

Islamic Art at Doris Duke's Shangri La Playing with Form and Pattern

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Abstract

Shangri La is the historic home of Doris Duke in Honolulu. It is filled with installations of Islamic tilework and other arts. Open to the public in late 2002, by reservation for tours arranged through the Honolulu Academy of Arts, today this home serves as a museum in which a walking tour can provide extraordinary visual opportunities for the study of geometry and pattern both in the arts that are installed and exhibited, and in the surrounding plantings and landscape. The house offers a plethora of educational opportunities, for which its full potential has not yet been tapped. A new initiative in 2004 afforded us the possibility of collaboration during a two-week scholarly residency, which we wish to share in this paper and presentation. What we offer here is a sampling of what we encountered through photographic documentation, analysis, and discussion.

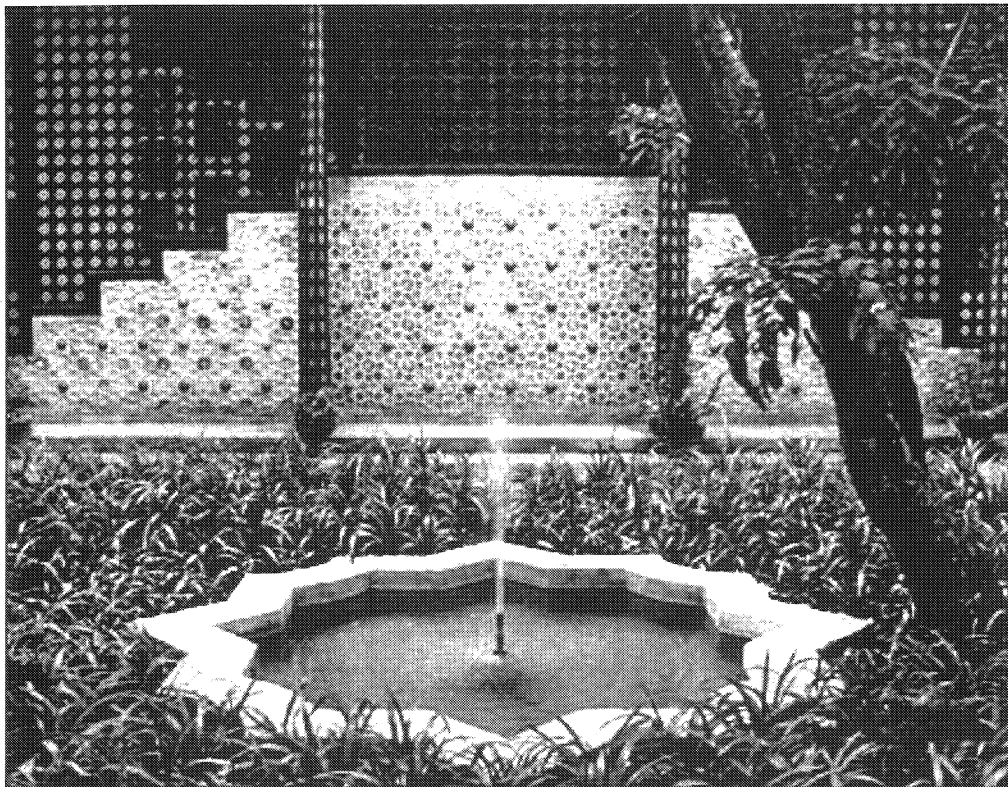


Figure 1: *Interior courtyard with Persian tiles and 12-pointed-star fountain*

1. Site, House, and Grounds: Axes of symmetry

Hidden and secluded on the lava rocks of Black Point (**fig. 2**), projecting into the Pacific beyond Diamond Head in Honolulu, is Shangri La, built as a home and quiet retreat for Doris Duke, one of the richest American women of all time. After she died in 1993, her will stipulated that Shangri La would be operated by the Doris Duke Foundation for Islamic Art, and opened to the public for the “promotion and study of Middle Eastern arts and cultures” [10]. Her last will and testament disclosed this private domain for public enjoyment, revealing that it served as a repository for sixty years of her passionate collecting and personal display of Islamic art, set amidst tropical foliage of palms, Norfolk pine, ferns, croton, and bougainvillea. Typical of Islamic art generally, the works exhibit a wide variety of geometric patterns based on symmetrical relationships among the designs [1, 4, 5, 6, 14, 15, 16]. But unlike many European

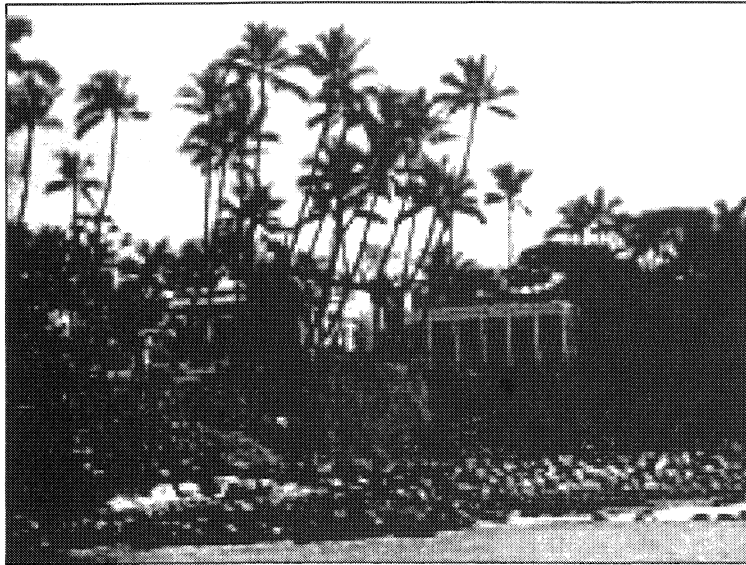


Figure 2: *Shangri La, viewed from the west*

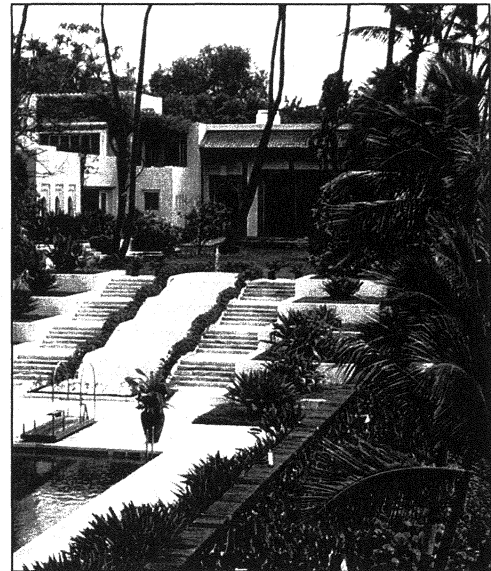


Figure 3: *Symmetry in the orientation of built components*

and American museum collections, which were acquired with an eye for Western paradigms of art appreciation, the collections at Shangri La are unique in the United States in many ways: Their permanent display is in the context of a private home built in the style of American modernism; the sheer quantity of materials from Islamic lands is enormous (approximately 3500 objects), and these contribute to an ambience that is quintessentially personal yet filled with visual, literary, and cultural allusions; the display of works of Islamic art in a tropical environment contributes to a sensuality with which one may appreciate the symmetries, antisymmetries, and underlying geometric structure of forms in art and nature in one breath. Most of the individual built components of the home bear axes of strict symmetry (**fig. 3**).

2. Islamic Art: Symmetry and Pattern

Patterns in Islamic art are usually organized according to principles of symmetry [1,2], articulating geometric relationships among forms [4,6,15]. Such patterns represent algorithmic iterations of individual design units [5,14] and may allude to metaphysical concerns [3,6]. At Shangri La, what is installed includes painted wood panels (**fig. 4**), molded and glazed ceramic tiles ((**figs. 1; 14-15**), inlaid wood and metalwork, embroidered, appliquéd, and woven textiles (**fig. 4**), blown and molded glass (**fig. 4**), and cut stone pavements and panels (**figs. 5-9**), gathered from regions of the Islamic world as diverse as Spain, Morocco, Egypt, Syria, Turkey, Iran, and India. Doris Duke also commissioned works in Islamic styles for installation in her home from India, Morocco, Iran, and Hawaii.

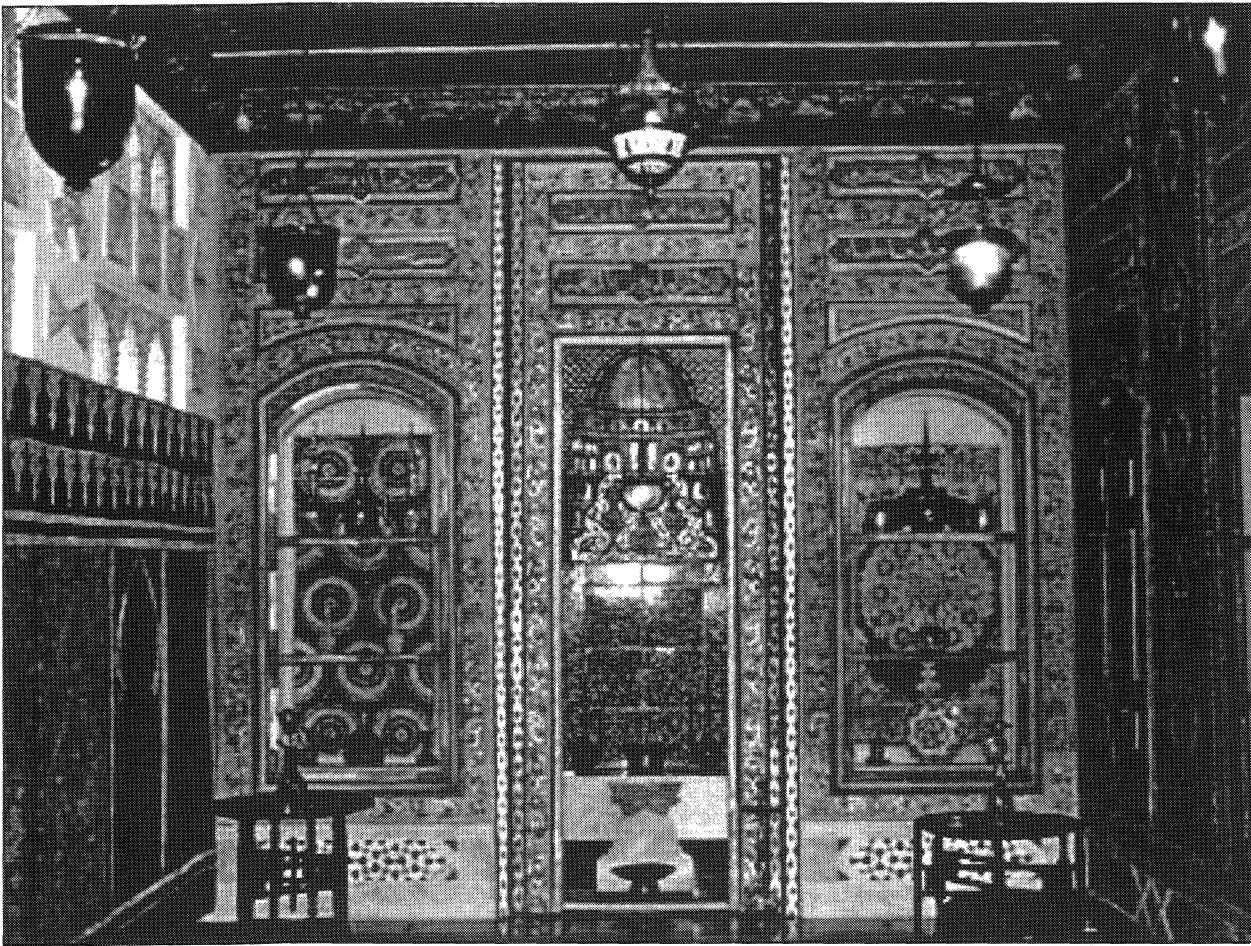


Figure 4: So-called *Baby Turkish Room* with painted wood panels from *Ottoman Damascus*, niches with *Ottoman woven textiles*, *Islamic blown glass*, hanging lamps of metal and glass; panels of cut colored marble below

Doris Duke herself engaged in the production of cut stone marble pavements (figs. 5-6), guiding and working alongside her household staff [10].



Figure 5: *Turkish Room*, viewed from above

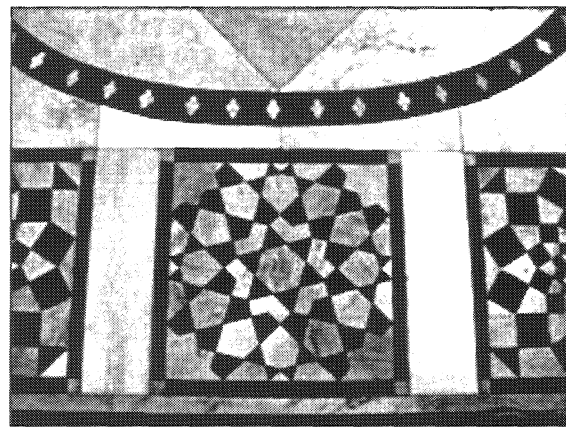


Figure 6: *Turkish Room*, marble pavement

3. Rotocenters

Many of the patterns show symmetry in their composition, no matter what the material. Reflections, and reflections of reflections, are present throughout the house. In the works of Islamic art, vertical and/or horizontal reflection is often present, as is rotational symmetry, with orders 2, 3, 4, 6, and 8 most prevalent. Looking at individual centers of rotation, around which local sections of patterns rotate (disregarding color), we can see among the plane symmetry groups families of patterns with 2-4-4 rotocenters (figs. 1, 7) and 2-3-6 rotocenters (figs. 8-9) [12, 13]:

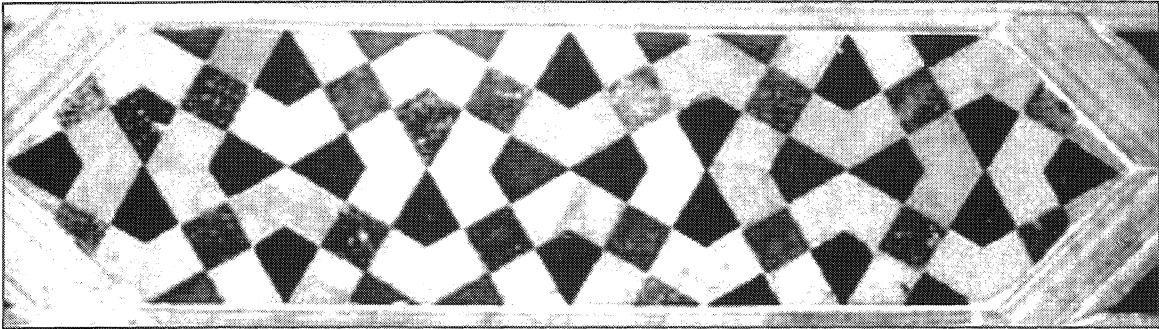


Figure 7: *Cut and assembled marble panel in "Baby Turkish Room" with 2-4-4 rotocenters*

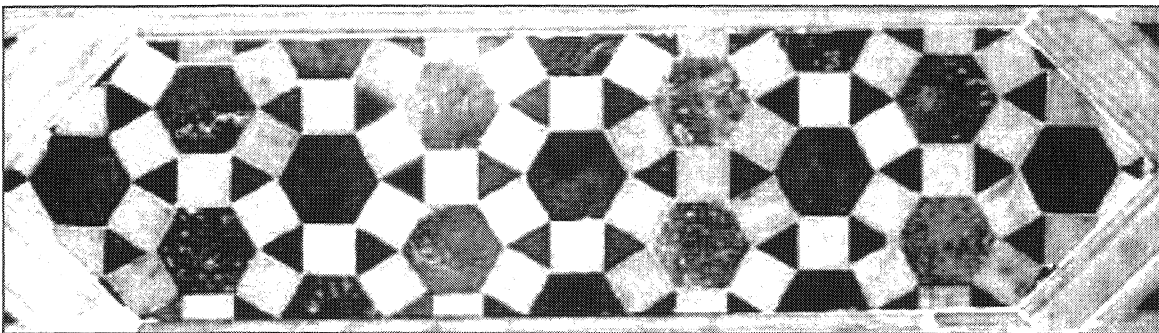


Figure 8: *Cut and assembled marble panel in "Baby Turkish Room" with 2-3-6 rotocenters*

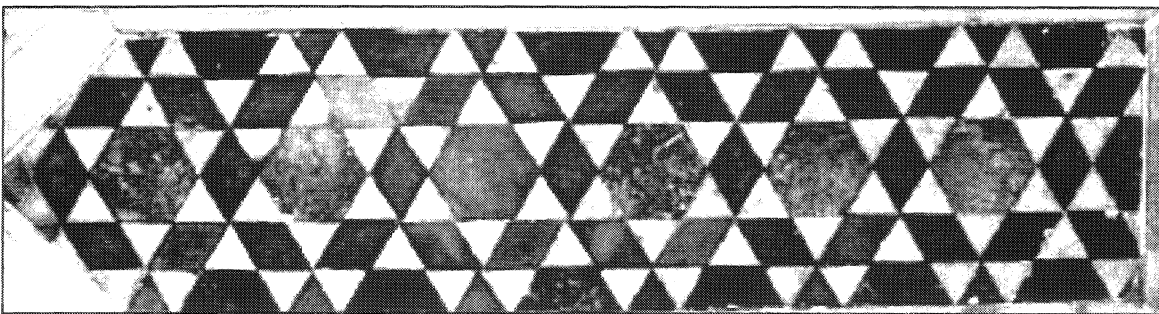


Figure 9: *Cut and assembled marble panel in "Baby Turkish Room" with 2-3-6 rotocenters*

Patterns with related relationships of forms and rotational symmetries appear and reappear throughout the house. Among the carved marble screens (called *jali*), imported from India and used in the bedroom and in the pavilion above the bedroom (fig. 10), there is also an example of a pattern with 2-3-6 rotocenters (fig. 11), showing hexagons and six-pointed stars set within a larger pattern of interlaced hexagons.

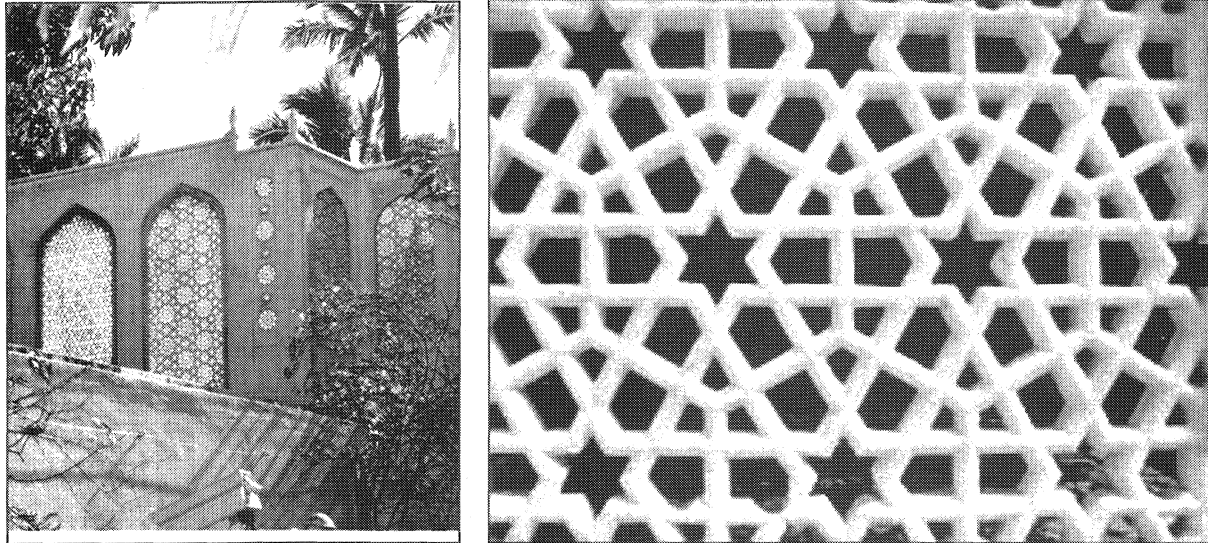


Figure 10 (left): Pavilion above Bedroom with carved marble screens

Figure 11 (right): Detail, carved marble screen with 2-3-6 pattern.

This pattern served as the basis for commissions of carved wooden doors, probably made in Hawaii (fig. 12). Patterns using hexagons, with or without six-pointed stars, is a decorative scheme used throughout the house. Other commissioned doors and gates reflect the direct influence of other works of Islamic art Miss Duke had acquired. A small gate (fig. 13) leading to roof access above the Playhouse utilizes a

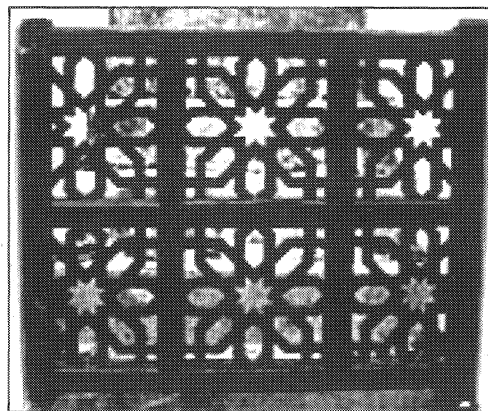
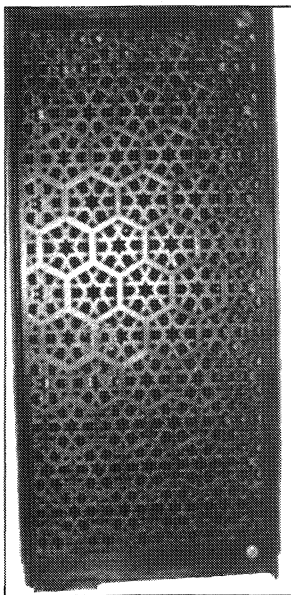


Figure 12 (left): Interior carved wood door from Dining Room to Staff Quarters (2-3-6 pattern)

Figure 13 (right): Carved wood gate at Playhouse (2-4-4 pattern)

pattern related to that of the tilework in the courtyard (figs. 1, 14-15) with 2-4-4 rotocenters. These tilework panels show the illusion of interlace (fig. 1), effected by molded tiles. Each panel (figs. 14-15) is composed of two sets of tiles; both sets are molded and selectively glazed. One set shows an eight-pointed star shape with a molded central hemispherical boss decorated with floral elements with approximate order 4 rotational symmetry, off axis with the surrounding eight-pointed star. The other set comprises square tiles, with a corner cut to match the outline of a quarter eight-pointed star. This tile is also molded, and bears four crossed bands, which when repeated four times creates an illusionary interlaced form with eight extensions. The negative spaces created by the generation of this pattern are irregular five-pointed stars, and octagons. The tiles of the two side panels (fig. 14) are minimally glazed; only the eight-pointed star tile and one corner of each square tile is glazed. In contrast, the tiles of the central panel (fig. 15) show glazing of both the eight-pointed star tiles with molded boss, and in all of the polygonal areas surrounded by interlace. Each of the polygons also contains molded floral elements the raised surfaces of which cause pooling of the glaze, which creates additional visual effects.

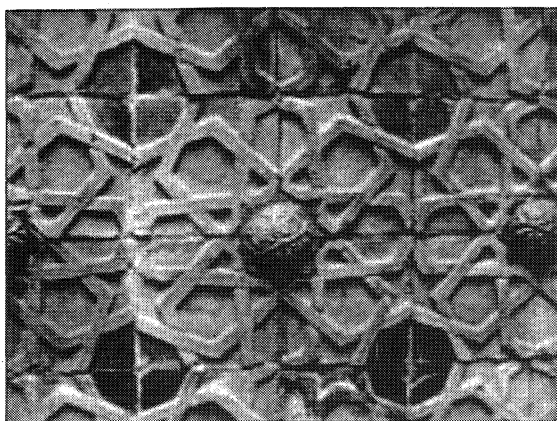


Figure 14: Side tile panel, detail of fig. 1

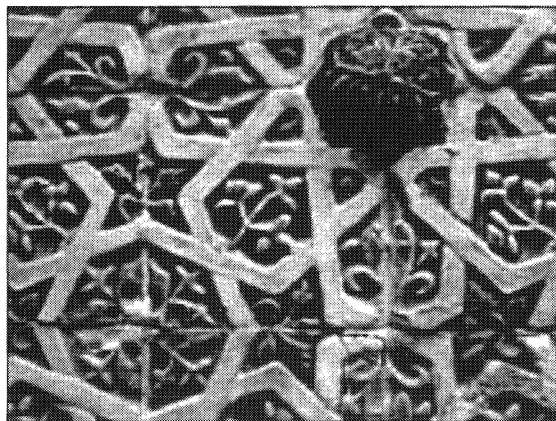


Figure 15: Central tile panel, detail of fig. 1

For both panels, the glazes are a cobalt blue and a copper-based turquoise. Parallels for these tile panels have been excavated at the site of Takht-i Suleiman in western Iran, dating from the early 13th century [9]. This pattern, with an underlying square grid and several different forms of concentric eight-pointed stars, was also taken as the basis for several commissions at Shangri La. The underlying square grid is emphasized in the Playhouse gate (fig. 13). The pattern also served for the design of painted and resin-coated panels for the ornamented ceiling of the Playhouse lanai.

4. Border Patterns

Border patterns with floral design elements show a variety of line symmetries (fig. 16a-c), often taking advantage of the inherent ambiguities seen in the use of reflections and glide reflections, in which there is also a rotational symmetry present (fig. 16a) [2], combined with symmetry-breaking.



Figure 16 (a,b): Ceramic tile; (c): Ceramic mosaic



5. Dilation and Projection

In the central courtyard, a patio called by Doris Duke “Pure Persian” [7, p. 75], is a set of twelve columns which exhibit dilation and projection (fig. 17). These were manufactured in Chicago according to Miss Duke’s specifications, and later set with mirrored surfaces in Hawaii. The design is based upon the tall narrow columns with muqarnas capitals, typical of courtly monuments in Safavid Isfahan dating from the 17th century. Set on a square base, the shaft of each column is a tapering octagonal prism. At the top of the column shaft (fig. 18), the capital, in contrast, exhibits a transition from the octagonal cross-section of the column, progressing in a stacked series of eight-pointed star prisms alternating with antiprism-like solids in which each triangular element is folded in the center. At the top of each capital is a square prism.

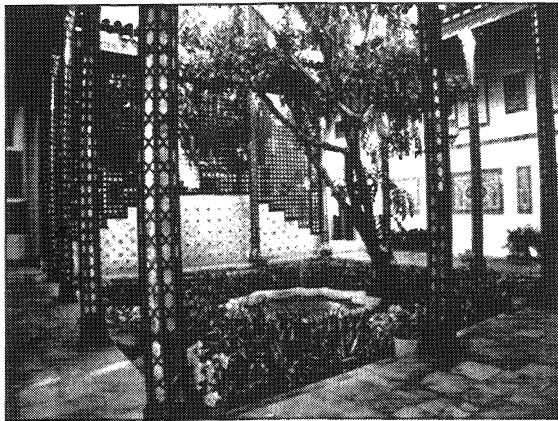


Figure 17: *Central courtyard*

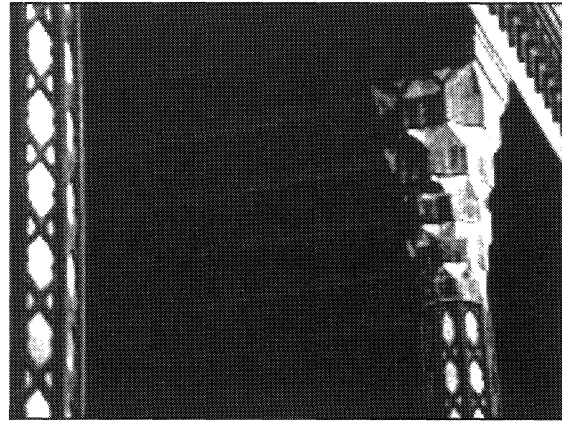


Figure 18: *Columns and muqarnas capital, detail*

6. Doris Duke’s Playfulness with Form and Structure

Doris Duke (fig. 22) can be seen to have amused herself by playing amply with form and structure, not only in the grouping of works of art, which she tended to rearrange at every visit [10], but also in the placement and orientation of individual works. She played with axes of symmetry, emphasizing vistas and focusing attention on particular objects [7]. She also made visual reference among objects and plantings. For example, the twined Indian laburnum tree planted beside the fountain (fig. 1) breaks the symmetry of the courtyard, but it also replicates the intertwined tree represented in nearby Safavid tile panels (fig. 17), the Persian reference a metaphor of lover and beloved. Miss Duke also took liberties in the placement of works to suit her particular sense of aesthetics. A tile panel meant to be viewed horizontally (fig. 19), she mounted vertically to suit the view down a corridor (fig. 20).

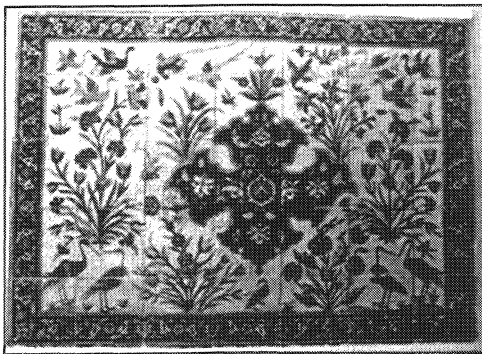


Figure 19: *Persian tile panel*

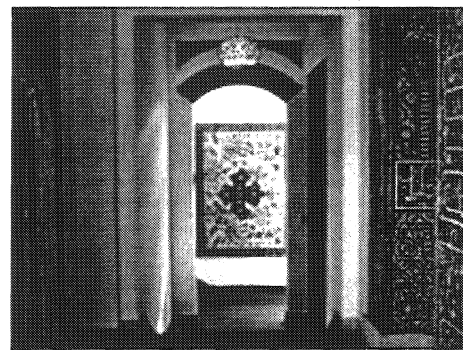


Figure 20: *Persian tile panel installed in corridor*

The plantings and landscaping (fig. 21) reinforce the use of natural forms within the built environment. Among the lush vegetation selected by Miss Duke for use at Shangri La, there are many specimens the form and structure of which contribute to an appreciation of the relationships between the patterns of nature and the nature of patterns. This is a site that warrants careful, slow, studied observation to reveal a broadened understanding of patterns [8] that enrich the diversity of our world.



Figure 21 (l.): *Areca palms along the driveway*

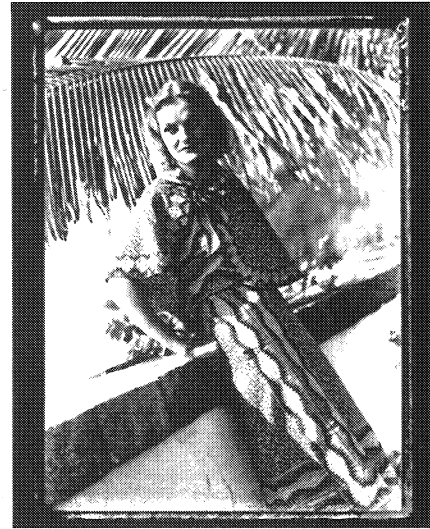


Figure 22 (r.): *Doris Duke at Shangri La, c. 1939*
Courtesy of Doris Duke Charitable Foundation Archives,
Duke Farms, Hillsborough, NJ

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Additional relevant websites: Shangri La website www.shangrilahawaii.org; Doris Duke Charitable Foundation www.ddcf.org; Honolulu Academy of Arts/Shangri La www.honoluluacademy.org.