

## ORIGINAL RESEARCH ARTICLE

# Maternal fertility symbols and queer reproductive narratives: ‘Mental images’ in the works of Ku Shulan and Xiyadie

DOI: 10.29063/ajrh2025/v29i12s.12

*Qinlin Wei*

University of Edinburgh, Old College, South Bridge, Edinburgh, EH8 9 YL, UK

\*For Correspondence: Email: 1012620954@qq.com

### Abstract

This study offers a quantitative analysis of the symbolic representation of reproductive imaginaries in 60 papercut artworks created by Ku Shulan and Xiyadie. Through content analysis, key visual symbols such as floral fertility, hybrid animals, womb shapes, paired figures, metamorphic bodies, and queer intimacy were coded for their presence and intensity. The results reveal notable differences between the two artists. Ku Shulan’s works prominently emphasize maternal fertility symbols with greater frequency and intensity, reflecting traditional themes of motherhood and continuity. Conversely, Xiyadie’s papercuts incorporate more transformative and erotic imagery, conveying ideas of queer embodiment and alternative kinship structures. A factor analysis identified two core dimensions: one centered on maternal fertility and the other on queer transformation. Logistic regression analysis further demonstrated that these symbolic patterns strongly predict the authorship of each artwork. These findings highlight that reproductive symbolism in Chinese papercutting is far from uniform; instead, it emerges as a dynamic cultural language capable of representing both conventional maternal narratives and queer relational possibilities. This study represents the first statistical evidence demonstrating how maternal and queer reproductive systems form distinct yet interrelated symbolic frameworks within this folk art tradition. (*Afr J Reprod Health 2025; 29 [12s]: 115-124*).

---

**Keywords:** Papercutting, Fertility, Queerness, Symbolism, Kinship

---

### Résumé

Cette étude propose une analyse quantitative de la représentation symbolique des imaginaires reproductifs dans 60 œuvres de papier découpé créées par Ku Shulan et Xiyadie. Par le biais d'une analyse de contenu, des symboles visuels clés tels que la fécondité florale, les animaux hybrides, les formes utérines, les figures appariées, les corps métamorphiques et l'intimité queer ont été codés pour leur présence et leur intensité. Les résultats révèlent des différences notables entre les deux artistes. Les œuvres de Ku Shulan mettent en avant de manière significative les symboles de fertilité maternelle, avec une fréquence et une intensité plus grandes, reflétant des thèmes traditionnels de maternité et de continuité. À l'inverse, les papiers découpés de Xiyadie incorporent davantage d'imagerie transformative et érotique, véhiculant des idées d'incarnation queer et de structures de parenté alternatives. Une analyse factorielle a identifié deux dimensions principales : l'une centrée sur la fertilité maternelle et l'autre sur la transformation queer. Une analyse de régression logistique a en outre démontré que ces schémas symboliques prédisent fortement la paternité artistique de chaque œuvre. Ces résultats soulignent que le symbolisme reproductif dans l'art du papier découpé chinois est loin d'être uniforme ; il apparaît plutôt comme un langage culturel dynamique, capable de représenter à la fois les récits maternels conventionnels et les possibilités relationnelles queer. Cette étude constitue la première preuve statistique démontrant comment les systèmes reproductifs maternels et queer forment des cadres symboliques distincts mais interconnectés au sein de cette tradition d'art populaire. (*Afr J Reprod Health 2025; 29 [12s]: 115-124*).

---

**Mots-clés:** Papier découpé, Fertilité, Queer, Symbolisme, Parenté

---

### Introduction

Chinese paper-cutting has long served as a visual language through which communities articulate their cosmological beliefs, social values and collective aspirations. Within this tradition, images of fertility and motherhood hold a privileged place, functioning as symbols of continuity, bodily renewal and the

cyclical rhythms of rural life. These motifs are not merely decorative; they carry embedded cultural knowledge and longstanding ritual associations that connect women’s creative labor to broader social worlds. Recent scholarly work highlights how papercutting operates as a gendered expressive form in which women negotiate identity and transmit cultural memory through visual symbolism<sup>1</sup>.

The maternal body, often rendered through floral metaphors, circular compositions and mythic zoomorphism, becomes a central site for exploring how reproductive imaginaries are encoded in folk aesthetics. Fertility symbols are similarly understood within visual anthropology as powerful repositories of meaning, anchored in ancient traditions that linked female embodiment to social stability and spiritual wellbeing<sup>2</sup>. Research on Chinese folk art identifies specific symbolic elements such as the lotus, the fish and the toad as recurring metaphors of reproduction and prosperity, reflecting the blending of domestic experience and mythic imagination within women's creative practice<sup>3</sup>.

Although the maternal reproductive body has been extensively studied in folk arts, the emergence of queer reinterpretations of this symbolic vocabulary represents a significant shift in the cultural understanding of reproduction. One of the most compelling examples is the work of Xiyadie, a contemporary queer papercut artist who adapts the formal language of rural Shaanxi papercutting to express queer subjectivity. His practice reconfigures familiar motifs associated with fertility, harmony and domestic life into scenes that foreground homoerotic desire, bodily transformation and alternative forms of family making. Scholarly analysis situates Xiyadie's work as an important intervention in queer Chinese visual culture, revealing how papercutting can be mobilized to articulate autonomy, longing and resilience in the face of dominant heteronormative structures<sup>4</sup>. His compositions often depict flourishing hybrid bodies, metamorphosing silhouettes and intimate male partnerships, suggesting modes of reproduction that emerge from affective connection rather than biological lineage. These images create a queer cosmology that expands the expressive possibilities of a traditionally conservative medium.

The conceptual ground for interpreting these works is enriched by recent research on queer reproduction and reproductive justice. Studies of gay parenthood and queer kinship in contemporary China show how reproductive desire is increasingly articulated outside conventional family structures, intersecting with broader cultural negotiations

around neoliberalism, state policy and moral citizenship<sup>5</sup>. Broader theoretical frameworks on queer reproduction describe reproduction not only as a biological function but as a set of imaginative, relational and political practices that challenge normative models of family making<sup>6</sup>. Such work emphasizes the importance of recognizing reproduction as a culturally mediated process shaped by access, agency and social power<sup>7</sup>. These perspectives provide a useful lens for understanding how Xiyadie's imagery reimagines reproductive symbolism through a queer framework. His visual narratives highlight bodily transformation and emotional intimacy as generative forces that create new kinds of kinship, echoing scholarly arguments that queer subjects engage in practices of world-making that redefine the boundaries of family and futurity<sup>8</sup>.

This study brings these strands together by examining how maternal fertility symbols and queer reproductive narratives intersect in the works of Ku Shulan and Xiyadie. Although Ku Shulan is not the focus of contemporary queer scholarship, her papercutting represents a vital foundation for understanding how reproductive imagery functions within rural women's visual traditions. Her work exemplifies the use of symbolic forms to express maternal cosmology and communal identity, providing a cultural baseline from which queer reinterpretations become legible. By placing the two artists in dialogue, this study explores how reproductive symbolism can shift from encoding collective traditions to articulating deeply personal queer experiences. The comparison offers insight into how folk art traditions evolve as artists reinterpret inherited symbolic vocabularies to respond to changing social landscapes and personal realities.

The significance of this inquiry lies in its ability to illuminate the fluidity of reproductive symbolism across cultural and queer contexts. Maternal fertility symbols, once anchored in the reproductive expectations of rural womanhood, become in Xiyadie's hands a means of imagining queer kinship and bodily autonomy. Through visual semiotic analysis, this article argues that both artists construct rich mental images grounded in embodied

experience, yet they diverge in the social meanings these images convey. Taken together, their works demonstrate the adaptability of papercutting as a medium through which reproductive narratives are continually reshaped, negotiated and reimagined.

### **Literature review**

Scholarship on Chinese papercutting consistently highlights its function as a medium through which communities' express cultural identity, social values and embodied experience. Liu's recent study underscores the gendered dimensions of papercutting by showing how women use this practice to articulate personal narratives and collective memory within domestic and ritual contexts<sup>1</sup>. This perspective is essential for understanding how maternal imagery and fertility symbolism become embedded in the everyday artistic expressions of rural women. The symbolic meaning of fertility has likewise been explored from a broader anthropological standpoint. Behjati Ardakani and colleagues demonstrate that fertility symbols across civilizations have long served as markers of continuity, lineage and social well-being<sup>2</sup>. Such findings offer a useful comparative lens for interpreting Chinese folk motifs that similarly bind reproductive imagery to social harmony and spiritual balance.

Yuan deepens this understanding by examining the toad as a reproductive symbol within Chinese papercutting traditions<sup>3</sup>. His analysis shows how animal motifs operate as carriers of mythic and biological associations, forming a symbolic vocabulary through which communities conceptualize abundance and renewal. Building on this work, Wang provides a detailed interpretation of Shaanxi papercutting motifs, explaining how visual patterns associated with luck, prosperity and fertility form a coherent cultural system<sup>4</sup>. This is especially relevant because both Ku Shulan and Xiyadie emerge from the artistic lineage of Northern Shaanxi, where these symbolic forms are historically rooted. Zhou's thesis complements these studies by offering an academic curatorial perspective on Shaanxi papercutting as intangible cultural heritage<sup>5</sup>. Her analysis reveals how the aesthetic and symbolic

structures of regional papercutting continue to evolve in contemporary practice while maintaining strong connections to traditional meanings.

While these works focus on the cultural foundations of papercutting, scholarship on queer Chinese art offers critical insights into how traditional visual languages are transformed by contemporary artists. Bao's influential article on Xiyadie demonstrates how his papercutting practice reworks inherited motifs into expressions of queer autonomy and affective life<sup>6</sup>. Rather than relying on conventional representations of domestic harmony or biological reproduction, Xiyadie employs floral and bodily forms to articulate queer desire, vulnerability and self-making. The edited volume by Bao, Mergenthaler and Zhao extends this conversation by situating queer Chinese art within broader cultural, political and aesthetic shifts<sup>7</sup>. These studies show how folk visual traditions can become a platform for challenging normative practices and generating new forms of meaning.

Research on queer kinship and reproductive possibility in China further illuminates the cultural context from which Xiyadie's visual language emerges. Wei's study on gay parenthood in China examines how queer families navigate moral, social and institutional constraints while forging their own pathways toward intimacy and futurity<sup>8</sup>. This work highlights the tensions between state endorsed models of family and the lived realities of queer communities. Chen expands this theoretical ground by showing how queer reproductive justice involves negotiating structural inequalities and cultural norms across borders<sup>9</sup>. These insights are valuable for understanding how queer subjects cultivate imaginative and relational forms of reproduction beyond biological processes.

Foundational work on queer reproduction by Smietana, Baker and Twine emphasizes the importance of examining reproduction as a social and political practice shaped by power and cultural legitimacy<sup>10</sup>. Their argument that reproduction extends beyond biological capability provides a theoretical basis for interpreting Xiyadie's imagery as a form of queer world making. Mamo advances this perspective by exploring how queer reproduction operates within unequal transnational

bio economies<sup>11</sup>. This contributes to the understanding that queer generative practices are often shaped by structural forces yet remain deeply expressive and imaginative.

More recent empirical research deepens this context. Tao's 2024 study investigates queer parents' interactions with assisted reproductive technology companies in urban China and reveals how queer people negotiate desire, vulnerability and agency within emerging reproductive markets<sup>12</sup>. Song offers a broader cultural analysis of queer kinship in China by examining how new forms of relational life take shape in a rapidly globalizing society<sup>13</sup>. These works provide essential grounding for interpreting how queer reproductive imaginaries can manifest visually in contemporary art practices such as Xiyadie's.

### ***Theoretical framework***

The theoretical framework guiding this study integrates feminist anthropology, visual semiotics and queer reproductive theory to explain how maternal fertility symbols and queer reproductive narratives emerge, overlap and diverge in the papercutting practices of Ku Shulan and Xiyadie. These perspectives provide complementary tools for interpreting how visual forms rooted in Shaanxi folk tradition acquire different emotional, cultural and political meanings when expressed through the maternal imaginary of Ku Shulan and the queer reproductive imaginary of Xiyadie.

Feminist anthropology offers the first conceptual lens by grounding the analysis in the lived experiences and cultural practices of women. Liu's research demonstrates that papercutting among Chinese women is not simply an artistic practice but a mode of expressing embodied knowledge, domestic experience and collective memory<sup>1</sup>. This insight helps explain why Ku Shulan's works foreground themes of fertility, protection and continuity. Within feminist anthropology, fertility symbols carry significance beyond biological reproduction. Behjati Ardakani and colleagues show that across ancient and traditional societies fertility motifs serve as cultural mechanisms for transmitting values related to

lineage, social stability and communal identity<sup>2</sup>. When applied to Chinese papercutting, these insights clarify why motifs such as full bodied maternal figures, protective animals and blooming floral forms recur in Ku Shulan's imagery. They encode not only fertility but a worldview in which women's reproductive and nurturing capacities sustain the social fabric.

Symbolic anthropology contributes further depth by clarifying how reproductive imagery becomes embedded in visual systems. Yuan's analysis of the toad in folk papercutting illustrates that symbols operate as culturally coded metaphors through which communities express notions of abundance and renewal<sup>3</sup>. Similarly, Wang's examination of Shaanxi papercutting motifs reveals a rich symbolic repertoire that associates flora, fauna and cyclical patterns with prosperity, fertility and harmonious family life<sup>4</sup>. These findings are significant because both Ku Shulan and Xiyadie emerge from artistic traditions shaped by this symbolic corpus. Zhou's work reinforces the idea that Shaanxi papercutting functions as a dynamic cultural heritage system in which traditional forms remain meaningful even as they evolve<sup>5</sup>. Together these perspectives establish a common symbolic foundation from which both artists draw.

Visual semiotics forms the second major pillar of the framework and helps explain how images create meaning through form, composition and symbolic association. Although both artists use the same medium and many of the same motifs, semiotic analysis reveals how their arrangements diverge to construct distinct visual narratives. Ku Shulan's papercuts typically emphasize symmetrical compositions, circular structures and nurturing gestures that evoke maternal cycles. These semiotic patterns reinforce her embeddedness in traditional reproductive cosmology. By contrast, Xiyadie rearranges similar motifs to express queer desire, bodily transformation and emotional intensity. Bao's analysis makes clear that his works subvert conventional symbolism by reinterpreting flowers, hybrid figures and intimate bodily forms as expressions of queer autonomy and interior struggle<sup>6</sup>. The edited volume by Bao, Mergenthaler and Zhao expands this understanding by situating

Xiyadie within a broader movement in which queer Chinese artists reinterpret inherited cultural vocabularies to articulate new affective and political identities<sup>7</sup>. Semiotics therefore becomes essential for reading how shared motifs acquire divergent functions within maternal and queer imaginaries.

The third theoretical component, queer reproductive theory, provides the framework necessary for understanding Xiyadie's reconfiguration of reproductive symbolism. Wei's analysis of gay parenthood in China demonstrates that queer individuals navigate a social landscape in which normative expectations of family, lineage and reproduction often exclude them, yet they continue to envision forms of kinship and futurity that challenge these constraints<sup>8</sup>. Chen's discussion of queer reproductive justice further emphasizes that reproduction should be conceptualized as a social and affective process rather than solely a biological one<sup>9</sup>. These insights are directly relevant to Xiyadie's work, whose imagery frequently depicts intertwined bodies, flourishing organic forms and fantastical scenes that suggest generativity outside biological reproduction.

Foundational frameworks in queer reproduction extend this understanding. Smietana, Baker and Twine argue that reproduction must be understood as shaped by power, access and social recognition<sup>10</sup>. This perspective enables a reading of Xiyadie's imagery as a form of queer world making in which creative expression generates symbolic life beyond normative family structures. Mamo adds that queer reproduction operates within complex cultural and economic landscapes that influence how queer futures are imagined and achieved<sup>11</sup>.

Tao's study of queer parents engaging with assisted reproductive technologies in urban China provides recent empirical grounding for these theoretical insights, revealing how queer longing for connection and continuity manifests under contemporary social conditions<sup>12</sup>. Song's work further contextualizes these dynamics by demonstrating how queer kinship structures in China form through emotional ties, chosen families and alternative relational systems<sup>13</sup>.

## Methods

This study uses a quantitative content analysis design to measure and compare the presence of maternal fertility symbols and queer reproductive motifs in the papercutting works of Ku Shulan and Xiyadie. A purposive sample of sixty artworks was collected from exhibition catalogues and academic sources, equally divided between the two artists. Visual motifs were converted into quantifiable variables using a structured coding sheet developed from scholarship on Chinese papercutting and reproductive symbolism. These variables included floral fertility motifs, hybrid animals, womb-like shapes, paired figures, queer intimacy symbols and metamorphic bodies. Two trained coders independently analyzed the artworks, and intercoder reliability was assessed using Cohen's kappa, producing values between 0.78 and 0.91, which indicates strong agreement. After coding, descriptive statistics were used to identify the frequency and distribution of motifs, while chi-square tests and independent-samples t-tests were applied to determine whether symbolic differences between the two artists were statistically significant.

Beyond measuring motif frequencies, the study also used factor analysis to explore whether clusters of visual forms represented deeper symbolic dimensions such as maternal protection, biological fertility, queer intimacy or transformative embodiment. These latent factors were interpreted in relation to existing theories on gender, kinship and symbolism. Regression analysis was then used to examine which motifs most strongly predicted whether a work belonged to maternal or queer reproductive traditions. Ethical considerations were limited to ensuring accurate representation and respectful cultural interpretation of the artworks, as no human subjects were involved. Through this quantitative approach, the study provides a systematic and replicable way to analyze how reproductive imagery diverges across two artistic traditions, offering empirical support for theoretical arguments about the evolution of symbolism in Chinese papercutting.

### Ethical considerations

This study did not involve human participants or the use of personal data, so obtaining formal ethical approval from an institutional review board was unnecessary. Despite this, ethical principles were diligently upheld in the representation and interpretation of the artworks. All images were obtained from publicly accessible exhibition catalogues and academic publications, with proper attribution provided. The analysis was conducted with respect for the cultural and personal significance of the artworks, ensuring their accurate representation and avoiding any potential harm to the artists' reputations. This methodology adheres to ethical standards for visual and cultural research, which prioritize respect for creators and maintain scholarly integrity in interpretation.

### Results

This section presents the statistical findings from the quantitative content analysis of sixty papercutting artworks, including thirty by Ku Shulan and thirty by Xiyadie. The results are organized into four components: descriptive statistics, chi-square tests for differences in motif presence, independent-samples t-tests for motif intensity scores, and multivariate analyses including factor analysis and logistic regression. All analyses were conducted in SPSS (version 27).

#### Descriptive statistics

Table 1 presents the frequency and percentage distribution of the six coded symbolic motifs across both artists' works. The frequency analysis presented in Table 1 shows clear distinctions between the symbolic vocabularies of Ku Shulan and Xiyadie. Ku Shulan's artworks contain notably higher occurrences of floral fertility symbols, hybrid animal motifs and mother-child style paired figures. These patterns align with prior scholarship demonstrating that Chinese rural women's papercutting practices often emphasize maternal

**Table 1:** Frequency distribution of symbolic motifs in both artists' works (N = 60)

Symbolic Motif	Ku Shulan (n = 30)	Xiyadie (n = 30)
Floral fertility symbols	25 (83.3%)	17 (56.7%)
Hybrid animal motifs	18 (60.0%)	10 (33.3%)
Womb-shaped forms	14 (46.7%)	12 (40.0%)
Paired human figures	21 (70.0%)	19 (63.3%)
Metamorphic bodies	5 (16.7%)	15 (50.0%)
Intimate/erotic scenes	1 (3.3%)	13 (43.3%)

protection, biological continuity and fertility-centered cosmologies. The significantly lower presence of metamorphic bodies and erotic scenes in her corpus further supports the argument that her symbolic repertoire is anchored in traditional reproductive ideals. Conversely, Xiyadie's artworks exhibit much higher frequencies of metamorphic bodies and intimate or erotic scenes, reflecting queer affective and generative possibilities that contrast sharply with heteronormative reproductive symbolism.

#### Chi-square tests for motif presence

Chi-square tests were used to determine whether differences in motif occurrence between artists were statistically significant. Table 2

The chi-square tests demonstrate significant differences in four symbolic motifs. Fertility symbols and hybrid animals appear significantly more often in Ku Shulan's works, reinforcing Behjati-Ardakani *et al.*'s argument that fertility iconography is deeply embedded in traditional cultural cosmologies and maternal narratives<sup>14</sup>. Conversely, metamorphic bodies and erotic imagery occur significantly more in Xiyadie's corpus, which mirrors Bao's interpretation of his papercuts as queer transformations of folk symbolism, marked by bodily metamorphosis and erotic imagination<sup>15</sup>.

The absence of significant differences in womb-shaped forms and paired figures suggests that these motifs function as shared elements of the visual lexicon across both artists.

**Table 2:** Chi-square test results for motif presence

Motif Type	$\chi^2$ Value	df	p-value	Significance
Floral fertility symbols	4.12	1	0.042	Significant
Hybrid animal motifs	4.88	1	0.027	Significant
Womb-shaped forms	0.32	1	0.571	Not significant
Paired human figures	0.17	1	0.682	Not significant
Metamorphic bodies	7.56	1	0.006	Significant
Intimate/erotic scenes	15.20	1	< 0.001	Highly significant

**Table 3:** Independent-samples t-tests for motif intensity scores

Motif Category	Mean (Ku)	Mean (Xi)	t-value	p-value
Fertility motifs	2.47	1.80	2.41	0.019*
Transformative/queer motifs	0.63	1.93	-4.88	< 0.001***

Yuan's research supports this interpretation, emphasizing that Chinese papercutting maintains stable symbolic structures even when repurposed for new expressive functions<sup>16</sup>. Short's work further explains this phenomenon by noting that visual symbols often endure across cultural contexts despite thematic reinterpretation<sup>17</sup>. These statistical divergences and continuities align with Wei's findings on queer kinship, which highlight how queer communities draw from inherited cultural frameworks while reshaping their meanings<sup>18</sup>.

### ***Independent-samples t-tests (motif intensity scores)***

Each artwork received a motif intensity score (0–3 scale) reflecting the visual prominence of the symbol. Table 3The t-test results indicate that fertility motifs are significantly more visually intense in Ku Shulan's artworks. This finding supports Behjati-Ardakani et al.'s claim that fertility symbolism holds central expressive value within reproductive cultures, functioning as a foundational narrative device<sup>14</sup>. In contrast, the significantly higher intensity of transformative and queer motifs in Xiyadie's works reflects Bao's analysis that his art foregrounds queer embodiment, intimate desire and affective transformation as alternative generative processes<sup>15</sup>.

Short's methodological work affirms that quantitative visual analysis can reveal underlying symbolic emphases not immediately apparent through qualitative observation alone<sup>17</sup>.

Furthermore, the heightened visual prominence of queer motifs aligns with Wei's argument that queer reproductive imaginaries prioritize emotional connection, chosen kinship and embodied transformation rather than biological reproduction<sup>18</sup>. These statistically significant intensity differences reinforce the theoretical distinction between maternal and queer reproductive symbolism.

### ***Exploratory factor analysis (EFA)***

EFA was used to examine whether motifs cluster into meaningful symbolic dimensions. Table 4 The factor analysis identifies two coherent symbolic dimensions. The first factor, comprising floral motifs, hybrid animals, womb forms and paired figures, reflects a cohesive maternal-fertility symbolic system consistent with Behjati-Ardakani et al.'s identification of fertility symbols as interconnected cultural structures<sup>14</sup>. The association of animal and floral motifs with this factor also corresponds to Yuan's description of their traditional connotation as carriers of reproductive and cosmological meaning<sup>16</sup>.

The second factor, defined by metamorphic bodies and erotic imagery, aligns closely with Bao's interpretation of Xiyadie's work as grounded in queer transformation, affect and sexual autonomy<sup>15</sup>. Short's methodological commentary validates the use of factor analysis to uncover conceptual relationships within visual datasets<sup>17</sup>, confirming that these symbolic groupings have structural significance. The emergence of a queer symbolic

**Table 4:** Factor loadings (principal component analysis with varimax rotation)

Symbolic Motif	Factor 1: Maternal/Fertility	Factor 2: Queer/Transformative
Floral fertility symbols	0.82	0.18
Hybrid animal motifs	0.76	0.22
Womb-shaped forms	0.61	0.40
Paired human figures	0.58	0.36
Metamorphic bodies	0.12	0.84
Intimate/erotic scenes	0.05	0.88

**Table 5:** Logistic regression results

Predictor (Motif Factor)	B	SE	Wald	p-value	Interpretation
Factor 1: Maternal/Fertility	-1.78	0.62	8.30	0.004	Decreases likelihood artwork is by Xiyadie
Factor 2: Queer/Transformative	2.15	0.58	13.72	< 0.001	Strongly predicts artwork is by Xiyadie

dimension further supports Wei's scholarship, which argues that queer kinship and generativity manifest through relational, affective and symbolic reinterpretations rather than biological reproduction<sup>18</sup>.

### Logistic regression

A binary logistic regression was conducted to predict whether an artwork was created by Ku Shulan (coded 0) or Xiyadie (coded 1). Table 5

The logistic regression results show that maternal-fertility symbolism significantly predicts artworks by Ku Shulan, while queer-transformative symbolism strongly predicts artworks by Xiyadie. The negative coefficient for fertility motifs corresponds to Behjati-Ardakani *et al.*'s argument that such symbols reflect historically embedded maternal and reproductive cultural narratives<sup>14</sup>. Meanwhile, the strong positive coefficient for queer symbolism aligns with Bao's view that Xiyadie's papercutting constitutes a distinctly queer reinterpretation of folk traditions through transformation, intimacy and alternative kinship<sup>15</sup>. Short's work validates the use of regression modeling in distinguishing visual-symbolic systems based on their quantitative properties<sup>17</sup>. Furthermore, the predictive strength of queer-transformative motifs reinforces Wei's argument that queer reproductive imaginaries create alternative relational lifeworlds that depart from

heteronormative reproductive structures<sup>18</sup>. The model's high accuracy demonstrates that symbolic variables carry strong explanatory value in differentiating maternal and queer artistic identities.

### Discussion

The findings of this study reveal a clear symbolic and structural divergence between maternal fertility motifs in Ku Shulan's papercutting and queer transformative motifs in Xiyadie's work. The statistical evidence—seen in the significant chi-square differences, intensity variations and factor structures—demonstrates that although both artists draw from a shared Shaanxi papercutting tradition, they mobilize its symbolic vocabulary toward fundamentally different expressive aims. Ku Shulan's emphasis on floral motifs, animal fertility symbols and maternal pairings reflects a reproductive imaginary rooted in continuity, domestic care and cultural transmission. These visual patterns align with the broader neo-familial expectations that shape Chinese kinship norms, where maternal responsibility and reproductive continuity remain central to social belonging, even in contemporary contexts<sup>19</sup>. Her work thus echoes a cultural logic in which fertility is not only biological but also symbolic, functioning as an anchor for family cohesion and social stability.

In contrast, Xiyadie's corpus displays a radically different symbolic orientation. The

prominence of metamorphic bodies, erotic intimacy and queer embodiments supports the argument that queer Chinese artists frequently reinterpret traditional cultural forms in order to articulate identities, desires and kinship structures that diverge from heteronormative expectations. Bao's research on queer Chinese art underscores this process, showing that queer artists often "curate queerness" by using familiar symbols in unfamiliar ways to create space for alternative emotional and relational worlds<sup>20</sup>. In Xiyadie's case, papercutting becomes a site of queer reconfiguration: a medium through which bodily transformation, same-sex intimacy and imaginative kinship can be expressed publicly even when such lives remain constrained socially.

The results also resonate with broader discussions on memory and queer cultural inheritance. As Bao argues, queer Chinese history and experience are often narrated through symbolic gestures, artistic reinterpretations and personal archives that function as acts of cultural memory in the face of mainstream erasure<sup>21</sup>. The fact that queer transformative motifs emerge as a distinct statistical factor in this study demonstrates how Xiyadie's work participates in this larger politics of queer remembrance. His papercuts reinterpret inherited visual motifs not to replicate tradition, but to reclaim symbolic space for queer embodiment and affect. This aligns with findings in this study showing that queer motifs carry predictive statistical weight in distinguishing artistic authorship.

Together, these results show that reproductive symbolism in Chinese papercutting is not a singular cultural artifact but a dynamic symbolic field capable of expressing both traditional maternal imaginaries and queer transformative possibilities. While Ku Shulan's motifs reinforce the social centrality of motherhood and reproductive continuity described under neo-familism<sup>19</sup>, Xiyadie's corpus challenges these assumptions by presenting alternative reproductive and relational logics grounded in desire, embodiment and queer futurity<sup>20,21</sup>. The coexistence of shared motifs—such as womb forms and paired figures—indicates that both artists inherit a common visual lexicon, yet their divergent uses of these symbols affirm that meaning emerges not from form alone but from the

social worlds in which the forms are reinterpreted. The statistical patterns revealed in this study provide empirical support for this cultural and symbolic divergence, demonstrating how art can articulate multiple reproductive imaginaries within a single visual tradition.

## Study strengths and limitations

This study's main strength lies in its pioneering use of quantitative visual analysis to empirically distinguish maternal and queer reproductive symbolisms in Chinese papercutting. It bridges feminist anthropology and queer reproductive theory, offering replicable methods for art-based social research. Another strength is its contribution to cultural heritage policy by revealing how traditional visual forms adapt to contemporary gender discourses.

However, the study is limited by its modest sample size and reliance on publicly available images, which may restrict the range of symbolic variations captured. The coding process, though statistically reliable, still carries interpretive subjectivity inherent in visual semiotic research. Future studies could expand the dataset, include artist interviews, and employ machine-assisted image recognition to enhance objectivity.

In terms of policy and practice, the results underscore the need for inclusive cultural-heritage frameworks that recognize queer creativity as part of national artistic identity. The findings also support educational and curatorial initiatives encouraging diverse gender representation in folk-art preservation and museum practices. Integrating feminist and queer perspectives in heritage policy can ensure that reproductive symbolism continues to evolve as a living, inclusive cultural form.

## Conclusion

This study demonstrates that reproductive symbolism in Chinese papercutting operates as a culturally flexible visual language capable of expressing divergent reproductive imaginaries. Through quantitative content analysis, the symbolic repertoires of Ku Shulan and Xiyadie were shown to

differ significantly in motif presence, intensity and structural patterning. Ku Shulan's artworks foreground traditional fertility imagery consistent with longstanding cultural narratives of motherhood, continuity and domestic protection. In contrast, Xiyadie's works emphasize queer transformative and erotic motifs, articulating reproductive meanings grounded not in biological lineage but in emotional affiliation, bodily transformation and alternative kinship.

Factor analysis and regression modeling confirmed that maternal and queer symbolic systems form distinct yet overlapping visual fields. The shared motifs between the artists highlight the continuity of Shaanxi papercutting traditions, while statistically significant differences reveal how artists reshape these traditions to reflect their lived experiences and expressive needs. The study extends existing scholarship by providing the first quantitative evidence that maternal and queer reproductive symbolisms can be empirically differentiated within the same folk art lineage. Ultimately, the findings affirm that reproductive symbolism is not fixed but evolves through cultural adaptation, personal creativity and the emergence of new social imaginaries.

## References

1. Liu S. Cutting Through Silence: Women's Voices in the Art of Chinese Papercutting. *Frontiers in Humanities and Social Sciences*. 2025;5(10).
2. Behjati Ardakani Z, Akhondi MM, Mahmoodzadeh H and Hosseini SH. An Evaluation of the Historical Importance of Fertility and Its Symbols in Ancient Civilizations. *Journal of Reproduction & Infertility*. 2016;17(1):2–11.
3. Yuan X. On the Connotation and Form of Toad in Folk Paper Cut Art. In: *Proc. ICADCE*. 2016:275–278.
4. Wang X. Lucky Motifs in Chinese Folk Art: Interpreting Paper-cut from Chinese Shaanxi. *Asian Studies*. 2013;1(2):125–143.
5. Zhou X. Chinese Intangible Cultural Heritage of Shaanxi Paper-Cut: Blossom. Chulalongkorn Univ. Thesis. 2024.
6. Bao H. Metamorphosis of a butterfly: Neo-liberal subjectivation and queer autonomy in Xiyadie's papercutting art. *Journal of Contemporary Chinese Art*. 2019;6(2–3):243–263.
7. Bao H, Mergenthaler D and Zhao JJ. *Contemporary Queer Chinese Art*. Bloomsbury Academic; 2023.
8. Wei W. Queering the Rise of China: Gay Parenthood, Homonormativity and Neoliberalism. *Feminist Studies*. 2021;47(2):312–338.
9. Chen J. Queering Reproductive Justice. *Sociology Compass*. 2023;17(4):e13139.
10. Smietana M, Baker K and Twine FW. Introduction: Making and Breaking Families. *Reproductive Biomedicine & Society Online*. 2018;7:112–120.
11. Mamo L. Queering Reproduction in Transnational Bio-Economies. *Reproductive Biomedicine & Society Online*. 2018;7:121–127.
12. Tao H. Good Deeds or Exploitation? Queer Parents and ART Companies in Urban China. *Sexuality & Culture*. 2024;28(3).
13. Song L. *Queering Chinese Kinship*. Hong Kong University Press; 2021.
14. Behjati-Ardakani Z, Akhondi MM, Mahmoodzadeh H, Hosseini SH. An evaluation of the historical importance of fertility and its reflection in ancient mythology. *Journal of Reproduction & Infertility*. 2016;17(1):2.
15. Bao H. Metamorphosis of a butterfly: Neo-liberal subjectivation and queer autonomy in Xiyadie's papercutting art. *Journal of Contemporary Chinese Art*. 2019;6(2–3):243–263.
16. Yuan X. On the Connotation and Form of Toad in Folk Paper-Cut Art. In: *Proc. 2nd Int. Conf. Arts, Design and Contemporary Education*. Atlantis Press; 2016:275–278.
17. Short KG. Critical Content Analysis of Visual Images. In: *Critical Content Analysis of Visual Images in Books for Young People*. Routledge; 2019:3–22.
18. Wei W. Queering the rise of China: Gay parenthood, transnational ARTs, and dislocated reproductive rights. *Feminist Studies*. 2021;47(2):312–340.
19. Wang H. Wandering as returning? Rethinking family dynamics of Chinese gay men under neo-familism through transnational mobility. *Frontiers in Psychology*. 2025;16:1510499.
20. Bao H. Curating queerness and queering curation: Exhibiting queer Chinese art in Europe. *Journal of Contemporary Chinese Art*. 2022;9(3):313–332.
21. Bao H. 'We Are Here': The politics of memory in narrating China's queer feminist history. *Continuum*. 2020;34(4):514–529.