

The Evolution of Portuguese Tile Art: Blending and Transformation from the Homeland to Macao, China

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Abstract

This paper traces the development of Portuguese Azulejo tile art, examining its stylistic changes and technical innovations throughout history, with a specific focus on its regional transformation after its introduction to Macao. Employing a combination of literature review and field research, the analysis encompasses the entire journey of Portuguese tiles, from their Islamic cultural influences to modern artistic expression, as well as their integration, adaptation, and cultural transmission within Macao's multicultural context. The study demonstrates that Portuguese tiles are not merely decorative art forms but also vehicles for cultural identity and visual expressions of historical memory. Their evolution in Macao serves as a vivid example of cross-cultural dialogue.

Keywords

Portuguese Tiles, Azulejos, Macao Culture, Artistic Transformation, Cross-Cultural Integration

1. Introduction

Portuguese Azulejos, a decorative art form with a long history, originated from Arabic cultural influences. Over the centuries, it gradually evolved into a distinctive national art. The term itself derives from the Arabic for "smooth little stone". Since the Portuguese arrival in Macao in the 16th century, this tile art was introduced to the Orient, embarking on a unique journey of regional transformation through its encounter and fusion with Chinese culture. This paper aims to systematically outline the development and evolutionary trajectory of Portuguese tile art from its homeland to Macao, revealing its adaptability and vitality as a cultural vehicle in cross-cultural dissemination. Employing a combination of literature re-

view and field research, this study encompasses historical analysis of Portuguese and Macao-based sources alongside on-site investigation in Macao. The fieldwork involved photographic documentation and stylistic analysis of Azulejos at key heritage sites such as the Macao Cathedral, the Municipal Affairs Bureau Building, and the Portuguese School of Macao, providing empirical evidence to trace their stylistic evolution and localization processes.

2. The Origins, Spread, and Regional Transformation of Azulejo Art

2.1. Origins and Early Spread: From Islamic Roots to Eastern Emergence

The roots of Portuguese Azulejo art trace back to Islamic culture from the 8th to the 15th centuries. (Salema de Carvalho et al., 2021) The term itself derives from the Arabic for “smooth small stone.” During Muslim rule, the Moorish style introduced *horror vacui* (fear of empty space), favoring intricate geometric patterns in vibrant colors like blue, green, and yellow. Portuguese tiles distinguished themselves through dynamic layouts and color contrasts that created visual illusions, as seen in the Sintra Palace, where borders suggested “enclosed spaces,” partially dissolving architectural limits.

From the 13th to the 15th centuries, this Arabesque influence continued through the Mudejar art style, which emerged after the Reconquista. This unique style, created by Muslim artisans (Mudejars) remaining in Christian territories, fused Islamic geometric aesthetics with Christian symbols, as visible in details like those at the Santos Palace in Lisbon (now the French Embassy).

The 16th century heralded a significant transformation with the “Majolica revolution.” The Italian Majolica technique (tin-glaze painting) entered Portugal via Spain towards the end of the 15th century. Artisans began using entire clay slabs, painting designs directly onto a white tin-glaze base before a second firing. This breakthrough enabled polychrome painting and large-scale production. Portuguese workshops further developed unique glaze formulas, blending the Arabic tin-glaze tradition with local clay properties to produce brighter blue (from cobalt oxide) and green (from copper oxide) hues (Bandiera et al., 2024). A pivotal moment came in 1503 when King Manuel I visited Seville and brought back painted tiles, leading to the extensive use of geometric motifs in royal palace decorations. Concurrently, influenced by other European manufacturers, Portugal adopted and established Majolica production. This technique, known as tin-glaze painting, involved applying a white opaque glaze (tin-based) to the clay surface, which served as a canvas for painted designs before a second firing. This innovation allowed for greater detail, polychrome expression, and narrative complexity, marking a significant departure from earlier mosaic-style tilework. The style increasingly drew inspiration from Italian and Flemish Renaissance and Baroque painting, evolving from purely geometric designs to complex narrative scenes depicting religious and historical stories, as seen in the São Roque Church in Lisbon by Fran-

cisco de Matos (as in **Figure 1**). Early tile panels were meticulously composed and decorative, representing a hybrid of Christian and Islamic art. This era also saw tiles becoming vehicles for political and cultural symbolism, resisting Spanish influence and competing with Talavera pottery, while colonial trade, especially with Brazil, provided new markets and introduced exotic patterns like tropical flora (Mitchell, 2017).



Figure 1. São roque church in lisbon by francisco de matos.

Concurrently, in the distant East, Macao became a Portuguese settlement in 1553. Under the Ming Dynasty's policy of "building a city, establishing officials, and governing it as a county," it was placed under the jurisdiction of Guangdong's Xiangshan County, with comprehensive administrative, judicial, customs, and military structures established. In 1582, the Portuguese were permitted to remain in Macao after pledging to abide by Ming laws. In 1623, the Portuguese appointed D. Francisco Mascarenhas as the first Governor of Macao (Zhang, 2020; Chen, 2016). While Macao rapidly evolved into a crucial confluence of Chinese and Western cultures and played a pivotal role in the "Eastward Transmission of Western Sciences" during the late Ming and early Qing dynasties, the application of Portuguese Azulejos in its architecture during the 16th and 17th centuries remained notably limited. As documented in historical records and material evidence, tiles appeared only as sporadic decorative elements, primarily confined to specific areas of churches and elite residences such as altar borders, portal frames, and niche surroundings. This restrained implementation contrasted sharply with the flourishing tile culture in Portugal, where ambitious narrative panels were transforming architectural spaces.

The constrained development of Azulejos in early Macao stemmed from mul-

tiple material and cultural factors. Practical limitations included the scarcity of skilled artisans proficient in the complex techniques of Portuguese tile production and challenges in maintaining consistent supplies of specialized glaze materials across vast maritime distances. Furthermore, the distinct cultural environment of Macao, where Chinese aesthetic traditions predominated and functional considerations often purely decorative ambitions, contributed to these constraints.

Consequently, early Macao Azulejos typically featured elementary geometric motifs or monochrome glazes, entirely lacking the sophisticated religious narratives and complex heraldic compositions that were being simultaneously developed in Portugal. This pronounced disparity between metropolitan Portuguese tile work and its Macao counterparts provides valuable insight into the dynamics of early modern cultural transmission (Cheng, 2020). This stylistic simplification reflects a broader pattern of cultural adaptation and localized reinterpretation observed when artistic traditions encounter new environments. The early Macao Azulejos thus represent an initial phase of cultural translation, where Portuguese forms were selectively adopted and adapted within local constraints and aesthetic frameworks.

2.2. Stylistic Fusion and Localization Beginnings: Global Influences and Macao's Roots

The 17th century marked a period of significant global confluence in Portuguese tile art, during which it extensively absorbed and synthesized diverse external influences (Mitchell, 2017). This era began with a notable shift from geometric to narrative patterns, a transformation facilitated by the adoption of the *Majolica* technique. This technology allowed for direct painting with pigments onto the tile surface, enabling the depiction of complex human figures and historical stories, as seen in the 1584 panels of the Church of São Roque in Lisbon by Francisco de Matos. Concurrently, Portugal began to emancipate itself from Spanish influences, gradually developing an original tile mural art. The mid-seventeenth century witnessed the profound impact of affordable and exquisitely designed blue-and-white Dutch Delftware, which reshaped the European ceramic market. This competition led to a sharp decline in production in regions like Spanish Valencia and captured a share of the Portuguese domestic market. The enduring aesthetic influence of Chinese blue-and-white porcelain further cemented the popularity of this monochromatic palette. From the 1650s to the 1680s, imported Indian printed textiles featuring Hindu symbols, flowers, animals, and birds became highly influential, giving rise to popular tile compositions known as “aves e ramagens” (birds and branches), examples of which can be found in the São Tiago Hospital, the Church of Santa Catarina, and the Buçaco Monastery. A pivotal moment occurred between 1687 and 1698 when King Pedro II halted almost all tile imports. This protectionist measure spurred local Portuguese workshops, such as that of the Spanish artist Gabriel del Barco, to take over production. These blue-and-white tiles quickly became fashionable, with the last major Dutch deliveries made around 1715, thereby solidifying the dominance of this style and fostering a more self-

sufficient national industry.

During this period, Azulejos also began to take root more firmly in Macao. In the 18th century, as Macao's status as a vital Sino-Western exchange hub solidified under Portuguese administration, Azulejos were more systematically introduced. They were primarily applied to the interior decorations of churches, monasteries, and significant public buildings, such as the Macao Municipal Building (constructed in 1784, as in **Figure 2**). These tiles predominantly employed a blue colour scheme to depict religious narratives and saintly figures, serving both a decorative purpose and a didactic function by visually conveying doctrine to the faithful. Stylistically, while still largely following the Baroque trends prevalent in mainland Portugal—characterized by dramatic and dynamic compositions—this period in Macao saw the transition of Azulejos from being sporadic decorative accents, as seen in the previous centuries, to a more preliminary yet established form of architectural application. This foundational phase, marked by direct importation and imitation of metropolitan models, nonetheless laid the crucial groundwork for the subsequent and more profound localization that would characterize the 19th century.



Figure 2. Interior of the Macao municipal building.

2.3. Industrialization, Popularization, and Deep Integration: Mass Production and Chinese Motifs

The 19th century brought the wave of the Industrial Revolution to Europe, profoundly transforming Portuguese tile production (Costa et al., 2016). The French

invasion of Portugal and the subsequent relocation of the Portuguese royal family to Brazil created unique demographic shifts, with Brazilian immigrants entering Portugal's ceramic industry and contributing to the perfection of its industrial chain. Portuguese tile production moved decisively toward industrialization and mechanization. The introduction of screen printing technology allowed for the mass production of artworks, significantly reducing costs and technical barriers; this industrialization, in turn, directly facilitated the wider dissemination of Azulejos in Macao through standardized sizes and enhanced affordability, enabling their use beyond elite and religious contexts into public and domestic architecture. Artistically, the succinct symmetry and elegance of Neoclassicism, emphasizing geometric patterns, classical architectural elements, and portraiture with relatively soft colors, replaced Rococo intricacy, reflecting a renewed examination and pursuit of classical culture. This period also saw the emergence of artists like Rafael Bordalo Pinheiro, while factories such as the Viúva Lamego exterior (1865) demonstrated industrial production capabilities. In Macao, industrial production propelled the proliferation of Azulejos. Tiles were no longer confined to religious sites but appeared extensively in theatres, government buildings, and even private residences.

In Macao, industrial production propelled the proliferation of Azulejos, making them more affordable and widely available. Tiles were no longer confined to religious sites but appeared extensively in theaters like the Edifício do Teatro D. Pedro V (built in 1860), government buildings, and even private residences like hotels. These tiles often depicted secular themes like family life and natural landscapes, reflecting the living tastes and aesthetic concepts of Macao residents at the time.



Figure 3. Interior of Macau government headquarters building.

Crucially, the process of localization accelerated during this stage. Tile patterns and styles began actively incorporating traditional Chinese cultural elements, such as flowers and auspicious animals, showing the influence of Chinese style integration. For instance, tiles at the Macao Municipal Building and the Dom Pedro V Theatre integrate motifs such as peonies (symbolizing wealth in Chinese culture) and mythical creatures like the qilin, demonstrating a clear blend of Portuguese compositional layouts with Chinese symbolic content (as in **Figure 3**). Colors also became richer, moving beyond the blue-and-white palette with more diverse combinations. This fusion, representing an exchange and blending of Chinese and Western cultures in aspects like color and composition, transformed Portuguese tiles in Macao from purely “imported goods” into a unique art form embodying the aesthetic tastes of both Portuguese and Chinese cultures, making them an integral part of Macao’s multicultural identity.

2.4. Modern Transformation and Cultural Heritage: Modernism and Identity Symbol

In the 20th century, Portuguese tile art underwent a significant transformation as it merged with Modernist intellectual trends. During the early decades, diversified production slowed while Art Nouveau styles gradually emerged, presenting an organic, vibrant aesthetic that contrasted with traditional Neoclassicism. This period saw growing emphasis on Portuguese tile heritage, with designs increasingly highlighting nationalist sentiments, establishing Azulejos as an important form of national artistic expression. The mid-century period solidified this role, with Azulejos being widely used to shape modern public areas, becoming what scholars termed “the backdrop for the urban stage.” Portuguese tiles played a crucial role in urban public space construction, characterized by modernist features that utilized precise geometric language and maintained strong visual relationships with architectural forms. This shift towards geometric abstraction in Portugal, influenced by artists like Maria Keil, paralleled developments in Macao, where Azulejos began to feature simpler, more abstract patterns that integrated with contemporary architectural styles. The late 20th century witnessed further evolution as Portugal completed its democratic reconstruction. Tile art reflected national changes, incorporating more Western elements in public outdoor designs, emphasizing linear patterns through “contour drawing” techniques to depict architectural murals, and demonstrating ceramic aesthetic qualities. This period saw the emergence of more avant-garde imagery integrated with deconstructivist concepts, as exemplified by Maria Keil’s 1985 works, revitalizing the art form with unique charm. Continuing into the late 20th and 21st centuries, artists have sought a new equilibrium between tradition and modernity. Building upon inherited craftsmanship and classic patterns, they actively explore novel forms of expression and design philosophies. This includes experimenting with new materials and techniques, such as combining tiles with glass or metal, and addressing socio-cultural and environmental themes, thereby ensuring the continued relevance and

vitality of Azulejos in the contemporary era (Salema de Carvalho et al., 2021).

Macao experienced a parallel modern transformation of its Azulejos. The early 20th century saw themes diversify to reflect local social life and natural landscapes, with color schemes expanding beyond the traditional blue-and-white to include combinations like yellow and green. These tiles were extensively applied in interior decoration, such as floors and staircases. After the mid-20th century, designs became more concise and abstract, featuring geometric patterns that integrated with modernist architectural styles, an evolution that resonated with the broader modernist movement in Portugal by emphasizing clarity, abstraction, and alignment with architectural form. Following Macao's handover, the SAR government prioritized cultural heritage, meticulously restoring historical Azulejos. Today, they are an indispensable part of the urban landscape, with their techniques being transmitted through workshops and their elements widely used in cultural creative products, ensuring the continuity and contemporary relevance of this traditional craft. (Huang et al., 2024).

3. Conclusion

The development of Portuguese Azulejos is a dynamic history of constant innovation through absorption and integration. When transmitted to Macao, this art form underwent a profound regional transformation: progressing from initial transplantation and imitation, to active integration with local techniques and aesthetics, and finally achieving deep fusion with Chinese culture, becoming a unique visual symbol of Macao's multicultural identity. The evolutionary journey of Azulejos in Macao is not only a classic case study of cultural transmission but also a vivid testament to the long-term dialogue and symbiotic mutual influence between Chinese and Western civilizations at the micro-level of material culture. The inheritance and innovation of this unique heritage remain crucial for sustaining Macao's cultural charm today. Looking ahead, the continued relevance of Azulejos in Macao will depend on their successful integration into the city's future architectural and cultural landscape.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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