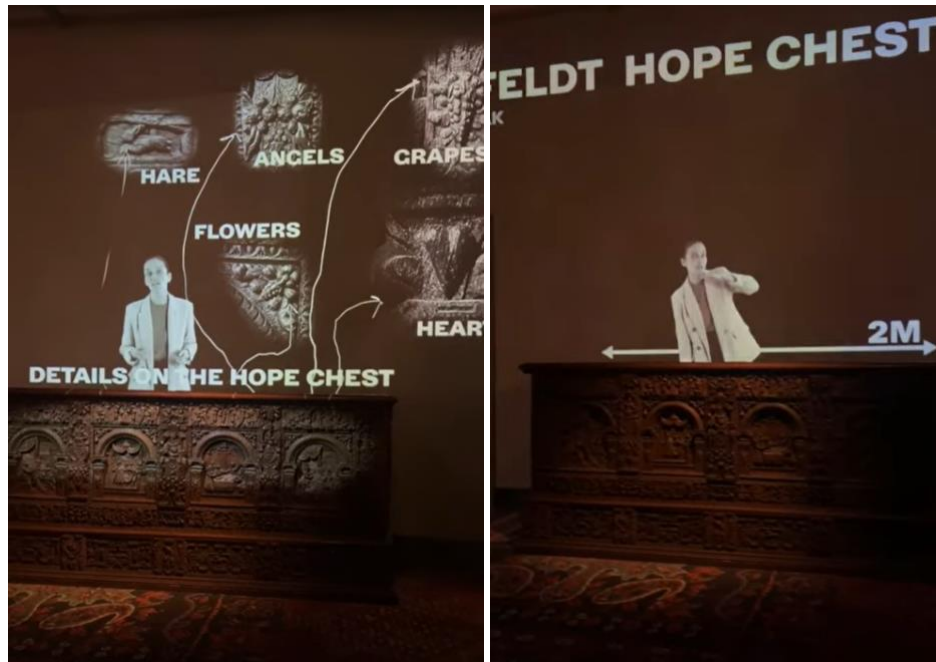


Figure 2. Projection still from *A Special Chest* installation at Designmuseum Denmark, featuring an informative female narrator voice-over synchronized with animated symbols, numbers, and textual elements.

The use of projection and tablet technologies in museums has become an important means of enriching visitor experiences. Projection technologies allow artworks to be presented impressively by casting them onto large surfaces, while projection mapping applications contribute to understanding the narratives behind the artworks (Toksöz, 2023). Tablets, on the other hand, enhance visitor engagement through interactive content and, particularly via augmented reality applications, create opportunities for educational experiences (Lanir, Wecker, Kuflik, & Felberbaum, 2016; Charr, 2024).

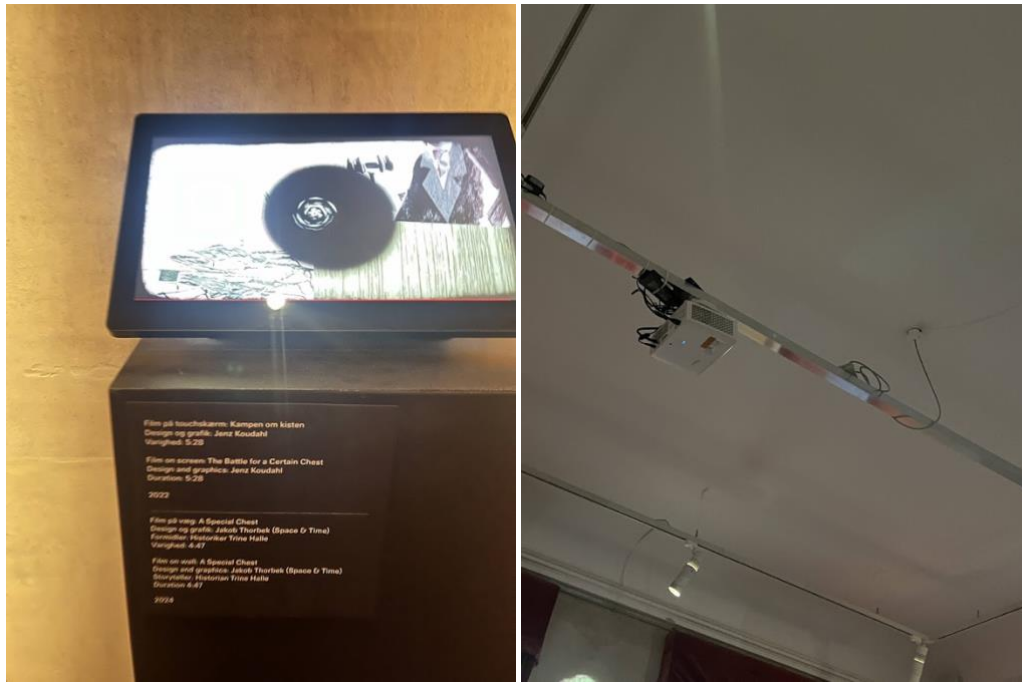


Figure 3. Exhibition setup of A Special Chest at Designmuseum Denmark, showing the projection devices and tablet interface

Three-dimensional museums, employing virtual reality (VR) and augmented reality (AR) technologies, represent a new generation of institutions that allow visitors to experience historical artifacts in interactive and immersive ways. These platforms enable greater interaction with objects, offering opportunities to examine them from multiple perspectives, explore interiors, and access additional contextual information (Kırık, 2024).

The primary dataset of this study derives from a semi-structured online interview conducted with project designer Jakob Thorbek. The questions were shaped around predetermined thematic categories; however, the conversation unfolded flexibly through probing questions that facilitated deeper insights. The interview focused particularly on the following themes: approaches to cultural heritage, the design process, visual language choices, sources of inspiration, and modes of audience engagement. Data from the interview were analyzed through thematic analysis.

The interview transcript was coded around themes that aligned with the research questions. During this process, both pre-established theoretical categories (e.g., “spatial narrative,” “digital representation,” “memory and design”) and emergent themes that surfaced during the dialogue (e.g., “designer identity,” “typographic gestures,” “storytelling with light”) were identified. Manual coding was employed to trace recurring patterns and clusters of meaning, which subsequently informed descriptive interpretations. The interview was conducted entirely on a voluntary basis. Informed consent was obtained prior to the use of the responses for publication. The participant explicitly authorized the use of his name and project. In presenting the data, minor editorial adjustments were made to enhance clarity without altering the substance of the responses.

As a researcher producing academic work in the field of visual communication design, the author approached this study with both analytical and creative perspectives. Familiarity with design processes facilitated meaningful dialogue during the interview and enabled a more layered interpretation during analysis. This positionality allowed the researcher to maintain a balance between insider understanding and critical distance.

Findings

The qualitative findings of this study draw not only from the literature review but also from practitioner insights. In this context, the written interview conducted on August 11, 2025, with Jakob Thorbek, founder of Space & Time ApS, offered a direct design perspective on spatial visualization, projection technologies, and the digital interpretation of cultural heritage. Thorbek's reflections contribute to situating the museum case study within a broader framework.

Theme 1: Design Philosophy and Creative Process

Thorbek emphasized that when working with cultural heritage, he often begins intuitively, but later adopts a more analytical and disciplined approach. In his view, practical constraints can become opportunities for creative solutions; limitations may themselves serve as active components of the design (J. Thorbek, personal communication, August 11, 2025).

Theme 2: The Creation Process of A Special Chest

The project was developed in close collaboration with curator Trine Halle. The objective was to produce an expert video that was directly connected to the chest yet more immersive than a conventional screen-based presentation. Due to the requirement for bilingual presentation and the limited availability of visual material, subtitles became an active part of the design. The process involved key stages such as green screen filming, storyboarding, animation, projection mapping, and optimizing light and sound within the space (J. Thorbek, personal communication, August 11, 2025).

Theme 3: Visual Language and Typography

The typefaces employed in the project were considered integral to the spatial narrative. The selected fonts played a supportive role, complementing the historical texture of the space.



Figure 4. Exhibition room view of A Special Chest installation at Designmuseum Denmark.

Theme 4: Sources of Inspiration

Thorbek cited inspiration from Bill Viola's use of moving images and light within spatial contexts, from the hybrid approach of Imaginary Forces in blending live footage with motion graphics for the title sequence of *Se7en*, and from the cross-media aesthetic of the Tomato collective (J. Thorbek, personal communication, August 11, 2025).

Theme 5: The Role of Visual Communication Design

According to Thorbek, visual communication design makes cultural heritage accessible to broader audiences. By re-staging objects and narratives, it offers perspectives that go beyond traditional exhibition methods and establishes an immediate, emotional connection between the viewer and heritage (J. Thorbek, personal communication, August 11, 2025).

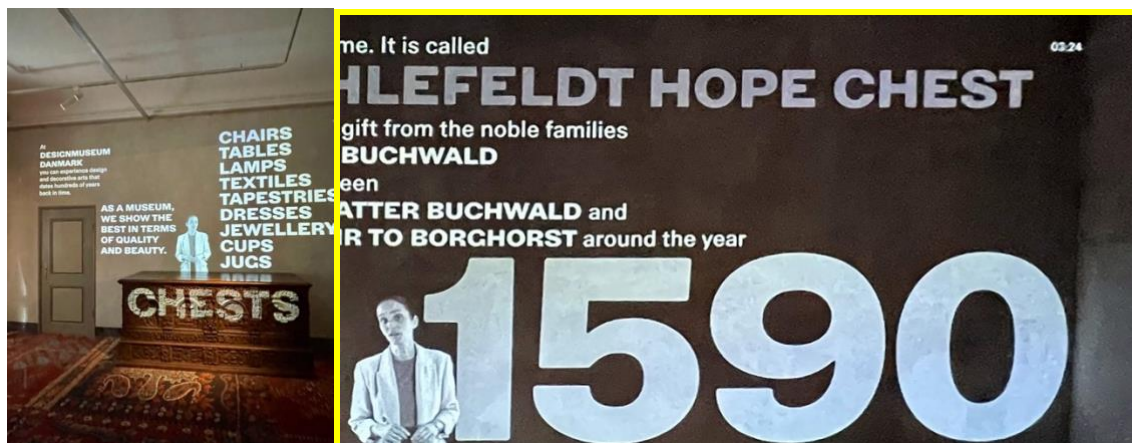


Figure 5. Close-up view of motion graphic elements in A Special Chest

Personal Design Approach and Relationship with Cultural Content

Thorbek's design approach reveals a constant negotiation between intuition and structured analysis. While he acknowledges that his initial responses to cultural content are guided by

instinct, these impressions gradually evolve into methodical, research-based design decisions. This balance allows him to preserve the emotional resonance of heritage objects while ensuring their narratives remain accessible to contemporary audiences.



Figure 6. Exhibition room view of A Special Chest installation at Designmuseum Denmark.

In projects such as A Special Chest, Thorbek's sensitivity to cultural context is evident in his choice of visual language, the integration of typographic gestures, and the orchestration of light and sound. Rather than treating heritage artifacts as static exhibits, he seeks to establish a dialogue between object, space, and viewer. This relational perspective underscores his belief that cultural content is not only to be preserved but also actively reinterpreted through design.

From the researcher's standpoint, this approach highlights the potential of design practice as both an interpretive and critical tool. By positioning himself as both a mediator and co-creator of meaning, Thorbek exemplifies how visual communication design can move beyond representation to foster new forms of cultural experience.

Case Study: A Special Chest Project

The Designmuseum Danmark stands as a central institution for both national and international design heritage, functioning as a "site of design memory" by juxtaposing historical collections with exhibitions that address contemporary global challenges (Designmuseum Danmark at 3DaysofDesign, 2025). This curatorial stance reflects a broader paradigm in heritage institutions where the museum is not only a repository of objects but also an active mediator of cultural meaning.

Within this context, Jakob Thorbek-designer and founder of Space & Time ApS-creates interactive installations, spatial visualizations, motion graphics, and online projects for clients in Denmark and abroad. Large-scale international projects are realized through close collaboration with the New Zealand-based Gibson Group, enabling Thorbek to position his

work simultaneously in local cultural narratives and within global design frameworks (Space & Time ApS, 2025).

The A Special Chest project exemplifies how Designmuseum Danmark employs contemporary strategies to reinterpret cultural heritage. Its exhibition strategy does not merely present objects but actively generates new experiential forms through digital mediation (Charr, 2024). Thorbek's contribution integrates historical resonance with innovative design solutions, illustrating how digital aesthetics can expand heritage interpretation beyond traditional modes.

A key dimension of the project is the integration of projection and typographic elements as interpretive layers. Rather than serving as a neutral display, projection became a tool for re-narration: the chest's surface functioned as a canvas where light and text intertwined. Typography, typically a medium of clarity and information, here gained atmospheric and narrative qualities, resonating with the museum's architectural context. In Thorbek's words, "constraints can become active components of design" (J. Thorbek, personal communication, August 11, 2025). This framing emphasizes how limitations-whether technical or contextual-can catalyze creative solutions that reimagine cultural objects for contemporary audiences.

The spatial composition further shifted the visitor's role from passive spectator to active participant. By embedding the chest within an immersive digital environment, the installation facilitated co-created meaning, where cultural memory was experienced through multiple sensory registers. In this sense, A Special Chest aligns with post-digital aesthetics, where physical artifacts are not displaced but re-read through computational overlays that both inform and transform.

Ultimately, the project demonstrates that cultural heritage is not solely a matter of preservation but of ongoing translation into contemporary design languages. It serves as a bridge where traditional materiality encounters digital re-mediation, offering visitors an affective, narrative, and reflexive encounter with history. As Mason and Vavoula (2021) note, such practices highlight how digital interpretation can generate new forms of cultural connectivity, ensuring heritage remains both relevant and resonant in the present.

Thematic Findings and Discussion

akob Thorbek's responses reveal that his design approach to the digital representation of cultural heritage is grounded in a balance between intuitive creativity and analytical structuring. This perspective resonates with Wimalasuriya et al. (2022), who propose a framework for in-situ digital interpretation of heritage sites that integrates technology with visitor experience. Thorbek's ability to transform practical constraints into creative opportunities also aligns with Li and Cai's (2024) user-centered spatial narrative methodology.

In A Special Chest, the subtitles became an active element of the visual design, a strategy that can be associated with Chu and Mazalek's (2019) Tangible and Embodied Narrative Framework (TENF). While TENF emphasizes the importance of engaging audiences

through multiple forms of interaction, Thorbek's solution managed to establish a direct connection with visitors despite limited visual material and the bilingual format. This suggests that constraints can, in fact, serve as productive forces driving creative design.

Thorbek's use of light and typography within the spatial context parallels Kocatürk et al.'s (2022) approach to enriching intangible heritage experiences through spatial storytelling. The symbolic layering of light and typography provoked both cognitive and emotional responses, reinforcing Themistocleous et al.'s (2022) observations on the narrative potential of digital twin models in spatial contexts. Moreover, UNESCO's (2003) Convention for the Safeguarding of Intangible Cultural Heritage highlights that such practices contribute not only to aesthetic innovation but also to cultural sustainability.

Thorbek also cites artistic influences such as Bill Viola, Imaginary Forces, and Tomato, underscoring how moving images, spatial immersion, and cross-media aesthetics intersect in his work. This synthesis echoes Jaillot et al. (2020), who argue that digital heritage tools hold significant capacity to foster multidisciplinary interaction.

In this light, contemporary museums are no longer static sites of historical display but dynamic institutions actively engaged in processes of meaning-making and open to transformation (Macleod, 2005: 13). This reflects the Contextual Model of Learning, which suggests that visitor experience is shaped not only by physical space but also by personal and sociocultural contexts (Falk & Dierking, 2013).

Finally, Thorbek's framing of visual communication design as a means of enhancing accessibility to heritage and facilitating emotional engagement situates his work at the core of current debates on participatory and experience-centered museum design. Within both the theoretical framework and the case study, these findings reaffirm the transformative role of visual communication design in shaping cultural heritage narratives.

The Role of Digital Intervention in Representation

"The design process should be understood as a negotiation between human intention and the affordances and limitations of the tools employed" (Mason & Vavoula, 2021). This approach is particularly significant in cultural heritage-focused digital design, as the balance between the designer's vision and the technical infrastructure defines both the quality of the process and the depth of meaning in the resulting work.

Through the example of A Special Chest, this study illustrates how digital intervention can add new layers to the representation of cultural heritage. Digital technologies not only facilitate the visualization of physical artifacts but also transform the ways audiences engage with them, creating multisensory and participatory experiences. Here, digital intervention functions as a tool of "re-staging," blending the historical context of cultural objects with contemporary narrative forms, and enabling collective memory to be reinterpreted from multiple perspectives.

Within this process, the designer's role as an "interpreter" becomes decisive. Jakob Thorbek's design approach exemplifies a multilayered process that evolves from an

intuitive beginning toward analytical and technical implementation. The designer is not merely the shaper of visual language but also a storyteller who builds meaning bridges between cultural content and audiences. In this sense, visual communication design transcends purely aesthetic concerns by making heritage objects accessible, comprehensible, and emotionally resonant.

The involvement of professional practitioners constitutes a further advantage in reconstructing cultural narratives. Close collaboration with the curator ensured both the accuracy of content and the coherence of representation, while design elements such as typography, light, and spatial arrangement were developed in alignment with curatorial vision. Such collaborations allow cultural heritage projects to draw upon multiple disciplines, resulting in richer and more polyphonic narratives.

Finally, the contemporary representation of collective memory through digital aesthetics enables a redefinition of the relationship between audiences and heritage. Light-based installations, typographic elements, and spatial projections position heritage not merely as a relic of the past but as an active component of present-day cultural experience. In this way, heritage is both preserved and re-signified within contemporary visual culture.

The following table presents the four main themes identified through Braun and Clarke's (2006) thematic analysis, together with sub-codes and selected direct quotations from the participant. The analysis aims to foreground the designer's perspective within the broader contexts of digital cultural heritage representation, visual communication design, and spatial narrative.

Table 1. Thematic Schema Analysis: Jakob Thorbek Interview

Theme	Sub-Codes	Interview Quotations
1. The Role of Digital Intervention in Representation	- Enhancing the representational power of digital technologies - Moving beyond traditional exhibition formats	<i>"By re-staging heritage objects or stories, one can offer perspectives that go beyond conventional displays or signage."</i>
2. The Interpretive Designer Identity in Visual Communication Design	- Intuitive beginnings, analytical process - Transforming technical limitations into creative advantages	<i>"I like to start intuitively and gradually become more analytical and disciplined. Practical obstacles... become part of the solution."</i>

3. Reconstructing Cultural Narratives Through Professional Practitioners	- Collaboration with the curator - Multilingual content design - Story-driven technical process	<i>“Developed in close collaboration with curator Trine Halle... the subtitles became an active component of the visual design.”</i>
4. Contemporary Representation of Collective Memory through Digital Aesthetics	- Emotional impact of light and typography - Relationship between space and memory - Inspirational sources (Bill Viola, Tomato, Imaginary Forces)	<i>“The works of Bill Viola sparked an early interest in using moving images and light within spatial contexts.”</i>

The four main themes summarized in the table were derived from the interview data coded using thematic analysis (Braun & Clarke, 2006). This method makes it possible to identify meaningful patterns in qualitative data, thereby enabling in-depth interpretation within both visual communication design and digital cultural heritage. Compelling narratives and storytelling techniques can foster an emotional connection between the user and the artifact or collection, while high-quality images and multimedia elements further enhance the immersive qualities of digital heritage platforms (Lee, 2025).

The first theme, the role of digital intervention in representation, highlights how digital technologies become not merely tools for display but also active instruments of meaning-making, as emphasized in the studies of Themistocleous et al. (2022) and Wimalasuriya et al. (2022). Thorbek’s practice of integrating subtitles into the design process parallels Li and Cai’s (2024) notion of “participatory and accessible exhibition.”

The second theme, the interpretive designer identity in visual communication, resonates with the role described in Chu and Mazalek’s (2019) Tangible and Embodied Narrative Framework, in which the designer acts as a mediator who merges intuitive and analytical processes. Thorbek’s emphasis on “turning constraints into creative opportunities” aligns with the innovative problem-solving practices identified by Jaillot et al. (2020) in their research on digital heritage tools.

The third theme, reconstructing cultural narrative through professional practitioners, demonstrates how collaboration between the curator and the designer can strengthen spatial storytelling. This corresponds directly with Kocatürk et al.’s (2022) concept of “spatial storytelling.” Thorbek’s work alongside the curator enables the heritage narrative to be re-created within an authentic and contextually grounded framework.

Finally, the contemporary representation of collective memory through digital aesthetics is evident in the emotional potential generated by multimedia integration and inspirations from artists such as Bill Viola. This approach aligns with Manovich's (2002) concept of the "media-enriched space" within digital aesthetics. Lev Manovich's work is considered groundbreaking because it offers a systematic and rigorous theory of new media within the historical context of visual and media cultures over the past few centuries (Manovich, 2002). Similarly, Paul (2015) emphasizes the transformative capacity of digital aesthetics in shaping audience perception, particularly through spatial media installations.

Overall, this analysis demonstrates that the interview data offer more than descriptive insights; they provide deeper findings that can be meaningfully connected to conceptual frameworks within the literature.

Conclusion and Recommendations

This study, through the case of A Special Chest, highlights the potential of digital technologies in preserving and reinterpreting cultural heritage from a holistic perspective. Jakob Thorbek's design language, which integrates light, typography, and spatial narrative, transforms cultural heritage objects from mere displays into experiences that engage visitors on both emotional and cognitive levels. The use of multilingual subtitles as an active component of visual design not only enhanced accessibility but also preserved aesthetic integrity, thereby enabling cultural content to be conveyed inclusively.

By examining cultural heritage through the lens of design, this research demonstrates that digital interventions are not merely technical innovations but also creative strategies that enrich layers of meaning. In this context, Thorbek's design process—beginning intuitively and gradually evolving into an analytical structure—presents a flexible model that transforms practical constraints into creative opportunities.

The use of semi-structured interviews as the primary research method underscores the importance of qualitative data collection in academic design research. Interviews provided direct access to the designer's creative process, sources of inspiration, and technical strategies, thereby yielding contextual insights that could not have been achieved through visual analysis alone. In this regard, the study exemplifies how conceptual frameworks identified in the literature can be tested through a concrete project and illustrates how interview data can be effectively integrated into design research.

Findings also reveal that spatial storytelling significantly enriches visitor experience in the digital interpretation of cultural heritage. In particular, projection mapping and interactive interfaces were shown to strengthen the interaction between object, space, and audience. Future research should focus on developing participatory and context-sensitive models by supporting spatial storytelling practices in community museums with ethnographic observation. Furthermore, comparative studies of digital interventions across different scales and contexts (e.g., open-air heritage sites, community museums, or entirely virtual exhibitions) are recommended. To gain a deeper understanding of visitor experience, combining interview data with methods such as eye-tracking, emotional response

measurement, or participant observation could provide multidimensional insights. Additionally, the active involvement of local communities in the design process would contribute to making cultural heritage projects more inclusive and sustainable, both contextually and globally.

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References (Visual Sources)

Figure 1. Integration of motion graphics and static wall-based textual narration within the A Special Chest installation at Designmuseum Denmark.

Source: Ünal Gerdan, S. (2025, August). Design Museum, Copenhagen, photo series [Digital photograph]. Personal archive.

Figure 2. Projection still from A Special Chest installation at Designmuseum Denmark, featuring an informative female narrator voice-over synchronized with animated symbols, numbers, and textual elements.

Ünal Gerdan, S. (2025, August). Design Museum, Copenhagen, photo series [Digital photograph]. Personal archive.

Figure 3. Exhibition setup of A Special Chest at Designmuseum Denmark, showing the projection devices and tablet interface

Ünal Gerdan, S. (2025, August). Design Museum, Copenhagen, photo series [Digital photograph]. Personal archive.

Figure 4. Exhibition room view of A Special Chest installation at Designmuseum Denmark.

Source: Jakob Thorbek, personal archive, visual shared within the interview (2025).

Figure 5. Close-up view of motion graphic elements in A Special Chest

Source: Jakob Thorbek, personal archive, visual shared within the interview (2025).

Figure 6. Exhibition room view of A Special Chest installation at Designmuseum Denmark.

Source: Jakob Thorbek (@jakobthorbek) • Instagram fotoğrafı. (2024). Instagram. <https://www.instagram.com/p/C6Vd2oqsNRs/>