

Research on Neolithic Painted Pottery Art: A Case Study of the Majiayao Culture

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Abstract:

During the Neolithic period, ancient ancestors created magnificent painted pottery art, leaving a significant mark on the history of world and Chinese ceramics. This paper explores the aesthetic implications and characteristics of Neolithic painted pottery, using the Majiayao culture as a case study. By examining the origins of painted pottery, its technological requirements, and its development in major distribution areas like the Yangshao culture, this study focuses on analyzing the artistic achievements of Majiayao pottery regarding vessel shape, ornamentation, and painting techniques. Research indicates that Majiayao pottery not only embodies the unity of utility and decoration but also carries primitive concepts of reproduction, totemism, ancestor worship, and nature worship, reflecting a primitive philosophy of “animism” and a utilitarian aesthetic consciousness. As a vital carrier of prehistoric art, Majiayao pottery vividly demonstrates the cultural connotations of primitive society regarding belief systems, social structure, and cognition of nature, providing physical evidence for understanding early Chinese aesthetics and the spiritual world.

Keywords:

Painted Pottery Culture, Majiayao Culture, Geometric Patterns

1. Introduction

The advent of pottery marks a pivotal transition in human history, signaling not only the dawn of the Neolithic age but also a profound shift in humanity’s ability to understand and master the natural environment. Beyond its immediate practical function for cooking and storage, the creation of pottery provided the material foundation for early artistic expression, allowing primitive ancestors to utilize natural mineral pigments to fuse utility with aesthetic beauty. As noted by anthropologists, these early artworks were often functional objects adorned with designs that reflected the will and developing aesthetic consciousness of early societies. Consequently, the study of these artifacts offers a window into the rawest human desires and the cultural evolution of the prehistoric era.

Within the vast history of Chinese ceramics, the development of painted pottery represents a zenith of prehistoric art, evolving significantly from the techniques of the

Yangshao culture to the distinct artistic language of the Majiayao culture. Situated at the geographical intersection of agrarian and nomadic regions in Gansu and Qinghai, the Majiayao culture is unique for its unparalleled proportion of painted vessels and its sophisticated “mud strip coiling” manufacturing techniques. However, these artifacts are not merely decorative; they serve as a physical language reflecting the complex spiritual world of primitive society—ranging from reproductive desires and totem worship to a philosophical worldview of “animism” and ancestor veneration. Understanding these motifs is essential to interpreting the social structure and cognitive development of early Chinese civilization.

This study focuses on the Majiayao culture as a primary case study to explore the aesthetic implications and artistic characteristics of Neolithic painted pottery. By systematically reviewing the origins, technological conditions, and regional developments of painted pottery, this paper analyzes the specific artistic achievements of Majiayao ware in terms of vessel shape, ornamentation, and painting techniques. Ultimately, this research aims to demonstrate how these artifacts function as carriers of primitive belief systems and utilitarian aesthetic consciousness, providing a material basis for understanding the early Chinese spiritual world through the unity of form and spirit.

2. Painted Pottery Culture

The emergence of pottery signifies more than just humanity’s deepening understanding and mastery of the natural environment; it is a crucial marker of human society entering the Neolithic period, and its appearance was historically inevitable. [1] On one hand, with social development, population growth, and the advancement of production tools, primitive humans had an urgent need for vessels that met their cooking and storage requirements. [2] On the other hand, from mastering fire in the Paleolithic Age to accumulating experience in fire usage during the Neolithic, humans gained a deeper understanding of how substances change under heat. Consequently, the combination of fire, water, and earth laid the material foundation for the creation of pottery.

Robert Layton, in *The Anthropology of Art*, suggests that “artworks in small-scale societies are often everyday objects that have a technical function and are decorated with artistic patterns”. [3] As pottery-making craftsmanship and technology evolved, Neolithic people began to decorate pottery to enhance its beauty, utilizing the heat-sensitive properties of natural mineral pigments like ochre to paint on the pottery surfaces. Thus, patterns representing the will of primitive ancestors and colorful painted pottery emerged, achieving a unity of utility and aesthetics.

The appearance of painted pottery patterns signifies that the aesthetic consciousness of primitive people developed alongside new social, economic, and cultural advancements. When primitive people consciously depicted objects they worshipped or feared onto pottery to express their piety, human emotion and will became infused into each piece of pottery. [4] Every stroke, whether black or red, represents humanity’s most primitive desires and constitutes an important legacy in the history of world art and culture.

Painted pottery appeared only after pottery technology had developed to a certain stage, requiring three critical conditions. [5]

Mastery of Mineral Pigments: Artisans needed to understand the use of materials like ochre and manganese oxide and have a profound knowledge of their color-change laws after high-temperature firing (e.g., ochre/hematite turning red, manganese oxide creating a hard black coating).

Advanced Firing Technology: Temperature determines color adhesion. Paleolithic “open-air firing” (piling dried clay on the ground covered with fuel) was random and reached temperatures below 800°C due to poor oxygen retention. With technological progress, horizontal and vertical kilns appeared; these simple kiln chambers provided insulation and reduction effects, significantly improving fuel efficiency, yield, and quality. **Surface Treatment:** Mineral pigments require fine clay with a smooth texture to penetrate the surface and allow for fluid brushwork. This necessitated meticulous processing of raw materials and careful polishing of the molded clay body.

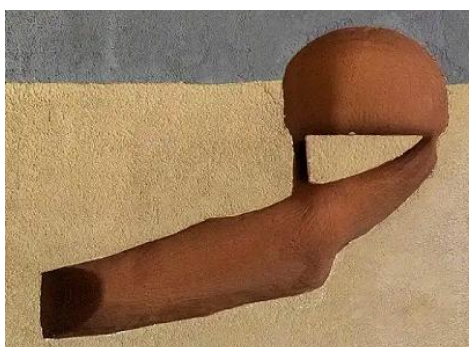


Figure 1. The Making of Ancient Painted Pottery: Cross-draft Kiln in Profile.

Throughout the development of painted pottery, techniques, vessel shapes, and patterns evolved alongside society. [6] Technically, firing methods shifted from open firing to kiln firing; forming methods evolved from hand-pinching to coiling and wheel-throwing. Artistically, patterns progressed from simple geometric shapes to complex composite forms, animal, plant, and human figures, while vessel shapes became increasingly diverse.

3. Major Distribution Areas of Painted Pottery

The evolution of painted pottery was not a uniform process restricted to a single location; rather, it flourished across vast geographical regions of China, manifesting in distinct cultural styles that reflect specific stages of social and artistic development. From the Yangtze River basin to the Yellow River valley, various Neolithic cultures contributed to this artistic lineage, leaving behind artifacts that narrate the history of the era. To understand the complete trajectory of this art form, it is essential to examine its major distribution areas. The following sections analyze three representative cultures—Daxi, Yangshao, and Qijia—which collectively illustrate the lifecycle of painted pottery from its developmental nascency and prosperous zenith to its eventual decline and transformation.

3.1. Daxi Culture

Located in the Wushan County area of the Three Gorges Reservoir, the Daxi Culture dates back approximately 5,000–6,000 years, spanning the late matriarchal to early patriarchal clan periods. Pottery from this era features uneven coloring, typically dark red or purplish-black, indicating that ancestors had not yet mastered pigment and temperature control. Common shapes include three-legged bowls, deep-belly jars, and

small-mouthed pots, often decorated with continuous bands of interlaced snake patterns on the rim. [7]

3.2. Yangshao Culture

The Yangshao Culture is the most significant archaeological discovery of the Chinese Neolithic, representing the prosperous period of painted pottery culture. Dating from 5000–3000 BC, it distributed across Henan, Shaanxi, Shanxi, Hebei, Gansu, Qinghai, Hubei, and Ningxia. It influenced many prehistoric cultures: it was the source for the Majiayao Culture, which in turn influenced the Qijia Culture. Archeologist Su Bingqi described Yangshao as a “pillar in the edifice of the history of Chinese national origin,” proving its pivotal status. [8] Historically, Yangshao represents the first great wave of prehistoric art, radiating its aesthetic imagery across numerous provinces.

3.3. Qijia Culture

The Qijia Culture had a broad distribution from the Jing and Wei River valleys in the east to the Hexi Corridor in the west, and from Inner Mongolia in the north to Ningxia in the south. This period marks the decline of painted pottery culture. With the mastery of red copper and advancements in metallurgy, as well as the use of unique jade artifacts, pottery production shifted toward plain, white-glazed surfaces. The few painted pieces feature simplified lozenge, grid, triangle, and wave patterns with rough execution, signaling the waning of the painted pottery tradition.

4. Aesthetic Characteristics and Implications of Majiayao Painted Pottery Culture

The Majiayao Culture, a radiant extension of the Yangshao Culture, flourished primarily in what is now central and southern Gansu and eastern Qinghai provinces. This region is geographically pivotal, situated at the convergence of the Central Plains, the Tibetan Plateau, and the Mongolian Plateau. Its heartland, especially the Hexi Corridor, has historically served as a vital crossroads—a transitional zone between nomadic pastoralists and settled agricultural communities. It was within this dynamic interface of diverse geographies and lifeways that Majiayao Culture developed its uniquely rich and multifaceted aesthetic character.

Drawing from its Yangshao roots, Majiayao artisans inherited advanced pottery techniques and a foundational emphasis on linear decoration. However, they dramatically evolved these traditions, producing vessels of remarkable variety and artistic sophistication. Their aesthetic is distinguished by a powerful sense of rhythm and movement, seen in the dynamic interplay of spirals, rolling waves, and saw-tooth patterns that swirl across the pottery surfaces. This expressive energy likely stems from the culture's hybrid existence: the stability of agrarian settlement merged with the potent influences of surrounding steppe and highland cultures, whose mobility and closeness to nature infused Majiayao art with a distinctive vitality and freedom.

Moreover, specific motifs such as net patterns, zigzag lines, and stylized animal figures point to active cultural exchange with northern steppe traditions, while certain compositional elements may reflect interactions with early cultures of the eastern Tibetan Plateau. This capacity for synthesis transformed Majiayao painted pottery beyond mere utility; it became a medium for expressing beliefs, signaling identity, and facilitating communication across cultural boundaries.

Thus, the pluralistic aesthetics of Majiayao Culture are essentially a material crystallization of the complex interactions between multiple subsistence strategies and population groups in a continental borderland. It retained the essential imprint of Central Plains agricultural civilization while seamlessly incorporating the boldness of the steppe and the raw simplicity of the highlands. Blossoming in the upper Yellow River valley, Majiayao created a painted pottery tradition of extraordinary artistic power, deeply embedded in these historical currents and laying a crucial foundation for subsequent Bronze Age cultures across northwestern China.

4.1. Vessel Shapes and Patterns

Representative pottery types include the Shilingxia, Majiayao, Machang, and Banshan styles. The sheer volume of Majiayao pottery suggests that social division of labor had specialized, with professional potters emerging. Manufacturing technology saw significant progress, utilizing the clay strip coiling method (a form of wheel technique) to build shapes upward spirally. This resulted in more regular shapes, uniform walls, and time-efficient mass production.



Figure 2.Characteristic Painted Pottery of the Majiayao Culture.

Regarding aesthetics, patterns were dominated by swirls, water waves, triangles, nets, fish, frogs, and human-faced animal figures, characterized by fluid lines and distinct designs. [9] Notably, Majiayao culture boasts the highest proportion of painted pottery among all discovered cultures in China; patterns often cover the entire vessel from rim to base, and interior painting was also highly developed.

Majiayao pottery was not merely for daily use; it embodied the spiritual connotations of primitive ancestors' worship of nature, reproduction, totems, and ancestors, reflecting a unique primitive aesthetic. [10]

4.2. Aesthetic Implications and Philosophical Connotations in Majiayao Pottery

4.2.1. Reproductive and Sexual Worship

In primitive society, population and labor were key to survival. Due to food scarcity and poor medical conditions, the average lifespan was only 20–30 years. Furthermore, warfare claimed many male laborers, intensifying the need for reproduction. In this context, Freud argued that libido is a basic instinct and the internal drive for all psychological activity and civilization. He posited that “the concept of beauty is rooted in sexual impulses,” suggesting that unsatisfied desires are sublimated into the realm of artistic aesthetics. Facing the uncertainty of reproduction and the need for population growth, people began to deify reproduction, viewing it as a mysterious power. This concept is manifested in Majiayao patterns such as frogs, fish, “bird pecking fish” designs, and group dance motifs. [11]

4.2.2. Totem Worship

Primitive totem worship, originating in the Paleolithic clan communes, is based on the philosophy of “animism”. [12] Ancestors adopted animals or plants closely related to their lives as objects of worship, believing these entities possessed characteristics that could protect the clan’s survival and reproduction. These totems symbolized strength, wisdom, or fertility and served as clan guardians. Totems played a crucial role in uniting the group, solidifying blood ties, and distinguishing different clans (e.g., the Dragon totem as a symbol of the Chinese nation).

4.2.3. Ancestor Worship

With the development of productivity and the emergence of surplus products, private ownership appeared, leading to a transition from matriarchal to patriarchal society. Émile Durkheim, in *The Elementary Forms of the Religious Life*, notes that ancestor worship is a religious phenomenon specific to the family unit, linked to authority and obedience norms. [13] Under patriarchy, the concept that male elders or ancestors could protect and bless their descendants emerged. Totem worship merged with ancestor worship; people no longer worshipped the animal itself, but the ancestor it represented. Essentially, this worship is a belief in the supernatural power of ancestral spirits to bless the clan. Artifacts like the human-faced salamander bottle and frog-shaped deity patterns represent the worship of ancestors who were originally associated with salamander or frog totems.

4.2.4. Nature Worship

Jiang Kongyang stated in *New Theory of Aesthetics* that “the relationship between man and the world. [14] is the starting point of all human learning”. Primitive philosophy and worship stemmed from a low capacity to transform nature; facing a dangerous environment, humans naturally sought explanations to survive. Majiayao patterns like the sun, moon, gourd, water wave, and swirl often appear as main motifs. Water waves artistically represent the surging Yellow River; swirls represent the observation of water vortices and celestial movements. [15] Sun patterns, often black circles with red borders, symbolize worship of the sun that enables growth. Sawtooth patterns, resembling thorns or mountains, reflect a reverence for nature. These designs combine abstraction with realism, expressing respect and praise for the natural environment and life.

4.2.5. Animism

To explain natural phenomena, the concept of the soul became the optimal explanation for primitive people. British anthropologist E.B. Tylor viewed animism as the origin of religion, encompassing two dogmas: the survival of the soul after death and the ability of spirits to influence the material world. Primitive people believed everything—animals, plants, rivers, fire—had a soul. This reflects the awe of nature and respect for life held by people with limited scientific understanding.

4.2.6. Utilitarianism

Primitive worship is a religious consciousness rooted in low productivity and ignorance. When experience could not explain nature, humans constructed illusory concepts, forming strong worship psychology. All worship was utilitarian, born of the desire to satisfy needs. When survival was threatened, humans sought power from

worshipped objects to better transform nature and strengthen the clan. This utilitarian worship evolved into totemism, reproductive worship, and eventually ancestor worship and formal religion. The patterns on Majiayao pottery are significant carriers of these utilitarian concepts and primitive aesthetic implications.

5. Conclusions

The study of Majiayao painted pottery provides a profound insight into the spiritual and material world of the Neolithic age, serving as a crucial bridge in understanding the evolution from primitive savagery to organized civilization. As a significant representative of the westward expansion of the Yangshao culture, Majiayao ware stands not merely as a collection of artifacts, but as a testament to the sophisticated intersection of technology, art, and belief systems in prehistoric China.

This research highlights that the artistic achievements of the Majiayao culture were rooted in a mastery of craftsmanship, including the refined use of mineral pigments and the mud strip coiling method. However, the true value of these vessels lies in their ability to transcend their function as daily utensils. They represent a perfect unity of utility and aesthetics, functioning as canvases upon which primitive ancestors projected their most urgent desires and fears. The analysis confirms that the aesthetic consciousness of this period was fundamentally “utilitarian,” driven by the harsh realities of survival rather than pure artistic indulgence.

The recurring motifs analyzed in this paper—such as frogs, fish, swirls, and celestial bodies—are visual manifestations of a worldview dominated by animism and the worship of natural forces. In a society where human lifespan was short and nature was unpredictable, art became a medium to communicate with the divine. The heavy emphasis on reproductive symbols reveals a desperate biological imperative for population growth and clan continuity. Similarly, the abstraction of river waves and solar movements into geometric patterns reflects a deep reverence for the natural environment that dictated their agricultural and nomadic existence.

Furthermore, these artistic expressions mirror the profound social shifts of the era, particularly the transition from matriarchal to patriarchal structures and the crystallization of ancestor worship. Ultimately, Majiayao painted pottery serves as an invaluable physical archive of the prehistoric mindset. It encapsulates the early Chinese philosophical pursuit of harmony between Heaven, Earth, and Humanity, providing modern scholars with the material evidence necessary to reconstruct the origins of Chinese aesthetic traditions and the spiritual heritage of the nation.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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