Sacral Qualities of Form in Mosque Architecture: Transformation of the Arts of the Qur'an into the Arts of the Mosque

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By the year 800 C.E., and within less than two centuries from the inception of Islam, a new religious and secular architecture materialized in a vast area: western Asia, all of North Africa, and southern Spain. The archeological and textual references for these projects have provided us with a wealth of physical and descriptive evidence of the emerging building types and forms of Islamic architecture. The mosque, for example, developed into a well-defined building type with characteristic physical features and spatial organization, among them the *miḥrāb*, the *minbar*, calligraphic inscriptions, and surface ornamentation, all of which are architectural elements whose designs and dispositions in the mosque space have taken on various reoccurring patterns.

The theological rationalization behind the historical evolution of mosque architecture is more formidable to consolidate, however, for information is scarce and it is difficult to interpret subjective information. The Qur'an decreed emphatically the *ṣalāh* (prayer) but did not describe what features a house of worship should incorporate. The Prophet taught *ṣalāh* to early Muslims and continued to lead the faithful in prayer in the architecturally modest mosque of Madīnah. When the spatial requirements for congregational mosques became apparent, such architectural features as the *miḥrāb* appeared.

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Mosque architecture began to develop under the Rightly Guided Caliphs and escalated through the succeeding Umayyad ascendancy, which witnessed the rise of architectural masterpieces in the expanding Islamic world. Mosque project officers incorporated innovations in designing the edifice in relation to its immediate environment, interior space planning, and construction techniques. But none surpassed the innovations in calligraphic inscriptions and ornamentation, which we classify as the surface arts of the mosque. The levels of productivity and quality of these surface arts defies description. What, then, was the source of motivation and poetics behind these creations?

This article suggests that the highly acclaimed Islamic surface arts are rooted in the corresponding calligraphic and illumination arts of the Qur'an and that Qur'anic arts arose to show the harmony of the theological idea of the sacredness of the Qur'an itself. This suggestion requires the clarification of two separate, but intertwined, relationships. The first is the relationship between the concept of the Qur'an's sacredness and the artistic presentation of the Qur'an as a holy book through fine calligraphy and illumination. The second is the relationship between the sacred arts of the Qur'an (calligraphy and illumination) and the surface arts of the mosque as a holy place (calligraphic inscriptions and ornamentation). In this article, such relationships are addressed more specifically through three questions: What made the Qur'an the absolute source and manifestation of sacredness in Islamic theology? What sacred arts of the Qur'an were developed in response to the established idea of the Qur'an's sacredness? What mosque surface arts were developed (out of Qur'anic arts) to express sacredness within the confines of the mosque?

To maintain consistency throughout the article, "calligraphy" and "illumination" are used in association with the sacred arts of the Qur'an; "inscriptions," "calligraphic inscriptions," and "ornamentation" are used in association with the surface arts of the mosque.

The Qur'an as the Embodiment of Sacredness

The Qur'an is the ultimate expression of the divine in Islamic theology. Muslims assimilate the revelation in absolute seriousness,[1] for it is the indisputable word of God, full of wisdom and guidance, that addresses a host of spiritual and worldly concerns from the human relationship with God to manners of social greetings. It provides axioms for interpreting every affair, reminds them of the divine throughout the day by means of various rituals, attests to the divine presence, and provides precepts for meditation.[2] Muslims pursue the holy word with the utmost esteem, be it perceived meaning, written word, or confining book.

The idea of the revelation's sacredness permeates numerous Qur'anic verses. Such verses reveal a variety of majestic attributes pertaining, among many respects, to the source, favors, and challenge of the Qur'an. The source of revelation is a key percept of Islamic theology. The divine

nature of revelation is asserted bluntly as being from God, the exalted in power and full of wisdom (Qur'an 46:2). Receiving divine mercy is one of the innumerable favors that the sacred word engenders. But the divine reminds the community that obtaining mercy is contingent upon righteous behavior as revealed in the Qur'an (Qur'an 6:155). Similarly, receiving the divine guidance leading to peace, safety, and light is a favor of the sacred word afforded only to those who seek God's pleasure (Qur'an 5:16).

The challenge of the Qur'an resides in its unmatched beauty. Armed with unprecedented linguistic efficacy, it dealt a decisive blow to the pride of the Makkan community. At the time of the revelation, the Makkan community and Arabia in general spoke the language eloquently, and orators and poets derived dignity from their distinctive performances. Speech and poetry had developed into the most prominent art forms. The stature of the language prompted the Prophet's clan (the Quraysh) to defy his call, for the clan chieftains demanded a written book from heaven that they could read. The revelation, in support of the Prophet, affirmed the divine source of the Qur'an by challenging any doubter to produce even one *sūrah* that developed those in the Qur'an: "And if ye are in doubt as to what We have revealed from time to time to Our servant, then produce a *sūrah* like thereunto" (Qur'an 2:23). Representing the highest form of rhetorical achievement in Arabic, the Qur'an was indeed unchallengeable.[3]

Viewing the Qur'an as "the most beautiful literary composition the Arabic language has ever known" is not an outcome of zealous faith; rather, it is a "critical judgment reached through literary analysis" by discriminating intellects acquainted with the language's literary elegance.[4] As acquaintance with the language is clearly a prerequisite, it is no wonder that the Qur'an's beauty did not resound in the minds of some western scholars. The assimilation of such beauty is hard to come by without familiarity with the genius of the Arabic language.[5]

The Muslim's conception of the Qur'an's sacredness also derives from the prescribed divine rules for listening to and reciting the revelation. When one is in a setting where the Qur'an is read, one ought to listen to it with the utmost attention, which is a reaction that would possibly bring mercy (Qur'an 7:204). When one recites the Qur'an, one should do so in slow and measured rhythmic tones in order to ponder the words' deep meaning (Qur'an 73:4). Probably nothing is more meticulously descriptive of the value of reciting the Qur'an than the name of the book itself: "Qur'an" has the literal meaning of "recitation." Seeking God's blessings, Muslims show the utmost dedication to the art of Qur'anic recitation,[6] which has persisted over time through *tilāwah* and *tajwīd*, the two prominent styles of recitation.

The divinely prescribed manners of listening and reciting the Qur'an transcend through several *sūrah*s into the glorification of reading and writing and the love of knowledge that such activities entail. This emphasis shows clearly from the very first revelation: "Proclaim (or Read) in the

name of the Lord and Cherisher" (Qur'an 96:1). Another *sūrah* symbolized the revelation with the pen and the record: "*Nūn*. By the pen and by the (record) which (men) write" (Qur'an 68:1).

The divine message delivered through the Prophet in the form of a book laid the foundation for the high intellectual and emotional esteem in which the Qur'an has been held ever since. This attitude resulted in two major developments: writing the text of the Qur'an in a manner compatible with its sacred status and the love of knowledge and the propagation of books as the milieu of knowledge. Indeed, "the holiness of the Qur'an extended to lend a special aura to all forms of the written word, which thus became in essence the 'sacred symbol.'"[7] This development, in particular, concerns us here, for it had a direct effect on applying the sacred qualities of the book to the sacred qualities of mosque surfaces.

Sacred Arts of the Qur'an: Calligraphy

Calligraphy, the first Qur'anic art of interest to this study, enjoys indisputable prominence among the Islamic arts. Indeed, "calligraphy is the premier Islamic art within its own culture."[8] How can this distinguished status be explained? Unveiling the genesis of the Arabic script and its development before and after the rise of Islam casts light on the role of the Qur'an in ameliorating the art of Arabic writing in general and of Arabic calligraphy in particular.

Prevailing linguistic theory traces the roots of the Arabic language to the Semitic languages of the lands to the north of the Arab peninsula. More specifically, its invention is attributed to the Nabataeans, an Arab people who established a powerful kingdom in Petra (contemporary southern Jordan) in the first century B.C. and excelled in trade with other provinces in Greater Syria and northwestern Arabia. While the corpus of their original language derived from the Aramaic script, their language set the stage for developing the Arabic language,[9] which came to be known as North Arabic.[10] North Arabic is traceable to the Nabataean alphabet and was buttressed later by diacritical and vowel marks derived from the Syriac alphabet, which itself was a form of Aramaic.[11]

Samples of North Arabic scripts are scant indeed, but from those that remain we can see the script's graphic coarseness, a peculiarity that echoes the evolutionary poise of the language a few centuries before Islam. The Arabic inscription of Imrū' al Qays at Namarah (328 C.E.) and the inscription at Umm al Jimāl (sixth century C.E.)[12] are two rare samples. These inscriptions, which lack any signs of beauty and order as well as the constructional elements of individual letters and words needed for the integrity of communication, exhibit a pronounced ungainliness. Apart from the script, writing as a craft possessed a low stature in the pre-Islamic language arts of Arabia. This situation was in sharp contrast with the spoken language, which concurrently asserted such remarkable eloquence that it has been held in high esteem in Arabic literature ever since.

Ironically, writing was shunned by the very orators and poets who prided themselves on their oral performances.

With such a linguistic background, the beginnings of Arabic calligraphy under the auspices of Islam raised a great deal of curiosity. One views with awe the pace of the calligraphic arts's maturation under the guiding hand of Islam. What were the elements in Islam that led to the enhancement of the Arabic calligraphic arts, and did this enhancement require, as a prerequisite, a reformation of the Arabic script? At this juncture, however, it is posited that the arousal of the need to write the Qur'an thrust the development of the calligraphic arts forward and that such a development was based on a sustained reformation of the Arabic script.

The revelations were not written and compiled in book form during the life of the Prophet. Rather, a dual approach was employed to preserve the text. First, revelations were memorized by the *ḥuffāẓ*, companions of the Prophet endowed with intellect, piety, and known to have command of Arabic. Further, revelations were recorded on whatever appropriate surfaces were available, such as fragments of stone or bones.[13] With the rapid expansion of the Islamic state, concern for the revelations' integrity flagged. On the other hand, the Islamic conquests decreased the number of *ḥuffāẓ*. Along with the rapid increase in the number of non-Arab converts, the need for a religious instrument proved essential for promulgating the faith. These concerns prompted the compilation the Qur'an in a more reliable and permanent form. On the order of Abū Bakr, the Prophet's secretary (Zayd ibn Thābit) compiled the first complete copy of the Qur'an in the sequence denoted by the Prophet. In 651, during the caliphate of 'Uthmān, a meticulous method was followed to produce several exact copies of the full text for distribution to the territories.[14] Within several years, writing the Qur'an became a prominent art that was subject to continued development throughout the ages with amazing artistic leaps.

Among the earlier calligraphic variants, three major ones can be recognized: Mā'il, characterized by the slanted vertical strokes of words; Mashq, characterized by extended horizontal strokes; and Naskh or inscriptional, characterized by its accommodation to the dexterity of the hand. The first variant did not last long, whereas the other two developed into the Kūfic and the cursive families of scripts respectively, the two principal calligraphic scripts that dominated the writing of the Qur'an for centuries.

Deriving its name from the city of Kūfah, the newly established Islamic center of learning in Iraq, Kūfic script reached maturity late in the eighth century and became what is known as original or standard Kūfic. Its extended horizontal strokes, bold lines, and geometric tendency brought writing closer to the art of drawing.[15] This original script was the first remarkable calligraphic achievement in response to the search for a hieratic form of lettering.[16] This and other Kūfic variants discussed below continued to embody mainly the Qur'anic text and, sporadically, formal state correspondence as opposed to general everyday writing.[17] Original

Kūfic underwent gradual renewals and yielded, during the ninth century, the styles of eastern Kūfic in the East and western Kūfic in North Africa. According to Martin Lings, "both these are lighter and more dynamic and more potentially decorative than the parent script."[18] In contrast to early Kūfic, which focused on communicating the meaning of the message, later Kūfic (from the tenth century on) admitted more and more decorative elements into the script. The result was a script flush with a wide variety of foliate, floral, and geometric manipulations of Arabic letters and words.

Rivalling Kūfic as a perpetuating family of scripts expressing the Qur'anic text was cursive calligraphy, which emerged from Naskh and other "curved and round" scripts practiced in the first decades of the Muslim era. In the words of Safadi, "it should be noted that the very early cursive scripts generally lacked elegance and discipline and were used mainly for secular purposes."[19] As in Kūfic, however, these scripts acquired various visual refinements over time. In addition, they were more readily accommodating to the constructional reformation of the Arabic script, which became necessary due to the presence of huge numbers of non-Arab converts who now had to learn the language of the Qur'an. The characteristics of cursive style absorbed with relative ease the attempts at solving two inherent problems: the absence of signs to help vocalize the script properly and the difficulty of distinguishing between different letters sharing the same character outline. Starting early in the Umayyad period, these two problems were alleviated respectively by introducing diacritical marks, such as *fatḥah* and *ḍammah* to help vocalization, and letter-pointing, such as dots above and below letters with the same outline.

Through the inventiveness of accomplished calligraphers, cursive scripts gained some discipline and refinement. The utilization of the principle of the dimensional proportioning of letters to a reference standard produced revolutionary systems for visual balance and script order, which, in turn, produced new scripts in their own right. For example, the Niṣf (half) and Thuluth (one-third) scripts, developed during the Umayyad reign, based their size proportioning on a reference script called Jalīl (Grand). In the first half of the tenth century, during the 'Abbāsid period, cursive scripts came under the scrutiny of the celebrated Ibn Muqlah. He "laid down a comprehensive system of basic calligraphic rules based on the rhombic dot as a unit of measurement" and also "redesigned the geometric forms of the letters and fixed their relative shape and size using the rhombic dot, the 'standard' Alif and the 'standard' circle."[20]

The strict rules of Ibn Muqlah, as well as further refinements made by Ibn al Bawwāb, Yāqūt, and others, resulted in the emergence of a family of cursive scripts, which developed over time and came to be known as *al aqlām al sittah* (the six pens). These six classical scripts encompassed the Thuluth, Naskhī, Muḥaqqaq, Rayḥānī, Riqa'ī, and Tawqī' styles. The characteristics of each script defined its selective use in secular and religious works. For example, a Qur'anic *sūrah* would have its heading written in the monumental decorative Thuluth and the main text in Rayḥānī.

Reflecting on the Qur'anic influence on the development of calligraphic arts, Welsh asserts that "the reasons for the . . . pervasiveness of the calligraphic arts lie in the central fact of Islamic culture—the Qur'an. For while Islamic calligraphy owes its historical development to human inventiveness and genius, it owes its origins to the revelation of Islam's holy book."[21] With an accent on ornamentation in the treatment of the Qur'an, Hillenbrand remarks that "the prestige of the Qur'an ensured that the ornament lavished on it was the best that the age could produce. The care which could be devoted to these Qur'ans beggars the imagination."[22] The effect of the new faith on calligraphic development amounted to the level of a "true miracle."[23]

Besides Qur'anic calligraphy, prolific scribes continued from generation to generation to add masterpieces across the land and on a variety of surfaces, including those of the mosques, ecclesiastical buildings, ceramic objects, wood panels, clothes, carpets, and metal surfaces. The mastering of the fine writing produced even treatises on the subject.[24] The artistic merits of Islamic calligraphy were so profound that they were recognized by external sources. The reaction of medieval Europe to calligraphy and objects from the lands of Islam testifies to that effect. For example, Islamic textiles, "despite their decidedly un-Christian inscriptions, were scissored and sewn into churchly vestments—by pious clerics and artisans who could see their beauty but could not read their Koranic inscriptions."[25] Fine Kūfic calligraphy adorned the coronation gown of a German emperor,[26] and even the Crusaders admired and adapted Islamic art objects for use in churches.[27]

Sacred Arts of the Qur'an: Illumination

Illumination, the second Qur'anic art discussed in this study, has an aesthetic purpose. The message of the Qur'an aims at reaching and taking root in the minds and hearts of Muslims through two functions: communicative (calligraphy as a medium) and aesthetic (the use of both calligraphy and illumination).[28] As the aesthetic function, especially that of illumination, is meant to support rather than compete with the communication function, illumination was universally kept in check when copying the Qur'an.[29] Thus, we can interpret the slower development of illumination, when compared with calligraphy, at the early stages of script writing as follows: The general understanding was that illumination may not intrude upon or distract from the text.

The visual motifs and elements used in illuminating the pages of the Qur'an appear in a variety of forms, patterns, and colors to signify organizational events and theological direction. Basic and modified palmettes and solar roundels mark the divisions between verses and sometimes denote prostrations—an occasional encounter that requires a prostration by the reader. Palmettes also appear in the margin as medallions with a root- or trunk-shaped base and a pointed end suggestive of infinity.[30]

Subtle decorative manipulations sometimes stretch out to cover the entire background of the body of the text, but with calculated deference to the written word.

Capturing the power of geometry, an astounding variety of orchestrated designs dominated the fields of the more conspicuous parts of the Qur'an, such as the surah headings and the frontispieces. To augment the aesthetic effect, "ornamental" styles of calligraphy are integrated within the field. For example, in reference to manuscripts from the western Islamic world, "the *sūrah* headings . . . are nearly always written in an ornamental style of lettering developed from Western Kūfic for the purpose of illumination only, different from the script of the text itself."[31] In making patterns for illuminating any piece of the Qur'an, rectilinear geometry with its straight lines, and curvilinear geometry with its curved lines, were the two principal instruments used.

While planning a patterning process, all illuminators exploited the useful geometric properties of the circle, for this form can accommodate the construction of any geometric shape with precision.[32] For example, the circle can readily enclose a square and, if it encloses two squares at a 45 degree difference in orientation, an octagon shape or an eight-pointed star can be manipulated. Juxtaposing multiple planning circles in a concentric, intersecting, touching, or remote relationship, illuminators created versatile working patterns as a framework for implementing the intended design patterns. The design pattern itself usually consists of rectilinear component forms,[33] although curvilinear component forms,[34] or a combination of both also occur.[35] Due to the nature of the patterning process, it was best suited for the full-page frontispiece illumination. However, it also triumphed in illuminating the smaller precincts of *sūrah* headings.

Geometric patterning of a frontispiece, for example, prepared the field for another illuminatory agent: the arabesque. This artistic style drew heavily from vegetal motifs derived from such flora as leaves, vines, flowers, rosettes, and trees.[36] Vegetal and geometric motifs have adorned Qur'anic pages since the early Umayyad era.[37] The application of arabesque art to Qur'anic frontispieces resulted in designs of varied character and, when combined in horizontal and vertical geometric strip segments, create global frames bordering the entire page or smaller frames enclosing rectangular panels. The frames and panels manifest intense vegetal, geometric, and calligraphic treatment.[38]

Color is another intermediary that dominates Qur'anic arts. It is found throughout geometry, arabesque, and calligraphy and endows all of them with a qualitative vehemence when used by a skilled illuminator. A color scheme is often that of polychromy, where multiple colors ally to invigorate visual harmony. Still, in many cases one, and hardly more than one, color dominates the field.[39] Among the many hues and tones, the light to medium golds and the medium to dark blues are very common.

The development of geometry, arabesque, calligraphy, and polychromy on the surfaces of Qur'anic pages follow distinct design principles.

To mention only a few, these include repetition, rhythm, symmetry, and balance, all of which work together to achieve "abstractiveness," a quality most akin to the transcendental or infinite attributes of the divine. As a form of Islamic art experienced through time that affords the viewer an opportunity to concentrate on details,[40] illuminated Qur'anic compositions further elevate the viewer's mind to reflect on the infinite.

Surface Arts of the Mosque: An Overview

In addition to their celebrated use in decorating Qur'ans, calligraphy and illumination, described as nonfigurative arts by Papadopoulo, were the exclusive arts used to adorn mosques and other religious structures.[41] Over the centuries, calligraphic inscriptions and ornamental devices endowed the mosque's architectural surfaces with prolific artistic treatments that are distinctively characteristic of Islam. There are almost no limits on when, where, how, or to what degree such arts appear on a given mosque's surfaces, for diversity and flexibility demarcated the production of these arts immensely.[42] One is compelled to speculate on the connection between these sacred arts and their Qur'anic counterparts. Did the inscriptional and ornamental arts associated with the mosque emanate from the Qur'anic calligraphic and illuminating arts? The answer to this question is attempted at two levels of discussion: an overview and a characterization. The overview discussion, which makes up the body of the following section, touches on the evolution of the mosque as a building type and the development of the associated surface arts. The characterization discussion, which takes up the next section, describes the specific attributes of surface arts of the mosque from several viewpoints, such as themes of calligraphic inscriptions and agents of ornamentation.

The very early years of Islam were the formative years of the mosque as a building type and also witnessed the initial reticent architectural attempts of the Arabs.[43] At that time, the search focused on providing adequate shelter for the religious and political functions called for by Islam. Beginning with the hijrah in 620 and for three decades under the leadership of the Prophet and the Rightly Guided Caliphs, the community founded the first mosque, the practically planned Mosque of the Prophet in Madīnah (622), and other stark mosques in the acquired regions, such as the Kūfah Mosque (638) in Iraq,[44] the Fusṭāṭ Mosque (641) in Egypt, and the Qairouan Mosque (667) in Tunisia.[45] These early mosques reflect the intensity of pragmatic needs in their planning, but little if any thought was given to embellishing the mosque's surfaces. During the second half of this period, devotion to recording the Qur'an through beautiful calligraphy and illumination reached considerable proportions. The contrast between the developing but promising arts of the Qur'an as against the lagging, but forthcoming, surface arts of the mosque was already apparent.

From the beginning of the Umayyad period, surface arts associated with the mosque began to develop in the same manner as the Qur'anic arts

had done. Inscribing and ornamenting mosque surfaces began to prosper, as seen in the newly established and lavishly ornamented Dome of the Rock (688-91), the Great Mosque of Damascus (construction began in 705), and the Great Mosque of Madīnah, which replaced the original Mosque of the Prophet on the same site (construction began in 705).[46] The trend for mosque surface ornamentation in particular, and design elaboration in general, continued through the golden era of the succeeding 'Abbāsid era and indeed persisted through time in all parts of the Islamic world.

The fervent patronage of successive caliphs, governors, and commanders brought about a steady accretion of architectural works that, at least in part, tended to glorify the concept of power. Many of the religious masterpieces that have come down to us attest to the political ambitions of the reigning powers within the geographic and historical domains of Islam. Therefore, we can make a reasonable distinction between the architectural heritage of dynastic- or doctrine-driven states, such as the Umayyads of al Andalus, the Fāṭimids of Egypt and Tunisia, the Ṣāfavids of Persia, and the Ottomans of Turkey.

Although the political ambitions behind erecting religious edifices remained potent, the commanding regimes refrained from suppressing the religious functions contained within. The position of Islam on the infusion of religion and state seems, on the one hand, to have aided the patron in the "power" design of the edifice and, on the other, to have guaranteed the prosperity of the mosque's religious and communal functions. In its true sense, Islam's joining of religion and state implies harmony and unison between the two, and in its intended practice the support for either religion or state would mean support for Islam. This interpretation could lead us to say that the amazing multitude, quality, and geographic spread of mosque architecture, especially as regards calligraphic inscriptions and elements of ornamentation, leave no doubt about the importance placed on the visual sensory language in communicating religious ideology as well as governing powers.

Surface Arts of the Mosque: A Characterization

The following discussion characterizes inscriptions and ornamentation, which are the dual components of mosque surface arts. It deals with such topics as the themes of calligraphic inscriptions, the options of Kūfic and cursive scripts used, the dedicated agents of ornamentation (geometry, arabesque, and polychromy), and the effect of the architectural spatial context both on the locational deployment of surface arts and on the potential engendering of three-dimensional plastic schemes of ornamentation.

The themes conveyed by inscription and celebrated by ornamentation vary. Conceivably, many themes were derived from and communicated through the language of the Qur'an. The choice of the verse or phrases to be displayed correlate well with the intended message and nature of the

building part on which the message would appear. This feature is evident on numerous components and objects of the mosque, such as the minaret, *miḥrāb*s, domes, and even glass light lamps. For example, the *shahādah* (profession of faith) often appears at the top of minarets.[47] The *miḥrāb* phrase of Qur'an 3:37 adorns the surface of many *miḥrāb*s,[48] as does the Verse of the Throne (2:225), which exalts the attributes of God.[49] Light, a very recurring theme in the Qur'an, graces medieval *miḥrāb*s through text from the Qur'an's *Sūrat al Nūr* (the Chapter of Light) inscribed around or within the *miḥrāb* niche.[50] The same verse also graces mosque lamps made of Syrian glass.[51] The *basmalah,* the opening phrase of every Qur'anic *sūrah* except one, is found in great abundance on a variety of locations within the mosque.

In addition to the Qur'anic text, glorious names and patronage phrases appear throughout in the mosque. The names of God, the prophet Muhammad, and the Rightly Guided Caliphs occupy, often separately, conspicuous positions on surfaces. The names of 'Alī and Ḥusayn, rather than those of the Rightly Guided Caliphs, dominate Shī'ī sanctuaries.[52] Oftentimes, inscriptions depict historical information concerning patronage, the date of construction, and other facts.[53]

Mosque surface epigraphy employed a repertoire of contemporary Kūfic and cursive scripts that had already burgeoned on the pages of the Qur'an or the surfaces of existing buildings. Indeed, the cursive scripts actually reach their apex in mosque applications.[54] The ever-developing nature of this repertoire put at the inscriber's disposal a growing number of scripts that could be for diverse applications. Inscribers chose from the arrays of Kūfic and cursive scripts and applied them individually or in combination to building interiors and exteriors. For example, "ornamental" Kūfic inscriptions are the sole adornments of the stucco *miḥrāb* found in the Mosque of Ibn Ṭūlūn (1094) at Fusṭāṭ, Egypt.[55] This same type of script surrounds *miḥrāb*s in the Great Mosque of Córdoba (began 786) and the mosque of the Aljaferia Palace in Zaragoza (second half of the eleventh century).[56] One of the earliest applications of cursive inscriptions belongs to the early Umayyad Dome of the Rock in Jerusalem. Here, a band of Thuluth fine script crowns the eight-sided exterior wall, and a similar Thuluth band above the springing of the dome encircles the round drum.[57] Another striking example of a dominant cursive script in stucco work is found in the Il-Khānid *miḥrāb* of Uljaytu (1310), located in the Jāmi' Mosque of Iṣfahān, Iran.[58]

Cursive and Kūfic inscriptions coalesced to engender large numbers of calligraphic patterns, with the Kūfic component often fusing an orthodox character to the composition. The inscriptions on the dome of the Ṣafavid Masjid-i Shāh (c. 1613) in Iṣfahān integrate not only types but also levels of inscriptions.[59] The dominant inscription band on the drum located just below the dome base displays Jalī Thulth, and the lower bands depict square ornamental Kūfic praising the Prophet and glorifying the power and unity of God. A second and more subtle level of inscription

occupies the background of the lower bands without encroaching on the visual integrity of the principal script. A more ornamental scheme of composite calligraphy in brickwork bands rises high on the exterior wall of Arahi-Dīn-ka-Jhonpra Mosque in Ajmer, India (c. 1200). Here, the first band of knotted and foliated Kūfic juxtaposes two parallel bands below Indian Thuluth, and all inscriptions project out to add a bold three-dimensional, plastic quality.[60]

Regardless of the theme sought or the script elected, calligraphic inscriptions almost always integrate a rich realm of ornamentation.[61] Indeed, inscriptions and ornamentation unite to offer the best visual design that the capabilities of architectural materials and implementation techniques could muster. The results are dazzling.

Mosque ornamentation makes an impressive use of the diversified repertories of geometry, arabesque, and polychromy. In this sense, mosque ornamentation is comparable with Qur'anic illumination, although its use differs in a number of aspects. Two salient aspects include the extent of the field and plasticity. Mosque spaces offer an extensive amount of surface, whereas the Qur'an presents a defined area limited by the requirements of a fixed body of text. The mosque edifice, although it has a two-dimensional surface, also offers a potentially three-dimensional, plastic treatment, whereas the Qur'an possesses only a two-dimensional plane surface. The difference in each aspect has implications for the use of ornamentation in the mosque.

The extensiveness of the mosque's surface fields influences the use of ornamentation in relation to calligraphic inscriptions, for it is accepted that architectural ornamentation enhances calligraphic inscriptions on the available mosque surfaces. The examples given earlier in regard to inscriptions support this postulate. However, our understanding of the relationship or spatial integration between the two arts is conditioned considerably by their spatial proximity on the actual surface. This proximity premise allows a set of relationship levels that may be described as close, associative, or independent. These levels, which are verifiable by endless case examples, are generalized for convenience and may not always have clear boundaries. A close level relationship brings ornamentation into a high order of spatial integration with inscriptions located within a well-defined and unified scheme. Many *miḥrāb*s are rich environments for this level of integration.[62] An associative level relationship maintains some degree of spatial integration, as when the ornamentation occurs around a specific surface already occupied by a scheme of the close relationship type.[63] An independent level of relationship maintains hardly any spatial integration, as when the ornamentation is located far away from an inscriptional treatment, thus declaring no direct alliance with that treatment.

The ability to manipulate the three-dimensional nature of a given architectural form engendered a vast array of innovative plastic works in mosque ornamentation.[64] Skilled building designers and ornamentors imparted the quality of plasticity through the simple principle of spatially positioning

ornamental devices in planes deviating from the receiving surface plane. The task, in other words, involves effecting projections and recessions in relation to a reference two-dimensional plane surface, such as a wall, for example.[65] The devices and materials employed in plastic, or relief, work are abundant and varied.

The plastic ornamentation schemes use devices similar to those of the two-dimensional ornamentation. These ornamental motifs and patterns involve such items as circles, polygons, stars, chevrons, spirals, medallions, rosettes, flowers, leaves, shells, and lamps.[66] An ornamental device that adds to the grandeur of religious as well as secular buildings is the *muqarnaṣ*. Originally thought of as having the structural function of helping to fit weighty round domes over a square compartment below, the *muqarnaṣ* developed into a visually expressive device[67] that, when combined in groups, yielded a striking honeycomb-like composition. In addition to its use at the meeting points of the dome and the upper corners of square rooms, the *muqarnaṣ* was used ornamentally in mosque portals, *miḥrāb*s, and *īwān*s (an Iranian shrine feature consisting of a large niche with portals opening onto a mosque court).[68] No exterior or interior part of the mosque escaped, at one time or another, relief composing worked out from the wide range of devices previously outlined. The result is an innumerable variety of compositions on entrance portals, building friezes, domes, minarets, walls, *miḥrāb*s, *minbar*s, and windows.

In effecting the relief artwork successfully, ornamental schemes capitalize on the properties of the materials used. Although wood, stone, and various metals were used in relief work, stucco and brick were probably the most common because of their workability and the abundance of raw material. Stucco, a highly shapable material, appeared in carved and molded forms and was sometimes painted lavishly. Carved stucco prospered in all parts of the Islamic world and was given an added impetus by inventive Iranian artisans, who adapted it to accommodate curvilinearly-based floral patterns.[69] This innovative development was responsible for such splendid stucco works as seen in the miḥrāb of Uljaytu of the Masjid-i Jāmi' of Iṣfahān (1310).

Brick, a material that is conveniently workable into structures, is of inherent visual expressiveness when exposed. Ornamentally patterned brickwork prospered more in the East, especially in the Sāmānid tombs of Bukhārā in the first half of the tenth century and the monumental Sejluq minarets, such as those of the Mosque of Damghān, Iran (1026–29).[70] Seljuq masons introduced unique projection or recession techniques in laying out brickwork and even went to the length of carving or molding plaster joints to further ornamental effects.[71]

Conclusion

The glory of the Qur'an, the book arts of the Qur'an, and the surface arts of the mosque have maintained a harmonic relationship throughout

Islamic history The sacredness of the Qur'an is a supreme concept for the Muslim. The powers of its language, knowledge, and guidance sought out and engaged triumphantly the intellectual and emotional capacities of the Muslims. To signify the veneration in which the book is held and the believers' gratitude to God, the Muslim community mobilized for producing what amounts to a visually compatible book masterpiece.

The revered words of the revelation had to be written in a permanent and clear manner. This need prompted the Rightly Guided Caliphs, especially 'Uthmān, to compile the revelation in a single volume and make copies of it available to the expanding provinces of the state. This assured the Qur'an's integrity and propagation during the early and crucial period of Islam. To enhance the clarity of the Qur'anic text, early Muslims introduced a series of reforms into the Arabic script that laid out rules for its correct writing and reading. These reforms guarded against diversification in exercising these cherished activities and, at the same time, gave non-Arab converts access to accurate and correct copies of the Qur'an from the outset.

The beautiful word had to be written in a beautiful fashion. The Muslim genius unleased to bring about, at a highly accelerated rate, a range of approaches on how to write and adorn artistically the sacred word. These approaches became known as the fine arts of calligraphy and illumination or, in sum, the sacred arts of the Qur'an. From the outset, the art of calligraphy defined two families of script: the Kūfic and the cursive. The angularity and majesty of Kūfic scripts explain their use in *sūrah* headings and frontispieces of the Qur'an, while the flowing characteristics and adaptability of the cursive scripts were perfect vehicles for writing the main body of the text. In both Kūfic and cursive, inventive calligraphers continued to add new styles over the centuries. Illumination enhanced aesthetically the message and the elegance of calligraphy. The organizational structure of the Qur'an offered opportunities for illumination, such as that of the *sūrah* heading. Illuminators put forth superb illumination schemes by the judicious use of geometric shapes, arabesque motifs, and colors.

As a center for worship and communal camaraderie, the mosque assumes a distinctively revered status among Islamic institutions. Departing from the necessity-driven designs of the early Islamic period and beginning with the Umayyad caliphate in 661, the design of the mosque as a building type witnessed drastic transformations in planning and surface finish. In keeping with the holy stature of the mosque, the search focussed on finding a suitable way to celebrate the edifice. The already considerable body of Qur'anic works in calligraphy and illumination served as artistic models for adorning the surfaces of the mosque in the form of calligraphic inscriptions and architectural ornamentation. Inscription themes were derived from the Qur'an or subjects of religious nature. Inscription types imitated the variety of Qur'anic Kūfic and cursive scripts. Similarly, building ornamentation schemes borrowed freely from the illumination repertoire of the Qur'an. Thus, the visual design

schemes that appeared on the building surfaces included Qur'anic motifs and patterns.

The spatial content of the mosque differentiated, in outcome, the surface arts of the building from the sacred arts of the Qur'an. The results appear in the way inscriptions and ornamentation schemes were spatially integrated and in the fact that building surfaces afforded plastic and three-dimensional treatments. However, the glorification of the word of God remains a common pursuit of both arts.

Endnotes

1. Ismā'īl R. al Fārūqī and Lois Lamyā' al Fārūqī, *The Cultural Atlas of Islam* (New York: Macmillan, 1986), 102.

2. Huston Smith, *The World's Religions*, rev. ed. (San Francisco: Harper San Francisco, 1991), 235.

3. John Wansbrough, *Qur'anic Studies* (Oxford, UK: Oxford University Press, 1977), 86.

4. al Fārūqī and al Fārūqī, *Cultural Atlas*, 102-3.

5. Phillip K. Hitti, *The Near East in History* (Princeton, NJ: Van Nostrand, 1961), 198.

6. Mahmoud Ayoub, "The Qur'an Recited," *Middle East Studies Association Bulletin* 27, no. 2 (1993): 169-71.

7. Anthony Welch, *Calligraphy in the Arts of the Muslim World* (Austin, TX: University of Austin Press, 1979), 22.

8. Robert Hillenbrand, "The Qur'an Illuminated," review of *The Nasser D. Khalili Collection of Islamic Art*, by Julian Raby, ed., *Art History* 17, no. 1 (1994): 116-26.

9. M. H. Bakalla, *Arabic Culture through Its Language and Literature* (London: Kegan Paul International, 1994), 108.

10. The name is meant to distinguish North Arabic from South Arabic, which prospered in the kingdom of Yaman before the former's maturity.

11. Nabia Abbott, *The Rise of the North Arabic Script and Its Kur'anic Development, with a Full Description of the Kur'an Manuscripts in the Oriental Institute* (Chicago: University of Chicago Press, 1939), 2.

12. Ibid., 4-5.

13. al Fārūqī and al Fārūqī, *Cultural Atlas*, 358.

14. Ibid.

15. Martin Lings, *The Qur'anic Art of Calligraphy and Illumination* (New York: Interlink Publishing Group, Inc., 1976), 16.

16. Ibid.

17. For example, as applied to metalware "Kufic . . . was used for Koranic phrases and blessings on twelfth and thirteenth-century Iranian vessels." Smithsonian Institute, Freer Gallery of Art, *Islamic Metalware* (Washington, DC: Smithsonian Institute, n.d.).

18. Lings, *Qur'anic Art*, 16.

19. Yasin Hamid Safadi, *Islamic Calligraphy* (Boulder, CO: Shambhala Publications, Inc., 1979), 14.

20. Ibid., 17.

21. Welch, *Calligraphy in the Arts*, 22.

22. Hillenbrand, "The Qur'an Illuminated," 122.

23. Annemarie Schimmel, *Calligraphy and Islamic Culture* (New York: New York University Press, 1984), 4.

24. For example, see Wheeler M. Thackston, "Treatise on Calligraphic Arts: A Disquisition on Paper, Color, Inks, and Pens by Simi of Nishapur," in *Intellectual Studies of*

Islam, ed. Michel M. Mazzaoui and Vera B. Moreen (Salt Lake City: University of Utah Press, 1990), 219-28.

25. Stuart Cary Welch, *Introduction to the Arts of Islam: Masterpieces from the Metropolitan Museum of Art*, by the Metropolitan Museum of Arts (New York: Harry N. Abrams, Inc., 1982), 9.

26. Schimmel, *Islamic Culture*, 2.

27. Welch, *Introduction to the Arts*, 9.

28. In an epigraphic sense, Arthur Uphram Pope affirmed the major aesthetic function of calligraphy, in addition to its communicative one. See his *Persian Architecture: The Triumph of Form and Color* (New York: George Praziller, 1965), 136.

29. Lings, *Qur'anic Art*, 71.

30. Sabiha Khemir, "The Arts of the Book," in *Al-Andalus: The Arts of Islamic Spain*, ed. Jerrilynn D. Dodds (New York: The Metropolitan Museum of Art, 1992), 121.

31. Ibid., 120-21.

32. Issam El-Said and Ayşe Parman, *Geometric Concepts in Islamic Art* (London: World of Islam Festival Publishing Co., Ltd., 1976), 3.

33. Examples of rectilinear design patterns abound. See Jerrilynn D. Dodds, ed., "Catalogue," in *Al-Andalus*, 316, no. 5. This illustration shows one of the final illumination pages of a Qur'an. Also see The Embassy of Saudi Arabia, Washington, DC, *Islam: A Global Civilization* (n.p., n.d.), back cover page.

34. See a frontispiece page in the Mamlūk style in Lings, *Qur'anic Art*, 126, plate 54.

35. Ibid., 100-101, plate 94. This plate is from sixteenth-century India and shows two pages full of illumination with part of *Sūrat al Fātiḥah* in the Rayḥānī script centering each page.

36. For more information on the motifs of Islamic ornamentation, see al Fārūqī and al Fārūqī, "Ornamentation of the Islamic Arts," in *Cultural Atlas* (chapter 21).

37. Barbara Brend, *Islamic Art* (Cambridge, MA: Harvard University Press, 1991), 34.

38. A simplified description of a rather common Qur'anic frontispiece design would be as follows. The page has a bold outer frame of vegetal arabesque surrounding a second frame of lesser thickness and varied vegetal treatment. A third and even thinner frame appears toward the center of the page and displays abstract nonvegetal motifs. The field of this frame is then divided into top and bottom rectangular panels that sandwich a large square in the middle of the page. Enhanced by the arabesque treatment, each panel celebrates a Qur'anic calligraphy, usually in ornamental Kūfic. The middle square houses a conspicuous multipoint star, at the center of which is a rosette that dominates the area. In such a frontispiece, vegetal motifs, geometric patterns, and calligraphy would cover fully the page field.

39. According to Lings, *Qur'anic Art*, 76, in the art of illumination blue hues, signifying infinite mercy, were dominant during the earlier periods of Islam. At a later period, golden hues, signifying light and knowledge, began to compete with the blue hues.

40. The quality of experiencing art through time is described as "dynamism," while the quality of offering opportunity for concentrating on details is described as "intricacy." See al Fārūqī and al Fārūqī, *Cultural Atlas*, 167-68.

41. Alexandre Papadopoulo, *Islam and Muslim Art*, trans. Robert Erich Wolf (New York: Harry N. Abrams, Inc., 1976), 127.

42. Oleg Graber described this point eloquently: "The range, expressive impact, and variety of motifs and techniques used to decorate objects and buildings of Islamic art are truly astounding. No category of design, no group of motifs, escaped a kind of treatment that has been called ornamental or decorative, and it is difficult to avoid being affected by the sheer sensuality of most of them." In *The Mediation of Ornament*, The A. W. Mellon Lectures in the Fine Arts, no. 38 (Princeton, NJ: Princeton University Press, 1992), 6.

43. Robert Hillenbrand, *Islamic Architecture: Form, Function, and Meaning* (New York: Columbia University Press, 1994), 31.

44. Dates are according to George Michell, ed., *Architecture of the Islamic World* (New York: William Morrow and Co., Inc., 1978), 210, 249.

45. Dates are according to Papadopoulo, *Islam and Muslim Art*, 493, 507.

46. Ibid., 481-83.

47. Hillenbrand, *Islamic Architecture*, 18.

48. Qur'an 3:37. The phrase states "Every time that [the Prophet] Zakariyah entered (her) *miḥrāb* (chamber)." An example is the *miḥrāb* of the Mosque of Sokollu Mehmet Pasha, Istanbul, 1571-72. See Papadopoulo, *Islam and Muslim Art*, 394, fig. 206.

49. Qur'an 2:255. This is the verse that condenses the glorious attributes of God. An example is the *miḥrāb* of the mausoleum–*madrasah* of Sulṭān Qalāwūn, Cairo, 1283. See Papadopoulo, *Islam and Muslim Art*, 391, fig. 191. Similarly, this *sūrah* was the subject of celebration on the exterior surface of the cupola over the foundation in the courtyard of the Sulṭān Ḥasan mosque–*madrasah* complex, Cairo, completed in 1363. See Brend, *Islamic Art*, 104-5, fig. 66.

50. F. B. Flood, "Iconography of Light in the Monuments of Mamlūk Cairo," in *Sacred Architecture in the Traditions of India, China, Judaism, and Islam*, ed. Emily Lyle, Cosmos: The Yearbook of the Traditional Cosmology Society, vol. 6 (Edinburgh: Edinburgh University Press, 1992), 169. The text referred to is from Qur'an 24:35.

51. Schimmel, *Islamic Culture*, 26.

52. Dalu Jones, "The Elements of Decoration: Surface, Pattern, and Light," in *Architecture of the Islamic World*, ed. George Michell (New York: William Morrow and Co., Inc., 1978), 168.

53. This tradition seems to have been enhanced by the Umayyad ruler 'Abd al Mālik's erection of the splendid Dome of the Rock in 691. Ironically, his inscribed name was replaced by that of the 'Abbāsid ruler al Ma'mūn about one hundred fifty years later. See K. A. C. Creswell, *A Short Account of Early Muslim Architecture*, rev. and suppl. ed., James W. Allan (Aldershot, UK: Scholar Press, 1989), 36.

54. Schimmel, *Islamic Culture*, 26.

55. Brend, *Islamic Art*, 56, fig. 30.

56. Papadopoulo, *Islam and Muslim Art*, 20-21, fig. 125, and 322, fig. 126.

57. See Richard Ettinghausen and Oleg Graber, *The Art and Architecture of Islam: 650–1250* (Harmondsworth, UK: Penguin Books Ltd., 1987), 27, fig. 4. The drum is the upright cylindrical element that carries the dome at the top and unites it with the body of the building at the bottom.

58. Antony Hutt and Leonard Harrow, *Iran I: Islamic Architecture*, ed. Leonard Harrow (London: Scorpion Publications Ltd., 1977), 170, plate 114, and 171, plate 115.

59. Safadi, *Islamic Calligraphy*, 106, fig. 120.

60. Ibid., 104, fig. 118.

61. According to John D. Hoag, however, the proportion of ornamentation to the size of the surface or structure on which it was applied began to decrease in about the late thirteenth or early fourteenth centuries. See *Islamic Architecture* (New York: Harry N. Abrams, Inc., 1977), 11-12.

62. The tile *miḥrāb* of the Murādiyah Mosque (1434) in Edrine, Turkey, is an example. See Oktay Aslanapa, *Turkish Art and Architecture* (New York: Praeger, 1971), 200-201, and fig. 150.

63. The portal of the fourteenth-century Sīdī Bū Madyan Mosque in Tlemcen, Algeria, shows a bold horizontal panel of inscriptions confined between a thicker panel of pure geometric patterns on the top and arabesque covered spandrels below. See Antony Hutt, *North Africa: Islamic Architecture*, ed. Leonard Harrow (London: Scorpion Publications, Ltd., 1977), 122, plate 66.

64. Although the discussion here focuses on the plastic possibilities of ornamentation, to some degree it also applies to calligraphic inscriptions.

65. The reference plane of the receiving surface could actually be a curvilinear surface, such as that of the round surface of a minaret or the spherical surface of a dome.

66. For a comprehensive definition and classification of motifs, see al Fārūqī and al Fārūqī, *Cultural Atlas*, 385, table 21.1, and 386-95, fig. 21.1. For the ornamentation appli-

cations, see Aslanapa, "Engraved and Relief Decoration, Figural Reliefs, in Turkish Art," in *Turkish Art and Architecture*, chapter 22.

67. Hoag, *Islamic Architecture*, 144.

68. An example of a dome being associated with the application of a *muqarnaṣ* is the eastern *muqarnaṣ* dome located in the Almohad Mosque of the Atlas village of Tinmal (commissioned 1153-54); see Christian Ewert, "The Architectural Heritage of Islamic Spain in North Africa," in Dodds, ed., *Al-Andalus*, 90, fig. 8. An example of a portal *muqarnaṣ* is found in the portal cornice of the al Azhar Mosque of Fez, Morocco (founded 1357); see Anthony Hutt, *North Africa*, 134, plate 78. An example of a *miḥrāb muqarnaṣ* is that of the Ṣāfavīd Masjid-i-Shaykh Luṭf Allāh in Iṣfahān, Iran (1601-28); see Arthur Uphram Pope, *Persian Architecture*, 217-20 and fig. 293. An example of an *īwān muqarnaṣ* is found in the dominantly Ṣāfavīd shrine of Imām Rezā at Mashhad, Iran (restored 1601). See Pope, *Persian Architecture*, 221-25 and fig. 296.

69. Pope, *Persian Architecture*, 156.

70. Ronald Lewcock, "Architects, Craftsmen, and Builders: Materials and Techniques," in *Architecture of the Islamic World*, ed. George Michell, 137.

71. Ibid.