Conclusion: In future, after intensive biomechanical analysis of complex movements, the findings on different forces, lengths and their changes over time will be used to adapt functional clothing to the movements of the wearer and to support them.

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UDC 687.3

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CROSS-BORDER INTEGRATION OF CONTEMPORARY HAND-MADE BEADS: FROM TRADITIONAL COLLECTIBLES TO FASHION ITEMS

Purpose. This paper aims to deeply analyze the internal logic behind the transformation of bracelets from traditional cultural antiques into trendy items.

Keywords*: bracelets; cross - boundary integration; cultural symbols; DIY culture*

Objectives. With the deepening of global cultural exchanges, bracelets are expected to integrate more cultural elements and become a new bridge for cultural exchanges. Integration with smart technology is a future trend. It not only provides new ideas for the design of smart

wearables, but also enriches the functions of bracelets, making them more intelligent by combining technological and cultural connotations. DIY culture has revolutionized the bracelet consumption ecosystem. With the help of digital technology, future creations will become more personalized, and the related business ecosystem will become more prosperous. The way bracelets inherit historical genes provides a guide for the innovative development of traditional culture in the modern era.

Methodology. The methodology used was a review of scientific sources on the topic under study, as well as visual-morphological analysis.

Research results. The cross - boundary transformation of bracelets is not simply a transfer of cultural symbols, but a complex experiment of the deep integration of traditional genes and modern demands. Catalyzed by the star effect and co - branding, the symbolic meaning of bracelets has been recoded. For example, the indigo turquoise bracelet worn by Johnny Depp (Fig. 1.), with its rugged silver inlay and Bohemian - style braided rope design, deconstructs the turquoise totem, which symbolizes "purification and protection" in Tibetan Buddhism, into a visual declaration of modern counter - culture. Through the superposition of streetwear and film and television images, this traditional amulet has been given a new semantics of the coexistence of rebellion and art, and has even derived the sub - cultural label of "energy rock". The minimalist turquoise bracelet worn by David Beckham, on the other hand, reconstructs the original form of the ancient Egyptian "stone of life" with geometric cutting techniques. Although the two styles are quite different, they jointly confirm the flexibility of bracelets as a cultural medium [1,2].



Fig. 1. **Johnny Depp and David Beckham Wearing Bracelets**

The evolution in the functional dimension highlights the transformation of bracelets from "ornaments" to "decorations for smart products" (Fig. 2.). Against the backdrop of the experience economy era, wearable devices are undergoing a paradigmatic shift from practical tools to

cultural carriers.Designing and beading geometric shapes involve mathematics, both in the planning stages and in the making. Writing patterns involve further calculations, especially when planning for a range of sizes [3].The new cultural symbol system formed by the integration of traditional jewelry and smart technology provides a new theoretical perspective for understanding the cultural identity mechanism in contemporary human - computer interaction design. The human - machine interaction interface needs to construct a multi - level meaning system to meet both practical needs and spiritual demands simultaneously. This is not only an evolutionary path for technological products but also an innovative paradigm for cultural inheritance in the digital age.



Fig. 2. **Bracelet - style Watch Strap for Apple Watch**

The rise of DIY culture has completely reconstructed the consumption ecosystem of bracelets. The young generation transforms bracelets into carriers of personal narratives through material deconstruction and symbol collage. The mix - and - match of Buddhist fengyan bodhi seeds and anime - themed acrylic beads, as well as the transformation of the Qing - dynasty "shibazi" style into constellation - themed bracelets, all demonstrate the creative transformation of traditional cultural symbols in the contemporary context. On a certain social platform, there are over a million notes related to "bracelet DIY". Tutorials shared by users, such as "colored glaze with southern red agate" and "braided - rope nine - square grid", have formed an open - ended creative grammar (Fig. 3.). This shift from "buying" to "creating" has given rise to the business innovation of modular smart bracelet components, and the consumption logic has shifted from "product transactions" to the accumulation of "creative capital".These activities not only preserve traditional crafts but also have a positive impact on communities by offering new business opportunities [4].



Fig. 3. **DIY Bracelets**

The recessive inheritance of historical genes reveals the cultural resilience of cross - boundary integration. The meaning of "breaking away from vexations" associated with the 108 - bead Buddhist prayer beads (Fig. 4.) has been transformed into a modern ritual of the "108 - day self - discipline challenge". The hidden Eight Immortals patterns (gourd, fan) on the Taoist flowing beads have become the visual IP of national - trend brands, continuing their auspicious semantics on carriers such as hoodies and skateboards. The refined pleasure of "polishing jade for peace of mind" among literati in the Republic of China has revived in the live - streaming of "immersive bracelet - polishing" on online social platforms, becoming a spiritual anchor for contemporary youth to combat anxiety. This kind of inheritance is not mechanical replication, but the regeneration of value through scene reconstruction.



Fig. 4. **108 - bead Buddhist prayer beads**

Conclusion. The transformation of bracelets from traditional cultural antiques to trendy items represents a profound cultural revolution, and its development model holds great significance as a reference for the development of multiple fields in the future. This not only provides new ideas for the design of smart wearable devices but also enriches the functions of bracelets, making them more intelligent while combining technological and cultural connotations.

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UDC 7.05:677(510)

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ADAPTIVE AESTHETICS: VISUAL UPDATING STRATEGIES FOR TRADITIONAL CHINESE TEXTILE PATTERNS

Purpose. *The research aims to create updated design approaches through digital technology which maintains the symbolic value of these historical patterns. The research combines traditional artistic methods with contemporary technological resources to integrate classical designs into contemporary fashion and visual design while preserving their cultural origins.*