

Innovative Zhangzhou Embroidery in New Chinese-style Clothing via Comfy UI, Inspired by Minnan Culture

Xueling Hong , Hao Zhang*

Xiamen University of Technology, Xiamen, 361000, China

*Correspondence: 948828418@qq.com

Citation: Hong, X. L. & Zhang, H. (2025). Innovative Zhangzhou Embroidery in New Chinese-style Clothing via Comfy UI, Inspired by Minnan Culture. *Journal of Arts & Cultural Studies*, 4 (2), 1-16. <https://doi.org/10.23112/acs25081101>



Received: May 8, 2025
Revised: June 9, 2025
Accepted: July 12, 2025
Published: August 11, 2025



Publisher's Note: KIHSS stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2025 by the authors. Submitted for possible open-access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Abstract: *Background:* Although traditional culture plays an increasingly prominent role in China's cultural development, inadequate promotion of Minnan culture, especially Zhangzhou embroidery, has constrained public engagement. Its traditional and outdated patterns restrict integration into modern fashion. *Purpose:* This study aims to enhance public understanding of Minnan intangible cultural heritage (ICH) and highlight AI technology's role in its innovation. *Methods:* Research methods include literature review, field investigation, case studies, narrative research on ICH inheritance practices, and quantitative-qualitative integration, focusing on innovative expression. *Results:* AI technology has enabled the development of multiple sets of innovative Zhangzhou embroidery patterns, realizing the appropriate integration of Minnan cultural elements with new Chinese-style clothing, and providing practical approaches to boost the popularity of Minnan ICH and facilitate its integration into daily life. *Conclusion:* The study deepens public understanding of Minnan ICH, emphasizes AI's positive role in fashion innovation, promotes the integration of Minnan culture into new Chinese-style clothing, and supports the preservation and innovative development of traditional culture in the new era.

Keywords: Minnan culture; New Chinese style; Zhangzhou embroidery; Comfy UI; Intangible Cultural Heritage

1. Introduction

1.1 Research Background

Amid increasing globalization and frequent cultural exchanges, cultural diversity has become a key driver in modern design. Zhangzhou embroidery, a treasure of China's intangible cultural heritage, carries rich Minnan cultural meanings and history. Its innovative use in new Chinese-style fashion can help preserve traditional culture and add unique cultural vitality to modern design. As consumers increasingly seek personalized expression and cultural identity, new Chinese-style fashion — blending Oriental charm with modernity — has become a fashion trend. The market for new Chinese-style clothing has grown nearly 30% over the past five years, reflecting strong demand for products that combine tradition and modern aesthetics. Zhangzhou embroidery, with its intricate stitching, elegant colors, and meaningful patterns, offers abundant inspiration for such designs. However, the main challenge is how to capture its essence and integrate it into modern design language, creating works that fit contemporary aesthetics while retaining traditional charm. Using Comfy UI, a parametric, node-based tool, this study explores the creative integration of Zhangzhou embroidery with new Chinese-style design, aiming to provide valuable insights and examples for the field. Additionally, intangible cultural heritage bamboo weaving, with its geometric patterns and eco-friendly features, also holds design potential. By combining traditional techniques with modern technologies (e.g., digital processing),

innovations such as pattern deconstruction can be achieved while preserving the cultural essence. Addressing issues such as aging inheritors through cross-collaboration and talent development can unify traditional and modern aesthetics in fashion (Lin, 2025).

1.2 Research Purpose

This study explores the innovative application of Zhangzhou embroidery in new Chinese-style clothing design through Comfy UI. It examines the depth of Minnan culture and its modern design potential. With a long history, Zhangzhou embroidery—featuring unique stitching, diverse patterns, and strong local traits—holds significant innovative value in such design. It systematically analyzes the embroidery's core features, such as delicate simulation stitching, relief-like 3D effects, and regional auspicious patterns. By combining key Minnan elements like marine motifs, folk beliefs, and architectural decorations, the focus is on integrating traditional elements with modern design concepts, trends, and functional needs. The goal is to create garments that combine modern aesthetics and comfort with traditional charm. Zhangzhou's paper-cut art, another intangible heritage with rich patterns and unique hollowed-out visual beauty, inspires fashion design. Its application follows principles like pattern utilization, style evolution, material selection, and embroidery techniques, enhancing both artistic and commercial value while preserving cultural heritage (Wang, 2024a). To achieve this, the study employs various methods, including historical research, case analysis, design optimization, and user feedback. It integrates frameworks like "Design Thinking" (Empathy, Define, Ideate, Prototype, Test) to guide innovation. Through practical cases, surveys, and expert opinions, the study validates the effectiveness of strategies, cultural acceptance, and market feasibility. As Steve Jobs noted, "Design is how it works." This study explores how Zhangzhou embroidery "works" in new Chinese-style design—using structure, craftsmanship, symbols, and visuals to meet functional needs while enabling deep cultural narrative and emotional connection. Its goal is to balance cultural sustainability and commercial value, offering both theoretical insights and practical pathways for the field.

1.3 Research Framework

Zhangzhou embroidery, a treasured intangible cultural heritage, carries rich traditions of Minnan culture. Its innovative application in new Chinese-style clothing highlights traditional craftsmanship while boosting the vitality of modern fashion. With tools such as Comfy UI, its classic patterns, colors, and stitching can be digitized for seamless integration into modern designs. A survey shows that over 60% prefer such fusion designs, indicating a strong market demand. Combining it with modern trends, innovative materials, and diverse aesthetic styles enhances cultural value and brand uniqueness. As Alexander McQueen noted, "Fashion trends change, but cultural roots endure"—this integration embodies that principle. New Chinese-style clothing, which blends tradition and modernity, is popular among young people, serving as a cultural heritage and a source of national pride (Hu, 2024), and inspiring an exploration of how Zhangzhou embroidery meets youth aesthetics and showcases Minnan culture.

This research framework focuses on "Innovative Research on Zhangzhou Embroidery Art in New Chinese-style Clothing Design under the Comfy UI Path — An Examination of Minnan Culture." Research methods include literature reviews, field investigation, case studies, narrative research, and both quantitative and qualitative approaches, focusing on new perspectives and innovative modes of expression.

It begins with a theoretical research phase, analyzing the historical heritage, artistic value, cultural elements, and limitations on the creative transformation of Zhangzhou embroidery, in conjunction with the techniques, styles, and cultural implications of Minnan culture. Next, it focuses on applying Zhangzhou embroidery into new

Chinese-style clothing design, exploring design concepts, traditional and innovative applications, and market performance. The technical implementation phase introduces the Comfy UI framework, including its design flowchart, trend forecasting, and iterative optimization of design schemes, supported by case studies demonstrating its application in Zhangzhou embroidery for clothing. Finally, the research outlines innovation strategies that integrate inheritance and innovation, covering creative design approaches, resource integration, and brand culture expression, along with practical exploration and avenues for improvement.

1.4 Research Methods

This study uses an interdisciplinary approach, combining historical analysis, field research, case studies, and innovative design experiments to explore the application and value of Zhangzhou embroidery in new Chinese-style clothing design. The historical analysis outlines the development, core techniques, and regional traits of Zhangzhou embroidery, exploring its deep connection to Minnan culture. Field research involves visits to key production areas to document craftsmanship, interview artisans, and collect first-hand data on the current state and challenges of traditional embroidery inheritance. Case studies analyze influential brands in the emerging Chinese-style clothing sector, examining how they incorporate embroidery elements into designs and assessing market responses. Additionally, design experiments, using Comfy UI, explore how to blend embroidery patterns, textures, and techniques with digital design, 3D modeling, and customizable production to create prototypes that balance tradition, regional identity, and modern demands. Through these methods, the study aims to provide theoretical support, practical strategies, and guidance for the living inheritance and industrial upgrading of Zhangzhou embroidery.

2. Analysis of the Artistic Characteristics of Zhangzhou Embroidery and the Connotations of Minnan Culture

2.1 History and Inheritance of Zhangzhou Embroidery Art

As a key part of China's intangible cultural heritage, Zhangzhou embroidery has a thousand-year history dating back to the Tang and Song Dynasties, serving as imperial tributes and folk necessities. It reflects the social, economic, and cultural changes, embodying local wisdom, aesthetic tastes (e.g., delicate natural depictions and auspicious pursuits), and the integration of Minnan and Central Plains cultures, showcasing cultural inclusiveness. It has developed a unique style characterized by exquisite craftsmanship, rich colors (dominated by red, gold, and green, which symbolize joy and prosperity), and vivid patterns featuring flowers, birds, stories, and more. Traditional Chinese patterns, with their rich variety and profound meanings, are valuable for modern clothing design in terms of cultural heritage and innovation. This is achieved through pattern reconstruction, proportion adjustment, and color modernization, with applications in high-end and casual wear. Future trends involve a combination of digital technology and sustainable design, emphasizing a balance between tradition and innovation (Xiong, 2025). Notably, its "double-sided embroidery" (the same patterns and colors on both sides), which reached its peak in the Ming and Qing Dynasties as court ornaments, reflects superb craftsmanship. Inheritors pass it down through master-apprentice systems, family workshops, and community training. However, modernization presents challenges like industrial impact and waning interest, which risk the loss of these techniques. To revitalize it, integrating new Chinese-style clothing via digital tools like Comfy UI (which simulates embroidery and optimizes layouts) is explored, promoting innovative applications in tailoring and fabrics. Similar research has been conducted on Quanzhou glove puppetry's "python robe" (inspired by Peking Opera, featuring dragon and cloud patterns with gold-blue embroidery), which

carries Minnan folk culture and Minyue heritage through its patterns, colors, and connotations (Yan & Lu, 2020).

2.2 Techniques and Styles of Zhangzhou Embroidery

Zhangzhou embroidery, a Chinese intangible cultural heritage renowned for its exquisite craftsmanship and unique style, is an integral part of Minnan culture. Tracing back to the Ming and Qing dynasties, it has developed a distinctive artistic system over time. As a time-honored global craft, embroidery features intricate patterns, diverse materials, and flexible stitches (e.g., flat and lock stitches). Its application in clothing design—via local embellishment, thematic presentation, material integration, and color matching—endows garments with artistic beauty and cultural meaning. It influences cultural confidence, fashion trends, industrial chains, and international exchanges, emphasizing the need to integrate modern design with tradition for the coexistence of tradition and innovation (Jiang, 2024). Famous for delicate stitches (flat, lock), rich colors, and vivid animal and plant patterns, Zhangzhou embroidery, crafted with centuries of pure handcrafting, infuses cultural depth into new Chinese-style clothing. “Double-sided embroidery” (different patterns on each side) enhances artistic value and versatility. Digital techniques, enabled by Comfy UI, enable the precise digitization of traditional patterns, integrating them with modern elements to revive traditional crafts in fashion. Similar to wool embroidery (a national intangible heritage), research into its materials, techniques, and integration with modern clothing explores feasible applications, offering paths for inheritance and innovation in fashion design (Xu, 2022).

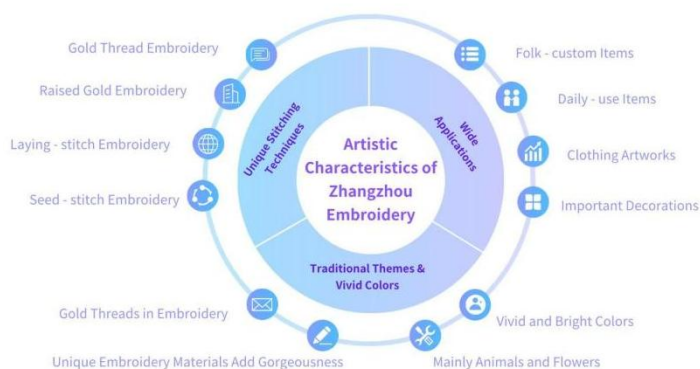


Figure 1: Artistic Characteristics of Zhangzhou Embroidery

2.3 Core Elements of Minnan Culture

Zhangzhou embroidery is an essential part of Minnan culture, bearing a profound history and distinctive regional characteristics that reflect the social and economic transformations and cultural resilience of the region. As a core aspect of Minnan folk art, it features exquisite craftsmanship (diverse stitches, clever silk use) and unique aesthetics like symbolic patterns and harmonious colors. It bridges tradition and modernity while reflecting the local people's perception of nature and life. Originating in the Song Dynasty (over 1,000 years ago), it thrived during the Ming-Qing era and continues to innovate in modern times, embodying Minnan wisdom, creativity, and respect for beauty and tradition. Drawing on Qin embroidery research, its development involves analyzing external features, such as stitches, patterns, and colors, as well as uncovering hidden meanings. It aims to establish an element gene bank and summarize strategies related to fabric, modeling, and technology (Luo et al., 2024). Research on the innovative use of Comfy UI in new Chinese-style clothing aims to merge traditional embroidery with modern design, creating works that blend modern aesthetics with traditional values. Comfy UI enables the digital processing of patterns and colors, 3D modeling, and virtual fitting, thereby preserving cultural symbols like dragon-phoenix

and flower motifs. This approach enhances cultural value, collectability, and market competitiveness through e-commerce and exhibitions such as international fashion weeks, thereby promoting Minnan culture. Traditional patterns, like bat motifs, which symbolize “blessings” due to homophony dating back to the Spring and Autumn Period, need in-depth cultural exploration. In new Chinese-style clothing, these patterns were innovated through changes in color and composition, and combined with modern styles like suits and dresses to balance tradition and modernity (Chang & Li, 2024).

3. Application of Zhangzhou Embroidery in New Chinese-style Clothing Design

3.1 Overview of New Chinese-style Clothing Design

New Chinese-style fashion has emerged as a prominent trend, combining traditional elements such as qipao buttons and stand collars with modern design concepts like simple lines and functionality. This fusion creates garments that beautifully balance contemporary aesthetics with Oriental charm. It involves innovative interpretation rather than merely combining traditional elements, thereby gaining global recognition and market acceptance. In women’s wear, innovation encompasses styles, including Sino-Western tailoring, combinations of traditional and modern colors, simplified traditional motifs with embroidery patterns, and the use of hybrid traditional and modern fabrics. This approach is promising for both domestic and international markets (Wang, 2024b). Zhangzhou embroidery, a craft originating from the Ming and Qing dynasties, enhances these designs with its intricate stitches, rich colors such as gradient blues and gold, and motifs such as phoenixes and peonies. For instance, a 2019 “Elegant Charm” collection applied it to dresses and blazers, successfully attracting young consumers via digital marketing. Designers merge traditional embroidery with digital tools, laser cutting, and 3D tailoring, thereby preserving artisanal essence while ensuring comfort and boosting market competitiveness. From an Oriental aesthetic perspective, new Chinese-style fashion features distinctive colors, evolved silhouettes, classic motifs, and craftsmanship like embroidery. This embodies the concept of being “rooted in tradition, shaped for the new” (Yang, 2023).

Table 1: Cases of New Chinese-style Clothing

Brand Name	Category	Characteristics	Examples
Uma wang	Clothing, including dresses, shirts, outerwear, pants, etc.	There are relatively few prominent Chinese-style symbols in the design. The brand focuses on fabric selection, preferring wool, cotton, linen, and real silk fabrics, and often uses aging treatments. It creates a “reclusive” feel with loose silhouettes and conducts creative work with an Eastern mindset. The style is rather artistic and implicit.	The 2016 spring-summer collection of ballet shoes was inspired by ballet itself and featured a brown fabric named after a famous ballerina. In contrast, the 2017 spring-summer series drew inspiration from the travel experiences of Luo Hao, with the colors from the photos separated and then printed onto the fabric.
Samuel Gui Yang	Clothing, including shirts, dresses, jackets, etc.	It mainly uses Western tailoring techniques and integrates Chinese elements, such as standing collars, slant plackets, and water-sleeves. It uses colors boldly and often draws inspiration from Chinese porcelain and traditional color palettes. The designs are more practical for daily use and	“Chang Dress long-shirt dress” features a standing collar, slant placket, and body-hugging dress design. The “Lee Jacket” retains the Chinese-style frog button, and the placket and waist use Western tailoring techniques. LiNa and Liuwen have both worn it.

		have a realistic approach.	
Yangkehan	Mainly dresses, with some tops and outerwear	The style is stunning and magnificent, mainly inspired by the Tang Dynasty. It uses a significant amount of cloud yarn and Song brocade fabrics. The designs have a sense of ceremonial feel, often employing loose silhouettes to convey elegance and sophistication.	The Shan Dye Black Dress was inspired by “Along the River During the Qingming Festival.” Clothing designs were inspired by historical figures and stories, such as those of Luoyang and Emperor Huizong.
T&A (Tianjia)	Women’s clothing, including outerwear, vests, dresses, bags, etc.	It mainly uses traditional Chinese handicraft brocade as the fabric, and some use real silk satin. The silhouettes are loose and sharp, with bright and solemn colors. The pattern designs mainly draw on classic Chinese traditional patterns, such as the tortoiseshell pattern and the treasure-flower pattern.	The new Chinese-style real-silk treasure-flower Song brocade outerwear “Luxurious Aroma” uses real-silk Song brocade, with emerald green as the base color, flower-pattern heavy embroidery, and is matched with golden edging and jade buttons; the new Chinese-style real-silk treasure-lower double-sided wear brocade vest “Jingcui”, with the same fabric, can be worn on both sides, and the inner side is decorated with grape-pine-nut pattern real-silk Yunjin.

3.2 Traditional Application of Zhangzhou Embroidery in New Chinese-style Clothing

As a vital part of China’s intangible cultural heritage, Zhangzhou embroidery plays a significant role in the design of new Chinese-style clothing. This traditional embroidery embodies a profound respect for time-honored culture and the inheritance of craftsmanship, while vividly showcasing the perfect integration of traditional handicraft and modern fashion trends. Renowned for its extremely intricate craftsmanship, vibrant color application, and unique patterns rooted in regional cultural heritage, Zhangzhou embroidery is not simply transplanted as decorative elements in such designs. Instead, through designers’ re-creation, the essence of the embroidery is infused into modern silhouettes, endowing clothing with rich cultural connotations and unique aesthetic value that make it stand out. For example, classic patterns in traditional Zhangzhou embroidery, such as “dragons and phoenixes bringing prosperity” and “flourishing flowers symbolizing fortune,” carry millennia-old cultural meanings of auspiciousness and nobility.

In new Chinese-style designs, designers skillfully employ partial embellishments, asymmetric layouts, and a blend of traditional fabrics with modern materials, as well as color harmonization in line with contemporary aesthetics. This approach presents clothing with a distinct style that is both elegant and avant-garde. Similarly, the She embroidery, another intangible cultural heritage with profound historical significance, has application value in clothing design through intellectual property (IP) transformation. This includes inheriting cultural connotations and craftsmanship, showcasing the charm of the She ethnicity, and meeting consumers’ personalized preferences. Specific strategies for integrating these traditional elements with modern design include emphasizing embroidery craftsmanship, focusing on cultural inheritance and storytelling, and tailoring designs for different consumer groups. The aim is to

achieve a win-win situation between ethnic cultural heritage and innovative clothing design (Hu & Min, 2024). An in-depth survey of the new Chinese-style clothing market reveals that clothing series featuring traditional Zhangzhou embroidery elements generally achieve about 20% higher sales than ordinary new Chinese-style clothing of the same grade, along with significantly better repurchase rates and consumer reviews. This strongly confirms consumers’ high recognition and appreciation of this traditional art form, and clearly reflects the market’s sustained and strong demand for clothing products that skillfully integrate traditional craftsmanship with modern design language—driving designers to continuously explore the rich potential of Zhangzhou embroidery in new contexts. Traditional tangled flower cloud shoulders showcase diverse structures, rich symbolic patterns, bold color matching, and exquisite craftsmanship. In new Chinese-style wedding dress designs, these elements achieve a seamless integration of tradition and modernity through various techniques such as direct application, decomposition, and reconstruction (Zhuo, 2024).

Table 2: Zhangzhou Embroidery on Different Clothing

Content Used	Features	Patterns
Large-scale Zhangzhou embroidery patterns are embroidered on the collars, cuffs, placket edges, and hems of dragon and phoenix gowns, cheongsams and other traditional Chinese wedding costumes	It is embroidered with gold and silver threads matched with real silk threads, using Zhangzhou embroidery techniques such as hollow seed-stitch embroidery and convex gold embroidery to make the patterns three-dimensional, vivid, and textural. The colors are mainly festive tones like red and gold, which are gorgeous and eye-catching. Gold threads outline the contours, and real silk threads fill in the details, showing exquisite craftsmanship.	Dragon and phoenix patterns, with the dragon having a vigorous body and dense scales, and the phoenix having elegant feathers and a graceful posture. They are often accompanied by wishful cloud patterns and peony patterns around. Dragons and phoenixes symbolize auspiciousness and nobility, cloud patterns represent good fortune, and peonies stand for wealth and prosperity
Zhangzhou embroidery is embroidered on local positions such as the chests, cuffs, and hems of shirts and dresses in daily new Chinese-style women’s clothing.	The stitching methods are delicate and varied, such as the flexible use of chain stitch, button stitch, and even stitch. The color matching depends on the overall style of the clothing: light colors are used for fresh styles, and strong contrasting colors are adopted for bright styles. The embroidery threads are carefully selected to complement the fabric’s texture, showcasing exquisite details.	Simple flower patterns, such as a blooming plum blossom with distinct petal layers, or a small butterfly with clear wing textures, exhibit vivid beauty. Plum blossoms symbolize tenacity and nobility, while butterflies add a lively and agile feeling.
Zhangzhou embroidery is embroidered on the center and edges of children’s clothes, such as belly bands and small jackets, in traditional children’s clothing	Soft and skin-friendly threads are used, mostly made from real silk threads. The stitching is designed to be flat, ensuring optimal comfort during wear. The colors are bright and lively, featuring combinations of vibrant colors like red, yellow, and green, to attract children’s attention. The thickness of	Auspicious animal patterns, such as lively goldfish symbolizing abundance, lovely jade rabbit representing purity, and traditional swastika patterns implying good luck and warding off evil, convey good wishes for children.

	the embroidery threads is moderate, which will not irritate children’s skin.	
Zhangzhou embroidery patterns are embroidered on the collars, cuffs, and backs of Taoist robes and other religious-related Costumes.	The stitching methods are neat and rigorous, reflecting the solemnity of the religion, usually using a hollow seed-stitch embroidery, nail gold embroidery, and other techniques. The colors are predominantly dark, such as navy blue and brown. The embroidery threads are strong and durable, meeting the needs of religious activities.	Eight trigram patterns with neat lines and clear hexagrams; Tai Chi diagrams with vivid Yin-Yang fish patterns; crane patterns symbolizing longevity and transcendence, showing the connotation of religious culture.

3.3 Innovative Application of Zhangzhou Embroidery in New Chinese-style Clothing

As an important part of China’s intangible cultural heritage, Zhangzhou embroidery art carries rich Minnan cultural connotations. In the design of new Chinese-style clothing, the innovative application of Zhangzhou embroidery not only revitalizes the traditional costumes but also promotes the integration of traditional culture and modern aesthetics. For example, by combining Zhangzhou embroidery with modern clothing design elements, designers have successfully integrated traditional embroidery techniques into details such as the necklines, cuffs, and hemlines of new Chinese-style garments, making each piece of clothing a work of art that tells Minnan stories. By sorting out the concept and organization of two-dimensional patterns, three methods for three-dimensional patterns are summarized, namely the interleaved visual method, the texture method, and the three-dimensional form method. The discussion focuses on three production technologies: shape deformation (such as splicing, overlapping, and pleating), material accumulation (including supporting materials like organza and iron wire), and new crafts (including 3D printing and hot pressing). Combined with specific cases, it analyzes how three-dimensional patterns enhance visual effects, enrich structural layers, and improve artistic value. The design practice verifies the innovative potential and application value of three-dimensional patterns in clothing design, providing theoretical and practical insights for their application in traditional patterns (Wang, 2024c).

A survey on the new Chinese-style clothing market shows that more than 60% of consumers prefer to buy clothing that incorporates traditional handicraft elements, reflecting the market’s positive response to the innovative application of traditional embroidery techniques. The influence of film and television costume design thinking on new Chinese-style clothing design reveals that, although new Chinese-style clothing is rooted in tradition and integrates modern concepts, issues such as homogenization and unclear positioning exist. Costume design in film and television follows principles such as conforming to the historical context and highlighting the character’s personality, exploring innovation in techniques and ideas. Its methods of integrating tradition and modernity, process workflows, considerations of audience positioning, balance between “realism” and “freehand brushwork,” and ideas of achieving a win-win situation in culture and business can provide references for new Chinese-style clothing, enriching its connotation and reach, and balancing cultural inheritance and commercial success (Meng, 2024).

In terms of technical implementation, the Comfy UI path provides strong support for designers. The flexibility and functional characteristics of the Comfy UI technical architecture enable designers to digitally integrate the patterns and colors of Zhangzhou embroidery into clothing design through an intuitive interface. For example, Comfy UI’s optimized design process enables easy adjustments to embroidery size, color, and layout

to suit different clothing styles and fabrics. The application of this technology not only improves design efficiency but also provides unlimited possibilities for the innovative application of Zhangzhou embroidery in new Chinese-style clothing. In a case study, designers used Comfy UI to combine traditional Zhangzhou embroidery patterns with modern geometric figures, creating a clothing series that combines both traditional charm and a modern style, which has been highly recognized by the market. Traditional paper flower-folding, recognized as an intangible cultural heritage technique characterized by a three-dimensional hollowed-out appearance, a freely reversible structure, diverse changing shapes, and bright colors, can be innovatively combined with modern clothing design from three aspects: materials (selecting appropriate fabrics by utilizing the commonality of fiber materials), structure (conducting embedded design by drawing on its similarity and variability with pleating techniques), and technology (combining modern digital printing, 3D software, etc.). This approach enriches the visual and tactile effects of clothing while preserving the cultural connotations and positive symbolism it carries, providing ideas for the innovative application of traditional crafts in fashion (Su & Wu, 2025).

In terms of innovation strategies, the combination of Zhangzhou embroidery art and new Chinese-style clothing design requires designers to inherit traditions and pursue innovation. This concept involves a deep understanding of the history and techniques of Zhangzhou embroidery, as well as the willingness to break traditional boundaries by integrating embroidery art with current popular elements. For example, combining Zhangzhou embroidery with modern colors, patterns, and fabrics to create new Chinese-style clothing that is both traditionally beautiful and aesthetically modern. This integration not only attracts young consumers but also promotes the inheritance and development of traditional embroidery art. As the famous designer Alexander McQueen said, "Fashion is fluid; it needs to be redefined constantly." The innovative application of Zhangzhou embroidery in new Chinese-style clothing design is a vivid practice of this concept. For example, regarding the cultural connotations and artistic characteristics of Miao silver ornament patterns, it is possible to analyze how both domestic and foreign designers integrate these elements (such as geometric patterns, animal and plant patterns, etc.) into clothing design. This is achieved through various techniques like printing, inlaying, and fabric transformation. It is proposed that innovative ideas, such as deconstructing and reorganizing patterns, as well as combining quilting techniques to present embossed textures, can be utilized to integrate traditional silver ornament culture with modern down jacket design. This provides valuable insights for the innovative application of intangible cultural heritage elements in the clothing industry (Zhan, 2023).

Table 3: Zhangzhou Embroidery in Modern Fashion

Content Used	Features	Patterns
Silk satin fabrics from Zhangzhou are used in products such as annual clothing and handbags to make styles like waistcoats and coats.	The traditional craftsmanship of Zhangzhou satin, characterized by "satin as the base, velvet warp for patterning," is retained, making the velvet patterns three-dimensional and as exquisite as reliefs; modern clothing-making techniques are integrated to improve the clothing version, which is more suitable for modern people's wearing habits. The colors are elegant, conforming to modern aesthetics.	There are traditional round flowers, round dragons, round phoenixes, turtle-back patterns, etc., as well as innovative "colorful eight treasures" auspicious patterns.

Zhangzhou embroidery elements are incorporated into modern clothing styles, such as stand-collar tops and embroidered waistcoats.	The stitching methods and color characteristics of Zhangzhou embroidery are combined with modern popular styles, for example, frog buttons and embroidery are integrated into windbreakers and suit jackets; the design is bold, and embroidered clothing is matched with Martin boots and baseball caps to expand the wearing scenarios; original designs are adhered to, with bamboo leaf embroidery showing the literary spirit.	Bamboo leaves with symbolic meanings are selected as patterns and some abstract geometric patterns combined with traditional elements are also created in line with modern trends.
Crafts related to Zhanazhou embroidery are used in high-end custom clothing (inferred from its application of traditional embroidery, possible innovative ideas for Zhangzhou embroidery can be drawn).	The main colors draw on traditional colors, such as the black and red of Han Dynasty lacquer ware matched with white and gold; a variety of fabrics are used, such as textured wool, environmentally friendly artificial fur with silk; three-dimensional texture embroidery and deconstructed slant placket tailoring are adopted in craftsmanship, allowing traditional patterns to be presented with 3D stitching, breaking the boundary between tradition and modernity.	Traditional patterns such as Kui dragon patterns, bronze coiled chi patterns, and cloud and thunder patterns are combined with modern designs.

4. Technical Implementation of Comfy UI in Fashion Design

4.1 Technical Architecture and Functional Features of Comfy UI

Comfy UI's architecture and features are vital for integrating Zhangzhou embroidery with new Chinese-style design. Its advanced framework enables efficient graphic processing and user interaction, providing tools for seamless fusion of traditional embroidery and modern fashion. For instance, the vector editing feature enables designers to precisely adjust embroidery patterns for different fabrics, while 3D simulation previews enhance accuracy and reduce trial costs. This approach is similar to the digital methods used in preserving Lingnan intangible heritage, such as "Xiangyunsha" (Yang, 2025). Additionally, Comfy UI's color management system is crucial for innovative embroidery colors, helping to blend traditional and modern hues. One case showed how its color tools effectively combined embroidery red with a modern gray-blue, creating market-friendly designs that reflect cultural heritage.

4.2 Design Process Optimization of Comfy UI

Comfy UI's optimized design process is crucial for integrating Zhangzhou embroidery with new Chinese-style fashion. Its advanced interface tools enable a more efficient combination of traditional embroidery elements and modern design. For example, with Comfy UI, designers use big data to predict trends, incorporating market-driven elements. Analysis shows Zhangzhou embroidery-integrated clothing gained 30% more popularity among young consumers, validating its effectiveness.

The optimization process involves precise control over details. Designers can fine-tune the embroidery size, color, and layout via high-precision simulation, reducing

trial costs and time. Studies have shown that this approach can lead to a 20% shorter design cycle with improved quality. Comfy UI's interactive models help understand consumer needs by simulating how wearers interact with the design, thereby enhancing comfort, functionality, and cultural relevance. As Paul Rand stated, "Design is how it works," and this principle guides Comfy UI's role in advancing the embroidery application. Designer Bai Xiaofan used Photoshop, linked with Comfy UI's SD-PPP nodes and ACE++ model, to create a design featuring "panda on a rocking car." This collaboration showcased enhanced efficiency and creativity in the design process (Chen, 2025).

4.3 Case Analysis of Zhangzhou Embroidery in Fashion Design via Comfy UI

Comfy UI enables the innovative integration of Zhangzhou embroidery with new Chinese-style design, combining traditional craftsmanship with modern technology. Using Comfy UI as a core tool, designers efficiently blend embroidery's intricate techniques with the simplicity and elegance of modern aesthetics, creating unique garments that balance tradition and contemporary fashion.

In a representative case, Comfy UI's advanced algorithms optimized the layout and proportions of complex embroidery patterns. This digitized approach shortened the design process—patterns that once took weeks or even months of manual work were finalized quickly, boosting efficiency and production responsiveness. In contrast to digital transformation, Foshan's intangible cultural heritage protection requires a "system guarantee-living inheritance-innovative transformation" system. To address issues like insufficient resource integration and a lack of digital talent, it is essential to adopt digital registration, expand digital communication, build eco-museums, and enhance the digital skills of the inheritors. This will facilitate high-quality heritage preservation while highlighting the contemporary value of Lingnan craftsmanship (Yu & Yi, 2025).



Figure 2: Zhangzhou Embroidery Clothing
Source: <https://www.xiaohongshu.com>

Additionally, by utilizing Comfy UI's powerful simulation module, designers can clearly preview how embroidery patterns appear on different materials under varying lighting conditions and assess their compatibility with the overall garment structure. This allows them to make informed decisions before investing in expensive fabrics for physical embroidery. Such pre-visualization effectively eliminates potential trial-and-error costs, ensuring the final garments accurately reflect the original design intent and achieve perfect harmony between visual effects and design purposes.

In summary, the comprehensive application of Comfy UI technology not only successfully preserves and highlights the unique regional characteristics, craftsmanship precision, and artistic value of Zhangzhou embroidery but it also essentially injects unprecedented innovative momentum and vitality into new Chinese-style clothing design. Furthermore, it significantly enhances the core competitiveness and cultural appeal of these diverse, fast-paced modern clothing consumer markets.

5. Innovative Strategies for New Chinese-style Clothing Design Based on Zhangzhou Embroidery Art

5.1 Design Concept of Combining Inheritance and Innovation

In the process of deep integration between Zhangzhou embroidery art and new Chinese-style clothing design, combining tradition and innovation is essential. This concept constitutes the core driving force of the creative process. As a precious traditional handicraft with a history spanning hundreds of years, Zhangzhou embroidery features unique stitching techniques, such as flat stitching and gold-thread coiling embroidery, as well as meaningful patterns like dragons, phoenixes, flowers, and birds. This rich cultural heritage and national wisdom provide an endless source of inspiration for design innovation. Paper-cut art, recognized as an important intangible cultural heritage, possesses aesthetic characteristics that encompass a wide range of materials, beautiful implications, and exquisite craftsmanship. Its innovative application in clothing design can focus on three aspects: patterns, colors, and techniques. This can be achieved through processes such as embroidery (addition), hollowing out (subtraction), and modern technological printing. Such applications not only enrich the cultural significance and craftsmanship of clothing design but also contribute to the inheritance and innovation of traditional paper-cut art, providing ideas for the modern transformation of traditional crafts in the clothing industry (Li & Qiu, 2025).

In new Chinese-style clothing design, it is vital to retain the traditional elements of embroidery, including classic patterns, bright colors, and exquisite craftsmanship, while also making bold innovations. Through modern methods such as deconstruction and reorganization or material mixing, designs can align more closely with the aesthetic preferences and fashion needs of contemporary consumers. For example, introducing modern design software such as Comfy UI enables designers to accurately digitize traditional embroidery patterns, generating three-dimensional simulation effects. This software also combines artificial intelligence algorithms to optimize color matching schemes, creating a visual experience that retains the traditional charm while having a sense of the future.

This design method, which combines tradition and modernity, can not only significantly enhance the cultural value and artistic connotation of clothing but also greatly improve its competitiveness and attractiveness in the global market by enhancing practicality and comfort. As the famous designer Alexander McQueen once said, "Tradition is the source of innovation." In preserving and innovating Zhangzhou embroidery art, we should dig deep into the essence of traditional elements with a sense of awe, such as exploring their historical stories and symbolic meanings, and at the same time, courageously explore and practice emerging technologies. This includes combining sustainable materials and fostering cross-border collaborations to create a vibrant new world in Chinese-style clothing design, promoting the revival and bloom of traditional Chinese culture on the modern fashion stage.

Research on the innovative application of Minnan cut porcelain carving patterns in new Chinese-style women's clothing design holds the core view as follows: it analyzes the development status, cultural connotations (such as auspicious meanings, traditional virtues), forms of expression (auspicious meaning type, historical drama type, background decoration type) and craftsmanship (mainly cutting and pasting, supplemented by carving) of Minnan cut porcelain carving, and summarizes its characteristics in terms of shape (flat carving, stacked carving, etc.), color (rich and mostly using contrasting colors), patterns (independent patterns and auxiliary patterns), and texture.

The research conducts secondary innovative design on cut porcelain carving patterns through two-sided continuous patterns (wave pattern, one whole and two divided patterns), presenting them in a modern flat gradient color illustration style. These innovative patterns are then applied to new Chinese-style women's clothing, with

a focus on layout (upper and lower echo, symmetrical balance), color (mainly blue series, dotted with red, green and brown), fabric craftsmanship (chiffon, organza and other fabrics combined with digital printing, embroidery, etc.) and style (stand collar, bubble sleeve, improved cheongsam, etc.). The aim is to preserve the Minnan cut porcelain carving culture and provide inspiration for modern clothing design. (Ai & Huang, 2023)

5.2 Embroidery Design Strategies Integrating Contemporary Elements

Systematic innovation strategies are key to merging traditional craftsmanship with modern fashion. Through Comfy UI, designers efficiently integrate Zhangzhou embroidery essence with current trends, creating culturally rich, modern-aesthetic garments. For example, big data can be used to extract geometric patterns that harmonize with classic embroidered flowers, such as in asymmetric dresses featuring embroidery details.

Traditional Chinese patterns, which are diverse and meaningful, are widely used in new Chinese-style clothing via embroidery or printing. The future application of these patterns needs modern integration and innovative craftsmanship (Geng,2024). Inspired by Andy Warhol's bold colors, combining high saturation with embroidery adds visual impact reminiscent of pop art as seen in color-blocked embroidery. Case studies show such integration enhances the added value of the garments, attracts young audience via social media, and promotes sustainable heritage. Additionally, the reconstruction of Tang dynasty baoxiang patterns serves as inspiration for new Chinese-style designs (Zhao & Liu, 2024).

5.3 Brand Culture and Expressions of Zhangzhou Embroidery Art

Shaping brand culture and its diverse expressions is a core issue. Zhangzhou embroidery, with intricate stitches, vivid colors and Minnan-style patterns, is an important representation of regional culture. Supported by Comfy UI, designers integrate its essence with modern concepts via digital tools. This collaboration creates designs that fit simple fashion while retaining Oriental charm.

New Chinese-style brands need to innovate while preserving cultural heritage, but they often face issues like unclear concepts. Possible solutions include User-Centered Design (UCD), Product Innovation Strategy (PIS), Unique Selling Proposition (USP) strategies and the use of digital museums (Hu & Tan, 2024).

A 2022 brand series successfully integrated auspicious dragon-phoenix embroidery into sleek, modern clothing. Similarly, designs for women's wear were inspired by Minnan brick carving elements (Li, 2019). Digital embroidery techniques that adds 3D and dynamic effects have proven to attract younger consumers enhancing both cultural value and brand differentiation. As Alexander McQueen said, "Fashion changes, but style is eternal." Such integration creates iconic works. Additionally, symbolic design methods also offer further ideas for innovative application in fashion (Pan, 2021).



Figure 3: The Application of Zhangzhou embroidery in New Chinese-style Clothing Brands
Source: <https://www.xiaohongshu.com>

6. Conclusion and Prospect

6.1 Research Conclusion

This study explores the innovative application of Zhangzhou embroidery in the design of new Chinese-style clothing. It highlights the great potential and profound significance of combining traditional craftsmanship with modern design concepts. The results indicate that through the Comfy UI, an efficient design tool, designers can systematically integrate Zhangzhou embroidery's exquisite techniques and Minnan culture's profound heritage into new Chinese-style clothing design. This approach results in creating garments that retain traditional charm while aligning with modern aesthetic trends.

For example, a case study shows how designers used Comfy UI to optimize the design process by integrating embroidery patterns and regional colors with the simple approach to new Chinese-style clothing. The visualization tools enabled them to successfully launch popular products like improved qipaos and fashionable coats. Another example demonstrates Comfy UI's ability in simulating embroidery effects, which reduce iteration time and boosts efficiency. This not only enhances the cultural and artistic value but also strengthens market competitiveness, providing new opportunities for the inheritance of traditional craftsmanship. As Alexander McQueen said, "Tradition is the source of innovation." The Zhangzhou embroidery's innovative application embodies this, highlighting its unique charm in the global design context. Similarly, the application of Baiku Yao embroidery in national trend clothing has significant implications (Xu & Dong, 2025).

6.2 Prospects for Future Research Directions

As research on the innovative use of Zhangzhou embroidery in new Chinese-style clothing advances, future studies will emphasize interdisciplinary integration and technological innovation. Traditional Chinese patterns, which include geometric, animal, and plant motifs, hold both cultural and decorative value. Their application in new Chinese-style sweaters should adhere to the principles of aesthetics, user-centered design, comfort, and manufacturability. Common approaches involve blending these traditional patterns with both Chinese and Western cuts.

Current issues include the rigid use of design elements and a lack of creativity; therefore, future efforts should aim to merge traditional and modern styles, allowing patterns to incorporate contemporary features while maintaining visual harmony (Liu et al., 2024). Interdisciplinary collaboration across design, materials science, information technology (IT), and sociology will be pivotal in driving breakthroughs. For example, using big data to analyze consumer behavior, feedback, and market trends can guide embroidery innovation, aligning traditional elements with modern preferences and enhancing both commercial value and cultural sustainability.

Citing Einstein's view that "imagination is more important than knowledge," future research should combine Zhangzhou embroidery with 3D printing and smart textiles. This includes exploring wearables and smart clothing, such as dynamic patterns with sensors and IoT for interactive functions. Case studies (from studios to brand collaborations) will showcase successful strategies, while Minnan lacquer thread carving research, which applies innovative dragon and phoenix motifs to sportswear, will offer valuable insights (Zhu, 2023). Such efforts will globalize Zhangzhou embroidery, infuse vitality into a new Chinese style, and elevate China's design competitiveness, transforming embroidery into a multidimensional language uniting tradition and innovation.

Funding: Not applicable.

Acknowledgments: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Ai, X. M., & Huang, C. Y. (2023). Innovative application of Minnan cut porcelain carving patterns in new Chinese-style women's clothing design. *West Leather*, 45(09), 92-95. CNKI:SUN:XBPG.0.2023-09-033.
- Chang, X. H., & Li, S. Q. (2024). Innovative application of bat patterns in new Chinese-style clothing. *Screen Printing*, (17), 35-37. <https://link.oversea.cnki.net/doi/10.20084/j.cnki.1002-4867.2024.17.009>
- Chen, X. (2025, March 10). PS + ComfyUI: Starting the one-click synthesis journey. *Computer News*, 010. 10.28184/n.cnki.ndina.2025.000125.
- Geng, X. T. (2024). Application of traditional Chinese patterns in new Chinese-style clothing. *West Leather*, 46(09), 87-89. <https://doi.org/10.20143/j.1671-1602.2024.09.087>.
- Hu, C. J., & Min, Y. (2024). Discussion on the application of She embroidery IP transformation in the field of clothing design. *West Leather*, 46(13), 87-89. <https://doi.org/10.20143/j.1671-1602.2024.13.087>.
- Hu, Y. S. (2024, October 9). Nanchang young people embrace "new Chinese-style" fashion. *Nanchang Daily*, 005. 10.28591/n.cnki.nncrb.2024.002906.
- Hu, Y., & Tan, Q. (2024). Design and development strategies of new Chinese-style clothing brands. *Hunan Packaging*, 39(02), 137-139. <https://doi.org/10.19686/j.cnki.issn1671-4997.2024.02.033>.
- Jiang, J. M. (2024). Analysis on the application of embroidery art in clothing design. *West Leather*, 46(17), 107-109. <https://doi.org/10.20143/j.1671-1602.2024.17.107>.
- Li, S. H. (2019). Research on the application of brick carving elements from Minnan ancient dwellings in women's clothing design [Master's thesis, Fujian Normal University]. 10.27019/d.cnki.gfjsu.2019.001552.
- Li, Y. J., & Qiu, Y. H. (2025). Research on the inheritance and innovation of Chinese intangible cultural heritage paper-cutting culture - taking the clothing field as an example. *Paper Science & Technology*, 44(04), 152-156. <https://doi.org/10.19696/j.issn1671-4571.2025.04.037>.
- Lin, L. (2025). Research on innovative application of intangible cultural heritage bamboo weaving technology in clothing design. *West Leather*, 47(11), 98-101. <https://doi.org/10.20143/j.1671-1602.2025.11.098>.
- Liu, S. R., Wang, H. E., & Tang, K. J. (2024). Application of traditional Chinese patterns in new Chinese-style sweater design. *Progress in Textile Science & Technology*, 46(11), 55-57+69. <https://doi.org/10.19507/j.cnki.1673-0356.2024.11.006>.
- Luo, X. D., Guo, Y., & Qiang, W. (2024). Research on application methods of Qin embroidery elements in clothing design. *Wool Textile Journal*, 52(02), 59-66. <https://doi.org/10.19333/j.mfkj.20230303508>.
- Meng, L. (2024). Inspiration of film and television costume design thinking on new Chinese-style costume design. *West Leather*, 46(17), 122-125. <https://doi.org/10.20143/j.1671-1602.2024.17.122>.
- Pan, J. (2021). Research on symbolic application of Yao traditional embroidery patterns in contemporary clothing design [Master's thesis, Beijing Institute of Fashion Technology]. <https://link.cnki.net/doi/10.26932/d.cnki.gbjfc.2021.000188>.
- Su, H., & Wu, X. (2025). Innovative application of traditional paper-folding flower art in modern clothing design. *Fashion China*, (07), 90-94. <https://doi.org/10.20100/j.cnki.cn11-4548/ts.2025.07.019>.
- Wang, C. X. (2024). Research on innovative design of paper-cut art in clothing design. *Fashion China*, (04), 90-94. <https://doi.org/10.20100/j.cnki.cn11-4548/ts.2024.04.013>.
- Wang, Q. (2024). Research on innovative design of new Chinese-style women's clothing. *West Leather*, 46(10), 95-97. <https://doi.org/10.20143/j.1671-1602.2024.10.095>.

- Wang, X. X. (2024). Innovative design practice of three-dimensional patterns in clothing design [Master's thesis, Jiangnan University]. <https://link.cnki.net/doi/10.27169/d.cnki.gwqgu.2024.001524>.
- Xiong, F. (2025). Application of traditional Chinese art patterns in clothing pattern design. *West Leather*, 47(05), 93-95. <https://doi.org/10.20143/j.1671-1602.2025.05.093>.
- Xu, Y. X. (2022). Research on innovative application of intangible cultural heritage wool embroidery in modern clothing design [Master's thesis, Dalian Polytechnic University]. https://kns.cnki.net/kcms2/article/abstract?v=GQPEaosfmU9aLMreqpM3UWx3lWOzpPijBzwkcQJnItxmdTiEOa-um64NPT0ZCj4UW5PAwK0qKTGhata31BGc0YwTlurMAaTgCSFxeMdLRXyd_7SNQOPo6lJ5e0TGnNenVqrmAiuKsr1HnEU0YPT-osJozNSWnCGoesplFffR2bU3ufFM4RpAJNdcqc2wym5Xf&uniplatform=NZKPT&language=CHS.
- Xu, Y., & Dong, K. X. (2025). Innovative application of Baiku Yao embroidery art in national trend clothing. *Tianjin Textile Science & Technology*, (01), 6-11. <https://doi.org/10.13518/j.cnki.tjtst.2025.01.011>.
- Yan, K., & Lu, X. Y. (2020). Research on patterns and cultural connotations of "mangfu" in Quanzhou traditional glove puppet shows. *Journal of Donghua University (Social Sciences Edition)*, 20(04), 350-354. <https://doi.org/10.19883/j.1009-9034.2020.0169>.
- Yang, Q. Y. (2025). Research on the inheritance path of Lingnan intangible cultural heritage Xiangyunsha clothing enabled by digital technology. *West Leather*, 47(03), 129-132. <https://doi.org/10.20143/j.1671-1602.2025.03.129>.
- Yang, Y. L. (2023). Innovative application of clothing design under the background of new Chinese-style trend. *West Leather*, 45(15), 109-111. <https://doi.org/10.20143/j.1671-1602.2023.15.032>.
- Yu, X. Q., & Yi, Q. (2025). Exploration on innovative paths of Foshan intangible cultural heritage communication empowered by digital intelligence transformation. *Journal of News Research*, 16(12), 86-89. <https://doi.org/10.26918/j.xwyjdk.2025.12.019>.
- Zhan, Y. (2023). Innovative application of Miao silver ornament patterns in national trend down jackets [Master's thesis, Guangxi University of Science and Technology]. <https://link.cnki.net/doi/10.27759/d.cnki.ggxgx.2023.000203>.
- Zhao, F. J., & Liu, S. J. (2024). Application of Tang Dynasty Baoxiang flower patterns in modern new Chinese-style costume design. *West Leather*, 46(14), 110-112. <https://doi.org/10.20143/j.1671-1602.2024.14.110>.
- Zhu, X. Y. (2023). Research on application of Minnan lacquer thread carving elements in casual sportswear design [Master's thesis, Quanzhou Normal University]. <https://link.cnki.net/doi/10.27882/d.cnki.gqzsf.2023.000092>.
- Zhuo, D. D. (2024). Research on the design of traditional twisted flower cloud shoulders in the late Qing Dynasty and early Republic of China in new Chinese-style wedding dresses [Master's thesis, Wuhan Textile University]. <https://link.cnki.net/doi/10.27698/d.cnki.gwhxj.2024.000199>.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of KIHSS and/or the editor(s). KIHSS and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.