# Hybrid Translation of Miao Butterfly Patterns for Cultural Preservation and Innovation in the Era of Globalization

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**Received** November 12, 2025; **Revised** January 18, 2026; **Accepted** January 25, 2026

## Abstract

This study investigates the hybrid translation of Miao butterfly motifs in the context of globalization and cultural innovation, with fieldwork conducted in Kaili, Guizhou where the "Butterfly Mother" mythology and related craft traditions remain active. The butterfly motif, rooted in ancestral narratives and ecological cosmology, functions as both a visual emblem and a vessel of emotional meaning, symbolizing blessing, transformation, maternal protection, and spiritual continuity. Women play a central role in its intergenerational transmission, embedding symbolic and emotional layers into embroidery, batik, and silverwork. Adopting a qualitative mixed-methods approach combining literature review, ethnographic interviews, visual-semiotic analysis, and case studies. This research examines how the motif can be reinterpreted without losing its symbolic integrity. The findings reveal that 1) emotional encoding and 2) gendered craft knowledge are central mechanisms for maintaining cultural authenticity during reinterpretation, and that 3) "controlled adaptation" enables cross-media innovation while preserving recognizability and symbolic constraints. The study proposes a hybrid translation model linking cultural origin, gendered transmission, and emotional meaning with controlled visual adaptation and cross-media innovation. Overall, the study concludes that sustainable innovation is achievable when contemporary redesign is anchored in cultural evidence and transmitted craft logic rather than treating the motif as detachable decoration. Theoretically, this model advances cultural semiotics research by integrating gendered heritage transmission with emotional encoding theory, offering a structured framework for analyzing and recontextualizing intangible symbols. Practically, it provides design strategies for sustainable heritage-based innovation, including participatory co-creation, media-adaptive visual preservation, and emotionally resonant product storytelling. By

synthesizing these contributions, the study clarifies both the academic and applied value of hybrid translation as an operational pathway for cultural preservation and innovation under globalization. The results offer insights not only for Chinese ethnic heritage revitalization but also for cross-cultural design practices across Southeast Asia and the global creative industries.

**Keywords:** Miao Butterfly Motif; Hybrid Translation; Cultural Innovation; Co-Creation; Intangible Heritage Preservation

## Introduction

In the context of accelerating digital transformation, the preservation and innovative reinterpretation of intangible cultural heritage have become urgent priorities in both cultural and design practice (Ergashev & Farxodjonova, 2020). Within indigenous communities, traditional motifs function as visual languages embedded with ancestral memory, cosmological symbolism, and collective identity. Among these, the Miao butterfly motif—rooted in the "Butterfly Mother" mythology—embodies themes of fertility, transformation, maternal protection, and ecological harmony (Han & Cong, 2023).

In Miao society, this motif is predominantly transmitted through gendered practices, with women serving as both artisans and cultural stewards. Through embroidery, batik, and silverwork, they embed emotional resonance and symbolic meaning into each artifact, ensuring its continuity across generations (Zhang, 2025). These artistic practices also operate as mechanisms of cultural memory and social cohesion.

As the motif enters digital platforms and cross-media applications, it faces challenges in maintaining symbolic depth while adapting to contemporary contexts. Specifically, digital circulation and market-oriented redesign may encourage visual simplification and decontextualization, leading to the loss of ritual references, erosion of culturally embedded "rules" of form, and the risk of the motif being treated as detachable decoration rather than a narrative-bearing symbol. This study responds to these challenges of maintaining cultural depth amid contemporary reinterpretations by proposing a hybrid translation model. It examines how cultural origin, gendered transmission, and emotional encoding can be integrated with controlled visual adaptation and cross-media innovation, and thereby establishes a conceptual pathway from cultural foundations to symbolic reinterpretation and finally to contemporary design application, ensuring both theoretical rigor and practical relevance.

## Research Objectives

1. To examine the cultural origin, gendered inheritance, and emotional encoding of Miao butterfly motifs, identifying how these elements function as interconnected components within a culturally embedded visual system.

2. To analyze the mechanisms of semantic transformation and cross-media adaptation of the motifs in the context of globalization and digital innovation, with particular attention to maintaining symbolic depth and cultural authenticity.

3. To develop a hybrid translation framework that positions emotional encoding as a central mechanism, integrating cultural integrity with controlled innovation to enable the sustainable reinterpretation of intangible heritage in contemporary design practice.

## Literature Review

### Miao butterfly motifs and costume heritage

Studies on Miao dress and textile culture emphasize that traditional costume functions as a carrier of cosmology, migration memory, and ethnic identity, rather than as mere decoration (Chen, 2024). Within this broader visual system, the butterfly linked to the "Butterfly Mother" myth has been identified as a core symbol that condenses ideas of fertility, protection, and the cyclical renewal of life (Han & Cong, 2021). Research on Miao costume structures, surface patterns, and regional styles has documented how butterfly and related zoomorphic motifs appear on jackets, pleated skirts, aprons, and headdresses, particularly in ritual and festive dress (Song et al., 2024).

At the same time, work on batik and other craft practices highlights the integration of such motifs into local economies and rural development strategies. For example, studies on Miao batik show how traditional pattern repertoires are mobilized to support cultural industries and tourism, combining heritage with livelihood improvement (Quan et al., 2024). These contributions provide rich documentation of visual forms, technical procedures, and economic functions.

However, most of this scholarship remains descriptive and object-centered. It tends to catalogue motif types, garment components, and regional variations, while offering only brief comments on embedded symbolism. The butterfly motif is generally treated as one figure among many, rather than as the focus of a detailed semiotic analysis. Moreover, existing studies seldom trace in depth how mythic narratives, ritual uses, and everyday practices jointly shape the motif's cultural meaning across time. This leaves a gap between abundant visual-ethnographic data and

the need for a more fine-grained understanding of how a specific motif-such as the Miao butterfly-operates as a culturally embedded symbol that could inform contemporary design translation.

**Intangible cultural heritage, gendered transmission, and emotional meaning**

In the broader field of intangible cultural heritage (ICH), scholars underline that safeguarding living traditions requires attention to social structures, value systems, and local agency under conditions of globalization (Ergashev & Farxodjonova, 2020). Research on Miao costume and pattern production shows that women are central to the continuity of textile and embroidery knowledge, with mother–daughter teaching and village-based practice forming relatively stable "knowledge communities" (Han & Cong, 2021). These studies reveal that technical instruction is inseparable from the transmission of myths, ritual norms, and cultural rules concerning when and how particular motifs may be used.

Recent work on the preservation and revival of traditional Miao costume patterns further stresses that visual elements act as vehicles of cultural memory and identity for contemporary communities (Ajanatorn, 2025). In addition, digital methods such as knowledge graphs and deep learning have been introduced to document and protect batik culture, again highlighting the importance of organizing intangible knowledge associated with patterns (Quan et al., 2024; Qin et al., 2025).

Yet, despite this growing attention to community-based and gendered transmission, the emotional dimension of motifs often remains under-explored. References to "blessing," "protection," or "identity pride" are common, but emotion is rarely treated as an explicit analytical category or as a key mechanism in the endurance and reinterpretation of heritage symbols. Existing studies seldom examine how emotional meanings-such as maternal care, spiritual reassurance, or transformative hope-are encoded in the visual structure of motifs, or how these meanings might guide contemporary re-use. There is still a lack of integrative frameworks that connect cultural origin, gendered inheritance, and emotional meaning in a way that can inform design practice.

**Heritage-based design innovation and digital media**

In discussions of cultural heritage and design, many authors point to the tension between preservation and innovation when traditional symbols enter markets, tourism, and global media. Analyses of traditional cultural expressions stress that commercialization and intellectual property regimes can both support and endanger local creativity, depending on how closely new uses

remain linked to community values and meanings. From a design perspective, cross-cultural and cross-media translation has become a key theme, as motifs are adapted for new products, environments, and audiences (Plocher et al., 2021).

Regarding Miao visual culture specifically, recent studies on the innovative visualization of costume images explore how traditional patterns are simplified, recomposed, or stylized under contemporary aesthetic expectations. Digital technologies-such as fast style transfer for ethnic patterns-offer powerful tools for generating new design variations while preserving certain visual features of the original forms. More broadly, research on digital and interactive technologies for ICH education and preservation demonstrates that augmented reality, motion-tracking, and other immersive tools can enhance user engagement and accessibility (Cozzani et al., 2017).

Nevertheless, these studies also note the risk of symbolic flattening when patterns are extracted from their cultural context and used purely as stylistic resources (Wong & Fernandini, 2011). Many accounts discuss "innovation" or "cross-cultural design" at a general level, without scrutinizing how the semantic structure of a specific motif is affected by different modes of visual adaptation. Moreover, user perception-especially among younger, digitally native audiences-is often treated as secondary, rather than as a key factor in evaluating whether heritage-based designs successfully communicate cultural depth.

## Conceptual Framework

This study adopts a conceptual framework that positions Hybrid Translation as the central process for revitalizing the Miao butterfly motif in contemporary design, integrating cultural integrity with creative transformation. At the core lies Emotional Encoding, which connects the motif's cultural foundations to its modern expressions, ensuring symbolic depth and affective meaning are retained across media. These dimensions encompass tracing the motif's cultural roots, examining its gendered transmission, experimenting with cross-media adaptations, and validating contemporary outputs through user testing and market analysis.

These dimensions operate within a Cultural and Social Context shaped by globalization, digitalization, and market trends. Together, they form an iterative cycle: heritage knowledge and gendered practices inform emotional encoding, which guides adaptation and output, enabling sustainable, culturally grounded design innovation (Figure 1).

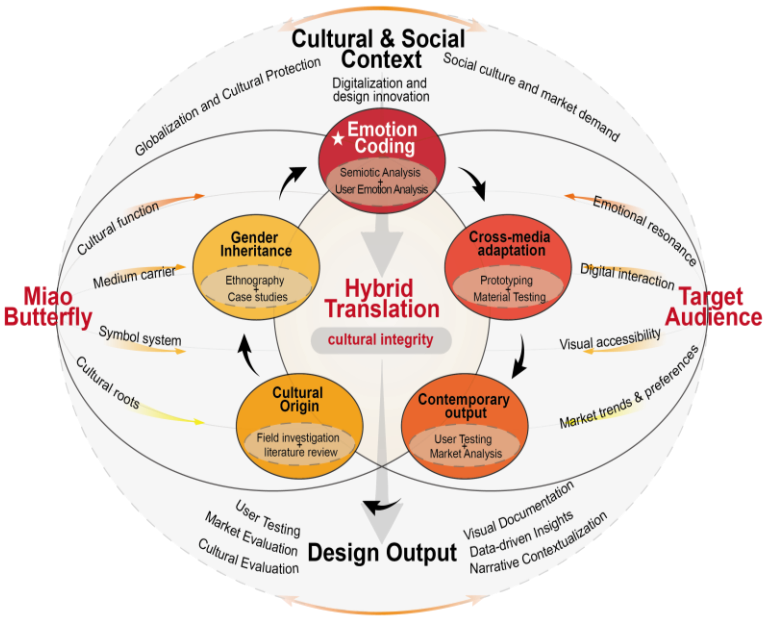



**Figure 1** Visual Reinterpretation Model of the Butterfly Motif

## Research Methodology

This study adopts a primarily qualitative mixed-methods approach, structured into three phases: cultural investigation, pattern analysis, and design experiments and user feedback (see Figure 6). The aim is to explore contemporary interpretations of the Miao butterfly motif in both form and meaning.

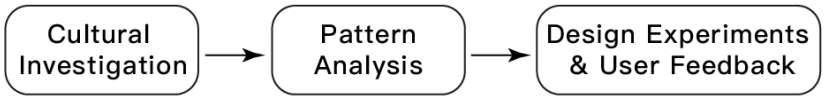



**Figure 2** Research Methodology Flow (Source: Constructed by researchers)

In the first phase, cultural fieldwork was conducted in Miao-populated regions of Guizhou. A total of 15 semi-structured interviews with local artisans and cultural bearers were carried out, complemented by 25 observed ritual and festive practices, and the collection of 30 craft samples (embroidery, batik, and silverwork). Data were recorded through interviews, observation notes, and visual documentation.

The second phase involved visual analysis of sampled motifs. Using image coding methods, the study examined structural features, color use, and symbolic composition, while identifying emotional themes embedded in narrative contexts. Selected motifs were digitized to compare differences between handcrafted and digitally rendered designs in terms of symbolic clarity and visual impact.

In the third phase, design experimentation and user testing were conducted. Based on earlier findings, five prototype designs (accessories, digital embroidery, and interactive elements) were developed. Feedback was collected from 25 Gen Z participants (ages 18–28), with the generational classification informed by commonly used definitions in academic and public discourse that place Gen Z in the cohort born approximately from the late 1990s to the early 2010s; therefore, participants aged 18–28 were selected to represent young adult Gen Z at the time of data collection. A user testing questionnaire was used to evaluate emotional connection, cultural recognition, and aesthetic appeal.

This methodology establishes a coherent path from cultural grounding to symbolic reinterpretation and design validation, ensuring that innovation remains rooted in cultural authenticity while enabling relevance in contemporary expression.

## Research Results

This study investigates the reinterpretation of the Miao butterfly motif through the lens of hybrid translation, with cultural integrity as the guiding principle. Drawing upon fieldwork, visual semiotics, and user feedback, the results are categorized into six interconnected dimensions, aligned with the visual framework's core structure.

### Cultural origin, gender inheritance, and emotion coding

#### Cultural Origin: Anchoring in Tradition

Field investigation in Guizhou revealed that the butterfly motif holds deep symbolic roots within Miao culture–representing fertility, ancestral blessing, and cyclical life. These meanings are embedded across embroidery, batik, and ritual garments. Literature reviews and interviews confirm that formal elements such as symmetrical wings and floral–vine combinations carry intergenerational mythic and cosmological narratives. Beyond these structural features, field observations show that the butterfly also operates as a key spiritual symbol in festivals and life–cycle ceremonies. It frequently appears on ceremonial garments, headdresses, ritual flags and altar textiles, where its position and combination with other images follow established ritual rules. On coats that combine bird and butterfly images, the motif is used to express harmony between different beings and continuity between ancestors and descendants. Outside of major rituals, it is still worn on everyday clothing, jewelry and household textiles, quietly maintaining links to origin stories, place–based memories and a shared sense of belonging. In this way, cultural origin is not only preserved in myth but continuously renewed through practice.

### Gender Inheritance: Intergenerational Transmission

The butterfly motif is primarily passed through maternal knowledge systems. Over 80% of interviewed artisans learned related techniques from their mothers or grandmothers before adolescence. This embodied knowledge is closely tied to life rituals such as coming-of-age ceremonies, weddings, and childbirth. Increasingly, these traditional roles are being recontextualized into collaborative spaces where women act as cultural curators and co-designers. The study also finds that this intergenerational learning goes beyond technical training. When mothers and grandmothers teach embroidery, batik or metalwork, they simultaneously transmit stories, taboos and expectations associated with the butterfly motif-such as which patterns are suitable for blessing a marriage, which are reserved for mourning, and how dense or prominent the image should be in different situations. As a result, the motif becomes a vehicle for female experience and family memory. In contemporary workshops and studios, many experienced craftswomen are no longer only producers; they increasingly give input on design direction, negotiate the limits of simplification, and help decide how traditional motifs are translated into digital prints or new product types, extending gendered inheritance into new collaborative settings.

### Emotion Coding: Semiotic Depth and User Resonance

Emotion emerged as a key factor in the reinterpretation of the Miao butterfly motif. Prototypes that retained symbolic themes-such as transformation, maternal protection, and ancestral blessing-elicited stronger user resonance than those focusing on novelty alone. As shown in Figure 3, Gen Z feedback highlights Symbolic Accuracy (72% high resonance), Cultural Relevance (80%), and Emotional Impact (76%) as dominant drivers of engagement, while Material Innovation (48%) and Visual Appeal (60%) scored lower. This indicates that users prioritize cultural depth and emotional meaning over surface aesthetics or material novelty.

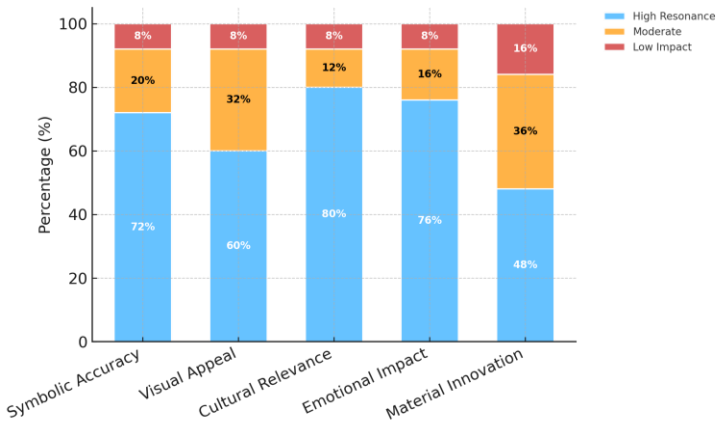



**Figure 3** Gen Z Feedback on Key Design Features (n=25)

The chart visually demonstrates that symbolic accuracy, cultural relevance and emotional impact are significantly higher than "material innovation" and "visual appeal" in the Gen Z feedback. The Cultural Inheritance X Market Attraction map (Figure 4) confirms this distinction: embroidered scarves and silver brooches excel in cultural authenticity, digital patterns and AR interaction show high market appeal but lower symbolic depth, while the batik bag balances tradition and practicality at a moderate level.

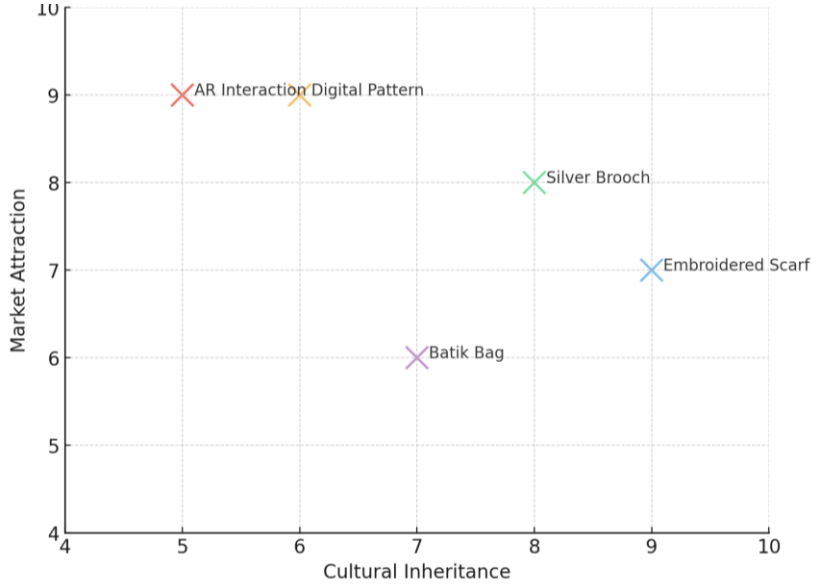



**Figure 4** Design Forms Positioned by Cultural Inheritance X Market Attraction

This diagram visually presents the distribution of different design forms between the protection of traditional culture and the adaptation to the modern market. Overall, emotion coding proves most effective when symbolic narratives are preserved while adapting to new media. By bridging cultural inheritance with contemporary appeal, the butterfly motif sustains both authenticity and relevance in global contexts. these findings indicate that emotional meaning is layered across ritual and everyday use. In festivals, the butterfly condenses wishes for protection, unity and the continuity of life; in weddings and funerals, it marks transition and frames hopes or farewells; in daily clothing and home textiles, it acts as a quiet reminder of ancestry and identity. When design translation keeps these emotional layers visible–through color choices, composition, material touch or short narratives–young users respond not only to how the motif looks, but to what it seems to “feel like” and represent in terms of care, transformation and memory.

**Semantic transformation and cross-media adaptation**

Several design iterations explored digital platforms–such as AR overlays, dynamic textile patterns, and virtual interfaces. These forms maintained symbolic consistency while enhancing interactivity and accessibility, particularly among digitally native audiences. Prototyping and material testing ensured that symbolic clarity was preserved through technological adaptation. Based on case observations, the symbolic integrity of the butterfly motif can be preserved through careful visual adaptation across media formats.

The experiments show that when key structural traits–such as bilateral wings, a clear central axis and recognizable antennae–are retained, the butterfly remains legible as a culturally grounded symbol even in highly stylized, animated or immersive environments. Digital illustration, three-dimensional modeling and extended-reality tools make it possible to zoom into details, animate transformations or place the motif within virtual ritual spaces, which strengthens experiential engagement without necessarily weakening meaning. However, when the figure is broken into fragments, over-simplified or detached from any story or context, viewers are more likely to see it as a generic decorative pattern. This suggests that successful semantic transformation in new media depends on a controlled balance: allowing color, motion and scale to change, while keeping a stable visual grammar and connecting the motif to specific cultural scenarios through captions, stories or interaction design.

**Hybrid translation, contemporary outputs and symbolic sustainability**

**Contemporary Output: Narrative-Driven Design for Market Resonance**

Although this study did not involve the creation of physical prototypes, it provides clear insights into how the Miao butterfly motif could be adapted to contemporary design in ways that resonate with younger audiences.

Survey feedback from Gen Z participants indicated strong preferences for designs that retain symbolic meaning and emotional depth. Concepts such as transformation, blessing, and protection were especially valued, suggesting that culturally grounded storytelling plays a central role in user engagement. Yiluo Studio, a design initiative that collaborates with Miao artisans, offers a valuable example of how traditional motifs can be reimagined through co-creation. Their work demonstrates how cultural meaning can be preserved while reaching new audiences through modern design and digital platforms.

Based on symbolic interpretation and user preferences, potential future applications of the butterfly motif may include wearable objects, textile expressions, and interactive experiences–formats that allow for both emotional expression and cultural continuity.

The integration of narrative proves especially important in these contemporary outputs. When products or digital experiences clearly explain why a butterfly appears in a certain position, how it relates to stories of origin, migration or women's life courses, and what kind of blessing it is meant to convey, users report a stronger sense of connection and authenticity. Co–creation settings, in which artisans share personal memories and local interpretations of specific patterns, enrich the narrative layer and give designers concrete material to translate into labels, interface texts and interactive storylines. In this way, hybrid translation becomes not only a formal transformation but also a re–staging of voices and experiences around the motif.

**Cultural and Social Context: Toward Symbolic Sustainability**

The reinterpretation of the butterfly motif must navigate broader challenges such as globalization, cultural commodification, and aesthetic homogenization. This study argues that semiotic sustainability embedding motifs in systems of emotion, ritual, and meaning is essential to maintaining relevance. This view is consistent with heritage–and–sustainability scholarship, which recognizes intangible cultural heritage safeguarding as contributing to sustainable development through cultural continuity and social inclusion (UNESCO, 2015/2016; Giliberto, 2022). Rather than replication, hybrid translation enables the motif's renewal in forms that honor origin while allowing change.

In contexts shaped by tourism, mass production, and fast visual trends, the findings highlight the risk of treating the butterfly as a detachable graphic resource. When separated from ritual roles, gendered transmission, and emotional functions, the motif becomes an interchangeable sign with limited depth. By contrast, design approaches that remain tied to concrete practices festivals, family rites, women's teaching circles, and community narratives better support long–term recognition and respect. Such practice–anchored design aligns with work on culturally responsible innovation in intangible heritage design, which stresses sustaining meaning–making systems while enabling media adaptation (Liu, 2023). Hybrid translation, therefore, is an ongoing negotiation between cultural memory, present–day use, and future audiences. Symbolic sustainability depends on continually re–embedding the motif in lived contexts, even as it moves across products, platforms, and markets.

## Discussion

This study examined the hybrid translation of the Miao butterfly motif within a framework emphasizing cultural integrity. The findings indicate that traditional motifs can retain meaning and adaptability in contemporary design when symbolic depth, cultural context, and user perception are respected.

First, the cultural origin of the motif is fundamental. Designs that respect the historical meanings and structural features of the butterfly motif are more likely to be perceived as authentic and culturally resonant. The close linkage between origin myths, ritual roles, and everyday use observed in this study echoes broader efforts to preserve and revive traditional Miao costume patterns through community–based practices and locally grounded transmission (Song et al., 2024). When contemporary design retains these underlying narratives–rather than using the motif as a detachable graphic–it aligns more closely with community expectations and strengthens cultural recognition.

Second, gendered transmission, especially through matrilineal craft practices, continues to play a vital role in sustaining the motif. This form of knowledge is now evolving through collaborative creation, where traditional skills are integrated with contemporary expression (Song et al., 2024).

Third, emotional expression emerges as a decisive mechanism for user engagement. Designs that clearly communicate narratives such as protection, rebirth, or transformation elicit stronger responses than those that emphasize formal novelty alone. The present findings show that younger users respond most positively when they can perceive both the cultural origin and the emotional intent of the motif, supporting the view that living traditions are sustained through affective as well as visual continuity (Song et al., 2024). In this sense, emotional expression is not an added layer but a core condition for successful hybrid translation.

The comparative analysis between handcrafted motifs and digital reproductions (see Figure 5) highlights a persistent tension between authenticity and adaptability. Handcrafted motifs demonstrate high emotional resonance and strong cultural recognition, owing to their rootedness in ritual contexts, material tactility, and visible traces of human labor. Digital reproductions, by contrast, can enhance symbolic clarity and aesthetic appeal through scalable adaptation, precision, and interactive effects. This duality mirrors broader debates in the field of traditional cultural expressions, where innovation can open new channels for visibility and participation, but also risks flattening meaning if it detaches symbols from their original social and ritual environments (Wong & Fernandini, 2011; Zheng et al., 2024).

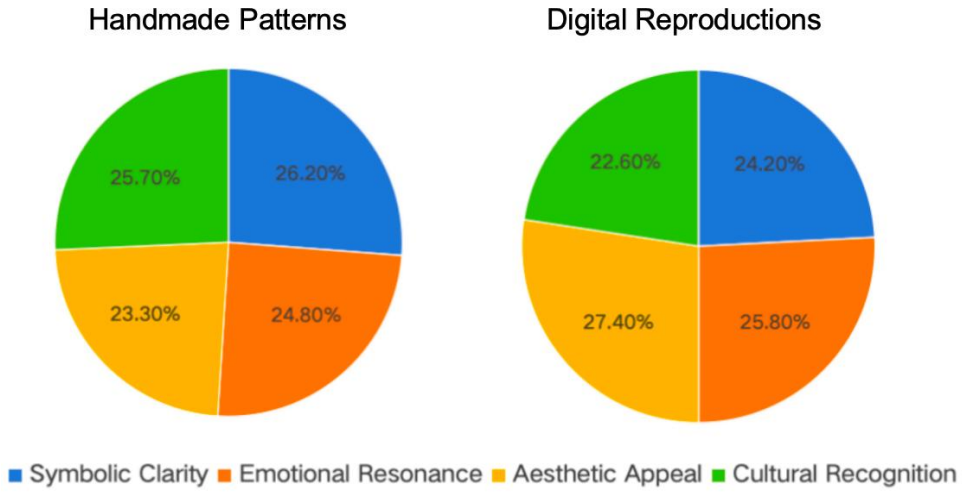



**Figure 5** Comparative analysis between handcrafted patterns and digital reproductions.

Overall, these findings suggest that the sustainable revitalization of the butterfly motif lies in a hybrid pathway–integrating the cultural authenticity of handcrafted expression with the adaptability of digital reinterpretation. Future applications should prioritize cultural storytelling and emotional value over superficial novelty, since the continuity of symbolic and emotional narratives provides a stronger foundation for cultural sustainability than form alone.

## New Knowledge from Research

This study contributes new knowledge in four main ways. First, it proposes a six–dimensional hybrid translation framework—covering cultural origin, gender inheritance, emotion coding, cross–media adaptation, contemporary output, and cultural–social context—to explain how an intangible motif can be sustainably reinterpreted. Second, it integrates cultural semiotics with user–centered design, showing that the Miao butterfly functions not only as decoration but as a carrier of narrative, memory, and meaning. Third, feedback from Gen Z participants provides youth–centered insight, indicating that younger audiences value cultural depth and emotional storytelling more than surface novelty. Finally, the study offers a visual reinterpretation model (Figure 10) that maps the flow from traditional symbol to contemporary output, giving designers and researchers a practical tool for culturally responsible innovation (Table 1).

**Table 1** Summary of New Body of Knowledge on the Hybrid Translation of the Miao Butterfly Motif

| Contribution | Core Idea | What Is New | Practical Implications |
|---|---|---|---|
| Hybrid translation framework | Six-dimensional structure for understanding motif reinterpretation | Systematically organizes the translation of an ICH motif across time and media | Serves as a checklist when planning or evaluating heritage-based design projects |
| Symbolic design integration | Links symbolic meaning with design decisions | Treats the motif as narrative- and memory-bearing, not just ornamental | Guides choices in form, color, material, and interaction to reflect cultural meaning |
| Youth-centered cultural insight | Highlights Gen Z preferences for depth and storytelling | Brings empirical youth perspectives into heritage design research | Helps shape products and experiences that appeal to young users while retaining integrity |
| Visual reinterpretation model | Maps the path from tradition to contemporary output | Provides a stepwise, visualizable process for hybrid translation | Can be used as a template in teaching, co-creation workshops, and professional design practice |

## Conclusion

This study investigated the hybrid translation of the Miao butterfly motif from both historical and local cultural perspectives. The aim was not merely to reproduce visual beauty or create novel user experiences, but to explore how cultural symbols can be sustainably revitalized while preserving their symbolic essence and collective meaning.

By constructing a six-dimensional framework-including cultural origin, gendered inheritance, emotion coding, cross-media adaptation, contemporary output, and broader cultural context-the research presents a structured approach to understanding how intangible heritage can be reinterpreted in meaningful and culturally respectful ways.

Field interviews and symbolic analysis revealed that the butterfly motif, rooted in Miao cosmology and community rituals, holds deep emotional and social value. Its reinterpretation in contemporary design-whether through storytelling textiles, symbolic accessories, or interactive formats-can enhance not only aesthetic engagement but also strengthen cultural identity and pride.

Importantly, the study argues that hybrid translation must be guided by cultural integrity, rather than solely by market demand. While user preferences and innovation are important, successful design must also reflect historical depth and ethical responsibility.

In this regard, the research also points to potential economic and social impacts of design-led cultural reuse. Drawing from observations of creative enterprises working in heritage innovation, it suggests that symbolic reinterpretation—when conducted in collaboration with local artisans—can contribute to livelihood improvement, cultural education, and community empowerment. The butterfly motif thus becomes more than a design object; it acts as a medium that bridges tradition, emotion, and economic potential.

Ultimately, this study offers a culturally grounded and socially aware model for sustainable design rooted in indigenous heritage. It provides both a theoretical foundation and practical reflection for future work that seeks to connect design innovation with cultural continuity and social meaning.

## Suggestions

### General recommendations

Heritage revitalization should be led by continuous collaboration among designers, researchers, and Miao artisans. Co-creation processes are needed at every stage—from motif selection and narrative framing to prototyping and market testing—to ensure authenticity, fair benefit-sharing, and the preservation of symbolic depth and emotional narratives embedded in the butterfly motif. Such collaboration strengthens local agency while enabling design innovation that respects cultural integrity.

Policymakers, cultural institutions, and industry stakeholders should actively support heritage-based creative enterprises that connect tradition with contemporary design and digital media. Priority should be given to initiatives that combine design, anthropology, and technology, create stable income opportunities for artisans, and develop models that are inclusive, scalable, and environmentally responsible. In doing so, the Miao butterfly motif can function not only as a cultural symbol, but as a catalyst for cultural education, tourism, and regional development.

### Recommendations for further research

Future research could extend this hybrid translation framework to other Miao motifs and to visual traditions of different ethnic groups, in order to test its applicability and refine the six-dimensional model across diverse cultural settings.

Long-term, participatory studies following specific communities or workshops over time would help clarify how gendered transmission, emotional encoding, and market pressures interact, and how hybrid translation practices evolve across generations

Further work should include a wider range of user groups—such as older community members, tourists, and international consumers—to compare how different audiences read and value hybridized motifs. Mixed-method approaches combining surveys, in-depth interviews, and experimental design testing would strengthen this line of inquiry.

Finally, more detailed investigation is needed into digital tools and workflows—such as AR, VR, and algorithmic pattern generation—to understand how they can support symbolic clarity, emotional resonance, and artisan participation, rather than driving purely formal novelty.

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