

Female Behavior and Environmental Perception in Paper- Cuttings in Northern Shaanxi

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Abstract

This study examines Northern Shaanxi paper-cutting from a female environmental perception. Through field investigation and interviews with female paper-cutting craftsmen, an environmental embodiment chain was revealed. Environment: female craftsmen shift among fields to houses, mixed plants, and geometric minimalist motifs to meet family or client expectations. Social: courtyard audiences slow the rhythm, cooperative venues steady it, private rooms speed it up. Sensory: louder drums or brighter light cues faster cutting, embedding new meaning. Thus, perception links bodily action to identity roles, from virtuous wife to community leader. Findings inform rural cultural-space design and female empowerment.

Keywords: Paper-cutting; Gender; Environment

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1.0 Introduction

Paper-cutting in Northern Shaanxi is a daily art for women on the Loess Plateau to write their life experiences and collective feelings on paper (Shukra, 2023). It is listed as a representative project of human intangible cultural heritage by UNESCO. However, existing research focuses on the image motif, inheritance dilemma, or marketization path, and lacks a micro-level demonstration of how environmental perception shapes paper-cutting creation (Yan et al., 2024). Traditional environmental research often relies on physical parameters such as temperature, humidity, and illumination, but for the fine art field, what is more explanatory is the symbolic social sensory complex field in which the artist is situated (Read, 2022; Prášek, 2024; Stronciwilk, 2024). This study proposes the concept of the environmental embodiment chain based on the following: women respond to three layers of environmental cues in real time through body movements and pattern manipulation, completing identity negotiation between self and social evaluation.

At the level of symbol motif, paper-cutting in Northern Shaanxi has formed a diversified pedigree that guards the family with Fields - House, metaphors ecology with hybrid plants, and echoes modern aesthetics with geometric minimalism (Gong, 2024). The choice of theme itself reflects the artist's perception and judgment of expectations. At the level of social interaction, creation is often nested in courtyard gatherings, cooperative exhibitions, or private workshops (Safaa&Saddou, 2023; Basov et al., 2024). The number of spectators and interaction frequency directly affect the cutting rhythm and pattern complexity.

At the sensory spatial level, the strong sound of drum music and natural light and shadow are regarded by craftsmen as cutting signals, and the body rhythm accelerates or slows down accordingly, transforming into formal strategies such as blank space and symmetry in the work (Charalambous&Djebbara, 2023). The continuous coupling of three layers of perception forms an environmental embodiment chain, driving the displacement of themes and the generation of identity scripts - progressing from virtuous assistants to

community leaders and even handmade entrepreneurs. Thus, this study aims to explore the environmental perception of female paper-cutting artisans in Northern Shaanxi. To achieve this goal, two key issues need to be addressed: first, analyzing environmental cues in their paper-cutting, and second, examining processes of identity negotiation and role transformation.

2.0 Literature Review

With the convergence of the activation of intangible cultural heritage and gender studies, the discussion on paper-cutting in Northern Shaanxi has gradually shifted from the pattern origin to the attention of female creators and their environment. At the same time, the understanding of the connotation of environment in the fields of art and anthropology has expanded from physical conditions such as temperature and humidity to complex fields of symbolism, communication, and sensory perception.

2.1 Research progress on Paper-cutting and female subjectivity in Northern Shaanxi

Since Northern Shaanxi paper-cutting was listed as a national intangible cultural heritage, research attention has turned to liveliness and marketization, revealing the practical difficulties of the inheritors, such as aging, single channel, and homogenization of content (Wang, 2023; Zhao&Kim, 2024). However, early literature generally positioned women as skilled executors and overlooked their initiative as cultural decision-makers.

Recently, female subjectivity has gradually become the core of analysis. The case of Huizhou brick carving and Weifang kite proposes the framework of craftsmanship identity social capital, which illustrates that women can achieve a professional identity leap through skill improvement and social networks (Pérez-Bustos et al., 2019). In the context of Northern Shaanxi, oral history research presents how female craftsmen negotiate their roles in the family and market through the rewriting of themes in multiple fields of the home square city (Fadare, 2022). At the same time, the paper begins to document intergenerational differences: the older generation emphasizes agricultural narratives, the middle generation combines ecological issues, and the new generation tends towards geometric minimalism (Chacur-Kiss et al., 2024). This shift suggests that women are not pattern replicators, but rather subjects who respond to social evaluations through symbolic strategies, which deserves further exploration from a micro perspective.

2.2 Environmental Perception Perspective: Symbols, Communication, and Sensory Space

In the study of folk art, the environment has traditionally been objectified as physical conditions such as light and humidity. However, the field of art focuses more on the symbolic environment and communication space. Semiotics and visual anthropology point out that the public memory and metaphorical displacement of the theme constitute the symbolic ecology of artistic creation, determining the acceptable range and emotional threshold of the pattern (Huang, 2023). Sociological research reveals how courtyard observation, market demonstrations, and cooperative courses reshape movement rhythm and theme selection through real-time feedback (Barrios et al., 2023; Ehwi, 2023). These results indicate that communication density and evaluation mechanisms are more directly involved in the creative process than climate factors.

Sensory ethnography further reveals how sound field and light, and shadow become bodily triggers: field observations of synchronous increase in drum sound intensity and cutting acceleration support the chain hypothesis of sensory stimulation, action rhythm symbol insertion (Contreras-Morales, 2024). Although there have been cases where craftsmen adjust the proportion of blank space based on audience emotions or ritual atmosphere (Bastiani, 2022; Kuzinas et al., 2024), there is still a lack of a systematic framework to explain how multiple layers of environment work together.

To sum up, the existing studies have observed paper-cutting in Northern Shaanxi from the perspective of female subjectivity and symbol and communication, but they have not placed them in the same analytical framework. The environmental embodied chain proposed in this article attempts to integrate three dimensions: thematic lineage, social interaction, and sensory signals, to explain how women complete action adjustment and identity negotiation through environmental perception, thus providing a new path for intangible cultural heritage research that combines artistic and sociological tension.

3.0 Methodology

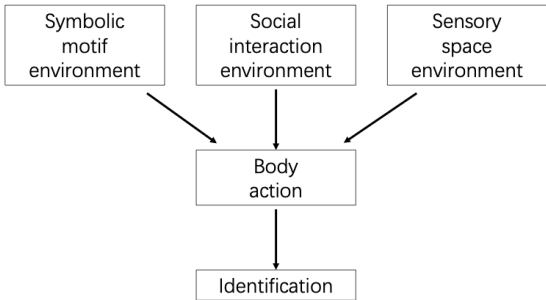


Fig. 1: Environmental Embodiment Chain Framework

To bridge the gap between the research on female subjectivity and the perspective of environmental perception, an explanatory framework that can simultaneously cover pattern symbols, interpersonal interactions, and multisensory experiences is needed. The concept of the environmental embodiment chain (Fig. 1) is proposed as follows: creators first capture symbolic clues, social intensity, and audio-visual stimuli based on intuition, and then make immediate responses through body movements and pattern selection, ultimately confirming or reshaping their own identity in the work and interaction.

3.1 Pattern Motif Environment: How to Use the Pattern Library

Paper-cutting in Northern Shaanxi is like a large pattern warehouse, filled with old drafts such as field cottages, bountiful harvests of grains, children riding fish, elm and plum blossoms, sea buckthorn, and geometric triangles. For female paper-cutting craftsmen, these are not decorations, but raw materials before they start. But their first step was not to use the scissors directly, but to go through it first in their minds: "Who wants these paper-cutting artworks"? "Where is it posted"? "What message do I want to pass on when I borrow this paper"?

At weddings, full moons, and other joyous events, the elderly default to using fields and large rooms or double happiness dolls with large patterns, thick lines, and wide white spaces. The joy can be seen from afar by sticking them to the window. They will also specially cut the grain ears to be fuller, meaning the more vigorous they are when crossed. If there is a green market in the village, the middle-aged people will cut and graft the local elm leaf plum trees with the roses from other places, and chat with tourists while cutting them: "Look, there is both loess flavor and romantic flavor here". The same bunch of flowers can have new meanings with different colors and spellings (Wang, 2013). Young people are most concerned about cleanliness and ease of retouching when making online store orders. They often indent traditional borders, leaving a large white border, cutting positive and negative shapes into geometric blocks, refreshing thumbnails, fast loading of e-commerce pages, and customers saying it looks high-end (Zhang, 2020). Some customers also put the logo of the enterprise into the design, and paper-cutting people hide the brand's initial letters in the petals or clouds, so that traditional blessings and modern logos can be combined at the same time.

From this, it can be seen that the perception of patterns also varies from person to person. Older people value meaning and prefer traditional patterns that are symmetrical and festive. Middle-aged people pay attention to topicality and like patterns that can trigger communication. Young people pursue visual aesthetics and communication efficiency, hoping that patterns can attract attention and receive likes in a short period. This standard of seeing directly affects the direction of picking and changing.

From selection to presentation, these three steps form a complete chain: Selection is finding the appropriate language from old patterns based on the audience and the occasion. Modification refers to the recombination of pattern structure, color matching, and symbols based on expression needs. Presentation, it's about taking feedback from the audience and adjusting the direction for the next creation. This three-step process of selecting, modification, and presentation brings the old pattern to life: the old framework retains the roots of this, which is Northern Shaanxi, while the new modification method presents the difference of who I am. The pattern library is no longer rigid, but like building blocks, it can be assembled into any combination at any time, by any person, and for any purpose.

3.2 Social Interaction Environment: Cutting Rhythm in Different Scenes

Paper-cutting is not only about a person holding scissors, but also depends on whether there are people, who are around, and what they say (Mahliza et al., 2018). We divide common occasions into three levels: lively courtyard, cooperative teaching area, and private studio.

Courtyard lively scene: During festivals or weddings, relatives and neighbors gather in a circle, watching and cheering at the same time. Paper-cutting people usually move the Eight Immortals Table to the center of the yard and slow down. They fold the paper, fold it in half, and then fold it in half. Each time, they explain to the onlookers: "This line is the ridge, and that blank is the ears of wheat". The slow rhythm has two purposes: first, it is convenient for others to interrupt and please others. The second is to save face and make it clear to both the elderly and children. The more onlookers there were, the more stable the paper-cutting people were - the cut was round and round, for fear that the wrong cut might damage the happiness.

Cooperative teaching field: poverty alleviation workshop or tourist experience store, operated in a teacher and apprentice, and tourist mode. A demonstration must be completed within a specified time of ten minutes. The paper-cutting craftsman first uses a pencil to draw the main shape, and then uses the continuous cutting method to cut it in one breath. The rhythm is steady but not slow, with the aim of allowing apprentices to see the steps clearly and tourists to capture the video. Sometimes, there is also a scoring process where peers evaluate each other, tourists give likes, good works are hung on the wall, and poor ones are returned to the market. Such a setting changes the seniors' final say in the yard to peers and customers' final say, so that middle-aged women can find the identity of a teacher and increase benign competition.

Private Studio provides young people convert a corner of their home or a rented single room into a workbench to receive e-commerce orders or live stream sales. There are no onlookers here; time is money. The action speed can reach 8 cuts per minute, and commonly used punching machines, roller knives, and metal templates can cut more than ten orders in one night. To prevent wrist strain, they disassembled the large image into several small modules and spliced them together with tape, which is both fast and effortless. The customer asked in real time through voice or bullet screen: "Add another kitten, OK"? The female paper-cutting craftsmen immediately filled in the corner. This kind of online interaction may seem to have fewer people, but in fact, the collective viewing in the comment section is more like a virtual courtyard.

These three occasions infiltrate each other and switch rhythm; the female paper-cutting craftsmen often switch several roles. They work as a teacher in the cooperative, or they cut happy words for weddings in the yard, sometimes they also work in their private studios. Every new occasion, they need to rejudge who the audience is and what they want to see, and then adjust the speed of action and the

complexity of the pattern. If they ignore the differences on such occasions, promotion or training will be a one-size-fits-all approach, either making tradition lose its flavor or making apprentices unable to learn.

3.3 Sensory Space Environment: How do Sound and Light Bring Rhythm

The sound and light of the paper-cutting scene is not the background board, but the rhythm command (Zhipeng, 2019). The drumbeat is fast, and the scissors are also fast: the rural yangko gongs and drums often use the rhythm of fast three, slow one. As the drum beats faster, the emotions of the onlookers increase. The paper-cutting cutter was driven by the atmosphere, and the rhythm of his hands accelerated instantly, and the number of origami pieces was reduced. Instead of using rotary scissors, the blank space was reduced accordingly, making the picture more compact subconsciously. The drumbeat slows down, the scissors immediately slow down, and then turn back to fine-tune or carve patterns.

Good lighting, fewer mistakes: the north wall of the cave has the brightest facing surface, and the paper mouth is clear and distinct; When backlit, there are many shadows, and the elderly are afraid of cutting them wrong, so they move to the center of the yard or move a small tabletop towards the door. Young people install LED circular lights above their desks for live streaming effects, with direct light and no paper shadows. The audience can see clearly, and I can also cut it steadily.

Sound and light bring double insurance. In cooperative open classes, teachers often play lively folk songs first, and then turn on the ceiling light to make the atmosphere warm and bright. The audience is focused, and the apprentice follows the same rhythm as the knife. At the end of the class, the music volume was lowered, and the lighting was soft. Everyone entered the review and photo-taking section, and the scissors also stopped (Liubai, 2022).

This sound light action matching not only changes the speed of paper-cutting but also reflects on the pattern. The pattern density becomes higher at the climax of the drumbeats, and the blank space is reduced. In a soft light environment, artists like to cut large areas of hollow flowers to highlight delicate lines. Over time, the audience can guess whether the scene was lively or quiet just by looking at the pattern. Sound and light link the movement rhythm, visual effects, and mood of the occasion into a chain, making paper-cutting a multi-sensory art that can be both heard and seen (Lindholm, 2022; Reva & Zolotareva-Pasyuta, 2024).

4.0 Findings

As shown in Table 1, the environmental embodiment chain elucidates the working logic of female paper-cutting craftsmen. Firstly, use the pattern library to select materials and rewrite them, and use symbols to express identity. Secondly, adjust the rhythm of the movements based on the number of spectators and interaction methods on site, so that the work can be used appropriately in ceremonies, teaching, or commercial scenes. Finally, using sensory signals such as drumbeats and lighting, fine-tune the blade speed and leave blank space, and directly write emotions and rhythm into the pattern. The three-layer environment echoes each other layer by layer: patterns provide themes, communication determines speed, and sound and light are responsible for final polishing. Any imbalance in any link may cause the work to lose its “Shaanbei flavor” or make it difficult to meet modern market demands.

Table 1. Comparison Table of Various Elements of the Third Ring Joint

Environments	Key Questions	Main Elements	Typical Practices/Scenes
1. Symbolic motif environment	What to select? What to change? Say what?	Traditional manuscripts; New additional elements; Combination techniques	Big room and grain using in weddings; Green market uses elm leaf plum and rose; Using geometric logos
2. Social interaction environment	Who is watching? How long do they watch? Wanna to learn or buy?	Gathering density; Interactional ways; Target roles	Slowly cutting and telling stories in the yard; Cooperative stable cutting as a demonstration; Private quick editing barrage
3. Sensory space environment	How do the sound and light bring rhythm?	Drumbeats; Light source direction; Sound and light synchronization	Drumbeats cause the spinning paper to accelerate; The light source affects the symmetry of the pattern

5.0 Discussion

Building upon the above research findings, a deeper discussion of the “environmental embodiment chain” can be developed at the level of practice. Firstly, from the perspective of symbolic pattern reconstruction, female paper-cutting artisans are not merely transmitters of craft techniques; in selecting and reorganizing traditional motifs, they are in fact engaging in a cultural “rewriting.” This rewriting is manifested not only in the visual renewal of symbols but also in the repositioning of identity: traditional motifs such as flowers, birds, and auspicious patterns are endowed with new meanings, enabling female artisans to shift fluidly between identities such as “virtuous wives and mothers” and “community leaders.”

Secondly, at the level of interaction, the number of spectators and modes of engagement directly determine the rhythm of performance and the density of cutting. This indicates that paper-cutting is not a closed act of craftsmanship, but rather an open communicative scene in which artisans continuously adjust their bodily movements in response to social feedback. Such adjustments suggest that paper-cutting is both an artistic production and a social performance, with its creative process constituting a dynamic negotiation of identity, values, and expectations.

Thirdly, from the sensory dimension, drumbeats and lighting are not merely auxiliary background elements but serve as critical signals that regulate the rhythm of the artisan’s movements. Through the immediate coupling of sensory stimuli and bodily responses,

paper-cutting practice demonstrates a mode of creative generation rich with “liveness.” This generative process highlights the value of embodiment: creation does not stem from a predetermined blueprint but from the artisan’s instantaneous perception and feedback within the environment. The interplay among the three environmental layers ensures that paper-cutting can retain the traditional flavor of Northern Shaanxi while simultaneously adapting to the diverse demands of the modern market. Thus, the “environmental embodiment chain” is not only an analytical framework but also a vital pathway for understanding how female artisans navigate between cultural inheritance and social innovation. It reveals the vitality of intangible cultural heritage in contemporary contexts, showing how traditional arts can continuously generate new narratives and identities through subtle bodily adjustments and sensory interactions.

6.0 Conclusion & Recommendations

In the framework of the environmental embodiment chain, this research reveals how female paper-cutting craftsmen in Northern Shaanxi can adjust their body movements and pattern choices through instant perception in the three-dimensional environment of symbol motif social interaction sensory space, and thus reshape their identity scripts, such as virtuous domestic help, community leaders, and manual entrepreneurs. The theme switching reflects a symbolic judgment of the audience’s expectations. The density of communication directly regulates the cutting rhythm and the blank space. Drumbeats, light and shadow, and other sensory signals instantly trigger action changes and embed narration. The three layers of chains together explain the dynamic creativity of paper-cutting practice. This perspective breaks through previous research that only focused on physical climate or market factors, providing delicate micro evidence for the intersection of intangible cultural heritage and art studies.

Based on the conclusions of this study, the future transmission and development of female paper-cutting in Northern Shaanxi can be advanced in three directions. First, at the cultural policy level, the establishment of a regional “pattern symbol library” should be encouraged. By preserving and dynamically updating motifs in digital form, artisans can flexibly navigate between tradition and contemporary contexts, thereby strengthening their agency in identity reconstruction. Second, at the level of social practice, interactive platforms should be expanded, such as community workshops, school-based curricula, or tourism programs. These settings can allow paper-cutting to operate across ritual, educational, and commercial spaces, creating multiple pathways for practice. Finally, in terms of technological support, stage elements such as lighting and sound can be introduced to enrich sensory interactions and enhance the expressiveness of embodied creation. Such measures not only help preserve the distinctive “Shaanbei flavor” but also revitalize the role of intangible cultural heritage in modern society, ensuring its sustainability and competitiveness in diverse cultural markets.

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Paper Contribution to Related Field of Study

This study proposes an “environmental embodiment chain” that connects symbolic motifs, social interaction, and sensory cues, recasting the environment as a composite of symbols, communication, and senses and offering a replicable qualitative approach to creative processes. Findings show female paper-cutters negotiate identities through motif choice and cutting rhythm, supplying actionable guidance for female subjects’ rural heritage renewal.

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