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Folding memory: The Swahili *khanga* as a contemporary design language

Juliet M. Kavishe, Greenside Design Center

Abstract

This design research explores the intersection of traditional African textile heritage and contemporary design practice through the reinterpretation of the Swahili *khanga.* Using the *khanga's* standard dimensions (3000mm x 1100mm) as a template, this paper investigates how traditional cultural artefacts can be transformed into modern design elements while maintaining their cultural significance and storytelling. The research uses a critical design methodology that translates the *khanga's* communication qualities, traditionally expressed through written proverbs and visual motifs, into a new design language that utilises Morse code patterns. This transformation acts as a cultural protest against the erasure of African design systems and principles, demonstrating how traditional communication methods can be preserved and reimagined through contemporary design interventions. The resulting product, a screen/cupboard, functions both as a practical object and a cultural narrative device, embodying the principle of *mtu ni watu* (a person is a people), emphasising the interconnectedness of community and design. The project challenges the traditional view that globalisation erases cultural differences by showing how cultural identity can be preserved while engaging with modern design practices. By drawing on influences from East African textiles, the screen/cupboard acknowledges the complexity of contemporary African identity and respects cultural traditions. The design process demonstrates how African-centred design can be rooted locally and remain globally relevant without sacrificing cultural integrity. This research contributes to the broader discourse on cultural preservation in design by introducing a novel methodology in tandem with the critical design methodology. This methodology treats traditional artefacts not as static historical objects but as living design languages that can be reinterpreted and revitalised. The transformation of textile-based communication into architectural spatial elements demonstrates how African design principles can inform contemporary spatial practices while preserving indigenous knowledge systems. The project suggests that celebrating African-centred design requires preservation and active reinterpretation, allowing traditional design elements to evolve while maintaining their cultural significance. This offers a model for how designers can address cultural pride and preservation globally, transforming inherited knowledge into future heirlooms that bridge generational and cultural gaps.

Keywords: *Khanga*, cultural artefacts, Morse code patterns, contemporary spatial practices

Introduction

Design practice increasingly faces the challenge of creating meaningful objects that transcend mere functionality to embody cultural significance and narrative depth. The "Folding Memory" project addresses

this challenge through the development of the *kunja/kunjua* screen. This multifunctional design object serves simultaneously as a spatial divider, storage system, and cultural artefact.

The *kunja/kunjua* screen was designed by the author in 2024 as part of the Future Heirlooms project, sponsored by American Hardwood Export Council (AHEC) and furniture manufaturer Houtlander (Smith 2025). In this project, five African designers were tasked with designing a piece of furniture that could house a family or cultural heirloom. This paper documents the design development process and theoretical framework that informed the project's creation, developed through a practice-based research approach that combines material experimentation with critical cultural analysis. The project emerged from questions about how traditional African design principles can inform contemporary furniture development while preserving indigenous knowledge systems and cultural meanings, offering insights into methodologies for culturally informed design practice.

This screen emerges from an examination of how traditional African design principles can inform contemporary product development while preserving indigenous knowledge systems and cultural meanings. The *kunja/kunjua* screen, named after the Kiswahili words for "fold" and "unfold", represents a response to the question: What does the act of folding and storing an heirloom that embodies language, written script, communication, and heritage within an object that protects, displays and embodies heritage look like? (Always Welcome 2024). This inquiry drives the development of a contemporary furniture piece that maintains physical and conceptual connections to traditional Swahili textile practices while functioning effectively within modern spatial contexts.

The design adopts a template based on the traditional Swahili *khanga* (3000mm x 1100mm) dimensions. The project's primary innovation lies not in textile preservation but in the creation of a new typology of culturally informed furniture that demonstrates how traditional communication systems can be reimagined through contemporary design language. The screen's panels feature Morse code patterns derived from the Swahili proverb *mtu ni watu* (a person is a people), creating a unique fusion of traditional wisdom and modern communication technology.

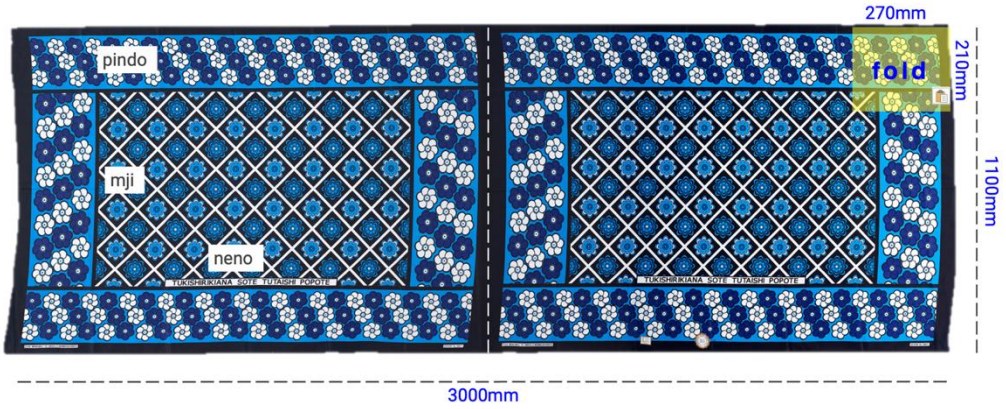

Figure 1: Parts and dimensions of the Khanga from folded to unfolded (Author 2024)

Constructed primarily from American oak with brass hardware, the *kunja/kunjua* screen embodies the concept of the future heirloom, objects designed to bridge generational and cultural gaps while maintaining relevance across time. This approach challenges conventional design paradigms that prioritise novelty over cultural continuity, instead proposing a methodology where contemporary objects serve as repositories for cultural memory and meaning.

The significance of this project extends beyond its immediate functional applications to address broader questions about cultural preservation, design methodology, and the role of objects in maintaining cultural continuity. By demonstrating how traditional African design principles can inform contemporary spatial practices while preserving indigenous knowledge systems, the *kunja/kunjua* screen offers a model for culturally informed design that is both locally rooted and globally relevant.

Theoretical framework

Cultural translation theory

The development of the *kunja/kunjua* screen is grounded in cultural translation theory, which provides a framework for understanding how cultural meanings can be transferred across different contexts while maintaining their essential significance. Bhabha's (1994) concept of cultural translation emphasises the dynamic process of meaning-making that occurs when cultural elements move between different contexts, creating new possibilities for understanding and expression while preserving core cultural values. His notion of the "third space" (Bhabaha 1990) is particularly relevant to this project, as the Morse code translation creates a hybrid space where traditional Swahili communication intersects with a modern communication system without cultural appropriation.

In the context of this project, cultural translation manifests in the transformation of textile-based communication systems into architectural language. The traditional *khanga's* function as a message-bearing medium is preserved through the integration of Morse code patterns, creating what might be termed architectural typography that maintains the original communicative intent while adapting to contemporary spatial contexts.

Spivak's (1993) work on the ethics of translation provides crucial guidance for this methodology, emphasising the importance of maintaining respect for source cultures while creating new possibilities for cross-cultural understanding. Spivak's (2008) concept of ethical translation supports the project's approach of preserving cultural meaning while adapting communication systems to contemporary contexts.

Material culture theory

Material culture theory offers crucial insights into how objects serve as repositories for cultural knowledge and social relationships. As argued by Ankora (2022), African textiles serve as markers of national identity, functioning as tangible connections to cultural heritage that transcend their immediate practical applications. The theoretical framework is crucial for understanding how the *kunja/kunjua* screen functions not merely as furniture but as a cultural artefact that embodies traditional values and knowledge systems.

Bourdieu's (1986) theory of cultural capital provides additional theoretical grounding for understanding how traditional textiles function as markers of cultural knowledge and social belonging. The *kunja/kunjua* screen operates as a form of cultural capital, encoding traditional knowledge within contemporary design language while maintaining its accessibility to those familiar with Swahili cultural traditions.

The screen's material composition, featuring American oak and brass, reflects contemporary interpretations of traditional artisanry values, emphasising quality, durability, and natural beauty. These material choices align with Miller's (1998) arguments about how objects acquire social meanings through their material properties and cultural associations. The selection of premium

materials signals the object's intended function as an heirloom, while their contemporary treatment ensures relevance within modern contexts.

Figure 2: Detail photograph of the *kunja/kunjua* screen illustrating the custom brass hinges, American oak panels and brass display rods (De Pina 2025)

Benjamin's (1936) concept of aura in reproduced objects provides theoretical depth to the idea of the future heirloom, particularly his discussion of how authentic objects maintain their cultural significance across technological and temporal boundaries. The *kunja/kunjua* screen maintains its cultural aura through the preservation of traditional proportions and meanings while adapting to contemporary manufacturing processes.

Spatial practice theory

Lefebvre's (1974) theory of spatial practice provides crucial insights into how objects function within spatial contexts to create meaning and facilitate social relationships. The *kunja/kunjua* screen operates across multiple spatial registers: as furniture that organises domestic space, as an architectural element that provides privacy and division, and as a cultural artefact that creates opportunities for storytelling and cultural transmission.

The screen's dual functionality as a storage and display device reflects what Lefebvre (1974) terms "differential space", a space that serves multiple functions simultaneously while maintaining coherence of purpose. This theoretical framework helps explain how the screen manages to function effectively as practical furniture while maintaining its identity as a cultural artefact.

The integration of Morse code patterns into the screen's surface creates what might be understood as inscribed spaces, spaces that carry encoded messages requiring active engagement from users to decode meaning. The approach transforms the screen from a passive medium into an interactive cultural space that facilitates deeper engagement with traditional knowledge systems.

Critical design theory

Critical design theory, as articulated by Dunne and Raby (2013), provides the methodological framework for understanding how design can function as a form of critique and social commentary. The *kunja/kunjua* screen embodies critical design principles by challenging conventional assumptions about furniture design, cultural preservation, and the relationship between tradition and innovation.

The project's transformation of textile proportions into furniture scale represents what critical design theory terms design provocation, a design intervention that challenges existing categories and creates new possibilities for understanding. By applying textile proportions to furniture design, the project

questions conventional furniture typologies while creating new categories of culturally informed objects.

Post-colonial design theory

Post-colonial design theory provides essential context for understanding the cultural and political dimensions of the *kunja/kunjua* screen project. As argued by Escobar (2018), design has historically functioned as a tool of colonial control, imposing Western aesthetic and functional standards while marginalising indigenous knowledge systems. The *kunja/kunjua* screen project represents a form of decolonial design that centres African knowledge systems while engaging with contemporary global design practices.

Scott's (1998) analysis of how state systems impose simplified categorisations on complex indigenous knowledge provides context for understanding the colonial disruption of traditional African design systems. His work supports the project's emphasis on preserving indigenous design knowledge while adapting it to contemporary contexts where the traditional *khanga* garment becomes a template for a contemporary screening/storage device.

Mbembe's (2001) work on postcolonial African identity and cultural production provides theoretical grounding for understanding how the screen functions as a form of cultural resistance and identity assertion. His concept of entanglement between traditional and contemporary forms supports this project.

Emphasis on preserving and reinterpreting traditional African design principles to align with postcolonial design theory's call for epistemological diversity in design practice. By demonstrating how traditional African proportions, communication systems, and cultural values can inform contemporary furniture design, the project challenges the dominance of the Western canon of design while creating new possibilities for culturally informed practice.

The screen's function as a repository for traditional proverbs and cultural knowledge reflects what postcolonial theory terms cultural sovereignty, the maintenance of indigenous knowledge systems and cultural practices despite colonial disruption.

Methodology

Critical design methodology

The development of the *kunja/kunjua* screen employs a critical design methodology that treats traditional cultural artefacts not as static historical objects but as living design languages capable of reinterpretation and contemporary application. This methodology involves four primary phases: cultural research and analysis, conceptual translation and development, material selection and refinement ending with cultural validation and community engagement.

Rather than beginning with market analysis or user needs assessment, the methodology starts with deep cultural research aimed at understanding the social, symbolic, and practical functions of traditional design elements.

Cultural research and analysis

The initial phase of the project involved extensive research into historical, social and symbolic functions of the Swahili *khanga* within East African culture. The *khanga* is a printed multipurpose cotton piece (worn also by men) that is a staple of female fashion in East Africa (Picarelli 2015). The

khanga emerged as a distinctive garment that transcended mere clothing to become a medium of communication and cultural expression.

Key findings included the *khanga's* standardised proportions (3,000mm x 1,100mm), its pattern design sections of *pindo* and *mji*, its function as a message-bearing medium with the *neno*, through the integration of proverbs and sayings, and its adaptability to multiple social contexts and functional requirements.

The research phase also examined the broader context of African textile traditions, drawing on scholarship by LaGamma and Giuntini (2008) and Labode and Braide (2022) to understand how symbolic designs function within African textile art. LaGamma and Giuntini's (2008) concept of African textiles as representing design without end provided a foundational understanding of how traditional textile frameworks allow for infinite possibilities in meaning-making and cultural expression. This research established the theoretical foundation for understanding how textile-based communication systems might be translated into contemporary design contexts.

The symbolic significance of African textiles extends beyond their immediate functional purposes. Labode and Braide (2022) emphasise that symbolic designs in African textile art serve as repositories of cultural knowledge, encoding complex social meanings and traditional wisdom within their patterns and motifs. The *khanga* exemplifies this principle, with each textile containing proverbs, sayings and visual elements that communicate messages about social relationships, moral values and cultural identity (Ong'oa 2008).

The Swahili *methali* (proverb) *mtu ni watu* (a person is a people) emerged as the central philosophical principle guiding the project. This proverb encapsulates the interconnectedness of individual and community identity, providing both a conceptual framework and specific content for the design development process.

Conceptual translation and development

The second phase involved translating cultural research findings into concrete design concepts through systematic cultural translation. This process began with the adoption of the *khanga* dimensions and proportions as the foundational template for the screen design, ensuring physical and conceptual continuity between the textile and the furniture object.

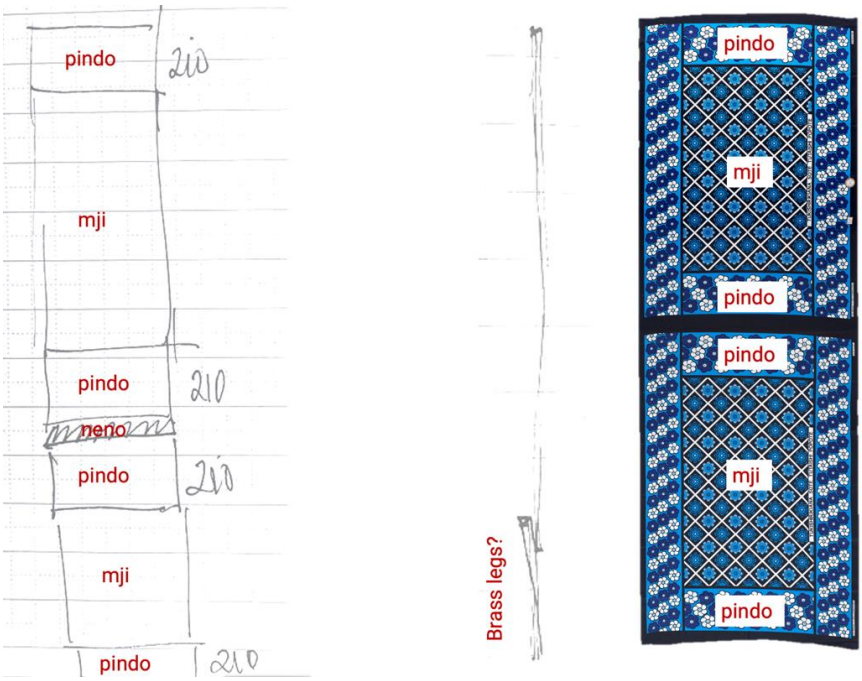

Figure 3: Working with the Khanga proportions and pattern sections to develop the *kunja/kunjua* screen design

The central innovation of this phase was the development of a new visual language based on Morse code translations of traditional Swahili proverbs. The proverb *mtu ni watu* was systematically translated into Morse code patterns: mtu: **-- –..-** | ni: **- [...]** | watu:**.--.- –..-**. These patterns were then adapted for integration into the screens panels, creating a unique fusion of traditional communication content and contemporary visual language.

Table 1: Morse code interpretation (Author 2024)

Swahili word	Morse code pattern	Meaning
mtu	-- –..-	person
ni	-...	is
watu	.--.- –..-	people

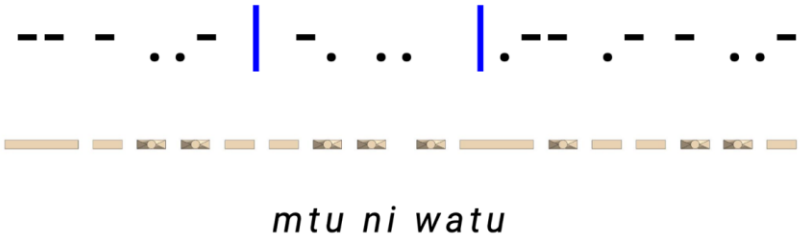

Figure 4: Morse code conversion to screen panel pattern repetition

This translation approach builds on Spivak's (1993) framework for ethical translation, ensuring that the cultural meaning of the original proverb is preserved while creating new possibilities for cross-cultural communication and understanding.

Material selection and technical development

The third phase focused on translating conceptual design into material reality through careful selection of materials, manufacturing processes, and technical details. The choice of American oak as the primary material reflected both practical and symbolic considerations. Oak's structural properties make it suitable for furniture applications requiring durability and precision, while its association with artisanry traditions aligns with the project's emphasis on creating a future heirloom.

Figure 5: Sketches (3D) of the screen illustrating materiality, scale and reconfiguration from screen to cupboard

The integration of brass hardware serves multiple functions: providing necessary structural support for the panel system, creating visual contrast that highlights the Morse code patterns, and referencing traditional metalworking practices within African artisanry traditions. The brass elements also contribute to the screen's identity as a premium object worthy of intergenerational use and inheritance.

The proportions of two screen panels, with a height of 3000mm and a width of 1,100mm, maintain a direct correspondence to traditional *khanga* dimensions, while translating effectively to architectural scale. These proportions create an object that functions as both furniture and architectural element, capable of organising domestic space while serving as a cultural focal point.

Cultural validation and community engagement

Throughout the development process, particular attention was paid to ensuring cultural appropriateness and authenticity. This involved ongoing consultation with cultural knowledge holders and community members familiar with Swahili textile traditions. The goal was to ensure that the cultural translation process maintained respect for traditional knowledge systems while creating new possibilities for cultural expression.

The validation process also involved examination of how the screen would function within contemporary cultural contexts, particularly diaspora communities seeking to maintain connections to traditional practices while adapting to contemporary living situations. This consideration influenced decisions about scale functionality and aesthetic treatment to ensure relevance.

The final screen height was then reduced from 3000mm to 2400mm; however, the *khanga* proportions were still maintained in this scaled-down version to accommodate standard domestic or commercial ceiling heights.

Discussion

Innovation in cultural translation

The *kunja/kunjua* screen represents a significant innovation in the field of cultural translation within design practice. Unlike conventional approaches that treat traditional cultural elements as aesthetic inspiration, this project demonstrates how cultural content can be systematically translated into contemporary design language while preserving essential meanings and functions.

The integration of Morse code patterns derived from traditional *Kiswahili* proverbs creates a new form of architectural typography that maintains the *khanga's* essential function as a communication medium while adapting to contemporary spatial contexts. This approach successfully bridges the gap between traditional communication systems and contemporary visual language without compromising the integrity of either system, demonstrating what Bhabha (1994) terms the productive potential of cultural hybridity.

Spatial practice and functional innovation

The screen's dual function as a storage system and spatial divider represents a significant contribution to contemporary furniture design. By adopting the proportional template of traditional textiles, the project creates a new furniture typology that functions effectively within modern spatial contexts while maintaining connections to conventional practices.

The panel system serves multiple functions simultaneously: providing access to storage space, displaying cultural content, and creating opportunities for user interaction through the encoding and decoding of messages.

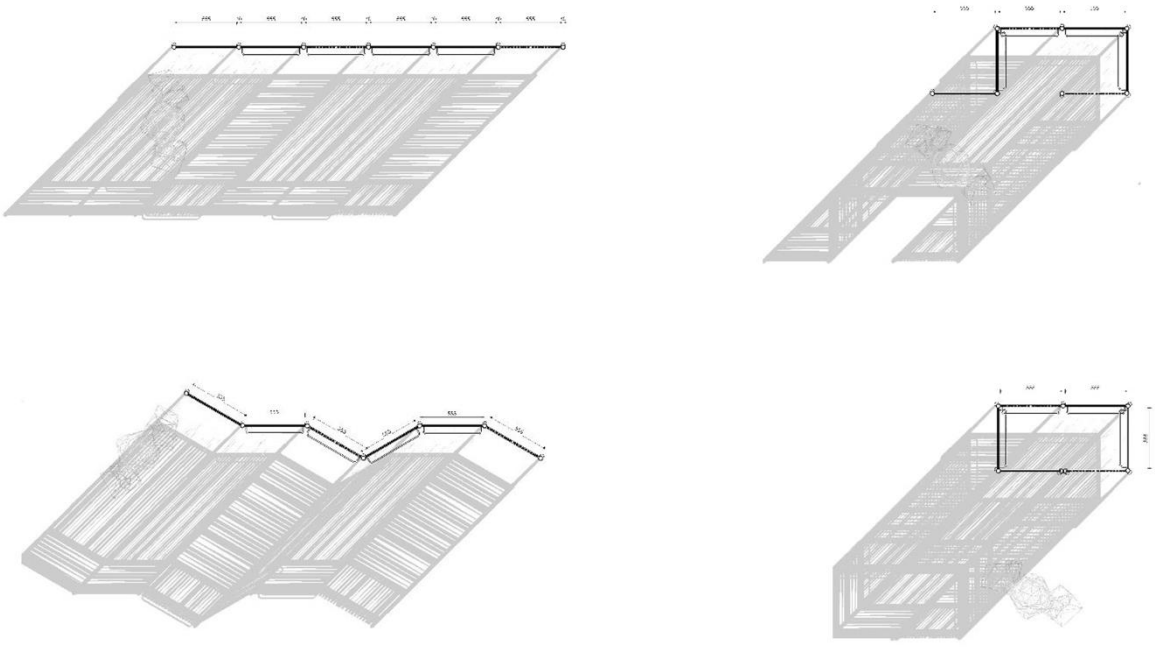

Figure 6: Plans of the screen in its various configurations as a screen and as a cupboard

Material culture and symbolic meaning

The *kunja/kunjua* screen's function as a future heirloom represents a significant contribution to contemporary discussions about material culture and the longevity of objects. By combining premium material with cultural content, the project creates an object designed to maintain relevance across generations while serving as a repository for traditional knowledge.

Drawing on Benjamin's (1936) concept of aura, the screen maintains its cultural authenticity through the preservation of traditional proportions and meanings while adapting to contemporary manufacturing processes. This approach ensures that the object retains its cultural significance while functioning effectively within a modern context.

Figure 7: Photograph of the *kunja/kunjua* screen (De Pina 2025)

Implications for design education

The *kunja/kunjua* screen project offers several important implications for design education, particularly in developing culturally informed design methodologies. The project demonstrates the value of incorporating deep cultural research curricula, moving beyond superficial aesthetic appropriation toward meaningful cultural engagement.

Design educators could adopt this projects three phase methodology as a framework for teaching cross cultural design ethics. The systemic approach to cultural translation provides students with concrete tools for engaging respectfully with traditional knowledge systems while creating contemporary objects.

Furthermore the projects emphasis on creating "future heirlooms" introduces students to concepts of design longevity and intergenerational responsibility, challenging prevalent paradigms of planned obsolescence and trend driven design. This approach encourages students to consider the long term cultural and social impacts of their design decisions.

The methodology offers practical pedagogical applications:

- **Research methods:** Teaching systemic cultural investigation techniques

- **Translation frameworks:** Providing ethical guidelines for cross cultural design engagement
- **Material consideration:** Emphasising the cultural significance of material choices
- **Community engagement:** Demonstrating the importance of cultural validation processes

Methodological contributions

The project's critical design methodology represents a significant contribution to culturally informed design practice. The approach to cultural translation, involving research, conceptual development, and material realisation, provides a reliable framework for other designers seeking to engage with traditional knowledge systems.

This approach aligns with postcolonial design theory's emphasis on epistemological diversity (Escobar 2018), demonstrating how indigenous knowledge systems can inform contemporary design practice while maintaining their cultural integrity.

Cultural preservation and contemporary relevance

The *kunja/kunjua* screen successfully addresses the challenge of maintaining cultural relevance while preserving traditional knowledge systems. Rather than requiring users to adopt conventional practices in their original forms, the project creates contemporary objects that embody traditional values and meanings while functioning effectively within modern contexts.

The screen's ability to serve diaspora communities seeking to maintain cultural connections while adapting to contemporary living situations demonstrates the project's broader social significance. By creating objects that function as cultural bridges, the project contributes to efforts to maintain cultural continuity across geographical and generational boundaries.

Conclusion

The *kunja/kunjua* screen represents a significant achievement in culturally informed design practice, by demonstrating how traditional African design principles can inform contemporary furniture development while preserving indigenous knowledge systems and cultural meanings. Through its integration of traditional proportions, communication systems, and cultural values into a contemporary furniture typology, the project offers a compelling model for design practice that is both locally rooted and globally relevant.

The screens' development through critical design methodology provides valuable insights into processes of cultural translation within design practice. By treating the traditional Swahili *khanga* not as aesthetic inspiration but as a living design language capable of contemporary reinterpretation, the project demonstrates how cultural preservation can involve active reinterpretation.

The integration of Morse code patterns derived from the Swahili proverb *mtu ni watu* creates a unique form of architectural typography that maintains traditional communication functions while adapting to contemporary spatial contexts. This innovation, grounded in Bhabha's (1994) theory of cultural hybridity and Spivak's (1993) framework for ethical translation, suggests new possibilities for creating culturally meaningful objects that serve both practical and educational functions within modern living environments.

The project's methodological contributions extend beyond its immediate applications to suggest new frameworks for culturally informed design practice. The systemic approach to cultural research, conceptual translation, and material realisation guides other designers seeking to engage respectfully

and effectively with traditional knowledge systems, supporting postcolonial design theory's call for epistemological diversity (Escobar 2018).

Perhaps most significantly, the *kunja/kunjua* screen demonstrates that contemporary design can serve as a vehicle for cultural preservation and transmission without compromising either cultural authenticity or contemporary functionality. By creating objects that honour traditional practices while meeting present needs, the project suggests possibilities for design practice that contribute to cultural continuity while remaining relevant for contemporary users.

The *kunja/kunjua* screen thus represents not merely a successful design object but a demonstration of possibilities for design practice that serves both individual needs and collective cultural preservation – folding memory into form and unfolding meaning for future generations.

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