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Visual Language Extraction and Re-construction of Dawu Brocade Belt from the Perspective of Regional Culture

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Abstract: Taking Hubei Dawu brocade belt as the research object, this paper explores its formative background, artistic features and cultural connotations from a regional-culture perspective. Through literature research, image analysis and pattern classification alongside design practice, it sorts out how local production-and-living conditions, traditional weaving crafts and folk-custom concepts shape the visual form of brocade belts, and analyzes their pattern modelling, color arrangement, compositional order and symbolic meanings. On this basis, core visual genes are extracted from four dimensions: graphic form, compositional rules, color relations and cultural semantics, to explore the structural features and generation mechanism of traditional visual elements. Adopting graphic simplification, geometrization, modular combination and grid translation, the study converts traditional warp-and-weave structures and pattern composition rules into contemporary graphic-design language, building a visual-reconstruction path with regional cultural recognizability and systematic scalability. This research promotes the modern transformation of traditional patterns from superficial formal copying to the reorganization of internal generative rules, and provides references for the visual inheritance of Dawu brocade belt as well as the contemporary design and communication of textile-related intangible cultural heritage.

Keywords: Regional Culture; Dawu Brocade Belt; Visual Language; Visual Re-construction.

1. Introduction

Among numerous vernacular intangible cultural heritages, many traditional crafts are not created out of thin air. Rooted in ordinary people's daily-life scenarios, they carry distinctive local customs and record practical life wisdom of local residents. Dawu brocade belt is one such hand-craft from Dawu, Hubei Province. It took shape during the Daoguang-Xianfeng reigns of the Qing Dynasty. It originated from rural households reprocessing leftover yarn scraps from handwoven homespun cloth, and gradually evolved into the narrow-strip weaving craft. It was inscribed onto the Hubei Provincial Intangible Cultural Heritage List in 2011.

Unlike many handicrafts made purely for ornamental purposes, Dawu brocade belt has been deeply embedded in folk customs in the Dabie Mountain area since its early days. It appears widely in dowry weddings, birthday celebrations, sacrificial rituals and traditional festivals, forming a symbiotic state in which folk customs sustain craftsmanship while craftsmanship enriches folk customs. It serves as a valuable physical specimen for investigating vernacular society in northern Hubei. Its contemporary situation faces evident challenges. Traditional folk rituals keep getting simplified, removing original usage scenarios for brocade belts. Elder inheritors grow older, while few young people are willing to devote years to mastering the complicated craft. In cultural-and-creative innovation practices, practitioners often only copy surface patterns while discarding underlying folk-custom connotations. Understanding the full folk-custom logic behind this craft to realize its living inheritance becomes an unavoidable practical issue[10].

Scholars have carried out existing studies on Dawu brocade belt along several major directions. Some works focus on craft documentation, recording loom structures and weaving procedures including the "one ground weft, one pattern weft" operation. [3]

Others adopt fine-art perspectives to analyze compositional forms of patterns and interpret superficial auspicious implications. Remaining research discusses inheritance status and attempts cultural-and-creative product development from intangible-heritage-protection viewpoints[7].

Nevertheless, existing studies possess noticeable limitations. Most literature treats the brocade belt merely as a craft-art object, concentrating on observable surface elements such as tools and patterns. Few studies integrate weaving techniques, pattern symbols and vernacular folk customs for holistic discussion. Existing publications rarely discuss how local folk customs reshape weaving technologies, complete sets of ritual-driven rules for patterns and color schemes, or deep-seated craft crises brought by fading folk customs. Its vernacular-creation origin of scrap-material recycling is also frequently overlooked. These gaps leave room for further exploration in this research.

Taking Dawu brocade belt as the research subject, this paper proceeds from the perspectives of vernacular circular creation and craft-folk-custom symbiosis. It addresses several research objectives. First, it sorts out its complete material-technical system, illustrating how makeshift local looms and weaving workflows adapt to folk-custom life in rural areas, and restoring its creation logic originating from fabric scraps. Second, it decodes pattern coding of brocade belts, sorting compositional features of fitness patterns, two-dimensional continuous patterns and individual patterns, distinguishing folk-custom connotations of patterns and colors across wedding, festival and sacrificial contexts, and interpreting vernacular ethics and people's aspirations embedded in visual motifs. Third, functional-anthropology perspectives are adopted to examine contemporary

inheritance dilemmas. Craft decline results not only from insufficient inheritors but also from the collapse of material-object functions after the disappearance of supporting folk-custom contexts. This paper reflects on the "core-loss" phenomenon in modern innovation and offers references for heritage protection.

Three primary research methods are deployed. Literature review sorts out intangible-heritage archives, local publications, dissertations and journal papers to compile historical evolution and folk-custom records of brocade belts, while building an analytical framework informed by creation anthropology and folk-pattern theories. Physical-and-image analysis draws on real-world brocade-belt specimens, inheritors' artworks and surveyed hand-drawn drawings to observe loom structures and weaving workflows, and classify patterns, color schemes and motifs under diverse folk-custom scenarios[4]. Functional-anthropology analysis avoids isolated discussion of brocade artifacts. The craft is replaced within its original vernacular-social context to observe how folk customs constrain brocade-belt usage, and how brocade belts in turn maintain local interpersonal and clan orders, explaining practical conflicts under modern-society impacts.

2. Regional Culture and Visual Language

2.1. Regional Culture and Material Foundation

2.1.1. Local Production and Strip-shaped Form

The narrow-strip form of Dawu brocade belt is not a deliberate design outcome. It directly stems from material realities of homespun-cloth production in rural northern Hubei. As cloth-trading businesses boomed in southeastern Dawu in the mid-Qing period, farm households produced handwoven homespun cloth, generating large quantities of leftover yarn scraps at both ends of finished fabric. These yarn remnants were insufficient for weaving full-width cloth. Discarding them would cause material waste, so rural women wove these scraps into narrow belts merely 2-4 centimeters wide.

Agricultural production rhythms confined brocade-belt weaving to spare-time sideline work. Farming occupied most labor resources, and weaving proceeded during rainy days and winter leisure periods. Long benches, wooden ladders and repurposed chair backs served as looms without dedicated workshops. The whole set of tools could be easily assembled, disassembled and transported. The loom, under 1.2 meters in length, accommodates seated female weavers, allowing work under eaves or in farmyards.

Material constraints and fragmented working hours ruled out wide-fabric production. Initially woven for binding articles, brocade belts later found expanded applications as waist belts, hat bands, garment edging and dowry-binding straps. All these usages only require long narrow strips instead of large fabric surfaces. Material leftovers, part-time farming-and-weaving modes and practical functional demands collectively fixed its narrow-strip morphological feature.

2.1.2. Folk-custom Life and Cultural Semantics

Wedding ceremonies represent the most culturally-loaded usage scenario for brocade belts. Girls wove exclusive brocade belts before marriage. Ginkgo-nut-pattern belts bound dowries, butterfly-and-golden-melon-pattern belts were presented to grooms, and shoulder-cape tassel ribbons were woven with double-happiness motifs and auspicious phrases. Brocade belts transcended binding utilities to become physical tokens of betrothal and clan-alliance formation. Family wealth disparities generated gaps in pattern complexity and warp-thread quantities of wedding brocade belts, reflecting status concepts embedded in local wedding rituals.

Festival-themed brocade belts shed romantic connotations and serve collective blessing purposes. Belts for Spring Festival and Dragon-Boat-Festival ornaments and fabric wrappers adopt meander patterns, cross patterns and floral motifs for prayers of bumper harvests and household peace.

Gift-giving among kinfolk further expands cultural semantics of brocade belts. Elders presented longevity-character and rhombus-pattern belts to juniors for blessings of safety and good fortune. Pomegranate-pattern belts accompanied childbirth congratulations, while yellow-and-blue bat-pattern belts appeared at birthday banquets. Gift-giving translates pattern implications into interpersonal emotional expressions.

In daily contexts, brocade belts return to practical functions for farm-tool binding and garment trimming. Ritual-specific motifs for weddings or childbirth celebrations are avoided for ordinary wear. Though daily application relaxes rigid ritual rules, local residents distinguish symbolic boundaries of patterns. Double-happiness and pomegranate motifs are never casually applied to casual ornaments. Folk-custom scenarios continuously endow brocade belts with cultural implications, which in turn constrain pattern and color selections during weaving.

2.2. Visual-language Features

2.2.1. Pattern Language

Geometric patterns constitute the largest proportion of brocade-belt decorations. Mountain-peak patterns, water-wave patterns, cross patterns, meander patterns and swastika patterns derive from simplified real-world objects. Instead of realistic detailed representation, weavers extract outlines and transform them into squares, triangles and broken lines arranged along geometric skeletons. Most geometric patterns function as background textures, borders and separators for picture segmentation and fabric reinforcement.

Flora-and-fauna motifs draw on common local Dabie-Mountain species, including ginkgo nuts, golden melons, pomegranates, chrysanthemums, sweet-pea flowers, butterflies, fish and bats. Original prototypes undergo drastic geometrization. Butterflies are decomposed into symmetrical blocks; pomegranates are abstracted into clustered dots. Bat shapes follow folk-craft oral formulas rather than realistic references. These motifs act as primary visual carriers of symbolic meanings.

Character-symbol patterns center on the double-happiness character and four-character auspicious phrases; phonetic-alphabet patterns emerged in later periods. Chinese characters are reconstructed into geometric blocks adapting to weaving limits instead of copying calligraphic scripts. Double-happiness exclusively belongs to wedding contexts. Auspicious phrases such as "longevity and wealth" decorate shoulder-cape ribbons of women from wealthy historical households. Phonetic-alphabet patterns carry subtle emotions for private courtship gifts between young women and men.

Composite patterns combine multiple aforementioned

motif categories. Pomegranates pair with swastika-floral textures; butterflies overlay mountain-peak backgrounds. Major motifs deliver core blessings while geometric auxiliary patterns fill void spaces. Main symbolic motifs and subordinate geometric textures interlock to form complete visual compositions on single brocade belts.

2.2.2. Color Language

Traditional brocade belts possess limited color palettes of cotton yarns, generating visual impact via several highly-saturated hues. Wedding brocade belts are dominated by red and yellow. Red conveys festive wedding atmospheres, while yellow symbolizes dignity and prestige through large-area application with strong color contrast.

Birthday-celebration and sacrificial brocade belts deploy yellow and blue. Yellow symbolizes longevity and honor; blue phonetically evokes "southern mountain", metaphorizing longevity comparable to the southern mountain. Calm tonalities avoid bold wedding red. Funeral-related brocade belts adopt black and off-white for solemn mourning atmospheres.

Each brocade belt distinguishes main colors and auxiliary colors. Primary motifs use dominant hues, while borders, backgrounds and dividing lines adopt secondary colors to separate graphic units via chromatic shifts. Identical motifs change color schemes across functional contexts. Mountain-peak patterns apply red-and-yellow combinations for dowry belts and yellow-and-blue palettes for birthday belts. Color choices respond to usage contexts beyond pure aesthetic preferences.

2.2.3. Compositional Language

Fitness patterns frequently decorate borders and interval dividers. Mountain-peak and water-wave patterns are typical examples adapted to long narrow belt spaces. Most follow axial symmetry and partial central-rotational symmetry. Positioned above and below primary motifs, they segment visual fields and regularize overall geometric frameworks.

Two-dimensional continuous patterns extend horizontally along belt length. Basic units such as cross, ginkgo-nut and plum-blossom motifs repeat cyclically. Originally placed on reverse sides to conceal loose threads and reinforce fabrics, they migrated to obverse surfaces as major decorations after inheritors' improvements. The weaving technique of "one ground weft, one pattern weft" perfectly accommodates cyclic composition.

Individual patterns serve as visual focal points. Butterfly-and-golden-melon, chrysanthemum, pomegranate and double-happiness motifs adopt predominantly symmetrical layouts. Positioned at the center of dowry-binding belts and curtain-hanging ribbons, they remain visually independent from frame constraints and carry core folk-custom connotations.

Repetition, symmetry and border decoration run throughout compositional practices. Symmetry satisfies local aesthetic preferences for balance and stability. Repetition generates visual rhythms. Border decorations frame inner graphics with fitness patterns and prevent visual dispersion. Multiple compositional categories coordinate to complete whole-belt visual arrangements.

2.2.4. Symbolic Language

Symbolic expressions of brocade-belt patterns rely on shared vernacular collective cognition instead of written captions. Ginkgo-nut motifs embody longing and mutual affection, originating from local ginkgo-tree folklore and ballads. Butterfly-and-golden-melon patterns imply marital harmony via paired butterflies and seed-rich melons. Multi-seed pomegranates symbolize flourishing offspring. Bats stand for "blessing" through phonetic puns; five-bat combinations reference traditional five-blessings concepts.

Some symbols derive from phonetic shifts: blue for southern mountain, bat for blessing, and the character "white" in ginkgo for "hundred" representing a hundred-year-long marriage. Other symbols stem from physical-object attributes. Stable mountain shapes symbolize unwavering love; cyclic meander patterns signify endless good fortune.

Pattern meanings are bounded by usage contexts. Identical motifs shift semantic emphases for wedding versus festival scenarios. Local residents interpret motif blessings through lived experience without specialized art-theory knowledge. The whole symbolic system is continuously confirmed and inherited through repeated wedding, birthday-celebration and gift-giving rituals [2].

2.3. Correlation Between Regional Culture and Visual Form

Local material-production conditions establish foundational visual frameworks for brocade belts. Its scrap-material-recycling origin, makeshift bench looms and fragmented spare-time weaving determine its long narrow morphology. Manual-jacquard loom constraints hinder complex realistic imagery and drive object representations toward geometrization.

Local folk-custom concepts impose persistent visual demands. Wedding, sacrificial and gift-giving rituals regulate motif themes, color schemes and compositional placements. Bright red is forbidden for birthday ceremonies; weddings demand dedicated primary motifs; gift belts match recipients' social identities. Practical folk-custom requirements retain applicable visual forms and eliminate incompatible ones.

Dabie-Mountain vernacular aesthetics permeate every visual detail. Local communities favor balanced symmetry, sharp color contrasts and auspicious narrative motifs. Realistic fine detailing receives less priority than visual expressions of life aspirations.

Weaving technologies, local lifestyles, folk-custom concepts and vernacular aesthetics interact mutually. Technologies realize visual presentations; folk customs filter motif themes; regional aesthetics adjust composition and coloring; living contexts define symbolic implications. The complete visual-language system of Dawu brocade belt emerges from layered influences of northern-Hubei vernacular realities rather than autonomous artistic creation.

3. Extraction of Visual Genes

3.1. Extraction Principles and Sample Selection

Visual features of Dawu brocade belts reside not merely within isolated patterns but also in graphic structures from warp-and-weave interweaving, pattern-arrangement modes and folk-custom usage conventions. Visual-gene extraction cannot evaluate patterns only by ornamental merits. Analysts must assess regional-cultural reflectiveness and retained formal relations after simplification[5].

Regional recognizability highlights connections between weaving craft and graphic forms. Confined by long narrow carrier spaces and warp-weave textile constraints, brocade-belt motifs feature broken-line geometrization and

continuous arrangement. Mountain-peak, water-wave, ginkgo-nut and cross patterns possess distinct structural traits for analyzing weaving-technique impacts on visual morphology. Sampling balances partial motifs and complete brocade-belt specimens, avoiding isolated pattern cropping that ignores original arrangement relations.

Cultural representativeness focuses on practical motif functions. Ginkgo-nut, butterfly-and-golden-melon, double-happiness and pomegranate patterns correspond with wedding rituals, gift-giving and offspring-blessing scenarios. Cultural significance arises not only from graphic appearances but also from usage occasions, combination formats and local customs. Sample records document motif titles, image sources, traditional applications and cultural interpretations to prevent equating general auspicious symbolism with location-specific Dawu folk customs.

Formal typicality screens patterns with extractable structural rules. Symmetrical relations within fitness patterns, repetition cycles of two-dimensional continuous patterns and central-organization modes of individual patterns constitute valid analytical objects. For structurally similar motifs, representative specimens suffice for comparative study. Patterns with ambiguous image sources, illegible structures or textual documentation without physical evidence are excluded from graphic-extraction procedures.

3.2. Graphic-gene Extraction

Starting from original patterns on physical brocade-belt specimens, analysts remove weaving-related defects such as loose threads and burrs and trace primary outlines. Fine yarn textures on fabric surfaces are disregarded; external boundaries reshaped by folk weavers are prioritized[1].

Outlines are further dissected inward to acquire internal structural skeletons recording line intersections, divisions and distributions. Skeletons demonstrate bilateral segmentation for butterfly-and-golden-melon patterns and radial convergence for pomegranate patterns. They express layout logics independent of color information.

Structural skeletons are simplified further into basic geometric shapes. Triangles correspond with mountain-peak motifs, clustered circles with pomegranate seeds, and rhombuses plus broken lines with swastika patterns. Original plant-and-animal figurative appearances dissolve into pure geometric block combinations.

Basic geometric shapes decompose into indivisible minimum visual units including short lines, triangular fragments, dots and rhombus fragments. Diverse major brocade-belt patterns originate from permutations and combinations of these limited minimal visual particles. This decomposition workflow converts figurative fabric decorations into reusable basic graphic materials.

3.3. Compositional-gene Extraction

Compositional features manifest primarily in pattern arrangements and inter-pattern relationships. Graphics expand along fixed orientations within long narrow belt spaces. Repetition, alternation, mirroring, rotation and border organization generate regular visual orders. Basic units such as cross, ginkgo-nut and plum-blossom motifs repeat along belt lengths to produce two-dimensional continuous patterns. Unit spacing, directions and blank-area variations adjust visual density and rhythm. Mountain-peak and water-wave auxiliary motifs surround primary graphics. Double-happiness and composite patterns achieve balanced layouts via axial mirroring. Partial fitness patterns adopt rotational central symmetry. Different floral or geometric units alternate sequentially; separator motifs connect and divide visual fields, introducing variations within repetitive sequences. Side borders constrain primary-motif distributions. Central graphics, separators and borders jointly build visual hierarchies.

Compositional-gene extraction records repetition cycles, axes of symmetry, unit spacing, arrangement directions and border relationships to summarize reusable organizational rules from concrete patterns. Graphic units can mutate while compositional relations of continuity, symmetry and alternation sustain overall visual traits, supplying structural foundations for modular recombination and contemporary reconstruction.

3.4. Color-gene Extraction

Color configurations of Dawu brocade belts correlate closely with folk-custom functional contexts. Existing documents record red-yellow and red-blue-yellow palettes for wedding belts, and yellow-blue schemes for birthday-celebration belts. Color extraction relies on physical specimens, documenting main colors, auxiliary colors and background hues, alongside their distributions in primary motifs and borders. Analyses cover color-area proportions, light-dark contrasts and chromatic-contrast relationships. Sharp chromatic differentiations highlight geometric contours; alternating colors and pattern arrangements jointly construct visual rhythms. Color-combination relationships outweigh isolated chromatic values for interpreting traditional color features. For photographic references, analysts focus on recognizable color sets and distributions. Accurate chromatic values require validation through physical artifacts or reliable archival records.

3.5. Cultural-semantic-gene Extraction

Cultural semantics reflect connections between patterns and local folk customs. Ginkgo-nut motifs appear in courtship gifts and dowry bindings, symbolizing hundred-year-long marriages through phonetic associations. Butterfly-and-golden-melon patterns express marital bliss and flourishing descendants via paired butterflies and multi-seed melons. Double-happiness exclusively symbolizes wedding joy; pomegranates embody blessings for numerous offspring. Mountain-peak patterns serve decorative auxiliary purposes while carrying ritual-specific symbolic connotations in different contexts. Cultural-semantic extraction archives motif titles, traditional applications, usage scenarios and implied meanings, maintaining correspondences between graphics and folk-custom information. Text-documented “five-bat longevity-worshipping” nine-strip brocade sets without surviving physical images are recorded for ritual implications only; speculative graphic reconstructions are excluded as raw samples. Pattern forms may vary flexibly, yet cultural interpretations must derive from verifiable documentary sources.

3.6. Construction of the Core Visual-gene System

Core visual genes of Dawu brocade belts encompass four components: graphics, composition, color and cultural semantics. Graphic genes include pattern outlines, structural skeletons and fundamental units. Compositional genes document repetition, symmetry, alternation and

border-organization rules. Color genes reflect main-auxiliary-color configurations, area proportions and contrast relations. Cultural-semantic genes correspond with traditional motif applications and folk-custom implications. Four categories of information link back to original samples to form a visual-gene database containing source images, simplified graphics, arrangement rules, color relations and cultural annotations. Distinct patterns may share compositional rules while retaining unique morphological and semantic traits. This system transforms complete brocade-belt patterns into identifiable, combinable visual elements and organizational rules, laying foundations for graphic simplification, modular reorganization and warp-weave-structure grid translation in subsequent design procedures.

4. Contemporary Re-construction of Visual Language

4.1. Principles of Visual Re-construction

Contemporary visual re-construction of Dawu brocade-belt visual language follows principles of cultural continuity, contemporary expressiveness and systematic scalability. Cultural continuity emphasizes internal connections among pattern forms, compositional rules and cultural semantics. Visual transformations preserve original regional-recognition features and cultural orientations. Contemporary expressiveness addresses adaptation between traditional graphics and modern-media contexts. Adjustments to pattern density, visual scale and information hierarchy optimize performance across diverse communication scenarios. Systematic scalability focuses on graphic combinability. Geometric orders, repetitive rhythms and symmetrical relations originating from weaving structures translate into unified design rules, maintaining consistent visual characteristics for reconstructed graphics across varied layouts.

4.2. Graphic Simplification and Deconstructive Reorganization

Traditional Dawu brocade-belt patterns consist of geometric lines and repetitive units with high abstraction. Graphic re-construction starts with structural analysis of original patterns, removing trivial ornamentation and extracting key outlines, turning points and symmetrical features. Continuous broken-line sorting refines mountain-peak patterns into directional geometric units. Cross patterns adjust proportions and combinative forms based on horizontal-vertical structures. Ginkgo-nut and double-happiness motifs retain recognizable core shapes to avoid feature loss caused by excessive simplification. Composite patterns such as butterfly-and-golden-melon motifs decompose into primary figurative subjects, auxiliary decorations and border structures. Reorganization adopts dislocation, superposition, mirroring and partial substitution. Deconstructive recombination does not arbitrarily alter original morphology. It modifies graphic relationships while preserving major structural features for concise contemporary visual outputs.

4.3. Modular Design and Rule Translation

Modular design establishes standardized graphic modules with unified dimensions, line weights and combinative scales using extracted basic graphic units. Cross-shapes, rhombuses, broken-line forms and geometric floral units possess clear structural boundaries suitable for standardized-module construction. Repetition, mirroring, rotation, alternation and dislocation generate graphic sequences with diverse rhythms and spatial relations. Two-dimensional-continuous-pattern arrangement rules translate into horizontal-or-vertical extension modes. Symmetrical structures from fitness patterns organize central-type graphics. Border structures form auxiliary separator modules. Module combinations follow fixed structural rules[6]. Adjustments to unit spacing, orientations and density produce visual variations. Excessive superposition that disrupts original visual order is avoided. Fixed complete traditional patterns convert into callable basic units and combinatorial rules, generating graphic systems with serial characteristics.

4.4. Translation from Warp-Weave Structures to Modern Grids

Warp-and-weave interweaving determines fundamental morphology and arrangement orders of brocade-belt patterns. Horizontal-vertical yarn intersections restrict graphic expressions and push natural-object representations toward broken-line geometrization. Modern visual grids share organizational similarities with traditional weaving structures, establishing graphic locations and spatial orders via horizontal-vertical relations. Design practices translate interweaving rules of warp-weave structures into grid measurements for graphic turning points, unit proportions and arrangement spacing to realize unified module positioning. The longitudinal extension trait of brocade belts transforms into sequential organization within layouts. Hierarchical relationships between primary motifs and borders correspond with spatial distributions of titles, graphics and auxiliary information. Modules generate visual rhythms via repetition, extension and partial dislocation within grids. Traditional weaving-structure logics integrate into modern graphic design rather than directly copying warp-weave lines.

4.5. Contemporary Re-construction of Traditional Color Systems

Color configurations of Dawu brocade belts correlate closely with pattern structures and folk-custom applications. Wedding brocade belts adopt red-yellow and red-blue-yellow combinations; birthday-celebration brocade belts deploy yellow-blue schemes. Color re-construction preserves main-auxiliary-color relationships and contrast traits of traditional palettes, adjusting lightness, saturation and area proportions for modern printing and digital-media characteristics. High-saturation colors apply to primary graphics; auxiliary colors reduce saturation to moderate visual intensity. Clear hierarchies persist between background hues and patterns. Color proportions re-configure according to distributions of primary modules, borders and backgrounds, harmonizing chromatic variations with graphic structures. Wedding-and-birthday-celebration-themed designs adopt culturally-corresponding color combinations to prevent traditional colors from becoming pure decorative elements divorced from usage contexts. Re-constructed color systems retain sharp contrast features of original brocade belts while adapting to posters, publications, digital visuals and other media requirements.

5. Conclusion

The complete visual-language system of Dawu brocade belt accumulates from interactions among local material-production conditions, folk-custom life and vernacular aesthetics. Its narrow-strip morphology originates from homespun-cloth yarn-scrap recycling and consolidates under fragmented spare-time farming-and-weaving production modes. Folk-custom scenarios intervene directly in motif themes, color schemes and compositional layouts. Practical wedding, sacrificial, festival and gift-giving demands select visual symbols and set implicit boundaries for color usage. Vernacular aesthetic preferences for balanced symmetry reject hyper-realistic representations and drive natural-object motifs toward geometrization. Visual forms are not products of independent artistic creation. Every contour, color block and compositional arrangement traces back to real-world living practices in the Dabie-Mountain region of northern Hubei.

This study completes extraction of four categories of visual genes: graphic, compositional, color and cultural-semantic genes. Graphic-gene decomposition follows the path: original pattern → primary outline → structural skeleton → basic geometric shape → minimum visual unit. Figurative fabric patterns with weaving defects are disassembled into recombinable graphic particles. Compositional genes summarize practical weaving-era organizational techniques: repetition, alternation, mirroring, rotation, continuity and border organization. Traditional weavers generated patterns relying on these rules without design drawings. Color genes document traditional chromatic samples and area proportions from physical specimens, sorting color-usage conventions and constraints under different folk-custom contexts. Cultural-semantic genes build correspondences linking motifs, usage scenarios and symbolic implications, distinguishing semantic-emphasis shifts for identical motifs across rituals and stressing that symbolic connotations are rooted in local folk-custom practices.

Contemporary re-construction of traditional patterns cannot rely on direct copying of intact historical motifs. Direct appropriation of complete patterns often generates mismatches with modern-product contexts and strips folk-custom connotations away. Rule-translation-oriented re-construction calls for deploying decomposed visual genes. Minimum visual units are recombined under adjusted compositional rules. Chromatic parameters are fine-tuned while preserving traditional color-combination logics. Cultural-semantic boundaries embedded within motifs are respected. Re-constructed outputs inherit underlying generative logics instead of replicating historical brocade-belt appearances, sustaining traditional visual traits within new-carrier contexts.

This research has noticeable limitations. Sample collections draw mainly from surviving inheritors' artworks and field-photographed physical specimens. Large quantities of antique folk brocade-belt artifacts have been lost. Text-documented motifs such as the "five-bat longevity-worshipping" nine-strip brocade set lack physical-image evidence for graphic decomposition. The sample pool cannot cover all historically-existing family-variant patterns. Analysis focuses on static patterns and images, with insufficient exploration of living-craft elements including weavers' bodily movements and oral formulas during on-site weaving.

Future research directions are proposed. In-depth field investigations can be supplemented to interview private artifact holders, collect antique brocade-belt specimens circulated among local residents, record elderly weavers' oral formulas and practical-operation experience, and fill gaps in variant-pattern data. Extracted visual genes can feed into digital-generation experiments. Parameterized pattern-generation methods based on minimum visual units and compositional rules can rapidly produce patterns adaptable to diverse modern-product dimensions. Further expansion toward interaction-design directions combines folk-custom narratives and semantic information behind patterns with visual genes to build visualized interactive carriers. Beyond physical cultural-and-creative-product development, diversified contemporary-communication forms for Dawu brocade belt can be explored.

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